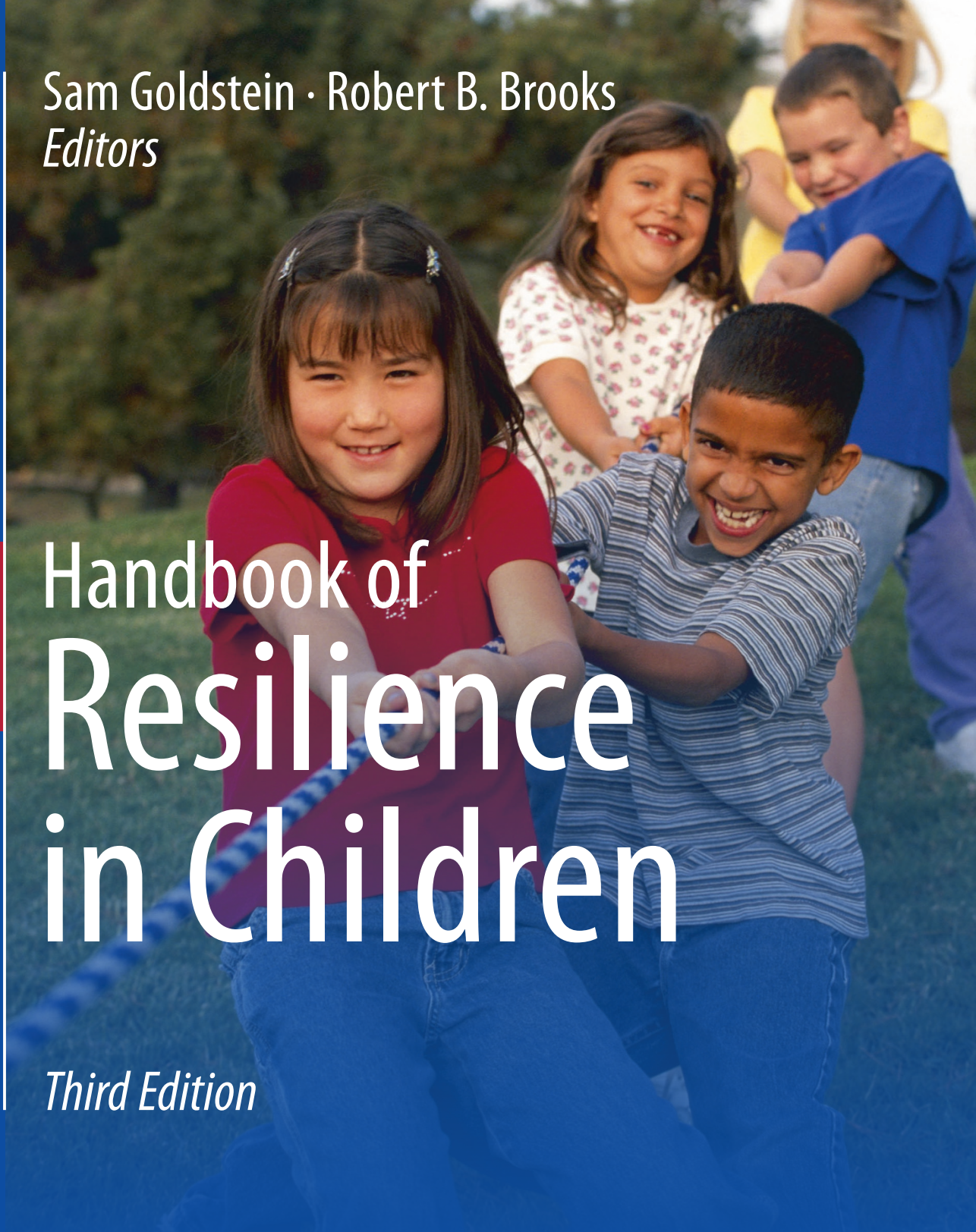
Sam Goldstein · Robert B. Brooks
Editors



Handbook of Resilience in Children

Third Edition

Springer

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ISBN 978-3-031-14727-2 ISBN 978-3-031-14728-9 (eBook)
https://doi.org/10.1007/978-3-031-14728-9

This Springer imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

This volume is dedicated to my grandchildren—Avery, Isaac, Tate, Axel, and Shiloh. It is my greatest hope that we can provide their generation with the tools needed to make a better world and a brighter future.

Sam Goldstein

Resilience is rooted in the positive relationships we experience throughout our lives. I have especially drawn strength and love from my parents Eva and David, my wife Marilyn, my sons Rich and Doug, my daughter-in-law Suzanne, and my grandchildren Maya, Teddy, Sophie, and Lyla. I wish to thank them all for the many ways in which they have enriched my life.

Robert B. Brooks

We dedicate this volume to the memory of two pioneers in the field of child psychology, Emmy Werner and Myrna Shure. In a time when others sought to find liabilities, their pioneering work and brilliant ideas changed the field of child psychology.

Among Dr. Werner's most significant findings was that one third of all high-risk children displayed resilience and developed into caring, competent and confident adults despite their problematic developmental histories. She identified a number of protective factors in the lives of these resilient individuals which helped reduce the adversity of risk factors at critical periods in their development. Dr. Werner's findings permeate every aspect of child development today.

As this book goes to press our dear friend, colleague and contributor to all 3 Editions of this volume, Myrna Shure, has recently passed away. Myrna taught us the power of words to

change mindsets and behavior, but most importantly to teach children to solve problems by thinking differently rather than through the administration of punishments and rewards. Her contribution to the field of child development was monumental. Her legacy will live on forever.

Their wit, humor and insight will be missed but never forgotten.

Sam Goldstein
Robert B. Brooks

Also By These Authors

Raising Resilient Children (2001)
Seven Steps to Help Your Child Worry Less (with Kristy Hagar) (2002)
Parenting Resilient Children Parent Training Manual (2002)
Nurturing Resilience in Our Children (2003)
The Power of Resilience (2004)
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Tenacity in Children (2021)

Preface

Twenty years ago, following the success of our book for parents, *Raising Resilient Children* (2001), we realized that there was a large volume of scientific literature that for the most part had been completed as an academic exercise rather than in an effort to create a new and different way of addressing the many mental health and life challenges faced by children on a global level. The United States, and for that matter, the entire world, was still in shock from the terrible tragedy of the terrorist attacks in 2001. The last 20 years have been perhaps the most stressful in regard to the worldwide impact of events that in the past were often geographic rather than international phenomena. As examples, in 2003 we invaded Iraq under the pretext of finding weapons of mass destruction which were never identified. This invasion was not agreed to by many countries, including France, Germany, Russia, and China, which set the stage for further conflicts between countries. On March 11, 2004, the terrorist group Al Qaeda committed the most serious terrorist attack in European history. Four commuter trains exploded on the way to Madrid leading to 200 deaths. In 2011, a magnitude 9 earthquake in Japan led to a tsunami that hit the Fukushima nuclear plan resulting in 300 hydrogen explosions and the release of radioactive contamination. In 2020, the COVID-19 pandemic led to worldwide changes and stresses that were unanticipated and unimagined by most people and even experts worldwide. In near real time, as these events unfolded, they were witnessed by people on every continent.

In addition, as you will read in the opening chapter of this third edition volume, in the last 20 years, the rates of medical and mental health problems in youth have continued to rise with a dramatic increase for individuals of all ages in just the last 2 years. Rates of anxiety and depression among US adults were about four times higher between April 2020 and August 2021 than they were in 2019. Some of the sharpest increases were among males, Asian Americans, young adults, and parents with children living at home. Between January and December 2019, the average monthly percentages of US adults reporting some symptoms of anxiety ranged between 7% and 8%. Between August 2020 and August 2021, that number increased to between 28% and 37%. Concomitantly, between January and December 2019, the rates of depression monthly among adults ranged between 5.9% and 7.5%. Between April 2020 and August 2021, that number increased to between 20% and 31% (Terlizzi & Schiller, 2021).

In our opening chapter, we note that these numbers for adults are reflected in children as well. These data raise increasing concerns about our species' capacity to cope effectively with stress. That is, to behave in a resilient manner in the presence of adversity. No longer is the study of resilience an academic subject. No longer is it reserved for just those facing adversity since on any given day in the world, it would appear that all of us to a greater or lesser extent are likely to experience stress and adversity. The questions we have asked in our two previous volumes have become even more important in the current world climate. As we have noted in the past, comparing individuals who overcome obstacles and function well with those who do not invites several intriguing questions. What exactly do those who manage to function well under adversity do that enables them to succeed? How do they think? What kinds of experiences might they have had that are absent in the lives of those who are unsuccessful? Are some of their experiences unique to survival in the face of adversity? Can they be manualized and reproduced? How much of their ability to cope over time can be predicted by genetics, parenting, early childhood experiences, education, mentoring, temperament, and general mental health in a world in which stress and adversity have increased exponentially since the publication of the second edition of this volume? The answers to these and related questions are no longer just important, they are essential. This third edition volume reflects our continued efforts to address these questions.

By way of history, it is worth revisiting that we met by chance at a national conference nearly 30 years ago. One of us was discussing childhood disorders and learning disabilities, the other the qualities of personality and thinking that help children at risk overcome adversity. After 50 combined years of clinical practice at the time, we agreed that the best predictors of children's functional outcome as they transitioned into adulthood may not lie in the relief of their symptoms or fixing their diagnoses but rather in an understanding, appreciation, and nurturance of their strengths and assets.

In the past 30 years, our initial connection has evolved into a very close professional and personal relationship. This volume represents our 15th joint-authored or co-edited trade or science text. We have spent countless hours elaborating ideas about the importance of a strength-based approach in our work and in our lives. Throughout our collaboration, we have come to realize the importance of thinking, feeling, and behaving in certain ways as a means of successfully and happily negotiating life. We have come to appreciate the biopsychosocial nature of this process. We began by defining a resilient mindset, which is associated with the ability to cope with and overcome adversity. We now believe that such a mindset is not a luxury or a blessing possessed by some but increasingly an essential component for all. This emerging field of study which once focused upon those who confronted and overcame adversity has found universal appeal as researchers and mental health professionals examine how the qualities of resilience can be applied to all individuals regardless of life challenges or age. We have replaced the medical model with a resilience model. We have developed an appreciation that learning to cope is the first step in functioning well, not just in the presence of adversity, but for all youth to transition successfully into adult life. We

understand that biology is not destiny despite the fact that it affects probability. We are aware that our genes determine the borders of the playing fields of our lives. We also recognize, however, that experience shapes how and in what matter these genes express themselves and ultimately where our lives take us in what turns out to be a vast field of possibilities.

We have continued to elaborate upon our initial work related to resilience. After authoring multiple trade and professional texts on resilience, we came to the realization that knowing what to do was not the equivalent of doing what you know. That is, to act and behave in a resilient manner required the self-discipline to do so. While we had positioned self-discipline as an important component of a resilient mindset, we came to appreciate that it deserved special attention. This prompted us to focus on describing a framework and strategies to help parents and educators guide children to self-regulate (Brooks & Goldstein, 2009). Recently, our thinking has evolved to identify seven instincts that we believe significantly contribute to who we are and how we function. We have placed these seven instincts under the concept of tenacity (Goldstein & Brooks, 2021). We view the seven instincts of tenacity as framing our beliefs and providing the fuel for our emotions and thoughts, and by doing so help us be resilient and achieve self-discipline.

We view these three components—resilience, self-discipline, and tenacity—as comprising the essential triad of human development. We have proposed that an understanding of this triad offers not only a different way of raising children and managing ourselves but also a more effective way. We have come to appreciate that children come into this world with different temperaments and other inborn attributes. No two are exactly alike. However, all are genetically endowed with instincts, not like the fixed behaviors of a bird building a nest or a fish swimming upstream, but rather ever-developing instincts that define our capacity to be fair, altruistic, responsible, empathic, optimistic, motivated, and effective problem solvers.

It is our charge as shepherds of the next generation to continue learning how to best prepare children for an adult world few of us can predict or imagine. The world has changed more in the last 17 years since the publication of the first volume of this work than perhaps in the previous 100 years or more. Accompanying these rapid advances have been equally developing if not greater adversities, many of our own making. The evolution of technology races ahead at break neck speeds. The potential for future pandemics seems to loom at every turn. Nonetheless, we are cautiously optimistic that as our understanding of our place in the universe advances, we will find the means to forge a promising, though not likely perfect, path into the future for ourselves and our children.

Salt Lake City, UT, USA — Sam Goldstein
Needham, MA, USA — Robert B. Brooks

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Our greatest glory is not in never falling, but in rising every time we fall.

Confucius

Do not judge me by my success, judge me by how many times I fell down and got back up again.

Nelson Mandela

If you want to help vulnerable youngsters become more resilient, we need to decrease their exposure to potent risk factors and increase their competencies and self-esteem, as well as the sources of support they can draw upon.

Emmy Werner

We need to get over the questions that focus on the past and on the pain 'why did this happen to me'—and ask instead the question which open doors to the future: 'Now that this has happened, what shall I do about it?'

Harold Kushner

Acknowledgments

We would like to once again express our appreciation to our editor, Judy Jones, for her confidence in and support of our ideas for over 20 years and many volumes. It is rare that a clinical volume appears in a second, let alone third, edition. A special thank you also to the many professionals who began this journey with us in 2005 and have contributed three chapters, updated in our second and third editions. We also thank the many professionals worldwide contributing for the first time to this third edition. The breath and scope of the knowledge contained in these three volumes is truly remarkable. Thanks also to our editorial assistant Kathy Gardner, for guiding the preparation of our 15th joint volume.

Sam Goldstein
Robert B. Brooks

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About the Editors

Sam Goldstein obtained his PhD from the School Psychology at the University of Utah and is licensed as psychologist and certified school psychologist in the state of Utah. He is also board certified as pediatric neuropsychologist and listed in the Council for the National Register of Health Service Providers in Psychology. He is a fellow of the American Psychological Association and the National Academy of Neuropsychology. He is an adjunct assistant professor in the Department of Psychiatry, University of Utah School of Medicine. He has authored, co-edited, or co-authored over 50 clinical and trade publications, three dozen chapters, nearly three dozen peer-reviewed scientific articles, and 8 psychological and neuropsychological tests. Since 1980, he has served as clinical director of The Neurology, Learning and Behavior Center in Salt Lake City, Utah.

Robert B. Brooks obtained his PhD in clinical psychology from Clark University in Worcester, MA, and completed a postdoctoral fellowship at the University of Colorado Medical School in Denver. He is board certified in clinical psychology and listed in the Council for the National Register of Health Service Providers in Psychology. He is currently on the faculty of Harvard Medical School (part-time) and is Former Director of the Department of Psychology at McLean Hospital, a private psychiatric hospital. He has authored, co-edited, or co-authored 19 books and, in addition, authored or co-authored almost three dozen chapters and more than three dozen peer-reviewed scientific articles. He has received numerous awards for his work, including most recently the Mental Health Humanitarian Award from William James College in Massachusetts for his contributions as a clinician, educator, and author.The *Handbook of Resilience in Children* is their 15th co-written/co-edited volume.

Part I

Overview

1 The Continuing Study of Resilience in Times of a Pandemic: This Is Why We Study Childhood Resilience

Sam Goldstein and Robert B. Brooks

The noun "resilience," meaning "the act of rebounding," was first used in the 1620s. It was derived from "resiliens," the present participle of the Latin "resilire," meaning "to recoil or rebound." In the 1640s, the term "resilient" was used to mean "springing back." Yet, the study of resilience as a construct denoting the ability to function well over time and rebound from acute or chronic adversity traces its roots back to not quite 70 years. Perhaps, best defined by Ann Masten in 2018, resilience is described as "the capacity of a system to adapt successfully to significant challenges that threaten its function, viability, or development" (p. 2) (Masten, 2018). Yet, nearly 20 years earlier, in 1999, Glantz and Slobada observed, "There is no consensus on the referent of the term, standards for its application, or agreement on its role in explanation, models, and theories" (p. 2).

We would argue that even with the explosion of recent research in resilience, this is still true today. A Google Scholar search of "resilience" since the publication of the second edition of this volume in 2013 yields more than 900,000 links! Early on, this field of study was not extensive and the number of researchers devoting their careers to the examination of this phenomenon was fairly small. This field, as Michael Rutter noted in 1987, reflected not so much a search for factual phenomena but "for the developmental and situational mechanisms involved in protective processes" (p. 2). The interest was and is not just on what factors insulate and protect but on how they went about exerting their influence. Resilience studies were reserved for high-risk populations with a particular focus on those youth demonstrating resilience or the ability to overcome the emotional, developmental, economic, and environmental challenges they faced growing up. The study of resilience has expanded significantly over the last 30 years. It has been the impetus for an explosion of empirical research and has played a central role in the reconceptualization of the biopsychosocial forces of human development. Yet, in the view of some, this has left matters in greater disarray.

Thus, it was with a greater sense of urgency that resilience research accelerated well before the world was beset by a worldwide pandemic. There are a number of reasons for this phenomenon. First, as the technological complexity of the late twentieth century increased, the number of youth facing adversity and the number of adversities they faced also appeared to be increasing. More youth are at risk today than ever before. Second, there has been an accelerated interest not

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_1

only in understanding the risk and protective factors and their operation but also in determining whether this information can be distilled into clinically relevant interventions (e.g., Underwood, 2018; Shean, 2015; Fava & Tomba, 2009; Wolchik et al., 2009) that may not only increase positive outcomes for those youth facing risks but also can be applied to the population of children in general in an effort to create, as Brooks and Goldstein (2001) point out, a "resilient mindset" in all youth.

The importance of such a mindset goes hand in hand with the perception that no child is immune from pressure in our current, fast-paced, stress-filled environment – an environment that ironically we have created to prepare children to become functional adults. Even children fortunate enough to not face significant adversity or trauma, or to be burdened by intense stress or anxiety, experience the pressures around them and the expectations placed upon them. Thus, this field has increasingly focused on identifying those variables that predict resilience in the face of adversity and on developing models for effective application (Rutter, 2006). The belief then is that every child is capable of developing a resilient mindset and will be able to deal effectively with stress and pressure, to cope with everyday challenges, to bounce back from disappointments, adversity, and trauma, to develop clear and realistic goals, to solve problems, to relate comfortably with others, and to treat oneself and others with respect.

A number of longitudinal studies over the past few decades have set out to develop an understanding of these processes, in particular the complex interaction between protective and risk factors, with the goal of developing a model to apply this knowledge to clinical practice (Goldstein & Herzberg, 2018; Tabibnia & Redecki, 2018; Sarkar & Fletcher, 2017; Donnellan et al., 2009; Garmezy et al., 1984; Luthar, 1991; Rutter et al., 1975; Rutter & Quinton, 1984; Werner & Smith, 1982, 1992, 2001). These studies and many others have made major contributions in two ways. First, they have identified resources across children's lives that predicted successful adjustment for those exposed to adversity, and, second, they began the process of clarifying models of how these protective factors promote adaptation (Ellis et al., 2017; Wyman et al., 2000).

Whether these processes can be applied to all youth in anticipation of facing adversity remains to be fully demonstrated (Vanderbilt-Adriance & Shaw, 2008; Ungar, 2008; Joyce et al., 2018). Masten (2001) suggests that the convincing evidence that resilience processes are in fact not only effective but can also be applied is demonstrated in the recovery to near-normal functioning found in children adopted away from institutional settings characterized by chronic deprivation. The positive outcome for many Romania adoptees appears to reflect this process (Groza et al., 2017; Beckett et al., 2006; Kreppner et al., 2007; Masten, 2001). Aames (1997), as cited in Rutter's English and Romania Adoptees study team (1998), documents a significant degree of developmental catchup cognitively and physically in many of these children.

Resilience in Times of Pandemic

The COVID-19 pandemic is reported to be causing serious mental health consequences.

(Stark et al., 2020; Berawi, 2020; Elcheroth & Drury, 2020). As a large portion of the population is vaccinated, there is an emerging shift from coping with the immediate health impact of COVID-19 to appreciation of an illness that can be described as a generation-defining experience. Most mental disorders begin in childhood. Prior studies suggest that experiencing mass disasters and economic recession is associated with an increased risk for mental illness (Golberstein et al., 2020; Sprang & Silman, 2013). Although children have a relatively low risk of severe COVID-19 complications (CDC, 2020), the mental health impact of the pandemic experience has proven to be a significant challenge (Qiu et al., 2020; Konstantopoulou & Raikou, 2020; Jiao et al., 2020).

Although environmental stressors will increase children's susceptibility to mental health problems, multiple protective factors offer oppor-

tunities to promote children's resilience, that is, the capacity for positive adaptation in the face of adversity. A consensus increasingly agrees that resilience as a process (Rosenberg et al., 2021) is a function of individual, familial, and systemic factors (Masten, 2001). Factors such as anxious temperament (e.g., Marshall et al. (2010)), early mental health concerns (Copeland et al., 2009), medical conditions (e.g., CDC, 2020), and a history of trauma (Nishith et al., 2000) are risk factors for developing mental disorders. In contrast, caregiving characterized by responsiveness, warmth, structure, and monitoring confers protection (Southwick et al., 2014). Social support (e.g., caring relationships with adults and peers) has also been shown to be a protective factor for children and families in the context of mass disasters and pandemics (Earls et al., 2008; Pfefferbaum et al., 2015). Safe neighborhoods and access to sufficient social services and healthcare are important system-level protective factors in youth as well (Ellis et al., 2017; Jenson & Fraser, 2015; Masten et al., 2003).

Pandemic-specific stressors may undermine proven protective factors. In addition to the stress of safeguarding familial health from the coronavirus, stay-at-home orders and public health recommendations for physical distancing have reduced access to a range of support systems for children and families. The increased demands on parents and the corresponding rise in parenting stress has also been apparent. Supporting children's academic goals through online distance learning may have kept children "in school" but at an increased burden considering the significant time that children spent in front of screens. Reduced access to childcare (e.g., through kinship care or daycare) and coping with potential employment-related transitions or losses are also some of the immediate concerns for parents. Schools, sports teams, after-school programs, and faith-based organizations provide children with structure and opportunities for mastery (Durlak & Weissberg, 2007). Although most children may not suffer from deleterious psychological outcomes because of a temporary loss of access to these opportunities, the impact of prolonged uncertainty and lack of socialization opportunities, skill-based learning, social support, and reduced physical activity may increase children's emotional distress and parenting challenges. In addition, with nearly 600,000 fatalities to date in the United States alone, many families are grieving the loss of their loved ones, often without being able to engage in traditional end-of-life rituals (e.g., in-person funerals) or gain access to typical support systems.

The World Health Organization has affirmed that mental health support is a priority as efforts are made to overcome the pandemic. In light of this alert, in this volume, we reaffirm a commitment to a positive psychology approach focused on prevention through strength and asset building. The challenges posed by this pandemic have in many ways created a new condition in comparison with what is known in clinical practice and with what is included in the classification of mental disorders. It is in fact not a disorder in and of itself. It is not similar to the stress encountered as a result of extreme events such as natural disaster traumas. The stress caused by the pandemic is, at the same time, an individual and collective stress. It is persistent, provoked by stressful, unpredictable circumstances that can evolve in many ways and that can develop throughout different phases. Starting with an *acute stress* (warning), it leads to a consequent *chronic stress*, characterized by the effort to adapt to the mortal risk of infection and which results in both a psychosocial and an economic effort to resist the lockdown situation first, and, consequently, in the effort to manage damages before and after the Pandemic (Biondi & Iannitelli, 2020). This ongoing stress condition, which not only hits the present but also disrupts the future, may create entirely new forms of clinical conditions (Walsh, 2020).

Creating a Clinical Psychology of Resilience

Keeping this foundation in mind, the process of creating a systemic, clinical psychology of resilience must begin with an understanding of the relevant variables, an appreciation and

acknowledgment of certain key phenomena. The process of resilience, first and foremost, for example, represents a biopsychosocial phenomenon. Such a process considers a range of biological, psychological, and social factors each with multidirectional influence on contributing to adequate functioning over time (Sameroff, 1995; Sroufe, 1997). Such a model must also begin with a basic foundation examining and appreciating the concept of wellness. In 1991, Emery Cowen, writing on the concept of wellness in children, suggested that a comprehensive approach to the promotion of wellness included four basic concepts: competence, resilience, social system modification, and empowerment. Cowen suggested that although wellness at the time continued to reflect an abstract concept, the pursuit of research in each of these four areas held promise in developing a scientific, reasoned, and reasonable model to ensure psychological health. In 1994, elaborating further on the concept of wellness, Cowen again emphasized the importance of resilience within the broader concept of wellness. For Cowen, a wellness framework assumes the development of healthy personal environmental systems, leading to the promotion of positive well-being and the reduction of dysfunction. A wellness framework emphasizes the interaction of the child in the family, academic setting, with adults outside of the home, and with peers. Clearly, Cowen suggested a person–environment interaction, one that ultimately predicts the strength and power of an individual's resilience in the face of adversity.

Additionally, the absence of pathology does not necessarily equate with psychological wellness. This concept continues to present a challenge for many mental health disciplines (Lorion, 2000). Mental health professionals are trained to collect data through a variety of means to measure symptoms. Such symptoms are equated with poor adaptation, inadequate adjustment, distress, and life problems. Emphasis on the negative equates with the perception that symptom relief will ultimately lead to positive long-term outcomes. In fact, the accepted nosology of the mental health system is a model that reflects assessment of symptoms and severity packaged into what at this point are weakly factor-analyzed frameworks (American Psychiatric Association, 2000). Still unavailable, however, is a nosology and system to measure adaptation, stress hardiness, and the qualities necessary to deal successfully with and overcome adversity. Yet, in clinical practice, it is increasingly recognized that it is these phenomena rather than relief of symptoms or the absence of certain risk factors that best predict adaptation, stress hardiness, and positive adult adjustment (Kieling et al., 2011; Catalano et al., 2012).

As Cowen pointed out in 1994, mental health as a discipline must expand beyond symptom-driven treatment interventions if the tide of increasing stress and mental health problems in children is to be averted. There must be an increased focus on ways of developing an understanding of those factors within individuals, both in the immediate environment and in the extended environment, which insulate from and prevent emotional and behavioral disorders. Understanding these phenomena is as important as developing "an understanding of the mechanisms and processes defining the etiological path by which disorders evolve and a theory of the solution, conceptual and empirically supported or supportable intervention that alters those mechanisms and processes in ways which normalize the underlying developmental trajectory" (p. 172).

Meta-analytical studies of preventive intervention effectiveness have generated increasing evidence of the ability to reduce the number of youth with certain emotional and psychiatric problems through an understanding of the forces that shape life outcomes. As Emmy Werner has pointed out, "beating the odds" is an attainable goal. Researchers have made an effort to address the complex biopsychosocial phenomena that influence the incidence and prevalence of emotional and behavioral problems in youth with an eye toward developing a "science of prevention" (August & Gewirtz, 2019; Coie et al., 1993).

Resilience is suggested as a construct that protects or reduces vulnerability. Lösel et al. (1989) suggested that a myriad of protective factors comprising this construct include hardiness,

adaptation, adjustment, mastery, a good fit between the child and environment, and buffering of the environment by important adults in the child's life. As Sameroff (2000) points out, a transactional view of development suggests that a combination of factors within the child and environment are mutually interactive over time. With appropriate responsive and adequate care taking and environment in which mutual adaptations can occur, the odds favor good outcomes (Campbell, 2002). In such a model, development is assumed to be discontinuous, characterized by qualitative change and reorganization. Children are viewed as active organizers of their experiences, and their interactions with others are viewed as bidirectional. Children's responses to adult behavior further influence that behavior.

This model is consistent with the artificial intelligence researcher Gary Drescher's observation suggesting that human beings are "choice machines." That is, they act partly in response to genetically driven imperatives but generate reasons for acting as they do. These reasons are not hardwired but are responsive and modifiable to the environment and help guide future behavior (Dennett, 2003). This flexible gene–environment relationship is reflected in the work of Goldstein and Brooks (2021). They propose that the lengthy transition from childhood to adulthood must be built on a foundation of seven instincts that they place under the umbrella of tenacity. They posit that we must reframe how we parent, educate, and socialize children if they are to be prepared for a future that few, if any, of us can imagine. Over tens of thousands of years, these instincts, present from birth, have provided the human species with untold advantages but at least one unexpected downside. We have failed to sufficiently appreciate the power of many human instincts in shaping a child's development and adult life. Whether or not we have realized it, we have until recently, parented and educated from the position that children are tabula rasa or blank slates waiting to be infused with knowledge.

Finally, with a strong genetic influence, children consistently move toward attempting to develop normal homeostasis. In this model, a single potential, traumatic experience would not be expected to lead to a chronically poor outcome. Instead, it would be the cumulative, persistent, and pervasive presentation of stressors that promotes risks. Within this type of conceptualization, risks fall within three dimensions: (1) external risks as opposed to protection, (2) vulnerability as opposed to invulnerability, and (3) lack of resilience as opposed to resilience (Greenbaum & Auerbach, 1992). Within such a model, a number of assumptions are made. These include (1) early nurturing and age-relevant stimulation that provides protection by decreasing vulnerability (Bakermans-Kranenburg et al., 2008) and (2) risk protection factors that are interactive, that is, factors within the child will interact and augment factors within the environment. This is likely true for risk factors as well; (3) vulnerability can be reduced and resilience increased by the introduction of additional protective factors; (4) risk and protective factors interact with a number of variables such as length of exposure and time of exposure, thus contributing to the outcome and (5) limited exposure to risks may in fact increase but not guarantee stress hardiness. Within these theoretical models, all of which will be discussed and reviewed in this chapter, the concept of resilience appears to play a major role. Within a wellness model, therefore, it is deserving of an identity and a field of study.

The concept of resilience is fairly straightforward if one accepts the possibility of developing an understanding of the means by which children either develop well emotionally, behaviorally, academically, and interpersonally in the face of risk and adversity or do not. Such a model would offer valuable insights into those qualities that likely insulate and protect in the presence of wide and varied types of adversities, including children experiencing medical problems (Brown & Harris, 1989), family risks (Beardslee, 1989; Beardslee & Podorefsky, 1988; Hammen, 1997; Worsham et al., 1997), psychological problems (Hammen, 1997; Hauser et al., 2006), divorce (Sandler et al., 1994), loss of a parent (Lutzke et al., 1999), and school problems (Skinner & Wellborn, 1994). Competent, appropriate parenting, for example, which provides a democratic or authoritative model, parental availability,

monitoring, and support are powerful protective factors for reducing the risk of antisocial behavior (Dubow et al., 1997; Masten et al., 1999). In fact, it appears to be the case that youth functioning well in adulthood, regardless of whether they faced adversity or not, may share many of the same characteristics with regard to stress hardiness, communication skills, problem-solving, self-discipline, and connection to others. Although the earliest studies of resilience suggested the role of "exceptional characteristics" within the child that led to "invulnerability" (Garmezy & Nuechterlein, 1972), it may well be that resilience reflects very ordinary development processes to explain adaptation (Masten, 2001; Masten & Coatsworth, 1998). Although, as noted, a focus on symptoms and symptom relief, that is one assessing risk alone, may be satisfactory for identification of immediate needs and diagnoses within a psychopathology model, such data are necessary though not sufficient to improve future functioning. It has been well documented that not all children facing significant risk and adversity develop serious adolescent and adult psychiatric, lifestyle, and academic problems. Risk factors also do not appear to be specific to particular outcomes but relate to more broad developmental phenomena. It is likely, as noted, that there is a complex, multidimensional interaction between risk factors, biological functioning, environmental issues, and protective factors, which combines to predict the outcomes (e.g., Kim-Cohen & Gold, 2009).

Within this framework, resilience can be defined as a child's achievement of positive developmental outcomes and avoidance of maladaptive outcomes under adverse conditions (Rutter, 2006; Wyman et al., 1999). Within a clinical framework, a resilient mindset may be defined as the product of providing children with opportunities to develop the skills necessary to fare well in the face of adversity that may or may not lie in the path to adulthood for that individual. The study of resilience has overturned many negative assumptions in deficit-focused models about "the development of children growing up under the threat of disadvantage and adversity" (Masten, 2001, p. 227).

Finally, within the broader framework, the incorporation of resilience research into clinical practice may be based on four key assumptions as described by Benard et al. (1994). First, resilience helps build communities that support human development based upon caring relationships. Second, resilience meets youth's needs for belonging and stability. Third, resilience is supported in the lives of practitioners as well. Fourth, resilience validates the wisdom of the heart or an intuitive, an innate set of practices to guide clinical intervention.

A Cascade of Risks

Although children by their very nature have been vulnerable to a variety of risks throughout recorded history, perhaps advanced technological societies create new and different risks for children. Poverty, for example, has likely been a risk factor for children throughout history, yet the manner in which it impacts children may be different as times change. Beginning with the work of Pavenstedt (1965), examining children reared in poverty, and well articulated by Garmezy and Nuechterlein (1972), researchers have questioned the processes by which individuals at risk for psychiatric conditions might be buffered or insulated from developing these conditions or experiencing them to a greater degree of severity should they present. Epstein (1979) wrote of children exposed to trauma in the Holocaust, examining the variables that helped some survive. In many of these studies, positive, yet unexpected, outcomes were considered interesting anomalies but not necessarily important data. Over time came growing recognition and acceptance that the ability to remain competent under adversity is not a random occurrence but one that can be investigated, understood, and instilled in others (Garmezy & Rutter, 1983a).

Research on adverse childhood experiences (ACEs) has demonstrated the impact of stress-related risk factors in childhood on later adult physical and mental health (for a review, see Finkelhor, 2018). Researchers have identified two distinct types of risk factors facing youth.

The first kind reflects the at-risk status of the general population such as a child raised in a family with a depressed mother or an absent father. The second kind of risk includes those factors that distinguish more or less positive outcomes among either groups with specified risks or those with seemingly little risks. In every case, each risk factor must be studied, understood, and then placed within a context of other risk and protective variables. It is for this reason that the scientific research on resilience is so complex. This too is perhaps a consequence of a complex, technologically advanced culture. A quick review of multiple risk statistics makes a strong case for developing a clinical psychology of resilience.

According to the Centers for Disease Control Youth Risk Behavior Surveillance System (2002), at least 12% of students have considered suicide, with suicide being the third leading cause of death between the ages of 15 and 24 years and rare but increasing between the ages of 10 and 14 years. Three million teenagers struggle at any given time with depression. Only one-third receive mental health services.

The Centers for Disease Control and Prevention and the Substance Abuse and Mental Health Services Administration (2002) note that one-half of motor vehicle accidents in the United States involving teens are associated with alcohol and drugs. In all, 30% of adolescent suicides are associated with alcohol and drugs. Furthermore, children and teens who abuse alcohol and drugs engage in a variety of risk-taking behaviors at a significantly higher rate than does the general population.

Across the world, about 1 billion children are multidimensionally poor, meaning that they lack necessities as basic as nutrition or clean water. Some 150 million additional children have been plunged into multidimensional poverty due to COVID-19. An estimated 356 million children live in extreme poverty (UNICEF, 2020).

In all, 40% of children under the age of 6 years in the United States live in homes with an income below $27,000 per year for a family of four. A total of 16% of children or more than 11 million live in homes that are below the federal poverty level. In all, 6% of children or five million live in extreme poverty. Finally, the poverty rate is the highest among African Americans (30%) and Latinos (28%) (US Census Bureau, 2019).

According to the Centers for Disease Control and Prevention National Household Survey of Drug Abuse, homicide is the second leading cause of death for all 15- to 24-year-olds. It is the leading cause of death for adolescent African Americans and the second leading cause of death for Hispanic youth. More than 400,000 youth in 2000 between the ages of 10 and 19 years were injured as a result of violence. More than 800,000 children were documented victims of child abuse nationwide.

The US Department of Health and Human Services (2019) reported that an American child was abused and neglected every 11 seconds. It is estimated that at least one in seven children in the United States have experienced child abuse and/or neglect in the past year. Neglect is the most common form of child abuse, followed by physical abuse, sexual abuse, and psychological abuse. Both boys and girls experience similar rates of childhood abuse (48.6% and 51%, respectively).

More than half a million children in the United States are in foster care. An American child is born without health insurance every minute. Millions of children are reported to lack safe, affordable, quality childcare and early childhood education while their parents are at work. Seven and a half million children are at home alone without supervision after school, and almost 80% of children living at or below the poverty level are in working households (U.S. Census, 2019).

In 2002, the Committee for Children at the National School Safety Center reported that one out of every seven children reports being bullied at school. In an average classroom, there are at least three to four victims or bullies. Many victims report self-imposed isolation in response to bullying. The US Department of Education in 2017 reported that the number had increased to one out of five youth being bullied.

According to the Youth Risk Behavior Surveillance System at the Centers for Disease Control (2019), the complex picture that emerges, pre-pandemic, of youth over a 10-year period alleviates some traditional concerns

while raising new ones. Teenagers' overall involvement in risk-taking has declined during the past two decades (except among Hispanics), with fewer teens engaging in multiple risk behaviors. However, multiple-risk teens remain an important group, responsible for most adolescent risk-taking. However, almost all risk takers also engage in positive behaviors; they participate in desirable family, school, and community activities. These positive connections offer untapped opportunities to help teens lead healthier lives. Between 1991 and 1997, there was a sizable increase in the number of students who did not participate in any of the 10 risk behaviors and a sizable decrease in the proportion of students who engaged in multiple risk behaviors. Despite this, the number of highest-risk students – those participating in five or more risk behaviors – remained stable. Of note, Hispanic students did not report the same shift toward less risk-taking.

Most risks are taken by multiple-risk students. The overall prevalence of a specific risk behavior among teenagers is primarily due to the behavior of multiple-risk students, since the majority of students involved in any given behavior were also engaging in other risk behaviors. For example, among the 12% of students reporting regular tobacco use, 85% were multiple risk takers. The number of girls giving birth between the ages of 15 and 19 years has steadily declined in the past decade, but sexually transmitted diseases among teenagers have increased. These statistics, only a sample of an emerging trend, make a strong case for the need to develop a clinical psychology of resilience.

Yet, nearly all teens, even those engaging in multiple risk behaviors, participate in positive behaviors. In all, 92% of students engage in at least one positive behavior, such as earning good grades, participating in extracurricular activities, spending time with parents, or being involved in a religious institution. Most out-of-school boys are also involved in appropriate positive behaviors, although less so than their in-school peers. Although multiple-risk teens engage in positive behaviors, participation in positive behaviors declines with increased risk-taking.

Furthermore, multiple-risk adolescents have many points of contact beyond their home and classroom. The assumption that risk-taking teens are socially disconnected is challenged by new findings that map their participation in a wide range of settings, such as faith-based institutions, the workplace, healthcare, and the criminal justice system. Their involvement in settings beyond their home and classroom, especially for out-of-school adolescents, offers opportunities for a myriad of interventions to reduce risk-taking and enhance resilience.

Toward Defining a Clinical Psychology of Resilience

Within the materials sciences, resilience is defined as the ability of a material to resume its original shape or position after being spent, stretched, or compressed. In part, resilience within this framework is defined by those properties that contribute to the speed and amount of a possible recovery after exposure to stress. Bonanno (2004) distinguishes between the concepts of resilience and recovery. As previously discussed, the initial application of resilience to the clinical field focused on the absence of clinical diagnoses or psychiatric problems over time in the face of stress and adversity (Radke-Yarrow & Brown, 1993). Rutter (1990) suggested that within the clinical realm, resilience and vulnerability may be at the opposite ends of a continuum, reflecting susceptibility to adverse consequences at one end and neutral or positive consequences upon exposure to risks at the other. This concept was further echoed by Anthony (1987). As Ann Masten (2001) notes, "Early images of resilience in both scholarly work and mass media implied there was something remarkable or special about these children, often described by words such as invulnerable or invincible." One of the first popular press articles dealing with resilience appeared in the Washington Post on March 7, 1976. The headline read, "Troubles a Bubble for Some Kids." Thus, within the clinical realm, the idea of resilience reflected a process that was not necessarily

facilitated through traditional psychotherapeutic or related intervention but rather was reflective of children who faced great adversity and in some internal way were special or remarkable, possessing extraordinary strength to overcome adversity. The belief was that these internalized qualities were somehow absent in others. Yet, as Masten observes, resilience may be a common phenomenon, resulting in most cases from the operation of "basic human adaptational systems." When these operate, development is successful even in the face of adversity. If these systems are impaired, then children struggle.

Masten and Coatsworth (1998) suggest that resilience within a clinical realm requires two major judgments. The first addresses threat. Individuals are not considered resilient if they have not faced and overcome significant adversity considered to impair normal development. The second assumption involves an inference about how one assesses a good or adequate outcome in the face of adversity. This continues to be a complex issue that is just now being addressed empirically (Finkelhor, 2018; Masten, 1999). It continues to be the case that most clinical practitioners define resilience on the basis of a child meeting the major requirements of childhood successfully (e.g., school, friends, family), despite facing significant life stress. Yet, one must also consider that a child facing multiple developmental adversities who does not develop significant psychopathology but who may not demonstrate academic or social achievements may be resilient as well (Conrad & Hammen, 1993; Tiet et al., 1998).

Bronfenbrenner and Crouter (1983) describe a functional model for understanding the process of resilience that may lend itself well to building a foundation for a clinical psychology of resilience. Their model contains four domains of influence and two transactional points between the domains. The four domains reflect (1) the acute stressor or challenge, (2) the environmental context, (3) an individual's characteristics, and (4) the outcome. Points of interaction reflect the confluence between the environment and the individual as well as the individual and choice of outcome. These authors raise questions as to the exact mechanisms by which stressors or challenges interact with the environment, the internal set of characteristics, both genetic and acquired, of the individual, and the short-term processes that individuals use to cope with stress and adversity. Interestingly, these processes most likely reflect skills learned by the individual through gradual exposure to increasing challenges or stressors. This "stress inoculation model" (Richardson et al., 1990) reflects the concept of Brooks and Goldstein (2001, 2003) of building stress hardiness by helping children develop a "resilient mindset."

Within clinical populations, three types of protective factors emerge as recurrent themes in most studies (Werner & Johnson, 1999). The first reflects dispositional attributes of the individual that elicit predominantly positive responses from the environment (e.g., easy temperament of the child within a family facing significant stress). The second reflects socialization practices within the family that encourage trust, autonomy, initiative, and connection to others. The third reflects the external support systems in the neighborhood and community that reinforce self-esteem and self-efficacy. From their longitudinal work, Werner and Smith (1993) point out a large number of variables, such as age, birth order, ages of siblings, family size, and gender of the child, which must be taken into account when assessing the relative vulnerability or resilience of an individual growing up in a family context of psychopathology or other risks. Such protective factors "moderate against the effects of a stressful or stress situation so that the individual is able to adapt more successfully than they would have had the protective factor not been present" (Conrad & Hammen, 1993, p. 594). Protective factors thus represent the opposite pole of vulnerability factors.

As discussed, the concept of resilience has not traditionally encompassed the potential of individuals to survive risks should they arise. Anthony (1987), Brooks and Goldstein (2001), and Rutter (2006) suggest that some individuals may appear resilient because they have not faced significant vulnerability, whereas others can be assessed for their potential to be resilient were they to face

adversity. Defining risks and protective factors is not a simple process. They are likely variable in their presentation and in their impact on specific individuals. Cicchetti and Garmezy (1993) point out that it is difficult at times to distinguish between factors that place an individual at risk and factors that happen to distinguish between good and poor outcome but have no clear causal significance. These authors caution, for example, that "a child with a mother who has been depressed will not necessarily experience poor quality of care giving" (p. 500). Competent youth differ from those lacking competence, regardless of the level of adversity faced. Thus, even though resilient and maladaptive groups may experience similar life histories of severe negative life experience, the outcome for those who are resilient appears more similar to those who have not faced adversity (Masten et al., 1999).

Youth demonstrating high competence despite facing strong adversity, when compared to youth equally competent facing low adversity, as well as groups of youth with low competence facing equal adversity, reflect this process. Competent, low adversity, and resilient youth appear to possess average or better academic outcomes, conduct, and social histories. They appear to possess highly similar psychosocial resources, including better intellectual functioning, parental mental health, parental availability, and more positive self-concepts. Although a heatedly debated phenomenon, strong intellect has been found to be a protective factor (Hernstein & Murray, 1995). Intellectual aptitude appears to represent an important protective factor against the development of conduct problems for children growing up in highly disadvantaged settings or with high exposure to adverse life events (Masten et al., 1999; White et al., 1989). However, there is no consensus on what defines intellectual ability (Masten, 2001). A strong performance on tests of intellectual functioning could reflect related neuropsychological factors, such as attention, memory, executive functioning, or, for that matter, motivation. Strong performances on intellectual tests, many of which are highly loaded on achievement, are also contributed to by the quality of the child-rearing environment.

A clinical psychology of resilience must also be capable of defining and understanding the multiple pathways by which an outcome is achieved. Cicchetti and Rogosch (1996) describe this process through the concepts of equifinality and multifinality. Children may reach the same end point, in this case pathology or survival by different routes. Children with apparently similar risks and histories can have different outcomes. As Rutter pointed out in 1994, the outcome is determined in part by the relative balance and interaction between risk and protective factors. The more the risk factors are present, the more likely the outcome will be adverse (Greenberg et al., 1999). It remains unclear, however, whether risk factors are equally potent in their adversity or protective factors equally stress resistant in their presentation (Shaw & Vondra, 1993). We have yet to develop a science to explain the manner by which biological factors such as stress during pregnancy, premature birth, and genetic variations leading to learning or related problems interact with family risk factors such as neglectful or harsh parenting and inconsistent childcare, with physical phenomena such as poor nutrition and educational and community experiences. It has yet to be truly understood and defined the means by which a child growing up with a learning disability in a poverty-stricken home, in a high-risk neighborhood, with parents exhibiting mental illness can and does overcome these adversities and successfully transitions into adult life.

On a basic level, it is still debated as to how nature and nurture interact. How do genes and environments influence each other? How might a child's genetically driven temperament influence parental behavior, thus, in part, forming the basis for a child's attachment and ultimately affecting parental behavior? Whether a continuous or discontinuous process, children's development is impacted by a host of phenomena. The study of a clinical psychology of resilience will allow for the examination of the means by which biological, environmental, and related factors interact. For example, children who are active or temperamentally irritable may be more likely to continue to respond maladaptively in the face of ineffective

parental behavior than children who do not demonstrate these patterns of temperament. Such children may be more sensitive to environmental risk factors (Belsky et al., 1996).

Finally, a clinical psychology of resilience must incorporate an understanding of the process of human development. Many of the renowned developmental theorists have assumed that human growth is in part driven by a need to cope, adapt, and develop a healthy homeostasis (Lorion, 2000). Across theoretical models, resilience, as encompassed within a wellness model, is characteristic of positive adaptation. Thus, the absence of symptoms should not be equated with resilience or for that matter good functioning (Luthar & Brown, 2007). Studies of youth capable of overcoming a variety of unfavorable environmental phenomena are confirmatory that resilience in fact operates for some but not for others. Some youth are insulated or protected, seemingly invulnerable from risks likely to overcome most others. It may be that these resilience qualities are the best predictors of a positive adult outcome (Brodsky, 1996; Masten & Coatsworth, 1998).

The Synthesis of a Model

In a review of successful prevention programs, Schorr (1988) suggests that effective programs for youth at risk are child-centered and based upon the establishment of their relationships with adults who are caring, respectful, and who build trust. In writing about single mothers and their children, Polakow (1993) suggests that ultimately connections to people, interests, and to life itself may represent the key component in resilient processes. This phenomenon is well-articulated by Hallowell (2001). As Michael Rutter has pointed out, "Development is a question of linkages that happen within you as a person and also in the environment in which you live" (as cited in Pines, 1984, p. 62). "The complexity of risk and resilience processes operating in multiple embedded systems of development in diverse contexts calls for the expertise of more than one discipline whether the goal is to advance empirical knowledge or to change the course of development through intervention" (Masten, 1999, p. 254).

Yet, if challenges are too severe, then normal processes break down (Baldwin et al., 1993). Baldwin et al. describe resilience as "a name for the capacity of the child to meet a challenge and to use it for psychological growth" (p. 743). In their description of an applied resiliency model, stressors are life challenges that if not balanced by external protective processes or resiliency factors within the individual lead to a disruption in functioning. Flach (1988) suggests that this process is not unidirectional but that individuals can recover and function better as risks reduce and protective factors are introduced. It may well be, as Tarter (1988) notes, that vulnerability is "a characteristic that predisposes an individual to a negative outcome" (p. 78). Thus, a particular factor creates vulnerability but does not necessarily define the level of vulnerability experienced by a particular individual. Shared and nonshared environments likely also play moderating roles in determining the risk and protective factors for particular individuals. Resilience is perhaps best understood as a product of a phenotype–environment interaction (Tarter & Vanyukov, 1994). This phenomenon, referred to as epigenesis, likely offers the best understanding of the individual effects that risk and protective factors have on shaping resilience. Such a phenomenon must be understood if it is to be effectively applied to a clinical framework.

Given the complexity of the human species and the culture we have created, there is a need to view the accomplishment of wellness and resilience from a multifaceted developmental and dynamic perspective (Masten & Coatsworth, 1998). The behavioral and emotional problems of children, the nature of our culture, and risks such as emotional or physical abuse all present as significant challenges. None have single or simple etiologies or solutions. All appear to arise from a complex interaction of biological, environmental, and cognitive influences. All of these influences to some extent are idiosyncratic to the individual.

Many risk factors such as poverty or neighborhood adversity cannot be easily ameliorated.

Although the process of resilience may reflect "the power of the ordinary" (Masten, 2001), there must be an increasing focus on understanding the protective variables that allow some children to function well in these environments and continue to function well in the future. Just as risk factors are not specific to particular adverse outcomes, protective factors may also not be equally specific. The "ordinary magic" that Ann Masten so eloquently writes about becomes an elusive phenomenon in the face of these risks. Masten (2001) notes that resilience does not appear to arise from rare or special qualities but from "the everyday magic of ordinary, normative human resources in the minds, brains and bodies of children in their families and relationships and in their communities" (p. 235).

In 1993, Coie et al. provided a list of generic risk factors including those of family conflict and poverty. These researchers and others have noted a diverse set of protective factors that often relate to close relationships with prosocial and caring adults (Masten et al., 1990). Finally, there is increasing research primarily reflecting genetically driven phenomena that predispose individuals to either stress hardiness or risk in the face of adversity. These types of cumulative risk and protection models form the basis of what is hoped to be the future state of the clinical psychology of resilience and treatment for youth at risk (Liu et al., 2017; Yoshikawa, 1994).

This volume, as with its two predecessors, addresses which and by what processes variables within the child, immediate family, and extended community interact to offset the negative effects of adversity, thereby increasing the probability of positive development rather than dysfunction. Some of these processes may serve to protect the negative effects of other stressors, whereas others simply act to enhance development regardless of the presence of stress.

As Seligman (1998a, b) has pointed out, attending to those issues that are preventative and creating a resilient mindset and wellness will require a significant paradigm shift in mental health professionals and the community at large. Seligman has suggested that this shift will not be easy to make. While professionals may be "ill-equipped to do effective prevention" (Seligman, 1998a, p. 2), at this time, the development of a systemic, clinical psychology of resilience still appears to offer the best hope of forming a cornerstone for the development of a "positive social science." In addition, we have an increasing volume of good science to suggest that this is not an inconceivable quest. Joyce et al. (2018), while conducting a meta-analysis of resilience training programs and interventions, found 437 citations and 111 peer-reviewed articles. Seventeen of these studies met the inclusion criteria and were subject to a quality assessment, with 11 randomized controlled studies being included in the final meta-analysis. Programs were stratified into one of three categories: (1) cognitive behavioral therapy (CBT)-based interventions, (2) mindfulness-based interventions, or (3) mixed interventions, i.e., those combining CBT and mindfulness training. A meta-analysis found a moderate positive effect of resilience interventions (0.44; 95% confidence interval (95% CI): 0.23–0.64) with subgroup analysis, suggesting that CBT-based, mindfulness, and mixed interventions were the most effective. Resilience interventions based on a combination of CBT and mindfulness techniques appear to have a positive impact on individual resilience.

Since the publication of the first edition of this volume, the field has greatly progressed from good ideas to workable solutions, yet to borrow from the late poet Robert Frost, "We have promises to keep to the next generation and miles to go before we sleep."

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2 Resilience Processes in Development: Multisystem Integration Emerging from Four Waves of Research

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How do children and adolescents "make it" when their development is threatened by poverty, neglect, maltreatment, wars, disasters, violence, pandemics, oppression, racism, and discrimination? What protects them when caregiving and family functioning are disrupted by separation, substance abuse, mental illness, physical illness, or death? How do we explain the manifestations of resilience—when we observe children succeed in spite of serious challenges to their development—and put this knowledge to work for the benefit of children and society? The scientific study of resilience emerged around 1970 when a group of pioneering researchers began to notice the phenomenon of positive adaptation among subgroups of children who were considered "at risk" for developing later psychopathology (Garmezy, 1985; Rutter, 1987; Garmezy & Rutter, 1983; Werner & Smith, 1982).

The resilience research pioneers led a revolution in thinking about the origins and treatment of psychopathology (Masten & Cicchetti, 2016). The primary focus of earlier clinical research on children at high risk for psychopathology had been to observe either the consequences of adversity or the unfolding of risk processes accounting for the etiology of disorders. Research efforts were directed toward understanding pathology and deficits rather than on how problems were averted, resolved, or transcended. The field of mental health at the time was dominated by psychoanalytic theory and a disease-oriented biomedical model that located the source of illness within the individual. However, the first investigators to explore the phenomenon of resilience realized that models based primarily on predicting psychopathology were limited in scope and usefulness, didn't account for why many did not fare poorly, and provided little understanding of how good outcomes were actually achieved by those identified as "at risk." Such information was vital to the goal of intervening to improve the odds of good developmental outcomes among children at risk. One of the great contributions of the early resilience investigators was their recognition and championing of the idea that understanding positive developmental pathways in the context of adversity is fundamentally important for preventing and treating problems, particularly among children at risk for psychopathology.

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_2

The study of resilience advanced in four major waves of research (Masten & Cicchetti, 2016; Wright et al., 2013). In this chapter, we highlight the concepts and findings resulting from these waves to date, as they have shaped an emerging multisystem resilience framework for research and practice. The first wave of work yielded good descriptions of resilience phenomena, along with basic concepts and methodologies, and focused on the individual. The second wave yielded a more dynamic accounting of resilience, focused on understanding the processes that could account for the manifestations of resilience observed in the first wave, adopting a developmental systems approach to theory and research on positive adaptation in the context of adversity or risk. The third wave focused on interventions aiming to foster resilience and thereby change developmental pathways in more positive directions. The fourth wave to date has focused on understanding and integrating resilience processes across multiple levels of analysis, with growing attention to epigenetic and neurobiological processes, brain development, cultural influences, and socioecological contexts, as well as the ways that systems interact to shape development. As the fourth wave of resilience science matures, there is growing attention to multisystem theory and processes, by which interacting systems shape the development of individuals and other systems over time, and a growing call for integrating knowledge across disciplines as well as levels of study.

The First Wave: Identifying Individuals Who Manifested Resilience and Factors That Appeared to Make a Difference

Initial research in this area was dominated by a strong cultural ethos in the United States that glorified rugged individualism—that Horatio Alger ability to "pick oneself up by one's own bootstraps" and succeed solely through individual efforts. Early on, investigators as well as journalists referred to children who functioned well despite the odds as "invulnerable" (Anthony, 1974; Pines, 1975) and tended to focus on their personal traits and characteristics. Such children were thought to be impervious to stress because of their inner fortitude or character armor. As research extended across time and across types of traumas, the term "invulnerability" was replaced by more qualified, realistic, and dynamic terms such as "stress resistance" and "resilience." These concepts were thought to more appropriately capture the interplay of risk and protective processes occurring over time as individuals interacted with families and larger sociocultural influences (Masten et al., 1990; Rutter, 1987; Werner & Smith, 1982, 1992).

Key Concepts

During the first generation of research on resilience in development, these phenomena were studied in a variety of different contexts throughout the world (Glantz & Johnson, 1999; Luthar, 2006; Masten, 2014; Masten et al., 1990; Ungar, 2008). A consensus emerged on key concepts, although controversies continue to this day and there have been changes in emphasis over the years. For example, in early work, "resilience" typically referred to a pattern of positive adaptation in the context of past or present adversity. Later definitions became broader, more dynamic, and systems-oriented, in keeping with efforts to integrate this concept across levels of analysis and across disciplines (Masten, 2018; Ungar, 2018). An example of a systems-oriented definition of resilience is as follows:

> The capacity of a dynamic system to adapt successfully to challenges that threaten the function, survival, or development of the system. (Masten, 2021, p. 1)

Early on, resilience investigators recognized that resilience was an inferential concept involving two distinct kinds of judgments (Luthar & Cicchetti, 2000; Masten & Coatsworth, 1998). First, one judges that there has been a significant threat to the development or adaptation of the individual or system of interest. Second, one judges that, despite this threat or risk exposure,

the current or eventual adaptation or adjustment of the individual or system is satisfactory by some selected set of criteria.

There has been considerable confusion throughout the past four decades on the precise meaning of the many terms used by resilience researchers (Luthar et al., 2000; Masten, 2001; Rutter, 2000). Nonetheless, there is some consensus on a working vocabulary for this domain of inquiry. Table 2.1 provides a glossary of key terms. Much of the terminology defined in Table 2.1 (e.g., adversity, risk factor, and vulnerability) was already familiar from studies of psychopathology. Resilience studies, however, underscored concepts that had been omitted or underemphasized in earlier work, most particularly the concepts of assets, compensatory or promotive factors, protective factors, and competence or developmental tasks.

Resilience definitions require consideration of both threats or disturbances to a system and criteria of adjustment or function by which the successful adaptation of the system is judged. Threat concepts include risks or adverse experiences. As defined in Table 2.1, "risk" most basically signifies an "elevated probability" of a negative outcome. It is a group or population term, in that a risk factor does not identify which individual or individuals in a group considered at risk will eventually display difficulties in adaptation but rather that the group of people with this risk factor is more likely to fare poorly or less likely to do well in some regard. There is often a lack of precision regarding risk factors, related to their complex and cumulative nature (Evans et al., 2013; Obradović et al., 2012). Many broad risk indicators or "markers" encompass considerable heterogeneity in outcomes within the group. For example, children born prematurely vary in circumstances, birth weight, accompanying complications, family socioeconomic situation, access to medical care, and adequate nutrition. A closer analysis often provides clues to the processes accounting for the overall risk of the group. In the case of prematurity, knowing details about the reason for preterm delivery or whether there were additional delivery complications may not only improve prediction about outcomes but also lead to better understanding of the actual processes producing or exacerbating the risks (O'Dougherty & Wright, 1990).

It soon became apparent that risk factors rarely occur in isolation. More typically, children with high risk are exposed to multiple adversities extending over time, sometimes for very long periods of their lives (Dong et al., 2004; Finkelhor et al., 2009; Masten & Wright, 1998; Obradović et al., 2012). Outcomes generally worsen as risk factors pile up in children's lives, and, concomitantly, resilience becomes less common. Thus, it became critical to examine "cumulative risk factors" in order to more accurately predict and understand developmental outcomes (Sameroff et al., 2003). Divorce, for example, has been a commonly studied stressor, but research revealed heterogeneity in outcomes for children of divorced parents. The concept of cumulative risk helps clarify this diversity in outcome. Divorce is not a single, time-limited risk factor or stressor but is often a lengthy process of multiple stressors and life changes. The extent and duration of these stressors vary considerably from family to family and can occur before, during, and after the divorce itself. Finally, some forms of adversity are so chronic and massive that no child can be expected to be resilient until a safe and more normative environment for development is restored. Thus, in cases of catastrophic trauma, such as those resulting from war, prolonged displacement, or torture, resilience often refers to good recovery after the trauma has ended (Masten & Narayan, 2012).

Risk terminology has been refined over the years, inspired by a series of influential articles by Kraemer et al. (1997, 2001, 2002). Their work underscored the importance of distinguishing correlates of poor outcomes from risk factors that clearly predate the onset of the problem from causal risk factors that can be shown (perhaps through experimental manipulation) to contribute to the undesirable outcome of interest. This work has not only led to a greater specificity in risk terminology but also provided a conceptual framework for research with the goal of identifying causal risk factors (see decision tree in Kraemer et al. (1997)) and testing hypothesized

Table 2.1 Definitions with child and family examples of key concepts

Term	Definition	Examples
Adversity	Disturbances to the function or viability of a system; experiences that threaten adaptation or development	Poverty; child maltreatment; death of caregiver; forced migration due to war or natural disaster; discrimination
Resilience	Positive adaptation in the face of risk or adversity; capacity of a dynamic system to adapt successfully to challenges that threaten system function, survival, or development	Child exposed to family violence does well in school, has friends, behaves well, and gets along well with the teacher; earthquake survivor recovers to normal function and development
Risk	An elevated probability of an undesirable outcome	The odds of developing autism spectrum disorder (ASD) are higher in groups of people who have a biological sibling with ASD
Risk factor	A measurable characteristic in a group of individuals or their context that predicts a negative outcome on a specific outcome criterion	Premature birth; parental divorce; homelessness; parental mental illness; sexual assault
Cumulative risk	Increased overall risk due to: (a) the presence of multiple risk factors; (b) recurring risk factors; or (c) accumulating effects of ongoing adversity	Homelessness confers high cumulative risk to health and development due to a piling up of risks and adverse experiences, such as food insecurity, residential instability, unsafe neighborhoods, school mobility and dropout, poor healthcare, and unemployment
Vulnerability	Individual (or system) susceptibility to undesirable outcomes; the diathesis in diathesis-stressor models of psychopathology	A compromised immune function increases susceptibility to infectious diseases; an anxious child finds school transitions challenging; a child abused at home has difficulties negotiating conflict with peers
Proximal risk	Risk factors experienced directly by the child	Witnessing violence; associating with delinquent peers; experiencing cyberbullying
Distal risk	Risk arising from a child's ecological context but mediated through more proximal processes	High community crime rate; inaccessible healthcare; economic recession; structural racism
Asset, resource, compensatory, or promotive factor	A measurable attribute of individual, family, or broader context that predicts a positive or desirable outcome regardless of risk level	Strong cognitive abilities; competent parenting; effective schools; high socioeconomic status
Protective factor	A predictor of better outcomes *particularly* in situations of risk or adversity	Airbags in automobiles, helmets, 911 services, neonatal intensive care, health insurance, vaccines
Cumulative protection	The presence of multiple protective factors in an individual's life	A child in a poor or violent neighborhood has supportive parents, a safe home, attends a good school, volunteers as a school tutor, and has prosocial friends
Developmental tasks	Psychosocial milestones, benchmarks, or accomplishments expected of people by age in a given historical or cultural context, often serving as the criteria for judging how well a person is doing in life	Walking, talking, learning to read, developing friendships, following rules, graduating from high school, taking care of one's children
Psychosocial competence	Effectiveness in or capacity for using personal and contextual resources to accomplish age-appropriate developmental tasks	Active engagement of intellectual ability and positive relationships with teachers result in school success

mediating and moderating influences through experimental intervention designs (Kraemer et al., 2002).

Over the past two decades, a retrospective measure of cumulative risks typically reported by adults about their childhood history has surged in popularity. The Adverse Childhood Experience (ACE) scale was developed to index childhood adversities linked to adult health problems, particularly those stemming from childhood maltreatment and exposure to household dysfunction (Felitti et al., 1998). The Centers for Disease Control and many US states subsequently adopted this brief, low-burden scale to screen for the prevalence of ACEs and monitor how these exposures were related to health and well-being over the life course. Interest also has grown in documenting the intergenerational transmission of cumulative adversities indexed by the ACE scale and similar measures (Narayan et al., 2021).

The second key aspect of judging resilience in the lives of individuals involves decisions about how well a person is doing in life or, in other words, the quality of their adaptation or development. A variety of criteria have been utilized to judge positive adaptation in the literature, including criteria focused on the absence of pathology, successes in age-salient developmental tasks, subjective well-being, or all of these (see Table 2.1 for examples). In the developmental literature, many investigators have defined good outcomes on the basis of the child's observed or reported "competence" in meeting the expectations for children of a given age and gender in their particular sociocultural and historical context. Competence is typically assessed by how well the child has met, and continues to meet, the expectations explicitly or implicitly set in the society for children as they grow up. This is often referred to as the child's track record of success in meeting "developmental tasks," age-related standards of behavior across a variety of domains, such as physical, emotional, cognitive, moral, behavioral, and social areas of achievement or function (McCormick et al., 2011). Although these may vary from culture to culture, they typically refer to broad tasks that guide the development and socialization of children (see Table 2.1 for examples). Children judged to show resilience have typically negotiated these developmental tasks with reasonable success despite exposure to significant risks and adversities.

During the first wave of research, controversies emerged about how to define resilience and many of these debates concerned the criteria for adaptation by which resilience would be judged (see Luthar et al. (2000) or Masten and Cicchetti (2016) for overviews of these debates). There was debate, for example, about whether a child who was adapting well in terms of observable social behavior (academic achievement, work, relationships, etc.) but suffering from internal symptoms of distress was showing resilience. There were debates about not only the "inside" versus "outside" picture on adaptation but also on "how many" domains should be considered and "when" to assess "outcome." We would argue, for example, that manifesting resilience does not necessarily mean that one is unaffected or untouched by the trauma one has endured nor does it mean that one always functions well (Wright & Masten, 2015). A person may show resilience at one point in life and not at another or in one domain and not another (e.g., work competence but not relational competence). Such debates linger in the literature (Masten & Cicchetti, 2016). Nonetheless, it is clear that the criteria by which resilience is judged in a population and how comprehensively it is assessed across domains of functioning will impact the prevalence of resilience in high-risk groups and the nature of the processes identified as relevant to resilience.

In recent years, this issue has re-emerged in the form of "costs" of resilience at a biological level, reflected in allostatic load (McEwen, 2020), with respect to achieving developmental tasks when enormous effort is required to overcome very high levels of adversity, particularly in the context of structural racism and oppression or ongoing war and extreme poverty (Brody et al., 2020; Chen et al., 2021; Panter-Brick et al., 2009). The concept of "John Henryism" (James, 1994) refers to the phenomenon of internal wear and tear in the context of external success. Investigators have shown that positive ethnic/

racial identity and racial socialization by families can play important protective roles in the development of children and youth coping with marginalization and discrimination (Anderson & Stevenson, 2019; Huguley et al., 2019; Marks et al., 2020).

One of the most important domains of study that unfolded as resilience research matured concerns the linkage among multiple domains of adaptation, positive and negative, and what this may mean for understanding resilience and psychopathology. Internal and external symptoms are related over time, as is adaptive functioning across different domains of competence and symptoms (Masten et al., 2006). Symptoms can contribute to problems negotiating developmental tasks, and failure in such tasks can lead to symptoms, with snowballing consequences that have been referred to as "developmental cascades" (Masten & Cicchetti, 2010). In developmental theory, good functioning in developmental tasks provides a platform on which future success is built. It is becoming more evident that promoting such competence may be crucial to preventing some kinds of problem outcomes among high-risk populations of children (see the section "The Third Wave: Intervening to Foster Resilience").

The first wave of resilience studies focused on identifying the correlates or predictors of positive adaptation against a background of risk or adversity. Thus, these investigators were also interested in assessing individual or situational differences that might account for differential outcomes among children sharing similar adversities or risk factors. Two major kinds of correlates were considered: (1) positive factors associated with better adaptation at all levels of risks, including high risk levels, which were often termed *assets, resources,* or *compensatory factors* (e.g., Garmezy et al., 1984) or *promotive factors* (Sameroff, 1999), and (2) factors that seemed to have particular importance for positive adaptation at high levels of risk or adversity, which were typically termed *protective* factors (e.g., Rutter, 1979). The key difference in the two types of concepts was in whether the processes underlying a factor played a special role under hazardous conditions, when risk or adversity levels were high.

When a positive predictor is designated a *protective factor,* some type of shielding from the effects of risk or adversity is implied. Thus, protective factors represent attributes or processes that particularly matter or only matter when risk or adversity is high. For example, airbags in automobiles or antibodies to specific disease agents are viewed as protective factors because they operate to protect individuals from the dangers of accidents or infections, respectively. Protective factors "moderate" the impact of adversity on adaptation. The examples of airbags and antibodies are causal protective factors in that they provide demonstrable and explainable protection to a living system in the course of an unfolding experience. Similarly, a parent who jumps in front of a child to take the brunt of a physical assault clearly is protective in the sense of shielding the child from worse harm. Yet, many presumed protective factors in studies of resilience are far less easy to specify.

It has proven to be quite difficult to distinguish promotive factors (assets) from protective factors in human development because many of the most important correlates of good adaptation are themselves complex systems or relationships that serve multiple functions. Parents and other caregivers, who can be viewed as "Mother Nature's protective factor," clearly comprise a protective system of immense complexity for child development. One finding that has emerged and been reconfirmed time and time again is that resilient adaptation depends on positive family (or surrogate family) relationships. For very young children, early relationships with caregivers provide the foundation for developing secure attachments to others (Bowlby, 1988; Sroufe et al., 1999). If this early infant–caregiver relationship is warm, attentive, and responsive, the child develops confidence that his or her needs will be met, learns positive ways of relating to others, becomes more able to regulate emotions, and develops feelings that the self is worthy and valued. Thus, a responsive, caring, and competent caregiver is a very powerful asset for fostering a child's healthy growth and development in any context. In the

face of significant adversity, such parents also know how to respond effectively to threat and are able to adaptively shift their responses to provide protective modes of behavior. Similarly, the human brain is capable of many functions and responds to life situations in a multitude of adaptive ways. Thus, it is not surprising to learn that "intelligence quotient (IQ)" scores and other assessments of general cognitive capabilities that measure general abilities for adaptive problem-solving predict a multitude of good outcomes regardless of risk or adversity level (meeting the definition of asset) and also have been shown to function as moderators of risk or adversity, mattering even more under threatening circumstances (Masten et al., 1999).

There have been considerable debates over the years about labeling a continuous variable that correlates with adaptation as a risk factor or an asset or compensatory factor, when it could be viewed as either or both. Often, these constructs are composed of bipolar opposites that exist on the same continuum. That is, the attribute or variable in question is associated with poor adaptation at one end of the range and good adaptation at the other end. For example, when poverty is present, it is identified as a risk factor for negative outcome, whereas a more advantaged economic status is observed to be a compensatory or promotive factor associated with positive outcomes. Eventually, we may learn "where the action is" for a particular attribute or factor, but in many cases, we may learn once again that adaptation arises from complex processes not easily labeled. Moreover, many of the broad indices of risk, such as poverty or homelessness or maltreatment, are marker variables for many additional risk factors and adversities that co-occur: when one is present, there usually is a history of high cumulative risk (Masten & Narayan, 2012; Sameroff et al., 2003). Certainly, it is conceivable to think about a pure "risk factor" that has a clear negative influence on development when it occurs (e.g., foot amputated in a random accident) but has no influence when it does not occur. It is also conceivable to think about pure "asset" factors that have a positive influence when they occur (e.g., musical talent) but have little impact on development in their absence. However, most factors currently studied as contributors to adaptation or good versus poor development reflect continuously distributed variables that may operate in many ways at many levels (e.g., attentional skills ranging from focused to multitasking to inattention or emotionality including calm states, excitement, and extreme dysregulation).

Developmental Perspectives

Resilience studies have revealed that children might have different vulnerabilities and protective systems at different times in the course of their development (Masten et al., 1990; Wright & Masten, 1997). Infants, because of their total dependence on caregivers, are highly vulnerable to the consequences of loss of their parents or mistreatment by caregivers. Yet, infants are more protected from experiencing the full impact associated with war or natural disasters because they lack an understanding of what is happening. As children mature, their school milieu and neighborhood can increasingly contribute to their exposure to traumatic events. Older children engage in more unsupervised activities, and their involvement with peers can be protective or risky. Thus, although older children are much more capable of coping in this world on their own, their independence from the protection of their caregivers can also contribute to their trauma exposure. Adolescents are also vulnerable to a different type of loss or betrayal, such as loss or devastation concerning friends, faith, schools, and governments. They understand what these losses mean for their future, a realization well beyond the understanding of young children (Masten & Narayan, 2012).

The possibility of "sensitive periods" in human development, when experiences (positive or negative, present or absent) might have more influence on development, was also recognized quite early in the resilience literature, particularly with regard to the timing of adverse experiences, including nutritional deficits, caregiving deprivation, exposure to violence, or direct maltreatment (e.g., Boyce et al., 2021;

Egeland et al., 1993; Narayan et al., 2013). However, researchers also recognized the importance of intervention timing in promoting resilience (e.g., Luthar & Cicchetti, 2000; Ramey & Ramey, 1998). Developmental theories of change underpinning the strategic timing of intervention and prevention efforts often were based on one of two fundamental ideas: "windows of opportunity" when developing systems were more malleable to change and "developmental cascades" (Masten, 2015). Windows of opportunity for enduring change in the life course have been studied in relation to neural plasticity (Boyce et al., 2021; Nelson, 1999) and with respect to contextual opportunities that trigger positive changes, such as adoption, entering a high-quality early childhood program, or moving from a conflict zone to a peaceful society with more support factors for child development. Similarly, the perinatal period has been recognized as an important window of opportunity to promote resilience in pregnant women as well as the fetus, through identifying risk and intervening to prevent intergeneration transmission of stress, trauma, and psychopathology (Davis & Narayan, 2020).

The concept of developmental cascades generally refers to the spreading effects of changes in one aspect or level of functioning in dynamic systems to other domains and levels, resulting from the many interactions of biological and psychosocial systems that shape human development (Masten & Cicchetti, 2010). Preventive interventions for children in high-risk groups often aimed at promoting positive cascades, given evidence that engaging successfully in developmental tasks in one period of development sets the stage for future success in a cumulative manner. Interventions alternatively aimed at preventing or interrupting the cascading effects of negative cascades, whereby problems in adjustment were likely to grow worse over time or undermine success in the important new domains of psychosocial adjustment.

Resilience Correlates

The first wave of research on resilience included both person-focused and variable-focused approaches. Person-focused approaches identified resilient individuals in an effort to determine how they differed from other individuals facing similar adversities or risks who were not faring as well. Variable-focused approaches, in contrast, examined the linkages among characteristics of individuals and their environments that contributed to good outcomes when risk or adversity was high. This method focused on variables that cut across large, heterogeneous samples and drew heavily on multivariate statistics. Across many studies from each of these perspectives and across widely divergent methodologies, the first wave of research revealed a striking degree of consistency in findings, implicating a set of broad correlates of better adaptation among children at risk for diverse reasons. This consistency was noted early by Garmezy (1985) and has been corroborated repeatedly over the years (Ungar & Theron, 2020). Table 2.2 provides examples of widely observed resilience factors.

Masten (2001, 2007) has referred to these resilience factors as "the short list" and argued that these commonly observed resilience factors reflect fundamental adaptive systems supporting human development, particularly in the context of adversity. During the fourth wave, a multisystem perspective on the short list has emerged, discussed further below.

As investigators began to consider the *processes* that might account for resilience factors observed across diverse studies, the second wave of resilience work began. Although the first wave produced many ideas, constructs, methods, and findings about the correlates of resilience (as well as many controversies), it was soon evident that more sophisticated models were needed to consider the complex processes that were implicated by the initial findings (see Glantz and Johnson (1999)).

Table 2.2 Examples of resilience factors for children in contexts of elevated risk or adversity

In the child
Sense of belonging and perceived social support
Cognitive capabilities, problem-solving skills, executive functions
Good and predictable sleep quality
Social skills and ability to form and maintain positive peer relationships
Effective emotional and behavioral regulation strategies and coping skills
Positive views of self (identity, self-confidence, self-efficacy)
Positive outlook on life (hopefulness)
Purpose, faith, a sense of meaning in life
Other attributes valued by the society and self (e.g., talents, sense of humor)
In the family
Stable and supportive home environment
Close relationship with sensitive and responsive caregiver(s)
Harmonious relationships among family members, family cohesion
Authoritative parenting (high warmth, structure, and expectations)
Supportive connections with extended family members
Positive and predictable family routines and traditions
Parental involvement in child's education
Parents who have attributes listed above in the child section
Socioeconomic advantages and resources
Family social support
Positive ethnic/racial identity and racial socialization
Spiritual or religious beliefs, affiliations, and activities
In the community
Positive neighborhood context
Safe neighborhoods with low levels of community violence and crime
Clean air and water
Affordable housing
Access to high-quality childcare
Access to green spaces, recreational centers, and libraries
Effective schools
Competent and reliable teachers
Strong and fair leadership
Positive school climate
Sense of collective community
Connections to caring adult mentors and prosocial peers
High-quality reciprocal friendships
Stable employment opportunities for adults, parents, and young people
Access to affordable and effective health-care services
Access to trustworthy emergency services (police, fire, medical)
Ethical and respected political or community leaders
In the culture or society
Protective child policies (e.g., for health, welfare, childcare, labor, education)
Healthy national economy
Peaceful political environment with national security and protection from violence
Social justice, low levels of discrimination, and perceived equity of opportunities
Nondiscriminatory laws and equal protection under the law
Traditions and celebrations that convey meaning, cohesion, belonging
Support for cultural belief systems that convey meaning and purpose

The Second Wave: Embedding Resilience in Developmental and Ecological Systems, with a Focus on Processes of Resilience

Early studies delineated a number of important *factors* that were associated with later resilience but did not provide an integrative understanding of the *processes* leading to resilience in development. As noted in a review of the first wave of work, "it is the task of future investigators to portray resilience in research questions that shift from the 'what' questions of description to the 'how' questions of underlying processes that influence adaptation" (Masten et al., 1990, p. 439). Subsequent research and theories focused more specifically on understanding the complex, systemic interactions that shape both pathological and positive outcomes, emphasizing resilience as a phenomenon arising from many processes (Cicchetti, 2010; Egeland et al., 1993; Yates et al., 2003; Masten, 1999, 2007). Wyman, for example, described resilience in the following manner: "Resilience reflects a diverse set of processes that alter children's transactions with adverse life conditions to reduce negative effects and promote mastery of normative developmental tasks" (Wyman, 2003, p. 308).

The second wave of resilience work reflected a broader transformation occurring in the sciences concerned with normative and pathological development that accompanied the emergence of *developmental psychopathology* (Cicchetti, 1990, 2006; Masten, 2006, 2007; Sroufe & Rutter, 1984). Systems thinking began to infuse general developmental theory as well as resilience theory and developmental psychopathology, yielding more dynamic models of change and paying far more attention to the interaction of multiple systems in development (Masten et al., 2021; Masten & Kalstabakken, 2018; Griffiths & Tabery, 2013). Initially, this sea change in developmental sciences led to greater emphasis on the role of relationships and systems beyond the family and attempted to consider and integrate biological, social, and cultural processes into models and studies of resilience (Charney, 2004; Cicchetti, 2010; Cicchetti & Curtis, 2007; Luthar, 2006; Masten, 2001, 2007). During the fourth wave, discussed further below, dynamic multisystem models of resilience surged. As resilience science integrated systems thinking and processes, investigators turned their attention to delineating the processes that could account for the descriptive findings that characterized the first wave of studies. The early pioneers certainly recognized the complex, dynamic nature of naturally occurring resilience (see Masten et al. (1990) for this history), but the basic descriptive data of the initial wave of studies were a necessary empirical first step before resilience research could begin to address the complexity of processes that might be involved.

The fact that many of the promotive and protective factors that were identified in the first wave appeared to facilitate development in both high- and low-risk conditions suggested the importance of fundamental, universal human adaptation systems that keep development on course and also facilitate recovery from adversity (Masten, 2001, 2007). Examples of these adaptive systems include the development of attachment relationships; moral and ethical development; belief systems that give life meaning and purpose; self-regulatory systems for modulating emotion, arousal, and behavior; mastery and motivational systems; and neurobehavioral and information processing systems. Other systems involve the broader cultural context and consist of extended family networks, religious organizations, and other social systems in the society that offer adaptive advantages. These adaptive systems are versatile and responsive to a wide range of challenges, both normative and non-normative. If the major threats to children's adaptation are stressors that undermine the development of these basic protective systems, then it follows that children's ability to recover and to be resilient will be highly dependent on these systems being restored (Masten & Narayan, 2012).

The influence of developmental systems theory is also evident in the multicausal and dynamic models of resilience characteristic of the second wave of work. Second wave theory and research often encompass the language of developmental

systems theory (DST), with concepts such as *equifinality* and *multifinality*, developmental *pathways* and *trajectories* that capture the dynamic, interactional, reciprocal, multicausal, and multilevel models typical of DST (Bronfenbrenner, 1979; Cicchetti & Rogosch, 1996; Ford & Lerner, 1992). The focus of many second-wave studies was on the processes that may lead to resilience. Studies attempted to explore moderating processes that would explain protective effects that seem to work only for some people under some conditions as well as mediating processes that explain how risk or protection actually works to undermine or enhance adaptation.

An ecological, transactional systems approach to understanding resilience marked a dramatic shift from a traditional focus on the individual to a broader focus encompassing family and community relational networks (Wright et al., 2013). Developmental outcomes from this perspective result from complex patterns of interaction and transaction. Second-wave research studies incorporated design and analytical techniques and strategies that allowed for detection of such multilevel influences. This dynamic approach emphasized the need to formulate different research questions in order to understand the process of positive or negative adaptation following stress. Rather than asking questions about why a child is resilient, questions were asked about bidirectional connections between the child and his or her context. These child–context relationships and interactions become the focus of study. This approach fostered research designs that more adequately reflected individual differences in developmental pathways and contextual variation within families, communities, societies, cultures, and historical periods. Second-wave research studies also provided a more complex assessment of family and environmental influences. Parents do not respond in identical ways to each of their own children nor is the family environment experienced in an identical way by different children in the family (Plomin et al., 2001). Even when there is significant conflict and disharmony within a family, the negativity expressed by the parents may focus more on one child than on another and the children themselves may be differentially reactive to and affected by such conflict. A transactional model of influence captures this dynamic pattern and highlights the importance of examining reciprocal patterns of interaction that shape development over time (Sameroff, 2000).

Finally, the impact of the social context on the child is mediated in part through the child's perception and interpretation of his or her experiences (Boyce et al., 1998; Sroufe, 2020), and some investigators have focused on such internal processes (Compas et al., 2001; Zimmer-Gembeck & Skinner, 2016). Although important, such assessments are inherently difficult to obtain, particularly in very young children who lack the verbal skills and conceptual framework needed to describe the impact of their traumatic experiences. There are likely to be significant changes in the meaning the child assigns to different experiences at different ages and thus the meaning and the impact of a traumatic experience can change considerably over time. For example, some victims of childhood sexual abuse are so young at the time of the initial abuse that they do not understand the full meaning of the perpetrator's actions. However, when they become older, the extent of betrayal and the shame and humiliation they experience can intensify and significantly enhance the stressfulness of the experience (Lieberman & Van Horn, 2009; Wright et al., 2007).

Contextual Specificity of Protective Processes

With closer attention to processes that might account for resilience, second-wave investigators also began to note that protective processes could be contextually specific. This research highlighted the importance of paying careful attention to the ways in which specific groups exposed to diverse stressors differentially adapt and also to exploring which factors were protective for which individuals in these contexts. Cicchetti and Rogosch (1997), in their follow-up study of maltreated children, provided intriguing evidence in

this regard. Whereas many studies of high-risk children have found that close interpersonal relationships and social support predict better long-term outcomes, Cicchetti and Rogosch found that the maltreated children in their study who displayed positive long-term adjustment actually drew on *fewer* relational resources and displayed more restrictive emotional self-regulation styles than did comparison controls who were not maltreated. In a similar vein, Werner and Smith (1992) and Wyman (2003) found that interpersonal and affective distancing and low expectations for parental involvement were related to later resilience and not poor adjustment. Expanding upon this observation, Werner and Smith reported that, later in life, many of their resilient adults detached themselves from parents and siblings, perhaps to prevent being overwhelmed by the emotional problems of their families. These results highlight the distinctive challenges faced by children who come from highly dysfunctional families and emphasize the importance of refraining from making premature conclusions about what constitutes positive coping.

The Rochester Child Resilience Project (Wyman, 2003; Wyman et al., 1993) shed additional light on the issues of context-specific adaptation and the processes underlying resilience. In their follow-up study of urban children growing up in the context of adversity (high rates of poverty, violence, family discord, and substance use problems), factors considered to be "protective" differed in their effect, depending on the additional characteristics of the child and the context. For example, although positive future expectations and perceptions of personal competence often appear to be protective, this positive effect was only evident among participants in their study when these perceptions were realistic. If an adolescent had an unrealistic perception of his or her competence, these positive perceptions were associated with an elevated risk of serious conduct problems. Furthermore, in their sample, positive future expectations were actually associated with academic disengagement among those participants who also displayed conduct problems. Overall, these findings suggest that individual child characteristics such as high self-esteem or positive future expectations may be associated with resilience for some children but not for others.

Stability and Change in Resilient Adaptation

As resilience research developed, more nuanced perspectives emerged. It was clear that the same child could be diagnosed as "resilient" at one point in development but not another, that a child might be adaptive in one context but not another at the same point in development, and that children were often adaptive in some aspects of their lives but not in others. Second-wave research also gave more consideration to multiple levels of context interacting to produce changing adjustment over time. Complex models of resilience focused on healthy versus maladaptive *pathways* of development in the lives of children exposed to adversity over time, which could capture fluctuations in adaptive functioning over time and allow for varying patterns for different indicators of adaptive behavior. Pathway models, which have a long history in embryology and developmental psychopathology, draw attention to turning points in development and also to the holistic patterns of development and adjustment that can emerge from complex interactions of a changing person and dynamic contexts (Masten & Cicchetti, 2016; Sroufe, 2020).

Initially, the discussion of developmental pathways drew primarily from case examples and composite data obtained from longitudinal studies (e.g., Cairns & Cairns, 1994; Furstenberg et al., 1987; Hawkins et al., 2003; Masten et al., 2004, 2006; Rutter & Quinton, 1984; Sampson & Laub, 1993; Werner & Smith, 1992, 2001). Longitudinal data allowed for studies of changes within individuals over time rather than focusing on between-individual analyses. Such data speak to the enduring capacity for change that exists throughout development and also provide valuable insights into the possible processes that may operate to produce either stability or change in functioning. For example, studies identifying and

attempting to account for desistance trajectories in delinquency and criminal behavior based on longitudinal data (e.g., Hawkins et al., 2003; Mulvey et al., 2010; Sampson & Laub, 1993) have suggested that complex interactions of youth with parents, peers, and other adults in the home, neighborhood, schools, and workplace contributed to positive and negative trajectories across the transitions from childhood to adolescence and early adulthood. Such studies also suggested that there were critical turning points in response to specific developmental challenges (such as entering school or the transition to adolescence) that may shape the nature and course of future adaptation.

Three studies that followed high-risk samples well into adulthood provide encouraging information about the potential for recovery from adverse experiences in childhood. Werner and Smith (1992) reported that *the majority* of their high-risk youth with serious coping problems in adolescence had recovered by the time they reached their 30s, and this was particularly true for the women in their sample. Only one in six troubled high-risk teens became a troubled adult. Furstenberg et al. (1987) found a similar pattern of later recovery among their sample of black adolescent teenage mothers. Similarly, among antisocial youth, considerable desistance is reported over time so that by mid-life, the majority of antisocial youth have desisted (Sampson & Laub, 1993). Across all three studies, strong ties to work and to one's spouse were associated with eventual positive adaptation and strongly implicated in "turn-around" cases. Activities that facilitated these ends, such as developing personal resources, obtaining further education, marrying an accepting and supportive spouse, joining the armed forces to gain vocational skills, and subsequent fertility control and family planning, were critical components promoting positive within-individual changes over time. For other high-risk individuals, social support from extended family and friendship networks or joining a church facilitated positive changes.

Follow-up studies of children who experience severe adversity suggest a remarkable capacity for developmental recovery when normative rearing conditions are restored, including studies of institutional rearing characterized by deprivation (Van IJzendoorn et al., 2020b), rescued child soldiers (Betancourt et al., 2013), and displacement due to wars and disasters (Masten et al., 2015). These longitudinal studies often reveal turning points in the lives of those exposed to severe adversity with lasting alterations in an individual's developmental pathway often occurring in conjunction with substantial positive changes in living conditions or adjustment, brought about by adoption, migration, education, rescue, securing stable employment, successful marriage, engagement in therapy, and similar improvements. Laub et al. (1998) described these phenomena in terms of "knifing off" in the long-term follow-up of the Glueck and Glueck cohort of antisocial youth, and there are many anecdotal accounts of such dramatic turns in the life course.

The impressive recovery patterns observed in many individuals later in life, however, do not mean that all children will recover. A significant percentage of the children from the Romanian orphanages characterized by severe deprivation, as well as from the refugee studies, continued to suffer from serious and chronic emotional, behavioral, and/or cognitive problems that appear to be the lingering effects of their experiences (Gunnar, 2001; Masten & Hubbard, 2003; Rutter & the ERA team, 1998; Wright et al., 1997; Zeanah et al., 2006). Longitudinal studies by Werner and Smith (1992) and Sampson and Laub (1993), Laub and Sampson (2002) revealed that if there were several problem areas at an early age, such as school failure, serious mental health problems, and repeated problems with delinquency, then the pattern of maladjustment and deviant behavior was more stable. This finding sheds light on a pattern replicated by other longitudinal studies that there is stronger support for developmental continuity of poor adaptation when multiple areas of competence have been compromised (Sroufe, 2020). Compounding or cascading problems may explain why interventions become more challenging as individuals advance further along pathways of maladaptation or problems show cascading effects, spreading across domains (Masten & Narayan, 2012).

Another important consideration is the possibility that the effects of early adversity might not be evident immediately, but might emerge much later in development (a kind of "sleeper effect"). Some types of early adversity, such as living with a depressed mother and maltreatment, might impair the child's later ability to function successfully in intimate family roles. For example, survivors of child sexual abuse and other forms of complex trauma can display a wide range of later interpersonal problems, including problems with intimate partner relationships, disturbed sexual functioning, and difficulties in parenting (DiLillo, 2001; Pratchett & Yehuda, 2011; Wright et al., 2012). Experiences of child maltreatment predict elevated risk, but, nonetheless, there is considerable evidence of resilience among adult survivors of child maltreatment (Cicchetti, 2013; Ioannidis et al., 2020; Wright & Allbaugh, 2017).

Understanding resilience in terms of processes that alter children's transactions with adverse life conditions or their aftermath, mitigating negative effects of such experiences, and fostering positive adjustment also avoids the type of damaging labeling that sometimes occurs when resilience is referred to as an individual outcome. For children who experience adversity, particularly severe and long-lasting trauma, one would expect there to be short-term and long-term effects of some kind, varying in terms of differences in developmental timing, the nature of the adversity, the extent of positive early experiences and resources, historical and cultural context, and individual differences in sensitivity, resources, and resilience capacity available at any given time, resulting in ever-changing functioning over time (Masten et al., 2015; Narayan et al., 2021).

There are potentially damaging consequences of viewing resilience as an individual *trait,* as noted by many resilience scholars over the years (Luthar, 2006; Masten, 2014; Panter-Brick & Leckman, 2013; Rutter, 1987). Foremost among these is the tendency to view those children who do not adapt successfully as somehow lacking the "right stuff" and as personally to blame for not being able to surmount the obstacles they have faced. This focus minimizes the overwhelming social stressors and chronic adversities that many children face and also underplays the extensive role of context in individual resilience. Because adaptation is embedded within a context of multiple systems of interactions, including the family, school, neighborhood, community, and culture, a child's resilience depends on other people and multiple systems of influence. The processes that foster resilience or vulnerability need to be understood within this holistic context. Children who do not "make it" often lack the basic support, protection, and respect needed for successful development, whereas children who succeed typically have sufficient external support to continue forward. The same forces that may constrain the child's development—poverty, discrimination, lack of opportunities, inadequate medical care, or exposure to violence—also often impact and constrain the entire family. Economically impoverished families, or parents ravaged by their own struggles with alcoholism, drug addiction, or mental illness, are often poorly equipped to provide the necessary resources and basic protections their children need. All individuals need the support and assistance of the society in which they live. The degree of success one has in surmounting these obstacles is a complex combination of personal strengths and vulnerabilities as well as ongoing transactions with one's family and community networks.

Cultural Influences on Resilience

Another critical component in understanding the processes in resilience is the role of culture. Just as biological evolution has equipped human individuals with many adaptive systems, cultural evolution has produced a host of protective systems. Protective factors are often rooted in culture. Cultural traditions, religious rituals and ceremonies, and community support services undoubtedly provide a wide variety of protective functions, though these have not been studied as extensively in resilience research. Moreover, there may well be culturally specific traditions, beliefs, or support systems that function to protect individuals, families, and community func-

tioning in the context of adversity within those cultures. Specific healing, blessing, or purification ceremonies, such as those found among Indigenous American Indian tribal cultures (Gone, 2009; LaFromboise et al., 2006a, b), as well as in many cultures and religions around the world (Crawford et al., 2006), may serve to counteract or ameliorate the impact of devastating experiences among people in a culture. Similarly, among minoritized groups in society, factors such as strength of ethnic identity, competence and comfort in relating to members of different groups, and racial socialization are particularly important in dealing with challenges that arise due to experiences of oppression and discrimination within the context in which they live (Szalacha et al., 2003; Wright & Littleford, 2002). Until recently, there was surprisingly limited systematic investigation of culturally based protective processes (Luthar, 2006; Masten & Wright, 2010). The movement away from an individually based conceptualization of resilience and toward a contextually situated framework has been a welcome one from the perspective of many cross-cultural researchers (Aponte, 1994; Boyd-Franklin & Bry, 2000; Hill, 1999; Theron et al., 2015). Whereas some of the factors and processes that have been identified as fostering resilience focus on individual functioning (such as good cognitive skills, socioemotional sensitivity, ability to self-regulate), the shape and function of these processes may be culturally influenced or may interact with cultural demands and expectations in ways that are poorly understood. Moreover, many other factors have been identified within the collective network of the family and the community. Recently, efforts have begun to index positive childhood experiences echoing the early "short list" of resilience correlates that may be efficiently tabulated to assess adults' and parents' early-life positive experiences, in addition to the positive experiences of current and future generations of children (Jefferies et al., 2019; Narayan et al., 2018). As the study of resilience continues, it will be critical to explore the extent to which factors found to promote resilience in one group are replicated across cultural groups and also how the same factor found across multiple groups may function differently in different cultural contexts (Panter-Brick, 2015). For example, for various cultural/ethnic groups, there can be a great deal of difference in the relative importance placed on individualism, collectivism, and familism, and these dimensions might mediate resilience in different ways for different groups (Gaines et al., 1997; Kim et al., 1994). Intervention efforts are likely to be enhanced by deeper consideration of these and of other cultural dimensions.

The Third Wave: Intervening to Foster Resilience

From inception, a compelling rationale for the systematic study of naturally occurring resilience was to inform practice, prevention, and policy efforts directed toward *building resilience* when it was not likely to occur naturally. The second wave focused on a better understanding of mediating and moderating processes that might explain the links between adversity and developmental competence, as an intermediate step toward the ultimate goal of intervening to promote resilience and positive development. Research on such processes continues to be important. However, using lessons from the first two waves, investigators of the third wave began to translate the basic science of resilience that was emerging into actions intended to promote resilience. These investigators recognized that experiments to promote positive adaptation and prevent problems among individuals at high risk for developing problems represented a powerful strategy for testing resilience theory. They focused their hypotheses on testing adaptive processes that were targeted in the theory or logic models of experimental interventions. Initially, this work took the form of theory-driven intervention designs, and subsequently, with growing frequency, third-wave research has taken the form of experiments with randomized control groups or quasi-experimental comparison groups to test explicit models of change. Such experiments represent the "gold standard" of evidence about change processes.

Historically, the third wave represented a confluence of goals, models, and methods from prevention science and studies of naturally occurring resilience (Cicchetti et al., 2000; Coie et al., 1993; Cowen & Durlak, 2000; Masten, 2007; Masten & Coatsworth, 1998; Weissberg et al., 2003; Yoshikawa, 1994). Multifaceted intervention studies designed to prevent or reduce risky behaviors, delinquency, and other problems in children (e.g., FAST Track or the Seattle Social Development Project) and also early childhood interventions developed to improve the odds of children growing up in poverty or disadvantage (e.g., Abecedarian, Head Start, Perry Preschool Project, Chicago Longitudinal Study) encompassed multiple strategies designed to promote success in developmental tasks at the same time that they reduced risk for problem behaviors (Ramey & Ramey, 1998; Weissberg & Greenberg, 1998; Reynolds & Ou, 2003). As the data on assets and promotive and protective factors began to accumulate in natural resilience studies, data were also mounting in prevention science based on randomized clinical trials (RCTs). These RCTs demonstrated that promoting competence was a key element of programs that worked, and the mediators and moderators of change bore a striking resemblance to the processes implicated by the "short list" in resilience research (Cicchetti et al., 2000; Luthar & Cicchetti, 2000; Masten, 2001, 2007; Masten et al., 2006; Masten & Coatsworth, 1998; Reynolds & Ou, 2003).

Resilience research had the goal of informing intervention from the outset. Moreover, with children in urgent need of help, practitioners could not wait for definitive evidence before using the best evidence available at the time to nurture resilience or recovery among children and families who were in the midst of suffering from the effects of adversity. Thus, as research models and knowledge accumulated, resilience-informed interventions emerged in parallel (Masten, 2011). Research on resilience had two major and transformative effects on interventions for children. One change was very general in the form of a profound shift away from deficit-focused models of intervention to models that included a focus on goals, strategies, and measures that assessed strengths and resources and examined promotive and protective processes. Risks and vulnerability processes remained important, but there was a new emphasis on strength-based models and strategies. Resilience-informed frameworks for practice and policy emerged in clinical psychology and psychiatry, education, school psychology and counseling, social work and child welfare reform, pediatric care, disaster preparation and response, family therapy, positive youth development, and humanitarian interventions for children, among other domains of helping professions (e.g., Ager, 2013; Galassi & Akos, 2007; Cicchetti et al., 2000; Lerner, 2017; Lundberg & Wuermli, 2012; Masten, 2021; Nation et al., 2003; Walsh, 2016). In the prevention science field, intervention models routinely delineated protective processes as targets to promote resilient development (e.g., McCLain et al., 2010; Patterson et al., 2010; Weissberg et al., 2003; Wyman, 2003; Wyman et al., 2000). Intervening to alter the life course of a child potentially at risk for psychopathology or other problems, whether by reducing risk or adversity exposure, boosting resources, nurturing relationships, or mobilizing other protective systems, in and of itself, can be viewed as a protective process.

Strategic timing of intervention also holds great interest for third-wave research because evidence suggested that there are windows of opportunity for changing the course of development, when systems may be more malleable or when there is a higher likelihood of potentiating a positive cascade. Timing an intervention well may lead to more lasting effects, broader effects, and/or higher returns on investment (Heckman, 2006; Masten et al., 2009; Masten & Cicchetti, 2010; Reynolds & Temple, 2006; Shonkoff et al., 2009). For example, during a developmental transition or turning point, targeted interventions can be critically important in activating developmental cascades (i.e., progressive effects) that enhance multiple domains of functioning or in deterring negative cascades of maladaptive behavior that could undermine adjustment (Masten et al., 2006; Masten & Cicchetti, 2010). For example, the long-term effects of the Parent Management Training-Oregon (PMTO) model to

promote parents' positive involvement and deter coercive aggression included cascading pathways of adaptive development for both parents and children. A follow-up study revealed a higher standard of living and healthier social interactions 9 years after the intervention (Patterson et al., 2010). As another example, the perinatal period is a key opportunity to intervene and bolster promotive and protective factors, with lasting positive effects on maternal adjustment and well-being as well as on fetal and infant health and development (Davis & Narayan, 2020).

Experimental intervention designs, as noted above, provide powerful testing of hypotheses about resilience processes, particularly when the process of change is specified (e.g., parenting or attributional style), the intervention is tailored to specific needs and targets changes in this process, and the change processes affect subsequent change in the targeted behavior of an individual or a system. For example, executive functioning skills consistently predict better school achievement among young children experiencing homelessness (Masten et al., 2012; Obradović, 2010) and high-quality parenting appears to buffer such children against the effects of adversity (Herbers et al., 2011, 2014). These studies emphasize the need to promote competence as well as to reduce risks. Boosting fundamental skills for learning and school success and nurturing parent–child relationships are promising pathways to adaptive development for young, disadvantaged children (Diamond et al., 2007; Masten & Palmer, 2019; Zelazo, 2020).

Kraemer et al. (2002) provided an illustration of how experimental intervention designs can test such mediating and moderating effects, with the intervention serving as the hoped-for moderator of the hypothesized mediating process. Experimental designs are also particularly well suited for identifying who benefits the most from what aspect of treatment, mediated by which changes, thereby testing additional moderating and mediating effects. The Seattle Social Development Project provides a classic example of an experiment designed to test whether and how an intervention worked to reduce problem behaviors (see Hawkins et al. (1999, 2003)). For example, a comprehensive intervention package (delivered to a group of children in schools serving high-crime neighborhoods when they were in elementary school) produced demonstrable changes in school bonding, which was associated with better outcomes in their secondary school years, assessed by less antisocial behaviors and better high school grades. Another excellent example is provided by Sandler et al. (2003) and Wolchik et al. (2021), who designed a preventive intervention for families going through a divorce, with the goal of moderating a key mediator in the child's life, namely, the parent's behavior. For this randomized prevention trial, 6- and 15-year follow-up data elucidated multiple cascading pathways to adaptation in adolescence and early adulthood. Early parenting effects of intervention on externalizing problems cascaded to academic and work outcomes later in adolescence and early adulthood. Moreover, intervention effects were greater for higher-risk families. Improvements in positive parenting associated with the intervention also predicted better internalizing outcomes. Such studies offer compelling evidence both for the effectiveness of a particular intervention (the manualized program for parents in this case) and for the role of parental functioning in causal processes related to child outcomes during the course of negotiating adversity. Similar findings from intervention studies have underscored the dynamic and malleable capacities afforded by close relationships to foster development and protect individuals and social groups in the face of adversity, leading numerous scholars to conclude that relationships play critical protective roles in resilience (e.g., Luthar, 2006). The children of parents who already function well during adversity or parents who mobilize what is needed to protect their children as a result of personal change, enlisting help, or other adaptive processes, fare better during and following adversity in many situations studied around the globe (Narayan, 2015; Masten et al., 2015).

Research on interventions to create resilience gained momentum as evidence accumulated from basic research and experimental data that resilience processes could be identified and changed and that intervention methods play a vital role in

testing resilience theory (Masten, 2011). It is still the case, as noted by Weissberg et al. (2003) some time ago, that much work remains to be done to understand resilience processes (e.g., mediating, moderating, promoting, compensating, and cascading processes) well enough to manipulate them effectively and efficiently, with strategic timing, to benefit children and society. However, the evidence base is growing and a good case can be made that progress would be accelerated by concerted efforts to span the translational divide through collaborative translational research that engages basic researchers and community partners in intervention trials that not only reflect current knowledge but also explicitly focus on testing theories of change. These are ongoing tasks of third-wave resilience research. Research elucidating multifaceted processes underlying successful adaptation under adverse conditions continues to guide intervention and prevention efforts. As evidence accrues, systematic reviews of resilience-focused interventions are beginning to emerge (e.g., Dray et al., 2017; Van IJzendoorn et al., 2020a).

Analyses of current preventive programs that work for children underscore the importance of theory-driven approaches that embrace a developmental, ecological systems approach and capitalize on the windows of opportunity in development. Salient features of successful prevention programs include many of the factors that have been described in this chapter. These include a focus on strategically timed, culturally relevant, comprehensive programs across multiple settings, programs that are of sufficient length and depth to address the magnitude of the problem, and strive to maximize positive resources and the benefit-to-cost ratio of implementation. Additionally, because the effects of interventions can be delayed, unexpected, or indirect, it is important to consider more complex models of change and monitor outcomes appropriately, over time, in multiple domains and possibly at multiple system levels. Such comprehensive prevention approaches acknowledge the multiplicity of risks and the cumulative trauma that many children face and emphasize the importance of promoting competence and building protection across multiple domains in order to achieve a positive outcome.

The Fourth Wave: Multisystem Resilience

The fourth wave in resilience research shifted the focus of resilience science to multilevel dynamics and the many processes linking genes, neurobiological adaptation, brain development, behavior, and context at multiple levels. This wave of resilience science was predicated on the idea that development arises from probabilistic epigenesis, involving many processes of interactions across multiple levels of function, with gene–environment interplay and coaction playing key roles (Gottlieb, 2007), and explicit recognition that adaptation is inherently multilevel (Masten, 2007). The fourth wave began as new methods for research became more widely available to study these processes, including the assessment of genes, gene expression, brain structure and function, social interaction, and statistics for modeling growth, change, and interactions in complex systems (Feder et al., 2009; Masten, 2007; Masten & Cicchetti, 2016). There had been many calls for greater attention to resilience at other levels of analysis (e.g., Curtis & Cicchetti, 2003), but earlier waves of resilience research were dominated by psychosocial studies emphasizing individual behavior and development, with some attention to other levels, such as relationships, families, peers, and schools or other community systems (Cicchetti, 2010; Luthar, 2006; Masten, 2007).

Over the past two decades, research aimed at elucidating the biology or neuroscience of resilience has burgeoned (Feder et al., 2019; Feldman, 2020; Ioannidis et al., 2020; McEwen, 2020; McLaughlin et al., 2020; Shonkoff et al., 2021). At the same time, once independent and disparate fields of research on resilience at different levels in varying disciplines (e.g., ecology, engineering, public health, management, emergency services) are coming together in response to urgent national and global threats that require integrative solutions, such as natural

disasters, terrorism, global warming, and pandemics (Masten, 2021; Ungar, 2021). Additionally, as the fourth wave matures, there is growing attention to issues of social justice in theory and research on resilience, bringing greater attention to structural racism, discrimination, and inequality in communities and societies that generate enormous disparities in risk and adversity exposure, resources, and protective systems that contribute to the vulnerability and differential outcomes of oppressed, marginalized, and minoritized children and their families (Anderson, 2019; Marks et al., 2020; Neblett et al., 2016; Rowhani & Hatala, 2017; Wilcox et al., 2021). There is also growing attention to understanding the intergenerational transmission of resilience across generations and to the processes accounting for individuals' abilities to harness resilience processes early in life, with positive cascading effects across generations (Narayan et al., 2021; Panter-Brick & Leckman, 2013). Some scholars have suggested that a "fifth wave" is emerging that "explicitly takes into account political and economic influences and privileges research coproduced with and alongside communities in adversity" (Hart & Gagnon, 2017).

Major Themes of the Multisystem Wave of Resilience Science

Fully describing the exciting and interdisciplinary directions comprising the multisystem wave of resilience research as it matures is beyond the scope of this chapter. However, the diverse goals and direction of developmental resilience science, as this multisystem wave matures, have been illustrated by numerous recent books and review articles (e.g., Kalisch et al., 2019; Liu et al., 2017; Masten, 2021; Masten et al., 2021; Mesman et al., 2021; Ungar, 2018, 2021; Ungar & Theron, 2020). Themes characterizing the fourth wave as it matures include the following.

- *Theoretical and empirical attention to multiple systems that influence the resilience capacity of an individual child.* Although caregiving systems always were a focus of resilience science about children, there is now more attention to socioecological contexts beyond families, including schools, communities, and culture (Dray et al., 2017; Gartland et al., 2019; Mesman et al., 2021; Panter-Brick, 2015; Ungar & Theron, 2020).
- *Calls for integrating resilience theory and science from different disciplines to tackle multisystem threats to human life and development*. There are growing calls for integrating diverse sciences concerned with human resilience in the face of growing threats to children (and adults) that span multiple systems, including large-scale disasters such as climate change, war, or the coronavirus disease 2019 (COVID-19) pandemic (Masten, 2014; Masten & Motti-Stefanidi, 2020; Sanson et al., 2019; Ungar, 2021; Walsh, 2020) as well as more specific threats and risks to children such as maltreatment (Meng et al., 2018), discrimination and structural racism (e.g., Anderson, 2019; Marks et al., 2020), or historical trauma (Hartmann et al., 2019).
- *Multilevel models and developmental cascades.* This wave of resilience science has intensified the focus on processes spanning levels of analysis and processes of change that span levels and generations over time, altering the course of development. This theme includes expanding research on the "top-down" (outside to inside the organism; outside to inside the family) effects of experiences or interventions on gene expression and neurobiological function (e.g., biological embedding of adversity), as well as the bottom-up effects of epigenetic or neurobiological changes on brain development and behavior; cascading consequences of ongoing multisystem processes over time, particularly for future health and well-being; and intergenerational transmission (e.g., Browne et al., 2021; Doty et al., 2017; Hentges & Wang, 2018; Ioannidis et al., 2020; Liu et al., 2017; Masten, 2018; Narayan et al., 2021; Toth & Manly, 2019). Multisystem developmental models of resilience highlight the importance of strategic timing and targeting of systems for change

as well as multilevel/multisystem approaches to intervention and policy to mobilize enduring change (Gee, 2021; Masten et al., 2021; Mesman et al., 2021; Ungar & Theron, 2020).

- *Measuring multisystem resilience.* Another salient feature of the multisystem resilience wave is more effort to measure resilience spanning multiple system levels. There are innovative strategies for modeling multisystem resilience in complex adaptive systems (e.g., Ioannidis et al., 2020) and the interconnections of protective factors across levels of analysis, for example, by dynamic network analysis (Kalisch et al., 2019). Various measures of childhood resilience encompassing multisystem resilience factors continue to be developed and refined (e.g., Jefferies et al., 2019; Morris et al., 2021; Narayan et al., 2018). Moreover, there are growing efforts to document the psychometric properties of widely utilized measures, such as the Child and Youth Resilience Measure, particularly with respect to structural invariance and multicultural validity (e.g., Renbarger et al., 2020).
- *Deeper examination of tradeoffs and sensitive periods in the study of resilience.* There is growing attention to issues of tradeoffs in resilience processes, notably with respect to timing or levels of analysis (Ellis et al., 2022; Hostinar & Miller, 2019; Ungar, 2018). Research on allostatic load, "wear and tear" on the body associated with successful adjustment in children or youth at high risk due to structural racism or poverty, or John Henryism, as described above, illustrate this theme. The possibility of temporal tradeoffs in adaptation to adversity, whereby short-term survival may compromise long-term health, is also receiving more attention. Both these trends reflect a more nuanced, multidimensional, and multisystem approach to understanding how adversity, resilience, and adjustment are interrelated over the course of development.

Conclusion

In conclusion, the past half century of research on resilience has yielded striking progress in theory, methods, findings, and intervention approaches while also identifying key promotive and protective factors that represent fundamental adaptive systems and processes supporting human adaptation and development in the context of adverse experiences. Findings suggest that resilience is dynamic, shaped by complex multisystem interactions that shape pathways toward positive and negative adjustment in relation to life challenges. Resilience science has shifted toward complexity, with growing attention to theory and methods that accommodate dynamic and developmental systems approaches to understanding and building resilience in children and the systems on which they depend. Resilience capacity develops in children through many processes at many levels of interaction from molecular to socioecological as children grow up and encounter challenges in ordinary or extraordinary circumstances. There is certainly progress, but much work remains, particularly to fill in the details about the intersystem processes that nurture and support resilience in different circumstances and cultures, both common and unique, during different periods of development. It will take time to unravel and understand these multiple levels of influence and build stronger bridges between science and practice.

It is essential for resilience scholars to remember the original goals of this work—to understand the variability of the pathways manifested by children who encounter developmental hazards and adversities well enough to make a difference; to prevent and mitigate risks and disparities in trauma exposure; to boost access to vital resources; to nurture, mobilize, or restore the systems that help children weather the storms of life; and to guide policy and practice toward a society of opportunity for nurturing and supporting resilience. Clinical interventions and pri-

mary preventions with promising efficacy for resilience exist, but these strategies need to be tailored to individual and contextual differences and evaluated for efficacy in more diverse community settings. Collaborative work across diverse contexts is urgently needed to refine resilience-based models of intervention and change and to inform the design of prevention and social policy programs. Decades of past work on resilience have focused productively on psychological and interpersonal processes. More recently, serious attention to biological and cultural levels of analysis is emerging, with an explicit focus on context and transactional as well as multidirectional analyses over time, clarifying the conditions under which interventions may and may not work, identifying the most strategic and cost-effective targets and timing for interventions, and exploring natural reparative processes. Although there is clear evidence that resilience in young people is highly dependent on other people and multiple systems of influence, there is limited knowledge of how these multiple levels of influence operate synergistically and how best to integrate multisystem processes in models of change and intervention.

The multisystem wave of resilience science is maturing as humanity faces profound global challenges related to climate change, pandemics, political conflicts and violence, record levels of migration and displacement, and reckoning with centuries of colonialism and oppression. Resilience science offers hope and guidance, but at the same time, there remain many gaps in the knowledge base needed to confront the existential threats of the present and future. It is essential that we invest in research, training for young scholars, translational applications of knowledge, and a transdisciplinary workforce to continue advancing resilience science and its practical applications on behalf of the future resilience of children, families, communities, and societies.

Acknowledgments The work of the authors on resilience was supported over the years by grants from the National Institute of Mental Health, the National Science Foundation, the William T. Grant Foundation, the Institute of Education Sciences, the University of Minnesota, the University of Denver, and the Ohio Department of Mental Health. Preparation of this chapter was supported in part by the Irving B. Harris Professorship (Masten). The authors express their profound gratitude to Norman Garmezy, Michael Rutter, and Emmy Werner for their extraordinary leadership in pioneering resilience science.

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Resilience in Gene–Environment Transactions

3

Zhe Wang and Kirby Deater-Deckard

Resilience in childhood is defined as typical development in the face of adverse circumstances that propel others to deleterious outcomes. The risks of minor or serious problems in mental and physical health are real and, for a segment of the human population, are ever present. Nearly every child faces occasional adversity, and many experience chronic stressors such as abuse, poverty, or disease. However, even within populations of children who have or who experience powerful predictive risks for behavioral and emotional problems, there is wide variation in outcomes. Some will succumb to the vicissitudes of life, but many will thrive despite them. Resilient children are not simply "born that way," nor are they "made from scratch" by their experiences. Genetic and environmental factors operate jointly as protectors against a variety of risks to healthy development, ranging from resistance to bacteria and viruses to resistance to maltreatment and rejection. The key question is how genes and environments work together to produce resilient children and adults. In this chapter, we highlight several areas of research that demonstrate the integrative interplay between nature and nurture in the prediction of individual differences in resilience. We begin with a brief overview of the scientific approaches for the investigation of nature and nurture in individual differences in development. We then turn to consideration of resilience-building transactions that involve gene–environment interplay, with an emphasis on the developmental outcomes of academic achievements as well as behavioral and emotional health. Finally, we consider several aspects of individuality, in particular dimensions of temperament, which are critical to resilience in childhood.

Author Note This chapter is an updated and modified version of the chapter from the first and second editions (Deater-Deckard, Ivy, & Smith, 2004; Wang & Deater-Deckard, 2013).

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Nature and Nurture: Behavioral Genetic Methods

Humans share a genome and live in environments that have many structural similarities. For numerous outcomes of interest to developmental scientists, the variation between people arises not from the presence or absence of genes or environments but from functionally distinct *forms* of genes and environments. A variety of techniques are used to estimate the effects of these distinct forms on

S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_3

individual differences, based on quantitative and molecular genetic models (Plomin et al., 2012).

Quantitative behavior genetic techniques rely on mathematical models based on population genetics to estimate the relative strength of genetic and environmental contributions to individual differences. These are based on data from quasi-experimental designs involving identical and fraternal twins, adoptive and non-adoptive siblings, adoptive and biological parent–child pairs, and stepfamily members. If family member similarity on a variable of interest is predicted by genetic similarity, then genetic variance or heritability is present. If family member similarity remains after genetic similarity is controlled, then shared environmental variance is present. Shared environmental influences are nongenetic effects that lead to family member similarity. Nonshared environmental variance is what remains—the nongenetic influences that do not account for family member similarities. Quantitative behavioral genetic models provide information about the extent to which individual differences in a given trait are attributable to genetic or environmental influences, but they lack the precision to pinpoint what these functional genes and environments are.

Molecular genetic techniques for the collection, storage, and analysis of DNA permit the examination of the association and linkage between specific genes, or specific regions of chromosomes, and human variation in measured attributes. Using these molecular approaches, scientists identify the genes that are involved in complex phenotypes (i.e., observed characteristics)—a level of specificity not afforded by quantitative behavioral genetic techniques. One commonly used method is a "candidate" gene design, which investigates the covariation between a human trait and a candidate gene selected based on an understanding of the biological functions of that gene. In recent years, a growing understanding of the human genome has led to a consensus that, with a few exceptions, most genes individually account for only a very small proportion of the variation in complex human traits (e.g., intelligence). As a result, the field has gradually shifted its attention from candidate gene studies that examine the impact of one gene at a time to genome-wide complex trait analysis (GCTA) or genome-wide polygenic score (GPS) studies that examine the cumulative impacts of many genes together.

Resilience as Process: Gene–Environment Transactions

There are a host of environmental factors that contribute to resilience in the home, neighborhood, school, and beyond. For example, warm and supportive parenting is consistently shown to be a predictor of resilience in development in a variety of domains (Pinquart, 2016, 2017a, b). Children who are at risk for developing behavioral, emotional, and academic problems are protected against those outcomes if their parents are sensitive, responsive, warm, and involved (Conger & Conger, 2002). However, findings from decades of behavioral genetic studies suggest that the estimated associations between developmental outcomes and environmental factors, such as warm and supportive parenting, often capture a conflation of both genetically and environmentally mediated processes that are mutually interdependent (i.e., gene–environment correlation) and interactive (gene–environment interaction). Below, we outline the many ways by which nature and nurture jointly shape developmental resilience (or vulnerability). We summarize findings from behavioral genetic research, with a focus on the development of academic achievements (e.g., math and reading), behavioral outcomes (e.g., aggression and drug use), and emotional outcomes (e.g., anxiety and depression).

Studies applying genetically informative twin and adoption designs suggest that heritability is ubiquitous in achievement, behavioral, and emotional development, typically accounting for one-fifth to three-quarters of variance among individuals (for reviews, see Calvin et al. (2012), de Zeeuw et al. (2015), Rhee et al. (2015), and Samek and Hicks (2014)). Multivariate longitudinal behavioral genetic research studies further reveal that (1) heritability often increases with

age, (2) it is often found in measures of environments, and (3) it often varies as a function of environments. These interesting findings highlight the dynamic nature of gene–environment interplay in resilience, primarily in the forms of "gene–environment correlation" and "gene–environment interaction."

Gene–Environment Correlation

Genetic and environmental factors can be correlated (gene–environment correlation or $r_{g\text{-}e}$). Two general classes of gene–environment correlations ($r_{g\text{-}e}$) have been described and identified in quantitative genetic studies—passive and nonpassive forms (Plomin, 1994). "Passive" $r_{g\text{-}e}$ arises when a child is exposed to an environmental factor that a biological parent provides and that is correlated with their genotypes. Consider the example of the link between cognitive skills and achievement. Variation in these skills arises in part from genetic influences. At the same time, parents who value and enjoy experiences that challenge their minds are more likely to provide stimulating environments for their children that promote resilience (e.g., books, reading, challenging toys, and puzzles). These parents are more likely to have children who have better cognitive skills and who succeed in school. The mechanisms linking stimulation in the home and child cognitive skills typically are tested using correlations in family studies of biologically related parents and children. However, because parents also provide genes to their children, the enriched environment and genetic influences are confounded. What may appear to be an environmental causation based on family studies may also arise from shared genes between parents and children (Petrill & Deater-Deckard, 2004). One way to detect passive $r_{g\text{-}e}$ is to compare genetically related (i.e., biological) with genetically unrelated (e.g., adoptive) parent–child dyads. Effects that are stronger in the genetically related dyads than the genetically unrelated dyads indicate passive $r_{g\text{-}e}$. Using this method, one study found evidence for passive $r_{g\text{-}e}$ in the association between language development and early home-learning environment (e.g., cognitive stimulation, parental involvement; Gilger et al. (2001)). Several other studies reveal that passive $r_{g\text{-}e}$ is one important mechanism underlying the intergenerational transmission of externalizing problems, depression, and cognitive abilities (Bornovalova et al., 2014; Loehlin & DeFries, 1987; Rice et al., 2013).

Non-passive $r_{g\text{-}e}$ includes at least two mechanisms: active and evocative (or reactive) effects (Deater-Deckard, 2009). Active $r_{g\text{-}e}$ is environment selection, whereby an individual is more likely to experience certain things as a result of selecting into specific environments that are most consistent with his or her own attributes. For example, children who are highly sociable and gregarious—behaviors that are genetically influenced and implicated in resilience—are more likely to seek out and reinforce interactions with other people, in contrast to shy or socially anxious children. In a similar vein, children with higher genetic propensities for behavioral problems are more likely to affiliate with deviant peers and thus self-select into social contexts that foster more delinquency and substance use problems (Loehlin, 2010; TenEyck & Barnes, 2015). As individuals repeatedly self-select into environments consistent with their own attributes, genetic propensities are reinforced and amplified. As such, active $r_{g\text{-}e}$ may also contribute to explain why heritability increases with age for many developmental outcomes including externalizing behaviors, anxiety, depression, and cognitive abilities (Bergen et al., 2007; Briley & Tucker-Drob, 2013; Gjone et al., 1996; Trzaskowski et al., 2014).

Evocative $r_{g\text{-}e}$ occurs when a child's genetically influenced attribute or behavior elicits a particular response from other people—a response that can then serve to reinforce that attribute or behavior. One source of evidence of evocative $r_{g\text{-}e}$ comes from studies of differential parental treatment to his or her multiple children. For example, when examining a parent's relationship with his or her two children (i.e., sibling differences), the warmth and acceptance in each parent–child dyad differ (Coldwell et al., 2008; Dunn, 1993; Kowal et al., 2002). In our research,

we have found that mother's self-reports of warmth toward each of her children as well as observers' ratings of maternal warmth and responsive behavior yield data that implicate evocative $r_{g\text{-}e}$. Identical twins experience very similar levels of maternal warmth and responsiveness from their mothers, whereas fraternal twins and non-twin full siblings experience moderately similar levels of maternal warmth (Deater-Deckard & O'Connor, 2000). In contrast, genetically unrelated adoptive siblings are only modestly correlated in the maternal warmth and supportive behavior that they experience (Deater-Deckard & Petrill, 2004). The differential parental treatment of siblings emerges in part as a result of evocative $r_{g\text{-}e}$ and likely operates through genetic influences on children's responsiveness to and social engagement with their mothers (Deater-Deckard, 2009). A further source of evidence of evocative $r_{g\text{-}e}$ comes from studies showing that the same genetic factors that influence developmental outcomes also influence treatments that children receive from their parents, teachers, and peers. For example, children's genetically influenced externalizing behavioral problems (e.g., aggression, conduct problems) tend to evoke harsh, critical responses including rejection and hostile treatment from parents and peers (Brendgen et al., 2011; Burt et al., 2005; Klahr & Burt, 2014; Larsson et al., 2008; Narusyte et al., 2011; O'Connor et al., 1998; Samek et al., 2015). Similarly, children's genetically influenced depressive symptoms tend to elicit more familial negativity and conflict (Neiderhiser et al., 1999; Pike et al., 1996; Wilkinson et al., 2013). When engaging in social interactions with unfamiliar peers, children who are genetically more prosocial and outgoing evoke more prosocial behaviors from their playmates (DiLalla et al., 2015). Evidence for evocative $r_{g\text{-}e}$ has also been found in cognitive development, in which genetic influences on children's cognitive abilities longitudinally predicted the quality of home-learning experiences, suggesting that children with genetically influenced higher cognitive abilities evoke more cognitively stimulating experiences from their environments (Tucker-Drob & Harden, 2011).

As molecular genetic techniques are becoming more available to researchers, more studies have begun to explore the correlations between specific genes and environments. For example, one recent study has found that a polygenic risk score associated with a higher impulsivity predicted poorer parental monitoring and more affiliation with peers with substance use problems in adolescence, highlighting the roles of genetic risks in the probabilistic exposure to high-risk environments through evocative and active $r_{g\text{-}e}$ mechanisms (Elam et al., 2017). Similarly, another study that utilized GCTA found an association between child genome-wide single-nucleotide polymorphisms (SNPs) and maternal intolerance, suggesting the active role of children in shaping their family environments, although specific behaviors that mediate this gene–environment correlation are yet to be determined (Dobewall et al., 2019).

Overall, findings on the three forms of gene–environment correlations suggest that developmental contexts are neither randomly nor equally distributed across all children. Rather, the probability of being exposed to a certain environment or experiencing a certain event throughout the course of development often varies systematically with one's own genetic makeup. However, this does not mean that gene–environment transactions are deterministic. For example, children with higher cognitive performance scores may seek and elicit more stimulation from caregivers and their physical environments, but experiments demonstrate that manipulating adults' perceptions of children's intellectual capacities causes improvements in children's achievement outcomes (Rosenthal & Jacobson, 1968). Similarly, children who are more difficult to care for because their behavior distresses their parents (e.g., irritable, aggressive, oppositional) are more likely to elicit harsh parenting. However, evaluations of parenting interventions show that parents can be taught strategies for responding differently to their children's aversive behaviors, which in turn promotes reductions in children's emotional and behavioral problems (Deater-Deckard & Panneton, 2017). Gene–environment transactions linking protective influences and children's outcomes are flexible and can change when environments change.

Gene–Environment Interaction

Through gene–environment interaction, the effect of a gene or genes on an outcome is conditioned on or moderated by an environmental factor or factors—or vice versa. This definition of gene–environment interaction fits well with most current definitions of resilience. Accordingly, children who have genetic risks for maladaptive outcomes will show fewer and less severe symptoms if certain environmental factors are present that functionally reduce or eliminate the genetic effect. Furthermore, children who have more environmental risks for disturbances in development will have fewer adjustment problems if they also have forms of particular genes that reduce or eliminate the environmental risk effect.

Behavioral genetic studies have provided preliminary evidence for gene–environment interactions in resilience by showing that heritability, in a variety of developmental outcomes, varies depending on the environmental contexts. For example, numerous studies converge to show that adverse environments amplify, whereas protective environments mitigate genetic influences on the development of behavioral problems. Specifically, externalizing problems (e.g., aggression and drug use) are more influenced by genetic risks in children who receive higher parental negativity and lower parental warmth (Feinberg et al., 2007; Hicks et al., 2009), have mothers with more depressive symptoms (Clark et al., 2018), live in more chaotic households (Wang et al., 2012b) and urban environments (Legrand et al., 2008), and are more closely affiliated with deviant peers (Agrawal et al., 2010; Hicks et al., 2009), whereas externalizing problems are less influenced by genetic influences in children who have more positive relationships with their teachers (Brendgen et al., 2011). Similarly, genetic risks for attention problems are also more pronounced in more chaotic households (Wang et al., 2012b). Heritability in anxiety is also found to be enhanced by more exposure to life stress (Eaves et al., 2003). In the academic domain, studies have repeatedly shown stronger genetic influences on intelligence and school achievement in children from more affluent families than in those from poorer homes, at least in the United States (for reviews, see Sauce and Matzel (2018) and Tucker-Drob and Bates (2015)). It is suggested that children from economically advantaged families are afforded with more opportunities to select learning experiences that match their genetically influenced intellectual interests (Tucker-Drob & Harden, 2012).

Another method for detecting gene–environment interaction is to examine the extent to which the characteristics of adoptive families (i.e., an index of environmental influence) moderate the associations between adoptive children's behaviors and their biological parents' characteristics (i.e., an index of genetic influence). In general, studies that used this method yielded results consistent with those from the twin studies reviewed above. For example, studies found that genetic risks for externalizing problems more strongly predicted externalizing symptoms in children in the presence of adverse environments, which included high levels of martial problems, parental anxiety and depression symptoms, and overreactive parenting by adoptive parents (Cadoret et al., 1995; Leve et al., 2010; Lipscomb et al., 2014).

More recent studies have applied molecular genetic tools to begin pinpointing the functional loci on the genomes that interact with environments in producing the diverse resilience trajectories. Nonhuman primate studies provide preliminary models for human research. A series of studies have demonstrated an interactive effect between the serotonin transporter gene *5-HTT* and early attachment relationships on resilience and vulnerability on various negative behavioral outcomes in rhesus monkeys (Barr et al., 2003). A functional polymorphism (5-HTTLPR) is involved in regulating serotonin transcription, with the short allele being associated with lower serotonin expression compared to the long allele (Fiskerstrand et al., 1999; Heils et al., 1996). The 5-HTTLPR short allele, along with poor early caregiving experiences, has been associated with higher rates of conduct problems including aggression and alcohol consumption, whereas secure attachment relationships in early childhood appear to buffer against the genetic risks of

these outcomes (for reviews, see Bennett (2007) and Suomi (2006)).

Humans have the same functional serotonin transporter gene, and a similar interactive effect between this gene and adverse life experiences has been found in the prediction of depression (Caspi et al., 2003; Eley et al., 2004; Kaufman et al., 2004; Kendler et al., 2005; Petersen et al., 2012; but see Risch et al. (2009) regarding nonreplication of this effect). Individuals with the "risk" genotype (i.e., short allele) have been found to exhibit higher amygdala activity in response to fear-related stimuli (Hariri et al., 2002; Heinz et al., 2005; for a review, see Wurtman (2005)), with related weakened or strengthened connections to other neural systems involved in cognitive processing of emotions (Heinz et al., 2005; Pezawas et al., 2005). These neural characteristics are associated with increased sensitivity to adverse experiences through which they potentially exert their influences on the development of depression and anxiety under conditions of life stress. Furthermore, their effects very likely depend in part on effects of still other genetic and environmental factors. For example, positive social support is a strong protective factor that guards children against depression and anxiety, even those who may be genetically and environmentally at risk (Kaufman et al., 2004, 2006). Furthermore, an intervention study that investigated the effects of foster care on children exposed to early institutional care found that high-quality foster care buffered against the negative effect of the 5-HTTLPR short allele on the development of externalizing problems (Brett et al., 2015). These gene–environment interaction processes clearly implicate malleability in the influences of environments and genes on development.

Another commonly studied candidate gene is the dopamine receptor D4 gene (*DRD4*). One functional polymorphism of *DRD4* is responsible for encoding the D4 receptors of varying activity levels, with the longer repeat alleles (e.g., 7-repeat or 7R) encoding less active D4 receptors compared to the shorter repeat alleles such as 4R (note that there are other less studied forms of this polymorphism; Asghari et al. (1995)). The 7R allele is linked to novelty-seeking behaviors and poor attention regulation (Deater-Deckard & Wang, 2012; Ebstein, 2006; but see Kluger et al. (2002) for nonreplication of these effects). Several environmental factors were found to moderate the associations between the *DRD4* gene and various developmental outcomes. For example, studies have demonstrated that the 7R allele increases the risk of attention-deficit hyperactivity disorder (ADHD) in children who have been exposed to alcohol and tobacco prenatally (Becker et al., 2008; Kahn et al., 2003; Neuman et al., 2007). Additionally, early maternal insensitivity is found to exacerbate the negative effect of the 7R allele on the development of ADHD, aggression, and oppositional behaviors in children (Bakermans-Kranenburg & van IJzendoorn, 2006; Berry et al., 2013; Windhorst et al., 2015; however, see Marsman et al. (2013) and Propper et al. (2007) for nonreplication of these findings).

The catechol-*O*-methyltransferase (*COMT*) gene is involved in the metabolism of dopamine and other neurotransmitters. The "valine" (val) form is associated with lower levels of dopamine, whereas the "methionine" (met) form is associated with higher levels of dopamine (Lachman et al., 1996). Studies have found that compared to individuals with two copies of the val allele, individuals with two copies of the met allele show higher level of fixation on negative affective stimuli (Drabant et al., 2006; Enoch et al., 2003), higher sensory and affective response to pain (Zubieta et al., 2003), and higher harm avoidance response (Enoch et al., 2003). These findings suggest that those individuals who have two copies of the met allele have an enhanced affective sensitivity to negative experiences and are at greater risk for developing behavioral and emotional problems such as anxiety and depression when faced with stress and adversity.

Another interesting area of inquiry can be found in research on the gene for monoamine oxidase A (*MAOA*) and interaction with adverse life experiences. MAOA is an enzyme that

metabolizes neurotransmitters including dopamine, serotonin, epinephrine, and norepinephrine (Fiskerstrand et al., 1999). The *MAOA* gene is linked to individual differences in attention regulation and sensitivity to social evaluations (Buckholtz et al., 2008; Fan et al., 2003). Individuals with the form of the gene indicative of insufficient production of MAOA appear to be more vulnerable to the influences of adverse environments. For males with forms of the gene that are indicative of sufficient production of MAOA, family adversity (e.g., abuse or maltreatment) is only modestly associated with behavioral problems in childhood and adulthood (Caspi et al., 2002; Foley et al., 2004; Kim-Cohen et al., 2006), whereas the effect of early adversity on these outcomes is substantial among those with forms of the gene indicative of insufficient MAOA production. This finding has been replicated with females as well and with respect to a variety of behavioral maladjustment outcomes (Derringer et al., 2010; Ducci et al., 2008; Widom & Brzustowicz, 2006).

Yet another gene of interest is the *GABRA2* gene, which encodes for the alpha-2 subunit of the receptor of gamma-aminobutyric acid. Variants of the *GABRA2* gene are linked to drug dependence and other externalizing problems (Covault et al., 2004; Dick et al., 2006; Edenberg et al., 2004), but a host of environmental factors are found to modulate these gene behavior links. Parental monitoring in adolescence functions as a protective factor that buffers against the negative effect of *GABRA2* minor alleles on the development of externalizing behaviors (Dick et al., 2009; Trucco et al., 2016). In contrast, adverse environments such as peer delinquency and experiences of negative life events appear to increase the susceptibility to externalizing problems in individuals with the minor alleles (Salvatore et al., 2015; Villafuerte et al., 2014).

Several other genes involved in regulation of the neuroendocrine stress response (i.e., the hypothalamic–pituitary–adrenal or HPA axis) have been examined as well. These include the corticotropin-releasing hormone receptor gene (*CRHR1*), the *FKBP5* gene (involved in glucocorticoid signal transduction), and the glucocorticoid receptor gene. These have been implicated in the prediction of behavioral and emotional maladjustments in adulthood among those who also have histories of child abuse and maltreatment (Binder et al., 2008; Bradley et al., 2008). This gene–environment interaction may operate in part through impaired regulation of the HPA axis. When functioning in an adaptive way, the HPA axis is not only activated in response to stress but is also regulated by a feedback loop. Impaired function of HPA axis regulation has been associated with stress-related disorders, such as depression and posttraumatic stress disorder (Ising et al., 2008; Koenen et al., 2005; Kumsta et al., 2007; van Rossum et al., 2006; van West et al., 2006; for a review, see Gillespie et al. (2009)).

Finally, a few studies investigated gene–environment interactions in development using polygenic scores that are comprised of multiple genes. For example, one study found that a polygenic score based on five dopaminergic genes interacted with parenting in predicting externalizing behaviors in boys—more positive changes in parents' parenting practices were associated with more decreases in child externalizing problems, even in children with high genetic risks (Chhangur et al., 2017). In contrast, another study found that genetic effects assessed via a polygenic score based on four genes were negligible in promoting resilience in maltreated children (Cicchetti & Rogosch, 2012).

All the above examples demonstrate how genetic and environmental factors can interact in the prediction of individual differences in children's resilience or susceptibility to developing various forms of psychopathology. Identifying specific gene–environment interaction processes in resilience is important for the future of genetic research in psychology because it provides information not only about bioenvironmental processes but also about ways to improve assessment and intervention.

Individual Differences and Resilience

There is also ample behavioral genetic research that investigates the complex interplay between genes and environments in shaping aspects of individuality that are critical to resilience. We exemplify this literature with a focus on temperament characteristics that are strongly implicated as protective factors in development.

Temperament includes individual attributes that are defined as being moderately stable across situations and over time, are biologically influenced, and are observable from infancy. Individual differences in temperament arise from transactions between genetic and environmental influences, are mediated by brain mechanisms, are modified by experience and situational factors, and change with development (Prior, 1999; Rothbart & Bates, 1998). Temperament forms the foundation of personality dimensions (e.g., neuroticism, conscientiousness, agreeableness) and is implicated in the development of resilience (Campbell-Sills et al., 2006; Carver & Connor-Smith, 2010; Costa et al., 1996; Matthews et al., 2003; Rothbart et al., 2000). Rothbart's theory of temperament is particularly helpful as an organizing framework for considering connections between individual differences, resilience, and gene–environment transactions (other prominent theories include those of Buss and Plomin (1984) and Thomas and Chess (1977)). According to this theory, there are multiple dimensions of temperament that represent reactivity to stimuli and the regulation of those reactions.

Extraversion/surgency The first dimension is extraversion/surgency and includes activity level, positive affect, low shyness, and positive anticipation/approach. *Activity level* represents the amount and pacing of physical movement. A moderate activity level is optimal for resilience (e.g., Mendez et al., 2002). If too low, the child is sluggish and prone to weight gain, and if too high, then the child is hyperactive and more difficult to manage. Between one-third and three-quarters of the variation in activity level is accounted for by genetic factors, with the remaining variance attributable to nonshared environment and error (Braungart et al., 1992; Gagne et al., 2009; Oniszczenko et al., 2003; Plomin et al., 1988; Saudino, 2012; Wood et al., 2008). Individual differences in *positive emotionality* are largely attributable to shared and nonshared environmental variances (Goldsmith et al., 1997; Planalp et al., 2017). Children who often experience and express positive moods (e.g., happiness, excitement, interest) are less likely to suffer from the consequences of exposure to risk factors. Lengua (2002) found that positive emotionality predicted resilience in 8- to-10-year-olds, consistent with an earlier study by Masten et al. (1999), although this effect was limited to females in the earlier study. *Shyness* represents slow or inhibited approach in novel or uncertain situations. Children who are less shy and more sociable may be protected against stressors (e.g., Lösel & Bliesener, 1994), although they also may be at greater risk for problems in coping with family conflicts (Tschann et al., 1996). Genetic variance in twin studies, and a serotonin neurotransmitter gene in molecular genetic studies, has been implicated in the development of shyness (Arbelle et al., 2003). *Positive anticipation/approach* represents the extent to which the child seeks out and enjoys having new experiences. Children who are high in positive anticipation/approach may be protected from negative events through their exploration of new strategies but may also be more easily frustrated when their anticipation is not fulfilled (Deater-Deckard et al., 2010). Heritability accounts for one-fourth to three-quarters of the variance, with some studies showing modest shared environmental variance (Eid et al., 2003; Plomin et al., 1988; Schmitz, 1994). Molecular genetic studies have indicated a functional role of the *DRD4* gene in novelty-seeking behaviors and high activity levels (Auerbach et al., 2001; Ebstein, 2006; however, see Kluger et al. (2002) for nonreplication of these findings).

Negative Affectivity This dimension includes sadness, anger, fear, discomfort, and problems in soothing when upset. Consistent with studies of

trait neuroticism in adolescents and adults, children who are low in negative affectivity are less likely to show maladjustment in the face of difficult circumstances. For example, Kilmer et al. (2001) found that negative affectivity best discriminated resilient from maladjusted children in their study of highly stressed inner-city youth. Genetic factors account for one-third to two-thirds of the variance in negative affectivity (Clifford et al., 2015; Oniszczenko et al., 2003; Plomin et al., 1988; Schumann et al., 2017). Molecular genetic studies have indicated that the *5-HTTLPR* gene and the *COMT* gene are associated with variation in anxiety and fear-related traits (Enoch et al., 2003; Gazor et al., 2017; Hariri et al., 2002; Melke et al., 2001; Sen et al., 2004; Woo et al., 2004). The *COMT* gene has also been associated with anger and hostility (Rujescu et al., 2003; Volavka et al., 2004).

Effortful Control This dimension includes enjoyment of low-intensity stimulation, greater perceptual sensitivity, and more control over impulses and attention. Effortful control is important to resilience. Children who are higher in effortful control show less negative affectivity, indicating an important connection between attentional control and the regulation of negative emotions (Rothbart et al., 2000). Thus, those who are better able to control cognitive and perceptual processing of information also may be better at regulating their emotions and behaviors so that they are less likely to develop psychopathologies that are associated with poor self-regulation (Buckner et al., 2009; Gardner et al., 2008; Posner & Rothbart, 2006). In addition, the tendency to persist with challenging tasks is a protective factor among at-risk youth, for a variety of outcomes (Lösel & Bliesener, 1994; Wills et al., 2009). Thus, children with more effortful control tend to have better academic achievement (Ponitz et al., 2009; Smith et al., 2008). Effortful control and its underlying attributes are heritable, and some include shared environmental variance as well (Fagnani et al., 2017; Goldsmith et al., 1997; Yamagata et al., 2005). For task orientation and persistence, heritability estimates are moderate to substantial in early and middle childhood (Braungart et al., 1992; Deater-Deckard & Wang, 2012; Manke et al., 2001; Wang et al., 2012a). Molecular genetic studies have identified the *DRD4*, *5-HTTLPR*, and *MAOA* genes as being involved in the regulation of sustained attentive behavior (Canli et al., 2005; Fan et al., 2003; Krakowski, 2003).

Dimensions of temperament may promote or undermine resilience through several gene–environment interplay mechanisms. The $r_{g\text{-}e}$ processes indicate that the probability of one being exposed to a certain environment may vary systematically with one's temperament, as children with different temperamental profiles elicit differential treatments from their social environments and seek out diverging opportunities congruent with their individualities. These environmental experiences reciprocally reinforce the temperamental characteristics through repeated nature–nurture transactions, which ultimately results in diverse individual differences in adjustment outcomes. Via the evocative $r_{g\text{-}e}$ mechanism, children with good effortful control tend to elicit high levels of warmth and positivity, few rejections, and little negativity from their parents (Klein et al., 2018; Lengua, 2006; Pener-Tessler et al., 2013). In turn, low levels of harsh and negative parenting foster a positive growth in effortful self-regulation, which subsequently protects children from developing externalizing problems (Klein et al., 2018; Lengua, 2006). Another protective dimension of temperament against negative adjustment outcomes is positive affect. Children with higher positive affect are found to be at lower risks for depression because they can establish and maintain more supportive relationships (Lengua & Kovacs, 2005; Wetter & Hankin, 2009). Temperament fear and irritability are found to be associated with higher risks for various adjustment problems. Temperamentally difficult children (e.g., highly irritable) tend to receive high levels of rejections, inconsistent disciplines, and harsh parenting (Lengua, 2006; Lengua & Kovacs, 2005). Genetic variations in children were found to explain the associations between negative emotionality/difficult temperament and

negative parenting practices (Herndon et al., 2005; Krueger et al., 2003; Kryski et al., 2014; Micalizzi et al., 2017), suggesting that the evocative $r_{g\text{-}e}$ mechanism underlies these temperament–environment associations at the phenotypic level. Negative parenting practices subsequently amplify these difficult temperamental characteristics, setting children onto a trajectory toward a series of emotional and behavioral problems (Lengua, 2006; Lengua & Kovacs, 2005).

The gene–environment interaction process indicates that children with different temperament profiles may respond to a given environmental input in drastically different ways because they may have different levels of sensitivity to the environment or they may habitually rely on different coping strategies. Thus, dimensions of temperament may interact with developmental contexts in predicting various adjustment outcomes. For example, good effortful control allows children to flexibly orient their attention (e.g., distract oneself from negative information), regulate their emotions (e.g., sooth oneself when in distress), and manage their behaviors (e.g., resist from participating in tempting risky activities; Posner and Rothbart (2006)), which are all critical abilities underlying resilience against life adversities. Consistent with this view, *high* levels of effortful control have been shown to attenuate the negative effects of environmental risks (e.g., parental negativity, household chaos, and socioeconomic risks) on the development of academic, emotional, and behavioral problems (Chen et al., 2015; Wang et al., 2017). At the other end of the self-regulation continuum, children with *low* effortful control are more susceptible to environmental risks—they are more likely to develop emotional and behavioral problems in the presence of harsh and controlling parenting than are children with high effortful control (Kiff et al., 2011; Muhtadie et al., 2013; Rubin et al., 1998). Positive affect also buffers against the negative impacts of risky environments on promoting positive adjustments in children. Children raised in an environment characterized by poverty, domestic violence, family conflict, parental substance abuse, harsh parenting, and peer deviance are often prone to developing behavioral, emotional, and health problems, but those with high levels of positive affect seem to be less affected by these environmental challenges (Agnafors et al., 2017; Kim-Cohen et al., 2004; Lengua et al., 2010; Martinez-Torteya et al., 2009; Mrug et al., 2012; Wills et al., 2009).

Other temperament dimensions, such as negative affect and surgency, appear to affect the extent to which children are susceptible to environmental influences—they predict the most desirable outcomes in supportive environments and the most undesirable outcomes in challenging environments. Specifically, higher levels of surgency and negative affect and reactivity generally predict higher levels of aggression, delinquency, and drug use, and these associations are particularly strong in children whose parents employ inconsistent, harsh, and controlling parenting as well as undermining co-parenting practices (Gagnon et al., 2014; Kolak & Volling, 2013; Lengua et al., 2010; Leve et al., 2005; Moran et al., 2017; Ramos et al., 2005; Wills et al., 2009). Socioeconomic risks are also more strongly predictive of low achievement outcomes in children with higher levels of surgency and negative affect (Wang et al., 2017). Importantly, these same children seem to benefit the most from supportive environments. Children with high levels of surgency and negative affect are found to develop even fewer behavioral problems than their peers with low surgency and negative affect when their parents are sensitive, warm, and supportive (Chen et al., 2015; Mesman et al., 2009; Muhtadie et al., 2013; Rioux et al., 2016).

In summary, there are a host of child attributes, including but not limited to temperament, which contribute to children's resilience. For example, persistence may help a child find appropriate coping strategies. Positive emotionality may increase proactive efforts to deal with stress and can promote the belief that the efforts will be successful. Furthermore, children who are easy to manage (i.e., adaptable, self-regulated, and happy) and who enjoy engaging in social interaction are more able to attract the care and attention of others who can assist them in coping with

stressful situations. They may have "double protection," both in terms of their temperaments and the qualities of their social relationships with caregivers and others (Prior, 1999; Smith & Prior, 1995). In contrast, children who are irritable, easily distressed by changes in the environment, and more distractible may be less able to cope with adversity and more likely to attract or elicit harsh and rejecting parenting—particularly if the parent is distressed (Hetherington, 2006). These attributes vary widely across children and emerge from the interplay between genetic and environmental influences.

Closing Comments

In closing, we address some implications of the research on gene–environment interplay and resilience.

Resilience Is a Developmental Process

Rutter (2006) has emphasized a focus on risk or protective *mechanisms and processes*, rather than identifying risk and protective factors. The goal should be to test for processes in development because risk and protective influences are not static. This may be particularly important when genetic influences are being considered, given that there is a tendency to view genes as being somehow fixed in their effects. The actions of genes, and their transactions with environments, occur at many levels (within and outside of cells) and in real time. Although the form of a gene within an individual may not change, its function and effects on the individual can, and this may depend entirely on changes in the function of other genes and changes in environments.

There are numerous and complex transactions operating between genes and genes, environments and environments, and genes and environments. Humans are not closed systems; the environment and the genome change, sometimes randomly. The "story" describing a gene–environment process in resilience may depend on the population being studied and the environmental context in which that population exists. The success of future research on gene–environment transactions in human development will depend on the extent to which these developmental transactions between genes and environments are taken seriously in research design, assessment, and data analysis.

Your Risk Factor Is My Protective Factor

What may be protective in some contexts may have no effect or may further increase problematic outcomes in others (Rutter, 2006). For example, high levels of surgency can be adaptive in the face of adversity because extraverted individuals are more likely to have access to and to seek out social support from other people. However, the approach behavior predicts social withdrawal when there is a high degree of conflict in the family (Tschann et al., 1996). Another example comes from studies of peer relations and antisocial behavior. For most children and adolescents in most social groups, having one or several stable close friendships predicts social competence and scholastic achievement. However, when the youth in question are antisocial and violent, and their peer group consists of other antisocial children or teenagers (a common scenario in natural environments as well as treatment settings), those who are least embedded in their peer networks and friendships show the most improvement in behavior over time (Berndt, 2004; Lösel & Bender, 2003). For a child or an adolescent with conduct problems, finding a close, supportive friend can greatly reduce or increase his or her antisocial symptoms, depending on whether or not the friendship is formed and maintained because of a shared interest in breaking the law and mistreating others (Gifford-Smith et al., 2005).

That a genetic risk factor can also have protective effects, depending on the environment or context, is essentially required by evolutionary explanations for species change and adaptation.

Genes that confer only deleterious effects are far more likely to drop in prevalence over time as affected individuals die before reproducing. However, genes that confer risks as well as protective influences are far more likely to remain over time because individuals with those genes can produce offspring who themselves reproduce. Sickle cell anemia illustrates this point. This is a single-gene recessive trait, the presence of which leads to malformation of red blood cells, rendering them ineffective and prone to clotting. Individuals who have both copies of the trait gene (one from each parent) have a wide variety of physical maladies due to problems in circulation, and the disease is life-threatening. Those who have only one copy of the disease form of the gene are carriers and are mildly affected by comparison. Furthermore, they are protected against contracting malaria. This explains why the disease form of this gene is far more prevalent in areas of the world where malaria is a constant threat, such as West Africa. The very same disease-inducing form of this gene protects carriers from a common threat to health. If malaria were reduced or eradicated, carrier status would no longer confer a known protective effect in those regions of the world. The prevalence of the disease form of the gene would likely drop off, as has been happening in successive generations of African Americans (Tobias et al., 2011). Thus, a genetic risk factor for a life-threatening and painful disease provides remarkable protection against a common external threat to health, but this protective effect becomes moot if the external biological threat is removed.

As specific gene–environment interactions are identified for psychological outcomes in childhood and beyond, we may see similar kinds of effects where the genes involved as protection against one outcome confer some risk for a different problematic outcome—but only under certain environmental conditions. This prediction does not sit well with the definitions of resilience involving static deterministic protective factors. Rather, it is consistent with the idea that resilience is a dynamic developmental process (Belsky & Pluess, 2009).

The Environment of the Mind

The reality of resilience in development is thrust upon us when we find that within populations that apparently are homogeneous in terms of risk factors (e.g., poverty, family violence, low birthweight), children's outcomes are anything but uniform. Considering, assessing, and testing for protective mechanisms using objective measures of the environment is essential but only tells half of the story. The other half requires venturing into the environment of the child's mind—his or her subjective reality. Although the research on resilience and self-concept and other self-relevant social cognitions (described above) is relevant to this end, what is needed are studies examining gene–environment transactions underlying children's interpretations of their environments and experiences and how these subjective experiences influence developmental outcomes.

There has been interest in the past two decades in establishing robust empirical methods for assessing children's subjective experiences, at younger and younger ages. This emerging literature shows that children's social information processing biases—in particular, the attributions that they make regarding others' intentions and their evaluations of alternative responses to provocations in social situations—help explain why some at-risk children become more aggressive over time while others do not (Arsenio, 2010; Crick & Dodge, 1994). Results also point to comparable or better predictive validity for children's social cognitions compared to parents' reports of children's rearing environments (Kraemer et al., 2003).

There are several hints from theory and empirical data from genetic studies, suggesting that the environment of the mind should be studied more often. First, in theory, all experiences in the objective sense are filtered through the brain via perceptual and cognitive mechanisms. Although there are species-typical brain pathways involved (e.g., visual systems feeding into memory systems), there also are individual differences between people in the targets of their attention and memory. Theoretically, individual differences in information processing biases or prefer-

ences are just as likely as variations in behaviors (e.g., temperament) to arise from gene–environment transactions. The work to test this idea needs to be carried out and requires social cognition experiments using genetically informative designs.

A second finding implicating subjective experience is that the majority of environmental variance in quantitative genetic studies is nonshared; it is possible that much of the nongenetic influence on developmental outcomes is idiosyncratic. It follows logically that these idiosyncratic experiences need not arise solely from differences in "actual" experiences in the objective sense but also can arise from idiosyncratic subjective experiences that differ between two people who have had the same "actual" experience. This type of research remains largely unexplored and requires experiments using genetically informative designs. However, one line of research suggests that studies like this will lead to some promising findings. Several studies examining sibling children's differential experiences with the same parent (a likely source of nonshared environmental influence) show that this differential treatment is associated with problem behaviors in the less favored child when he or she perceives the situation as being unfair (Coldwell et al., 2008; Kowal et al., 2002; McHale et al., 2000). Within families in which one child is treated more punitively than another, some children view this as being fair because the differential treatment reflects parents' fair and appropriate responses to sibling differences in misbehavior (i.e., the less favored child is getting what she or he deserves). In those families, the differential treatment does not appear to be associated with increases in problem behaviors in the less favored child. In contrast, some children view differential treatment as unjust, and it is these children who are most likely to show behavioral and emotional problems because of differential treatment. A complete picture requires consideration of both the objective (differential treatment of siblings) and the subjective (children's perceptions of whether the differential treatment is fair or not).

A third finding that points to subjective factors is that individual differences in concurrent and retrospective self-reports of rearing environments show clear evidence of genetic influence. Siblings who are more similar genetically also report more similar childrearing environments and experiences (Plomin, 1994). The most common interpretation of this finding is that active and evocative gene–environment correlations cause this effect, whereby siblings who are more similar genetically actually do have more similar experiences—and their self-reports reflect this reality. Another interpretation that has not been rigorously investigated is that there are genetically influenced information processing mechanisms that lead to similarity in interpretations of events even when the "actual" events are distinct. Again, testing this idea will require experiments using genetic research designs.

One empirical implication concerning the environment of mind is how data on environmental protective mechanisms in the home should be assessed and analyzed. More of the emphasis should be on child-specific factors within families, both in objective and subjective terms, rather than on global measures of the home environment. For example, a researcher can focus on measuring a mother's control, warmth, and negativity with two or more of her children rather than with only one child. Often, the same mother's feelings about and behaviors toward her two (or more) children will differ, depending on the child in question. In addition, measures other than parents' self report should be utilized to assess various aspects of parenting. Specifically, child report is of great importance because it serves as an index of each child's subjective perception of parenting behavior. After all, it is not only what the parent actually does that matters but also what each child sees and feels that exerts an influence. The same can be said for a host of other environmental factors that typically are assessed at a level that does not capture the process for each individual child within each family. Examining each child individually permits tests of the most approximate candidate "environmental" mechanisms that protect him or her against various negative behavioral and emotional outcomes.

In conclusion, resilience is a developmental process that involves individual differences in children's attributes (e.g., temperament, cognitive abilities) and environments (e.g., supportive parenting, learning enriched classrooms). The genetic and environmental influences underlying these individual differences are correlated, and they interact with each other to produce the variation that we see between children and, over time, within children. Elucidating these gene–environment transactions will allow better prediction. At the same time, it is imperative that scientists and practitioners recognize that these gene–environment transactions are probabilistic in their effects and that the transactions and their effects can change with shifts in genetic functions and environments.

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Relational Resilience in Girls

4

Judith V. Jordan

This chapter, mainly theoretical in orientation, also reviews recent research on resilience and gender. The theoretical orientation represented here is known as relational-cultural theory (RCT). At the core of this work is the belief that all psychological growth occurs in relationships and that movement out of relationship (chronic disconnection) into isolation constitutes the source of much psychological suffering. Moving away from a "separate self" model of development, RCT also suggests that resilience resides not in the individual but in the capacity for connection. A model of relational resilience is presented. Mutual empathy, empowerment, and the development of courage are the building blocks of this resilience. While this chapter seeks to explicate the importance of relational resilience for girls, it also suggests that growth-fostering connections are the source of resilience for both boys and girls.

Resilience is traditionally defined as the ability to "bounce back" from adversity, to manage stress effectively, and to withstand physical or psychological pressures without showing major debilitation or dysfunction (Benard, 2004; Brooks & Goldstein, 2001; Hartling, 2003; Herrman et al., 2011; Jordan & Hartling, 2002). Often, resilience is described as (1) good outcomes in high-risk children; (2) sustained competence in children under stress; and (3) recovery from trauma (Hartling, 2003; Masten et al., 1990). In these models, resilience is most often seen as residing within the individual, in such traits as temperament (Rutter, 1978, 1989, 1990), hardiness (Kobasa, 1979), or self-esteem (Schwalbe & Staples, 1991). Temperament and hardiness are usually depicted as involving innate physiological variables. It is noteworthy that the hardiness research that emphasized commitment and control, however, was first conducted on White male middle- to upper-level business executives and then generalized to all people (Hartling, 2003). Contrary to these findings, Sparks (1999) described relational practices rather than internal traits as contributing to the resilience of African-American mothers on welfare. The internal locus of control is an individual characteristic, which has also been associated with resilience (Masten et al., 1990). "Children who take responsibility for their own successes and failures are said to have an internal locus of control" (Roediger et al., 1991, p. 352).

Recently, research in the field of neuroscience has paved new ways for understanding resilience, providing hopeful data about the lifelong malleability of the brain and hence of behavior. Davidson's research on resilient health indicates that a secure relationship history provides people with the resources to bounce back from emotional setbacks and losses (Goleman, 2006).

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https://doi.org/10.1007/978-3-031-14728-9_4

When the left prefrontal cortex has time to recover from distress and thus remains robust, we continue to develop strategies for emotional regulation and recovery throughout life. Cozolino (2006) has written that the greatest contributor to neural plasticity is love; good relationships rework the circuitry of the prefrontal cortex. Siegel and Bryson (2011), in writing about interpersonal neurobiology, suggest that curiosity, openness, acceptance, and love support neural integration and openness to the present. Resilience is in part the ability to be present in the moment, responding rather than reacting, thus exhibiting emotional flexibility. The capacity for relational repair depends on flexibility, respect, safety, trust, and courage (Jordan, 2010). If the amygdala alert system has been overstimulated by abuse, neglect, or other signals of danger, however, then a child's nervous system will be overstressed and excessive cortisol will be released. We know that cortisol has a negative impact on our bodies and our brains; it contributes to diabetes, depression, anxiety, and heart disease. If we seek comfort when stressed (Schore, 1994) and we participate in mutual empathy and regulation (Jordan, 2010), our systems will not be overwhelmed by adverse hormonal/chemical reactions and we will demonstrate some measure of resilience. What some have called "allostatic load" (Goldstein & Thau, 2011) represents a physiological response to social conflict that persists over time. This creates enormous wear and tear on the body and contributes to chronic stress. A reactive amygdala, overstimulated by unrelenting threats of danger, hijacks a person's response in a context that feels unsafe. In this case, more considered responsiveness is overridden by impulsive, disorganized responding. These patterns of reactivity often leave a person more cut off and therefore less able to find support and repair in safe, sustaining relationships. Isolation can become chronic, keeping people from participating in healing relationships. This is especially stressful for girls because girls and women experience connection as central to their well-being (Hossfeld, 2008).

Social pain overlap theory (Eisenberger & Lieberman, 2004) provides additional insights into resilience. Research shows that social pain travels the same neuronal pathways to the same place in the brain—the anterior cingulate cortex. This model confirms how core our need for connection is: being excluded is experienced as urgent at a biological level as is hunger, thirst, or pain avoidance. A cultural system that denies the importance of connection for growth and healing interferes with our ability to acknowledge our need for others and thus impedes our ability to turn to others when in distress. To the extent that dependency and need of others is devalued (Jordan, 2010), our capacity to form supportive and resilience-building relationships is challenged. Girls and women are especially impacted by the negative cultural messages about our yearnings for connection. Despite the values and pressures in our culture that block the natural flow of disconnection–connection and healing in connection, our brains exhibit a robust ability to change.

Neuroscience studies using functional magnetic resonance imaging (MRI) in particular have provided us with the data that establish beyond a doubt that the brain has the ability to change throughout a person's life span—neuroplasticity. People can move out of isolation and dysfunctionality throughout their lives (Cozolino, 2006; Goleman, 2006). Even when children have grown up in families where they have suffered terror or great instability, there is the opportunity to achieve more secure attachments by finding safe enough connections with therapists, teachers, professors, mentors, and friends (Cozolino, 2006; Farber & Siegel, 2011; Goleman, 2006). Love, connectedness, secure attachments, responsiveness from others, etc. actually resculpt the brain. Acute disconnections, reworked back into healthy connections, begin to shift the underlying patterns of isolation and immobilization. The amygdala can be quieted and the prefrontal cortex can function more effectively. Some researchers have looked at the effect of early experience on glucocorticoid and catecholamine levels that influence neural activity in areas of the brain associated with executive function (Blair, 2010). Empathy

can create a change in the prefrontal cortex and block the production of certain hormones (glucocorticoids) that kill neurons in the hippocampus (Goldstein & Thau, 2011).

Toning the vagal nervous system also significantly impacts relational responsiveness. The vagal nerve plays a part in modulating emotional reactivity and particularly intervenes to move a person out of sympathetic (arousal) and parasympathetic (withdrawing, shutting down) patterns. What some have called the "smart vagus" allows us to stay in relationships even when we are angry or shamed (Banks, 2011), crucial skills for maintaining connection. We do not have to move into all or nothing, black or white reactivity. If we have poor vagal tone arising from a neglectful, abusive, or risk-filled childhood, we can achieve more resilient functioning by experiencing more modulated patterns of organization and disorganization, the ebb and flow of connection and disconnection (Goldstein & Thau, 2011). More recent resilience research has pointed to the dynamic nature of resilience throughout a person's life span (Herrman et al., 2011).

Gender

The effects of gender or context on resilience have not been well documented in traditional or neuropsychological approaches. In much of the resilience research, issues of control and power tend to be decontextualized; in particular, there is a failure to recognize the realities of racism, sexism, and heterosexism or other forces of discrimination and social bias, which render certain people powerless and realistically lacking control. Brown, however, studies the impact of culture on girls' ability to speak up with their anger (2003). She suggests that "relational aggression" (Simmons, 2002; Wiseman, 2003) results not from girls' essential meanness (the mean girl phenomenon) but because girls are not provided with more direct ways to register their protests and anger. A contextual approach might reconsider the concept of an internal sense of control, examining a person's engagement in mutually empathic and responsive relationships as the more likely source of resilience. Although social support is often cited in studies of resilience, it is typically studied as a one-directional process in which one person is supported by another (Spiegel, 1991). In Western psychology, the tradition of studying individual traits and internal characteristics exists within a paradigm of the "separate self." Separation is seen as primary and relatedness as secondary. What is inside the individual, such as traits or intrapsychic structure, is seen as fundamentally determining an individual's well-being and psychological adjustment. There are now studies and models of development that question this separate self-bias (Jordan, 2010; Jordan et al., 1991; Spencer, 2000).

A study of 12,000 adolescents suggested that the single best predictor of resistance to high-risk behaviors (violence, substance abuse, and suicide) is "having a good relationship" with one adult, such as a teacher, parent, or mentor (Resnick et al., 1993, 1997). Connections "fortify" kids. I would suggest that a growth-fostering connection is at the core of the notion of resilience; I would also like to address the additional factor of "resistance," which points to the importance of contextual factors in resilience. By resistance, I refer to the capacity to resist the destructive and disempowering messages regarding gender, race, and sexual orientation coming from many sources such as the immediate familial context and/or larger societal controlling images (Collins, 2000). Although resistance is not always included in the concept of resilience, for a member of any marginalized group (i.e., nondominant, less powerful groups such as girls, people of color, homosexuals), the capacity to develop resistance to the distorting and hurtful influences impinging on them as a function of their marginality (and also contributing to their marginality) is essential (Brown, 2003; Ward, 2002). Gilligan et al. (1990) noted that there is a gender disparity with respect to times in development when children's resilience is at a heightened risk: early in childhood for boys and in adolescence for girls. She suggests that it is important for all children to be joined by adults in their resistance. In RCT, the primary indicator of psychological development is an increasing

capacity for a significant and meaningful connection with others (Jordan, 2010; Miller & Stiver, 1997). Relationships are at the heart of growth, healthy resistance, and resilience. The societal or cultural context largely determines the kinds of relationships that are likely to occur for anybody, and these determine one's capacity to respond to stress.

Most models of child development are framed by the notion of growth toward autonomy and separation. The cultural mandate and myth is one of "standing alone," the lone ranger, the lone hero, the fully individuated person who is independent, separate, and autonomous. Resilience is then viewed as an internal trait or set of traits, the lone resilient individual recovering from the impingements of an adverse environment. The job of socialization in this model is to bring the dependent child into a place of separate, independent adulthood. These standards apply to all children but especially to boys.

As Bill Pollack (1998) notes, the "boy code" pushes boys toward extremes of self-containment, toughness, and separation. Men are encouraged to dread or deny feeling weak or helpless. Shame-based socialization for boys directs them toward being strong in dominant and defined ways: unyielding, not showing vulnerability, and displaying a narrow range of affects (i.e., anger). The standards for maturity involve being independent, self-reliant, and autonomous. Yet, these hallmarks of successful maturity and "strength" are generally unattainable since we are ultimately interdependent beings. These hyperindividualistic standards then create stress, shame, and enormous pain for all those affected by them. Furthermore, the importance of connection with others is omitted in these models. Context and socially defined identity issues such as race and gender clearly impact resilience and yet they, too, are overlooked.

With regard to some unexamined gender issues, Seligman's concept of "learned helplessness" is seen as contributing to poor outcomes (such as poor psychological health) and optimism is seen as leading to resilience and good outcomes (Seligman, 1990). Yet, gender may play a crucial role in the development of pessimistic or optimistic coping strategies (Dweck, 2006; Dweck & Goetz, 1978). Girls' expectations of future performances are affected more by past or present failures than by successes (Dweck & Reppucci, 1973). Girls attribute failure to internal factors and success to chance or external factors, whereas boys tend to attribute failure to external factors and success to internal factors. Girls blame themselves far more than boys do and take less credit for their success. Studies have shown that freedom from self-denigration is a powerful protector against stress-related debilitation (Peterson et al., 1981). Self-denigration is seen as contributing to poor self-esteem, which in turn is thought to contribute negatively to resilience (Dumont & Provost, 1999). Self-esteem tends to be thought of as a core, internal trait. However, self-esteem is a complicated concept. Self-esteem has been constructed in Western cultures based on a separate-self, hyperindividualistic model of development (Jordan, 1994). One "possesses" self-esteem, and in a competitive culture often comparisons with others (better than or worse than) are at the core of self-esteem. As Harter (1993) notes "how one measure up to one's peers, to societal standards, becomes the filter through which judgments about the self pass" (p. 94). Groups that are "outside" the dominant definitions of merit, who may have differing standards of worth, are thus disadvantaged by these privileged standards (e.g., being emotionally responsive and expressive in a culture that overvalues the rational or being relational in a culture that celebrates autonomy). Yvonne Jenkins has suggested that we think of "social esteem," which implies a group-related identity that values interdependence, affiliation, and collaterality (1993). Social esteem, then, may be more relevant to psychological well-being than self-esteem, particularly in more communal cultures and subcultures. Feeling good about oneself depends a lot on how one is treated by others and whether one can be authentic and seen and heard in relationships with important others.

Data suggest that girls are more depressed and self-critical in adolescence than are boys. Girls' rates of depression begin to climb in adolescence. Girls and women are twice as likely to develop

depression throughout their lives (Gillham et al., 2008; Gladstone & Beardslee, 2009; Hankin & Abramson, 2001; Lewisohn & Essau, 2002) "For girls to remain responsive to themselves they must resist the convention of female goodness; to remain responsive to others, they must resist the values placed on self-sufficiency and independence in North American culture" (Gilligan, 1990, p. 503). Girls lose connection with themselves and authentic connection with others during this period. Researchers have observed that women's coping styles are more relational (i.e., talking about personal distress with friends, sharing sadness) (Lazarus & Folkman, 1984). Men's styles are more problem-focused or instrumental, taking action to solve the problem and seeking new strategies. Emotion-focused coping may be more adaptive in situations where one has little real control, and problem-focused coping is useful where one can realistically expect to effect change. Those with less power and less real control (members of nondominant and marginalized groups) may develop more relational or "externalizing" ways of coping.

One of the core ideas of traditional Western psychology is the notion of "fight or flight" in the face of stress. This knowledge has been passed along for generations and is quite relevant to the way we understand resilience. Prevailing studies have consistently suggested that when we are stressed, we either mobilize aggressive, self-protective defenses (fight) or we flee (run away and avoid the possible confrontation with our own vulnerability). However, a recent analysis by Taylor et al. (2000) and Taylor (2002) has pointed out that all the studies on "fight or flight" were completed with males (i.e., male albino rats and monkeys, men, etc.). In replicating some of these experiments with females, Taylor noted a very different response to stress, which she and her colleagues called the "tend-and-befriend" response. In times of stress, they noted that females engage in caretaking activities or in the creation of a network of associations to protect themselves and others from a threat. Women respond relationally to stress; they seek connection. Belle (1987) has also noted that women are more likely to mobilize social support in times of stress and turn to female friends more often than are males. These data suggest that it is imperative that we attend to social identity issues, particularly gender, when we seek to understand resilience.

Relational Resilience

Theorists at the Stone Center, Wellesley College, have created a relational model of development and resilience. The model was originally developed by listening to women's voices and studying women's lives, but it is increasingly seen as applicable to men as well. Most developmental and clinical models have been biased in the direction of overemphasizing separateness, particularly "the separate self." This new model, called RCT, posits that we grow through and toward connection and that a desire to participate in a growth-fostering relationship is the core motivation in life (Jordan, 1997, 2010; Jordan et al., 1991; Miller & Stiver, 1997). Growth-fostering connections are characterized by mutual empathy and mutual empowerment and produce the following outcomes: zest, a sense of worth, productivity, clarity, and a desire for more connection (Miller & Stiver, 1997). All relationships arise within particular contexts, and the socioeconomic/cultural context powerfully shapes the connections and disconnections that exist in people's lives. Isolation is viewed as the primary source of pain and suffering. In a stratified society, difference is always subject to distortions of power (Walker, 2002). When one group is dominant and possesses the power to define what is valuable, the less powerful group is left having to "fit in," to "make do" with the rules of conduct and behavior that may not represent their experiences. Thus, Jean Baker Miller once said, "authenticity and subordination are totally incompatible" (1986, p. 98). In order to enjoy full authentic and growth-fostering interaction, one cannot be in a position of subordination. The role of power is to silence differences, limit authenticity, and define merit.

RCT proposes that we think of "relational resilience" as the capacity to move back into

growth-fostering connections following an acute disconnection or in times of stress (Hartling, 2003; Jordan, 1992, 2010). RCT suggests that relationships that enhance resilience and encourage growth are characterized by a two-way experience of connection, involving mutual empathy, mutual empowerment, and movement toward mutuality. For instance, we would suggest that real courage, real growth, and real strength all occur in a relational context and not in a state of isolation or independent assertion. In short, resilience is not an internal trait. The dominant North American culture does not support the notion of interdependence among people. Yet, there is an inevitable human need to turn to others for feedback, both appreciative and corrective, and to provide support to others as we make meaning of our lives. We all need to be responded to by others throughout our lives. This is different from one person needing support or approval from another person; we need to engage with others and to be engaged with and to participate in relationships that create growth for each person involved. It is about mutuality.

What is needed is a relational model of resilience, which includes a notion of: (1) supported vulnerability; (2) mutual empathic involvement; (3) relational confidence or the ability to build relationships that one can count on; (4) empowerment that involves encouraging mutual growth; and (5) creating relational awareness alongside of personal awareness. Relational resilience emphasizes strengthening relationships rather than increasing an individuals' strength (Hartling, 2003). In this model, the ability to ask for help is reframed as a strength. When we are stressed, our personal vulnerability increases. Finding a way to tolerate vulnerability and turn toward others is a significant sign of resilience. When we turn away from others and move toward isolation, we are likely to become more inflexible, getting stuck in dysfunctional patterns. In order to reach out for support, we must have some reason to believe that a dependable, mutual relationship is possible in which putting oneself in a more vulnerable position does not pose a danger. A part of relational resilience, then, involves discerning the growth-fostering potential of a particular interaction or relationship.

Relational resilience involves movement toward mutually empowering, growth-fostering connections in the face of adverse conditions, traumatic experiences, and alienating social–cultural pressures. It is the ability to connect, reconnect, and/or resist disconnection. Characteristics such as temperament, intellectual development, self-esteem, locus of control, and mastery can be reframed from a relational perspective. The most important contribution of temperament to resilience may be the means by which a child is placed at risk or protected in terms of relational consequences. For instance, a hard-to-soothe child may contribute to a sense of helplessness and frustration in the parent, which could lead to avoidance or neglect. Similarly, "intellectual development," which is typically thought of as an internal trait largely deriving from genetic loading, is now understood as a quality that is formed to a great extent in relational contexts. Siegel (1999) notes that interpersonal relationships are the primary source of experiences that shape how the brain develops. "Human connections create neuronal connections" (Siegel, p. 85).

Self-esteem can also be thought of in a more contextual way by examining what Jordan (1999) has called "relational confidence." Thus, rather than emphasizing "the self" and its esteem, we suggest that one's capacity to develop growth-fostering relationships, which engender confidence in our connections with others, might be a more important variable for study than some supposed internal trait of self-esteem (Burnett & Denmar, 1996). Similarly, the internal locus of control defined as a source of resilience may be understood better when we take context into account. In a culture that so values control and certainty, one can understand why this might be seen as central. However, studies have indicated that the locus of control is influenced by the cultural context and the realistic power that groups exercise in their culture. The locus of control may be seen as the ability to influence one's experience, environment, or relationship (Hartling, 2003).

Social support has also been viewed as vital to resilience (Masten & Coatsworth, 1998). It is defined as emotional concern, instrumental aid, information, and appraisal. Most social support studies have emphasized one-way support, "getting" love, "getting" help, etc. A relational perspective points to the importance of engaging in a relationship that contributes to all people in the relationship. Data suggest that it is as rewarding to give to others as it is to be given to (Luks, 1992). The power of social support is more about "mutuality" than about "getting for the self." However, mutuality is often obscured in the ways social support is construed; this appears to be true of the 12-step programs, misleadingly called "self-help groups" when they actually are about "mutual help" and growth. In other words, we all have a need to be appreciated, valued, validated, and given to, but we also have a need to participate in the development of others.

Mutuality

At the core of relational resilience is the movement toward mutuality. The social support literature points to the importance of being given to and receiving support from others (Ganellen & Blaney, 1984; Spiegel, 1991). But recently research has uncovered the importance of "giving" to others (Luks, 1992). The research community has moved into the study of altruism as a way of understanding the benefits of giving to others. RCT would suggest that it is actually *mutually* growth-fostering relationships that create the beneficial effects for individuals and not a trait such as altruism. That is, there is a need to give, to matter, to make a difference; we find meaning in contributing to the well-being of others (Jordan, 2010; Jordan et al., 1991, 2004). But we also need to feel cared for, given to, and treated with respect. We need to feel that we matter, that we can have an impact on the other person and on the relationship. Imbalances in mutuality are the source of pain for many people. And when we feel "outside" a mutual connection, we often experience isolation. To give to others in a situation where we are not being respected, responded to, and appreciated in the long run can lead to demoralization, a drop in resilience. It is not that we need to be "thanked" or valorized for our giving. We must feel that we are part of a respectful, mutual system. Mutual empathy holds the key to what we mean by mutuality. It is important that we see that we have had an impact on each other; we know, feel, see that we have made a difference. Mutual empathy is not about reciprocal, back and forth empathizing, although that happens in growth-fostering relationships as well. Mutual empathy is the process in which each person empathizes with the other in mutual growth; I see that I have moved you and you see that you have moved me. We matter to each other, we reach each other, we have an effect on one another. We can produce change in one another and in the relationship. This ultimately brings about a sense of relational competence. It brings us into the warmth of the human community where real resilience resides. And it contributes to the development of community, the ultimate source of resilience for all people.

The literature on competence motivation addresses the intrinsic need to produce an effect on our environment (White, 1959); the usual research looks at the way a child manipulates the physical world and how that enhances a child's sense of competence ("I made this happen"). Although there is no doubt that physical ability and task competence serve to increase one's sense of efficacy and worth, it is clear that an equally, if not more, important source of competence is in the world of interpersonal effectiveness, being able to evoke a sought for response in another person.

Let us take the example of a child and parent where the child is not understood, heard, or responded to (Dunham et al., 2011). There may be an empathic failure and the child attempts to represent her hurt to the parent. If the parent responds and lets the child see that it matters to the parent that she has hurt the child, that she is affected by the impact (in this case hurtful) that she has on the child, and the parent communicates this to the child, the relationship is strengthened and the child's sense of relational competence is strengthened. The child feels seen,

heard, and cared about; she feels she matters, her feelings matter. If, on the other hand, the parent does not respond to the child's pain with empathy or caring but denies the child's feelings or attacks the child in some way or simply does not respond at all (neglect), the child will experience a sense of not mattering, of having no impact on the other person or on the relationship. She will begin to keep these aspects of herself out of relationship and will move into isolation and inauthenticity. When this happens repeatedly, the child moves into chronic disconnection. She develops strategies of disconnection for survival. In the most egregious cases of chronic disconnection and violation such as physical or sexual abuse of a child, these strategies of disconnection lead to a massive sense of isolation, immobilization, self-blame, and shame, what Jean Baker Miller calls "condemned isolation" (Miller & Stiver, 1997). This state of condemned isolation is a state of minimal resilience. The person maintains rigid and overgeneralized relational images that maintain isolation and mistrust of others. The person is not free to move back into connection following current disappointments and disconnections. New learning and growth is blocked or limited. The biochemistry may also be altered in such a way so that dissociation, amygdala reactivity, and startle responses interfere with reestablishing connection (Banks, 2000).

Shame

Often, these disconnections occur in a climate of shame. Shame moves people into isolation and thus disempowers and immobilizes them. Shame is the experience of feeling unworthy of love, of feeling outside the human community (Jordan, 1989). In shame, one doubts that another person can be empathically present. One feels that one's very being is flawed in some essential way. Although in guilt we can hope to make amends, in shame, we anticipate only rejection and scorn. Our very "being" feels deficient. Shame is an intensely interpersonal effect, one of the original effects delineated by Tomkins (1987). Because it leads to silencing and isolation, shame is a major deterrent to resilience, particularly if one frames resilience as an interpersonal, relational phenomenon. To the extent that one moves away from a relationship in the face of shame, the opportunity for a restorative and corrective connection is lessened.

Shame arises spontaneously when one feels unworthy of love or connection, at the same time that one is aware of one's yearning for connection. Shaming is also done to people, used to change an individual's or a group's behavior. Sometimes it is used to disempower and silence. Dominant societal groups often shame the subordinate groups into silence as a way of exercising social control. The implication often is that "your" reality (nondominant individual or group) is deficient or deviant. This applies to any marginalized group, whether it is girls, people of color, gays, and lesbians. To the extent that an individual or group feels shame, they will in fact be less resilient and less empowered, less able to give voice to difference.

Building Relational Resilience in Girls and Women

Resilience exists to the extent that empathic possibility is kept alive. To the extent that girls feel they are a part of mutually growth-fostering relationships in which they care about others and are cared about as well, they will experience a sense of flexibility, worth, clarity, creativity, zest, and desire for more connection, what Jean Baker Miller has called the "five good things" of good connection (Miller & Stiver, 1997). We grow and learn, expanding the quality of our relationships. In isolation, we repeat old patterns, are caught in repetitive cognitions, and are often disempowered. Resilience implies energy, creativity, flexibility to meet new situations. Sometimes it involves courage, the capacity to move into situations when we feel fear or hesitation. Courage is not an internal trait; it is created in connection. As human beings, we *encourage* one another, thus creating courage in an ongoing way. Just as there is no such thing as an internal state of "self-esteem" that resides in a separate person, feelings

of worth, strength, and creativity are also supported or destroyed in relationships. At a societal level, those at the margins, defined by the dominant "center" (Hooks, 1984), are often disempowered by the dominant group's definition of what defines them, their "defective differentness."

Resilience becomes especially salient for girls in adolescence, a time when, according to Carol Gilligan (1982), girls begin to "lose their voices." Between the ages of 11 and 13 years, Caucasian girls show massive drops in self-esteem (Gilligan et al., 1990). Rates of depression increase. As Gilligan suggests, girls begin to be silenced and less authentic in relationships. They appear to lose their relational intelligence. They take themselves out of a relationship (authentic relationship) in order to "stay in a relationship" (appearance of relationship). They lose a sense of effectiveness and feel they must accommodate other's needs (Jordan, 1987). Janie Ward has written with great insight about the importance for adolescent girls of color to find a way to resist the disempowering stereotypes that the dominant culture imposes on girls of color. This capacity to resist the controlling images (Collins, 2000) is a significant contributor to resilience.

In working with African-American girls, Janie Ward (2002) has suggested that we help them build healthy resistance, originally called "resistance for liberation" (Robinson & Ward, 1991). She suggests four processes to help these girls remain strong and resilient. First, she suggests that we help these girls "read it." By this she means that we should examine the message and the immediate context and larger sociopolitical context. Thus, with disempowering messages, one does not get caught up in reacting but examines and thinks carefully about the evidence for the message or stereotype. After reading it, it is important to *name it*: in this, we acknowledge the presence of racism, sexism, or class bias. It involves "knowing what you know" and confronting the issue. It may involve keeping silent until safety is reached (e.g., bringing it to a trusted adult to get support and seek clarification). A failure to name can lead to internalization of the negative identity and shame. Naming gives one a sense of agency and strength. The third step is to *oppose the negative force*. As Janie Ward suggests, one engages in the action to defy or circumvent or avoid the negative force, such as racism. It involves opposing self-hatred, despair, contempt, hopelessness, anger, and complacency. Finally, she suggests that we support girls in *replacing it*. This means that one can hold fast to a belief or value a sense of reality that is different from the one that is being promoted and then put something new in the place of the feeling, attitude, or behavior that is being opposed. For instance, a person resisting racism could take a stand for fairness and justice.

These steps can be applied to many situations that typically undermine the sense of strength and worth of an individual (Franz & Stewart, 1994). It is interesting that members of marginalized groups are encouraged to internalize blame. For instance, there was a "psychiatric diagnosis" of drapetomania in the days of slavery, which was applied to slaves who had "a need to run away from their masters." Their desire for freedom was pathologized and given a medical diagnosis. In a less extreme way, girls are taught to take responsibility for failures and are pathologized for their relational longings. And there are abundant data that indicate girls internalize failure and externalize success, while boys do the opposite. If the default explanation for failure is self-blame, assuming that "I am the problem," depression, immobilization, and shame ensue. If, on the other hand, one assumes that failure results from chance factors or external forces and success is a result of one's ability or effort, one feels more empowered to act and more sense of worth. The context plays a large role in creating these styles of attribution.

Courage in Connection

In addition to resisting the forces of disempowerment (sexism, racism, classism, heterosexism), resilience involves the development of courage. Although courage has also been constructed within a separate self-model, with images of lone heroes scaling mountains or jumping from

airplanes in individual death-defying acts, courage also might be considered to be an interpersonal experience. Courage develops in connection; we are *encouraged* by others (Jordan, 1990). Courage, like resilience, is not a trait that exists within the individual. As human beings, we are constantly in interactions that are either encouraging or discouraging. Growth-fostering relationships that promote zest, clarity, a sense of worth, productivity, and a desire for more connection are intrinsically encouraging. They help us feel energetic, focused, strong, and seeking growth and connection. Much of parenting, teaching, and therapy is about encouraging others, literally helping people develop a sense of courage, and feeling the capacity to act on one's values and intentions.

For young adolescent girls, there is probably nothing more important than supporting the growth of courage. Girls in early adolescence begin to lose their voice, begin to lack confidence, and their self-esteem plummets. The early energy, confidence, and feistiness (Gilligan, 1990; Pipher, 1994) that researchers have written about in young girls evaporate for many. A part of this arises around heterosexual relationships in which girls begin to feel objectified, lose touch with their own body experience, and feel that they must accommodate others, often boys' desires and definitions of them. A preoccupation with body image (where one feels eternally deficient) and with control of sexuality and anger leaves girls feeling constricted and inauthentic. Girls feel they cannot represent their experience fully; they fear rejection from boys and exclusion from girls if they deviate from the group norms. The inclusion–exclusion factors (Eisenberger & Lieberman, 2004; Simmons, 2002) that have weighed heavily on girls in social relationships heat up even more during these years. And as they emulate boys' models of success, girls feel less and less able to show or share these feelings of fear and uncertainty. They are supposed to be cool and tough.

The prohibition on anger for girls (Brown, 2003; Miller, 1976, 1985) is a great obstacle to their developing resilience. If a person cannot represent her feelings as fully as possible, particularly feelings that inform relational health, she will move into silence and isolation. Anger is a necessary and important signal in any relationship; it often marks a place of hurt or injustice. People need to be able to move into conflict to avoid being silenced or subordinated (Jordan, 1990). By suggesting that anger is a necessary part of change and growth in a relationship, I am not endorsing cathartic, expressive, impulsive anger. Nor am I supporting the use of aggression, force, or dominance against others. Authentic anger is not about being totally reactive, expressive, or spontaneous. In all relationships, we must act and speak with awareness of our possible impact on others. And if we value good relationships, we will use anticipatory empathy to avoid hurting others when possible. But anger is a signal that something is wrong, that something hurts, that there has to be a shift or change in the relationship. If girls are asked to suppress their anger, they are invited into accommodation, subordination, and inauthenticity. Helping an adolescent girl learn how to speak up, especially how to channel her anger, how to be strategic in her use of her anger will support her courage and her sense of who she is. Messages from the culture, however, silence and distance girls from these interpersonal signals. Girls then become cut off from themselves and from authentic connection with others.

Promising interventions have been developed in response to the research indicating that adolescent girls are at particular risk for depression, anxiety, losing their sense of worth, and becoming less resilient. Girls define safety in terms of relationships (Schoenberg et al., 2003). The "Girls Circle" model (Hossfeld, 2008; Irvine, 2005) integrates relational theory, resilience practices, and skills training in an effort to help girls increase their positive connections. It is meant to counteract social and interpersonal forces that impede girls' growth and development. The Girls Circle is a gender-specific program. Benard has indicated that providing caring and meaningful participation in communities increases empathic responsiveness and helps girls navigate difficult peer relationships (Benard, 2004; Hossfeld, 2008; Johnston et al., 2002;

LeCroy & Daley, 2001; LeCroy & Mann, 2008; Steese et al., 2006). Gender-specific programs become increasingly important as modern adolescents are exposed to risky behaviors at a much earlier age. Another curriculum, "Go Grrrls" is a program aimed at strengthening girls' connections and friendships. Go Grrrls was also found to improve girls' body images, assertiveness, efficacy, self-liking, and competence (LeCroy, 2004). The Penn Depression Prevention program and the Penn Resiliency Program (PRP) address personal relationships and cultural pressures in addition to cognitive changes (Beck, 1976). The Penn program is a manualized program that can be delivered in schools, clubs, clinics, and other community settings (Gillham et al., 2003, 2008). Given the sex differences in depression in adolescence, the Penn project underscores the importance of addressing girls' depression and resilience separately from boys (Le et al., 2003; Lewisohn & Essau, 2002). It focuses on cognitive risk factors and problem-solving strategies. Restriction of anger may also be linked to depression in girls (Chaplin & Cole, 2005). Girls respond to the physical changes of puberty more negatively than do boys. Furthermore, the internalization of negative cultural messages increases girls' vulnerability to depression (Stice et al., 2001). A new initiative at the Penn Resilience project, "Girls in Transition" (GT), highlights issues important to girls in early adolescence. GT encourages girls to think critically about cultural messages that demean women or impose impossible body image standards (Chaplin et al., 2006). Successful mentoring programs are based on teaching skills, relational competence, fostering relationships between the mentor and mentee, and fostering connection with the community. They emphasize mutual support (Dubois et al., 2011).

As the research and many of the intervention programs point out, helping girls value connections and relationships is essential. Too often, the larger culture invalidates or pathologizes a girl's desire for connection or her desire to participate in the growth of others (seen as a failure of "self-interest"). The courage to move into the necessary vulnerability of authentic connections is as important as the courage to move into conflict to protest personal and social injustice. Because there is little real support for the importance of relationships in people's lives, girls and women are viewed as "too needy" or "too dependent" when they express their strong desire for connection. By acknowledging and valuing the basic, lifelong human need for a relationship (now strongly supported by neuroscience research), we support a girl's natural inclination toward connection and thereby help create a powerful pathway toward resilience.

In summary, all children experience a better outcome following adverse life conditions when they have a positive relationship with a competent adult, engage with other people, and have an area of competence valued by themselves or society (Masten, et al., 1990). Girls tend to seek more help from others in childhood and offer more help and support in their preadolescent years (Belle, 1987). For girls and women in particular, mutuality is a key factor in how much protection a relationship offers. Lower depressions scores are found in women who are in highly mutual relationships (Genero, 1995; Sperberg & Stabb, 1998). The importance of these relationships is not just that they offer support but that they also provide an opportunity to participate in a relationship, which is growth-fostering for the other person as well as for oneself (Jordan, 2010). Participation in a growth-fostering connection and relational competence may well be the key to resilience in girls and women. It is likely that understanding resilience as a relational phenomenon rather than as a personality trait will lead us to deepen our understanding of the significance of connection for the well-being of all people.

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5 What Can We Learn About Resilience from Large-Scale Longitudinal Studies?

Shawna Hopper and Theodore D. Cosco

The Kauai Longitudinal Study Beginning in the prenatal period, the Kauai Longitudinal Study has monitored the impact of a variety of biological and psychosocial risk factors, stressful life events, and protective factors on the development of some 698 Asian, Caucasian, and Polynesian children, born in 1955, in the westernmost county of the United States. Some 30% of this cohort were exposed to four or more risk factors that included chronic poverty, perinatal complications, parental psychopathology, and family discord. Data on the children and their families were collected at birth, in the postpartum period, and at ages 1, 2, 10, 18, 32, and 40 years. The most comprehensive publication resulting from this study is the book *Journeys from Childhood to Midlife*: *Risk*, *Resilience, and Recovery* (Werner & Smith, 2001).

The Minnesota Parent–Child Project Begun in 1975, this project followed some 190 of 267 low-income women and their first-born children in Minneapolis from the last trimester of pregnancy to ages 7 and 10 days, 3, 6, 9, 12, 18, 24, 30, 42, and 48 months, and from grades 1, 2, 3, and 6 to age 25 years (Yates et al., 2003; Sroufe et al., 2005).

Project Competence Begun in 1977–1978, this study followed a normative school cohort of 205 third to sixth graders in the Minneapolis public schools (ages 8–12) after 7, 10, and 20 years, with high retention rates. Some 90% of the original cohort participated in the 20-year follow-up (Masten & Powell, 2003; Masten et al., 2004).

The Virginia Longitudinal Study of Divorce and Remarriage Begun in 1971, the initial sample consisted of 144 white middle-class families, half divorced, half nondivorced, with a target child of 4 years. Children and families were studied at 2 months and 1, 2, 6, 8, 11, and 20 years after divorce. Of the original 144 families, 122 are continuing to participate in this study. When the children were 10 years old, the sample was expanded to include 180 families. When the children were 15 years old, it was expanded to include 300 families, and when the young people were 24 years old, it was expanded to include 450 families (Hetherington, 1989).

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_5

The Hetherington and Clingempeel Study of Divorce and Remarriage Begun in 1980, this study examined the adaptation in stepfamilies of adolescent children at 4, 17, and 26 months after their parents' remarriage. Participants in this study were 202 white middle-class families living in Philadelphia and its suburbs, with the non-divorced and stepfamilies studied at equal intervals (Hetherington & Kelley, 2002).

The Rochester Longitudinal Study Begun in 1970, this study included a core sample of 180 out of 337 women showing a history of mental illness (and a normal control group), whose children were studied at birth, at 4, 12, and 30 months, 4 years, and through grades 1–12 (Sameroff et al., 2003).

A Study of Child Rearing and Child Development in Normal Families and in Families with Affective Disorders Begun in 1980, this study enrolled 80 (Maryland) families in which parents had affective disorders, with 2 children each, i.e., a younger child in the age range from 15 to 36 months and an older child between the ages of 5 and 8 years, and 50 control families. There were three follow-ups at ages 42–63 months, 7–9 years, and 11–13 years (Radke-Yarrow & Brown, 1993).

Lehigh Longitudinal Study This study, which began in 1976, included 297 families (457 children and parents). Participants were recruited from child welfare abuse and protective service programs, with controls recruited from Head Start centers and childcare programs in Pennsylvania. The first set of data collection took place when the children were between 18 months and 6 years. The second wave of data collection followed 4 years later, and the third wave took place 10 years after that. Approximately 91% of the original participants were reassessed in the third wave (Sousa et al., 2011).

The Virginia Longitudinal Study of Child Maltreatment Between 1986 and 1989, this study focused on 107 maltreated children, identified from the statewide registry, and a normal control group of children attending public schools in Charlottesville. The children were assessed in grades 1–3, grades 4–5, and grades 6–7 (Bolger & Patterson, 2003).

The Notre Dame Adolescent Parenting Project (NDAPP) This focused on the fate of more than a 100 teenage mothers and their children—born in the late 1980s and early 1990s across the first 14 years of their lives. The goal of this study was to understand the mechanisms and pathways through which risk and protective factors influenced children's development at 6 months and 1, 3, 5, 8, 10, and 14 years of age (Borkowski et al., 2007).

The Chicago Longitudinal Study Begun in 1983, this is an ongoing longitudinal quasi-experimental cohort design, including 989 low-income children (93% African American), who entered the Child–Parent Center (CPC) programs in preschool, and 550 low-income children, who participated in an all-day kindergarten program (Reynolds, 2000). More than 75% of the original sample participated in the Age 35 survey (Ou et al., 2020).

Canadian Studies

National Longitudinal Study on Children (NLSC) Beginning in 1994, this study followed the development and well-being of children from across Canada's provinces and territories, from birth to early adulthood. A total of 22,831 children aged 0–11 years were included at baseline. Waves of data collection took place every 2 years, ending in 2008/2009.

The Quebec Longitudinal Study of Child Development (QLSCD) This is an ongoing longitudinal study of children born between October

1997 and July 1998 in Quebec, Canada. At baseline, 2120 participants were included in the study. Data were collected annually or every 2 years. When the children were 20 years old, 1245 remined in the study (Orri et al., 2021).

British Studies

The Early Prediction of Adolescent Depression (EPAD) Study This longitudinal study, also known as the Cardiff University Mood and Wellbeing Study, follows 337 families from across the UK with the aim to better understand the causes of youth mental health difficulties. Since 2017, three waves of assessment have been conducted and the results have shown that together, family, social, and child factors explain resilience within the high-risk sample.

The Millennium Cohort Study (MCS) This study followed 18,818 children born in England, Scotland, Wales, or Northern Ireland between 2000 and 2002. Data were collected when the participants were 9 months old and at ages 3, 5, 7, 11, 14, and 17 years. The next scheduled data collection will take place at age 22 (Joshi & Fitzsimons, 2016).

The Next Steps Study This study follows the lives of 15,770 people born in England in 1989–1990. Data were collected annually from 2004 to 2010. The next data collection took place in 2015–2016 when the cohort members were 25 years old, and another data collection is underway with participants aged 32 years.

The Medical Research Council (MRC) National Survey of Health and Development This study followed 5362 children, born in England, Scotland, or Wales in March 1946. Since the initial maternal survey, study members have been followed up 24 times. At the 24th follow-up, 2816 participants remained active in the study (Kuh et al., 2016).

The National Child Development Study (NCDS) This study followed some 16,994 persons, born in Great Britain between March 3 and 9, 1958, until adulthood. Data were collected on the physical, psychosocial, and educational development of the cohort at ages 7, 11, 16, 23, 33, 42, 44, 46, 50, and 55 years. In 2020 and 2021, participants were also asked to participate in three coronavirus-19 (COVID-19) surveys. The next data collection, Life in Your Early 60s Survey, is currently underway (Power & Elliott, 2006).

The British Cohort Study (BCS70) This study followed 14,229 children, born in the week between April 5 and 11, 1970, for over five decades. Follow-up data were collected when the cohort members were aged 5, 10, 16, 26, 30, 34, 38, 42, 46, and 51 years (Elliott & Shepherd, 2006).

The Avon Brothers and Sisters Study (ABSS) This is a longitudinal study of some 192 families, each with a child born between August 1991 and December 1992 and an older sibling over the age of 7 but below the age of 17 years. The aim of the research was to explore sibling relationships in different family types (two-parent families, single-parent families, and step-families) and the risk and protective factors that impact their development and adjustment (Gass et al., 2007).

New Zealand Studies

The Dunedin Multidisciplinary Health and Development Study This is a longitudinal investigation of a cohort of infants, born between April 1, 1972, and March 31, 1973, in Dunedin, New Zealand. The base sample contained 1037 children, followed up at ages 3, 5, 7, 9, 11, 13, 15, 18, 21, 26, 32, 38, and 45 years (Caspi et al., 2003). In the latest follow-up, at age 45 years, 94% of the living study members participated (Bourassa et al., 2021).

The Christchurch Health and Development Study Begun in mid-1977, this study consists of a birth cohort of 1265 children, born in the Christchurch urban region and followed at 4 months, 1 year, annually to age 16 years, and then at ages 18, 21, 25, 30, 35, and 40 years (Fergusson & Horwood, 2003).

Australian Studies

Childhood to Adolescence Transition Study (CATS) This study began in 2012 and follows more than 1200 children annually from grade three through adolescence. A total of 881 participants were assessed in 2019. During the school years, teachers and parents also completed the questionnaires. Parents have since been asked to complete some of the questionnaires (Mundy et al., 2013).

The Barwon Infant Study Beginning in 2010, this study recruited 1158 expectant mothers. Data collection took place within the first and second trimesters as well as the third trimester. At birth, 1074 infants were included in the study. Follow-up data collection took place at 4 weeks, at 3, 6, 9, 12, and 18 months, and at 2 and 4 years of age. At 4 years of age, 909 participants remained in the study. Data are currently being collected for participants ages 7–9 years (Vuillermin et al., 2015).

The Longitudinal Study of Australian Children This study began in 2003 with two cohorts—5000 children aged 0–1 years and 5000 children aged 4–5 years. This study includes children, their parents, carers, and teachers. Data collection took place every 2 years until 2019. Participation in 2009 included more than 3000 participants from each cohort. Since 2020, three surveys have been completed regarding COVID-19 (Wake et al., 2014).

The Mater-University of Queensland Study of Pregnancy (Brisbane) This is a prospective study of 8556 pregnant women that began in 1981. The mothers and their offspring were assessed between the third and fifth days postpartum and at 6 months, 5 years, 14 years, and 21 years. Between 2009 and 2012, the mothers were followed up. Between 2011 and 2014, the children were followed up. Between 2016 and 2018, the third generation was recruited to this study. In 2021, another phase of this study commenced with the second and third generations (Najman et al., 2005).

The Australian Temperament Project (ATP) This is a longitudinal study of the psychosocial development of a representative sample of 2443 children born in the Australian state of Victoria between September 1982 and January 1983. Since recruitment, 15 waves of data have been collected over 30 years including both parents and children. The ATP Generation 3 currently follows more than 1000 offspring from late gestation through to 6 years of age where 706 families participated in data collection (Edwards et al., 2013).

Scandinavian Studies

The Copenhagen High-Risk Study This study has traced 207 children of schizophrenic mothers and 104 matched controls from age 15 to ages 25 and 42 years. More than half had exhibited "no" psychopathology from mid-adolescence through mid-life (Parnas et al., 1993).

The Lundby Study This is a prospective longitudinal study of the mental health of some 2550 persons ages 0–92 years at baseline, including 590 children (mean age 8 years at baseline) living in southern Sweden. Three waves of follow-up took place (1957, 1972, and 1997). In 1957, 1013

people were added to the original cohort. Cederblad (1996) followed a subsample of 148 individuals who had been exposed to three or more psychiatric risk factors (such as parental mental illness, alcoholism, family discord, or abuse) in childhood. Three out of four were functioning well in midlife.

African Studies

The Longitudinal Study of War-Affected Youth (LSWAY) This is a 17-year prospective longitudinal study of the intergenerational impact of war on mental health and psychosocial well-being. Beginning in 2002, this study included children aged 10–17 years who participated in Sierra Leone's civil war as child soldiers as well as a random sample of similar aged youth (n = 395). In 2004 and 2008, caregivers were included in the study, and in 2016–2017, caregivers, intimate partners, and children were added. Although many participants show mental health problems with consequences to their families, family- and community-level risks and protective factors were identified (Betancourt et al., 2020).

German Studies

There are two longitudinal studies of risk and protective factors in Germany: Lösel and Bliesener (1990) have studied adolescents in residential institutions in Bielefeld; Laucht et al. (1999) have followed a birth cohort of 347 children in Mannheim from 3 months to 8 years. Reports on the findings of their studies are available in German in the book *Was Kinder Starkt* (*What Makes Children Strong?*) (Laucht et al., 1999).

Individual Attributes and Sources of Support Associated with Successful Coping Among High-Risk Children

Tables 5.1 and 5.2 summarize the individual attributes and sources of support in the family and community associated with successful coping among high-risk children, which have been replicated in a number of large-scale longitudinal studies in the United States and abroad. In most cases, the factors that contributed to resilience among those exposed to high levels of childhood adversity also benefited "low-risk" children, that is, they showed a main effect rather than an interaction effect in statistical analyses (Fergusson & Horwood, 2003).

Children who coped successfully with adversity tended to become less easily distressed than those who developed problems and had an active, sociable, "engaging" temperament that attracted adults and peers alike. They possessed good communication and problem-solving skills, including the ability to recruit substitute caregivers; they had a talent or special skill that was valued by their peers, and they had faith that their actions could make a positive difference in their lives.

They also drew on external resources in the family and community. Foremost were affectional ties that encouraged trust, autonomy, and initiative. Resilience levels were higher for children who have close relationships with their parents, friends they could trust and communicate with, and a sense of belonging within their school community. In formal support systems in the community also promote resilience by providing them with positive role models, such as teachers, mentors, and peer friends.

The frequency with which the same predictors of resilience emerge from diverse studies with different ethnic groups, in different geographic and sociopolitical contexts, conveys a powerful message of universality (Masten & Powell, 2003). That does not preclude the possibility that some protective factors are more age-, gender-, and context-specific than are others. For example, the Kauai Longitudinal Study found some variables that discriminated significantly between positive and negative developmental outcomes only when there was a series of stressful life events or when children were exposed to poverty. They did not discriminate between good and poor outcomes among middle-class children whose lives were relatively secure, stable, and stress-free (Werner & Smith, 1989).

Table 5.1 Individual attributes associated with successful coping in high-risk children—replicated in two or more large-scale longitudinal studies

Source notes	Characteristics of individual	Time period studied	Multiple (4+) risk factors	Childhood adversities			
				Poverty	Parental mental illness	Child abuse	Divorce
1	Low distress; low emotionality	Infancy–adulthood	+	+	+	+	+
2	Active; vigorous	Infancy–adulthood	+	+			
3	Sociable	Infancy–adulthood	+	+	+	+	
4	Affectionate "engaging" temperament	Infancy–childhood	+	+	+	+	+
5	Autonomy; social maturity	Early childhood	+	+			
6	Average to above-average intelligence (including reading skills)	Childhood–adulthood	+	+	+	+	+
7	High achievement motivation	Childhood–adulthood	+	+	+		
8	Special talents	Childhood–adolescence	+	+	+		
9	Positive self-concept	Childhood–adolescence	+	+	+		+
10	Internal locus of control	Childhood–adulthood	+	+	+	+	+
11	Impulse control	Childhood–adulthood	+	+	+		
12	Planning; foresight	Adolescence–adulthood	+	+			
13	Faith; a sense of coherence	Adolescence–adulthood	+	+	+		
14	Required helpfulness	Childhood–adulthood	+	+	+		

Source notes:

1. Farber and Egeland (1987), Fergusson and Horwood (2003), Werner and Smith (1992, 2001)
2. Farber and Egeland (1987), Werner and Smith (1992, 2001)
3. Farber and Egeland (1987), Lösel and Bliesener (1990), Werner and Smith (1992, 2001)
4. Farber and Egeland (1987), Hetherington (1989), Werner and Smith (1992, 2001)
5. Farber and Egeland (1987), Masten et al. (2004), Werner and Smith (1989, 1992, 2001)
6. Farber and Egeland (1987), Fergusson and Lynskey (1996), Hetherington and Elmore (2003), Lösel and Bliesener (1990), Masten and Powell (2003), Masten et al. (2004), Seifer et al. (1992), Werner and Smith (1992, 2001)
7. Fergusson and Horwood (2003), Lösel and Bliesener (1990), Masten and Powell (2003), Masten et al. (2004), Radke-Yarrow and Brown (1993), Schoon (2001), Werner and Smith (1992, 2001)
8. Anthony (1987), Werner and Smith (1992, 2001)
9. Cederblad (1996), Fergusson and Horwood (2003), Hetherington and Elmore (2003), Lösel and Bliesener (1990), Radke-Yarrow and Brown (1993), Werner and Smith (1992, 2001)
10. Bolger and Patterson (2003), Cederblad (1996), Hetherington and Elmore (2003), Masten and Powell (2003), Seifer et al. (1992), Werner and Smith (1992, 2001)
11. Fergusson and Lynsky (1996), Fergusson and Horwood (2003), Masten and Powell (2003), Werner and Smith (1992, 2001)
12. Masten et al. (2004), Rutter (2000), Werner and Smith (1992, 2001)
13. Cederblad (1996), Hansson et al. (2008), Hetherington and Kelley (2002), Howard et al. (2007), Rumbaut (2000), Suarez-Oroczo and Suarez-Oroczo (2001), Werner and Smith (1992, 2001)
14. Anthony (1987), Boyden (2009), Lösel and Bliesener (1990), Werner and Smith (2001)

Table 5.2 Resources in the family and community associated with successful coping in high-risk children—replicated in two or more large-scale longitudinal studies

Source notes	Resources	Time period studies	Multiple (4+) risk factors	Childhood adversities			
				Poverty	Parental mental illness	Child abuse	Divorce
1	Small family (<4 children)	Infancy	+	+			
2	Maternal competence	Infancy–adolescence	+	+	+	+	
3	Close bond with primary caregiver	Infancy–adolescence	+	+	+	+	
4	Supportive grandparents	Infancy–adolescence	+	+	+	+	+
5	Supportive siblings	Childhood–adolescence	+	+	+	+	+
6	Competent peer friends	Childhood–adolescence	+	+		+	+
7	Supportive teachers	Preschool–adulthood	+	+	+		+
8	Successful school experiences	Childhood–adulthood	+	+	+		+
9	Mentors (elders)	Childhood–adulthood	+	+			
10	Prosocial organizations: youth clubs, religious groups	Childhood–adulthood	+	+			

Sources:

1. Cederblad (1996), Werner and Smith (1992, 2001)
2. Egeland et al. (1993), Masten and Powell (2003), Seifer et al. (1992), Werner and Smith (1992, 2001)
3. Cederblad (1996), Fergusson and Horwood (2003), Losel and Bliesener (1990), Masten et al. (2004), Mednick et al. (1987), Rumbaut (2000), Seifer (2003), Werner and Smith (1992, 2001)
4. Farber and Egeland (1987), Herrenkohl et al. (1994), Hetherington (1989), Howard et al. (2007), Radke-Yarrow and Brown (1993), Werner and Smith (1992, 2001)
5. Gass et al. (2007), Hetherington (1989), Wallerstein and Blakeslee (1989), Werner and Smith (1992, 2001)
6. Bolger and Patterson (2003), Fergusson and Horwood (2003), Hetherington (1989), Losel and Bliesener (1990), Rumbaut (2000), Suarez-Oroczo and Suarez-Oroczo (2001), Wallerstein and Kelley (1980), Werner and Smith (1992, 2001)
7. Hetherington (1989), Losel and Bliesener (1990), Radke-Yarrow and Brown (1993), Reynolds and Ou (2003), Rumbaut (2000), Werner and Smith (1992, 2001)
8. Fergusson and Lynskey (1996), Masten et al. (2004), Schoon (2001, 2006), Wadsworth (1999), Werner and Smith (1992, 2001)
9. Howard et al. (2007), Yates et al. (2003), Werner and Smith (2001)
10. Howard et al. (2007), Masten and Powell (2003), McGee (2003), Rumbaut (2000), Suarez-Orozco and Suarez-Oroczo (2001), Werner and Smith (1989, 1992, 2001), Wyman (2003)

Protective factors include autonomy and self-help skills in early childhood for males and a positive self-concept in adolescence for females. Among protective factors in the caregiving environment for both boys and girls were a positive parent–child relationship observed during the second year of life and the number of sources of emotional support they could draw on in early and middle childhood. Furthermore, in the Rochester Child Resilience Project, Wyman (2003) reported context-specific effects of involvement in structured after-school activities among high-risk teens. Participation in prosocial group activities lowered the risk for delinquent behavior for children with many antisocial friends but not for those with few antisocial friends.

The Importance of Early Developmental Competence and Support

Previously, research on resilience had focused on middle childhood and adolescence, with a lesser focus on the early history of developmental competence. Both the Kauai Longitudinal Study and the Minnesota Parent–Child Project have shown that an early history of positive adaptation, engendered by consistent and supportive care, has a powerful and enduring influence on children's adaptation and that it increases the likelihood that they will utilize both formal and informal sources of support in their environment at later stages in the life cycle.

For example, Yates et al. (2003) found that children with early histories of secure attachment in infancy and generally supportive care in the first 2 years demonstrated a greater capacity to rebound from a period of poor adaptation when they entered elementary school compared to those with less-supportive histories. Likewise, children who exhibited positive transitions from maladaptation in middle childhood to competence in adolescence were able to draw on a positive foundation of early support and positive adaptation.

That the process of resilience is manifested at later stages in the developmental trajectory became apparent to us in our follow-up studies in early adulthood and midlife in Kauai (Werner & Smith, 1992, 2001). The majority of high-risk children who had become troubled teenagers (with delinquency records and mental health problems) recovered in the third and fourth decades of life and became responsible partners, parents, and citizens in their communities. Individuals who availed themselves to informal sources of support in the community, and whose lives subsequently took a positive turn, differed in significant ways from those who did not make use of such options. They had been exposed to more positive interactions with their primary caregivers in the first 2 years, that is, their early rearing conditions fostered a sense of trust.

The Shifting Balance Between Vulnerability and Resilience

Large-scale longitudinal studies that have followed boys and girls from birth to adulthood (whether children of poverty, divorce, or children coming from multi-risk families) have repeatedly found a shifting balance between stressful life events that heighten children's vulnerability and protective factors that enhance their resilience. The follow-up in adulthood in the Kauai Longitudinal Study, for example, found a few offspring of psychotic parents who had managed to cope successfully with a variety of stressful life events in childhood or adolescence but whose mental health began to deteriorate in the third decade of life (Werner & Smith, 1992).

Other high-risk children had grown into competent, confident, and caring adults but felt a persistent need to detach themselves from their parents and siblings whose domestic and emotional problems threatened to engulf them. This was especially true for the adult offspring of alcoholic parents, some of whom had been physically and emotionally abused when they were young. The balancing act between forming new attachments to loved ones of their choice and the loosening of old family ties that evoked painful memories exacted a toll on their adult lives. The price they paid varied from stress-related health problems to a certain aloofness in their interpersonal relationships.

On the positive side, the Kauai study demonstrated that the opening of opportunities at major life transitions (high school graduation, entry into the world of work, marriage) enabled the majority of the high-risk individuals who had a troubled adolescence to rebound in their 20s and 30s. Among the most potent second chances for such youth were adult education, voluntary military service, active participation in a church community, and a supportive friend or marital partner. Likewise, Project Competence identified a number of young people who did poorly in adolescence but turned their lives around in the transition to adulthood (Masten & Wright, 2009).

Protective Mechanisms: Interconnections Over Time

Just as risk factors tend to co-occur in a particular population (i.e., children of poverty) or within a particular developmental period (i.e., adolescence), protective factors are also likely to occur together to some degree (Gore & Eckenrode, 1994). The presence of a cluster of (interrelated) variables that buffer adversity at one point in time also makes it more likely that other protective mechanisms come into play at a later period of time.

There are only a few large-scale longitudinal studies that have demonstrated such interconnections over time. The highlights of the results of the latent variable path analyses that were applied to the data from the Kauai Longitudinal Study at six points in the life cycle illustrate the complexity of the phenomenon of resilience. They show how individual dispositions and outside sources of support and stress are linked together from infancy and early childhood to middle childhood and adolescence and how these variables, in turn, predict the quality of adaptation in young adulthood and midlife (Werner & Smith, 1992, 2001).

When the links between individual dispositions and outside resources were examined, men and women who had made a successful adaptation at midlife—despite serious childhood adversity—had relied on sources of support within the family and community that increased their competence and efficacy, decreased the number of stressful life events they subsequently encountered, and opened up new opportunities for them.

The protective processes that fostered resilience manifested themselves early in life. Across a span of several decades, maternal competence in infancy was positively related to their offspring's adaptation in adulthood (at 32 and 40 years). Girls whose mothers interacted in a consistently positive way with their infant daughters were more autonomous at age 2 and more competent at age 10. They also attracted more sources of emotional support in childhood and adolescence and encountered fewer stressful life events than did the daughters whose mothers were less competent caregivers. Males with more competent mothers were more successful at school at age 10, more resourceful and efficacious at age 18, and utilized more sources of emotional support in adulthood than did the sons of mothers who were less competent caregivers.

For both boys and girls, there was a positive association between autonomy at age 2 and scholastic competence at age 10. Boys who were more autonomous at age 2 encountered fewer stressful life events in the first decade of life and had fewer health problems in childhood and adolescence. Girls who were more autonomous as toddlers had fewer health problems in each decade of life and fewer coping problems by age 40.

For both boys and girls, there was a positive association between the number of sources of emotional support they were attracted to in childhood, their scholastic competence at age 10, and the quality of adaptation at age 40. Individuals who could count on more sources of emotional support in childhood reported fewer stressful life events at later stages of their lives than did those who had little emotional support.

For both sexes, scholastic competence at age 10 was positively linked to self-efficacy and the ability to make realistic plans at age 18. Males with higher scholastic competence at age 10 had fewer health problems in adolescence and higher activity scores in the Emotionality Activity Sociability (EAS) Temperament Survey at age 32. They also availed themselves of more sources of emotional support in adulthood. Females with higher scholastic competence at age 10 attracted more sources of emotional support in adolescence. For both boys and girls, the number of sources of emotional support they could rely on in adolescence was positively linked to their self-efficacy and ability to make realistic plans at age 18.

Men and women who were more resourceful and more realistic in their educational and vocational plans at age 18 received higher scores on the Scales of Psychological Well-Being at age 40. Their temperament was related to the quality of their adult adaptation as well. Men who scored higher on the activity scale of the EAS Temperament Survey at age 32 coped better at

age 40 than did males with lower activity scores. Women with higher distress scores at age 32 had more health problems and lower scores on the Scales of Psychological Well-Being at age 40.

Most of the variances in the quality of adaptation at age 40 were accounted for by earlier predictors of resilience (i.e., variables associated with successful coping at ages 2, 10, and 18 years). Most were attributed to four clusters of protective factors that had been independently assessed in the first decades of life: (1) maternal competence (a cluster of variables that included mother's age and education and the proportion of positive interactions with her child, observed independently at home at age 1 and during developmental examinations at age 2); (2) the number of sources of emotional support available to the child between ages 2 and 10 years (including members of the extended family); (3) scholastic competence at age 10 (a cluster of variables that included intelligence quotient (IQ) scores and scores on the Primary Mental Abilities (PMA) reasoning test and the Strategic Teaching and Evaluation of Progress (STEP) reading test); and (4) the health status of the child (between birth and 2 years for females; between birth and 10 years for males).

These findings point to the importance of the first decade of life in laying the foundations for later resilience—as has been also documented by Sroufe et al. in the Minnesota Parent–Child Project (Sroufe et al., 2005).

Gender Differences

All large-scale longitudinal studies of risk and resilience report gender differences that appear to vary with the stages of the life cycle and the demands made on each gender in the context of the prevailing sex role's expectations.

At each developmental period, beginning in the prenatal period and infancy, more males than females perished. In childhood and adolescence, more boys than girls developed serious learning and behavior problems and displayed more externalizing symptoms. In contrast, in late adolescence and young adulthood, more girls than boys were subject to internalizing symptoms, especially depression (Caspi et al., 2003; Fergusson & Horwood, 2003; Werner & Smith, 1989).

However, among the high-risk youth who had become "troubled teenagers," more women than men managed to make a successful transition into their 30s and 40s, at least in Kauai. Protective factors within the individual—an engaging temperament, scholastic competence, and self-efficacy—tended to make a greater contribution to the quality of adult adaptation for females than for males who successfully coped with adversities in their lives. In contrast, the sources of support available in the family and community tended to make a greater impact on the lives of the men who successfully overcame childhood adversities (Werner & Smith, 2001).

Biological Aspects of Resilience

Most of the longitudinal studies reviewed here were conducted by educators, psychologists, and sociologists, but there has been a growing interest in biological and genetic variables that may mitigate or modify the impact of stress and childhood adversities on the quality of adaptation at different stages of the life cycle (Curtis & Cicchetti, 2003).

Health

Surprisingly, the general health status of the individual tends to be overlooked in most studies concerned with resilience and vulnerability. Even in large-scale longitudinal studies, in which the original focus has been "health and development," the variables that are included in complex regression equations that look for "resiliency factors" tend to denote psychological or sociological constructs or are concerned with educational attainment rather than health (Fergusson & Horwood, 2003; Schoon, 2001).

Path analyses of the data of the Kauai Longitudinal Study suggest that it might be worthwhile to explore the effects of good health or debilitating illnesses or accidents on children's

ability to cope with stressful life events and adversity. In Kauai, at each stage of the life cycle—from early childhood to adulthood—individuals who encountered more stressful life events also encountered more health problems. Health problems in early childhood (a count of serious illnesses or accidents reported by parents between birth and age 2 years; the number of referrals to health-care providers, and the pediatrician's low rating of the toddler's physical status at age 2) were significantly correlated with coping problems in adulthood, both at 32 and age 40 (Werner & Smith, 1992, 2001).

On the positive side, perinatal health (i.e., the absence of pregnancy and birth complications) was a significant protective factor in the lives of adolescents who were the offspring of mothers who suffered from mental illness. These findings have been replicated in the Copenhagen High-Risk Study (Parnas et al., 1993) and in a study of 15-year-old children of depressed mothers who were participants in the Mater-University Study of Pregnancy and Outcomes in Brisbane, Australia (Brennen et al., 2002).

Biological Sensitivity to Context

An exciting new avenue of research has focused on the role of psychobiological factors as moderators of children's vulnerability to stress. The concepts of "biological sensitivity to context" and "differential susceptibility to environmental influences" have been advanced to explore the possibility that some children are more sensitive to the influence of context than are others, whether the context is adverse or beneficial (Belsky et al., 2007; Ellis et al., 2005).

Biological reactivity to naturally occurring stressors appears to be a robust, replicable phenomenon that involves a set of complex responses within the neural circuitry of the brain, and within peripheral neuroendocrine pathways regulating metabolic, immunological, and cardiovascular functions. Ellis et al. (2005) have demonstrated in several studies that a disproportionate number of preschool children in supportive home environments displayed a high autonomic reactivity. Conversely, a relatively high proportion of children in very stressful family environments, followed from infancy to age 7 years, showed evidence of heightened adrenocortical and sympathetic reactivity. In both studies, children from moderately stressful home environments displayed the lowest reactivity levels.

These finding suggest that relations between levels of childhood support/adversity and the magnitude of stress reactivity are curvilinear, an observation supported by Belsky et al. (2007) who speculate that the anxiety displayed by fearful children reflects a highly sensitive nervous system on which experience registers powerfully—one that makes them especially susceptible to both negative and positive rearing effects.

Research on differential susceptibility has only just begun. Studies that include twins and other siblings from the same family (such as the Swedish Twin Registry) may prove especially powerful as they could distinguish between genetically and environmentally induced variations in susceptibility (Hansson et al., 2008).

Gene–Environment Interactions

There is ample evidence of the important role that genetic factors play in the susceptibility of individuals to psychopathology, such as alcoholism, antisocial behaviors, and severe psychiatric illnesses (schizophrenia and bipolar disorder). Several studies, including the Copenhagen High-Risk Study (Parnas et al., 1993) and the Kauai Longitudinal Study, have reported findings that suggest that adverse environments, including serious pre- and perinatal stress, have the most negative impact on individuals who are genetically vulnerable, among them the offspring of alcoholic and schizophrenic mothers (Werner & Smith, 2001).

It stands to reason that gene–environment interactions also play a significant role in relation to the phenomenon of resilience. Evidence of gene–environment interactions in which an individual's response to environmental insults appears to be moderated by his or her genetic makeup has been reported by Caspi et al. (2002,

2003) from the 26-year follow-up of the Dunedin (New Zealand) Multi-Disciplinary Health and Development Study, in which 847 Caucasian cohort members participated.

Individuals with one or two copies of the short allele of the *5-HTTLPR* gene (a serotonin transporter) exhibited significantly more (self-reported) depressive symptoms in relation to four or more stressful life events between the ages of 21 and 26 than did individuals homozygous for the long allele. Of special interest was the finding that childhood maltreatment in the first decade of life predicted adult depression only among individuals carrying a short allele but not among individuals homozygous for the long allele (Caspi et al., 2003).

In another analysis of data from the Dunedin Study, Caspi et al. found that a functional polymorphism in the X-linked gene encoding the neurotransmitter-metabolizing enzyme monoamine oxidase A (MAOA) was found to moderate the effects of childhood maltreatment in males. Boys with a genotype conferring high levels of MAOA expression who had been maltreated in childhood were less likely to develop antisocial problems (conduct disorders between ages 10 and 18; convictions for violent crimes by age 26) than those with low levels of MAOA activity (Caspi et al., 2002). The authors wisely suggested that "until this study's findings are replicated, speculations about clinical implications are premature" (p. 853).

Kim-Cohen et al. (2006) were able to replicate the original finding by showing that the *MAOA* genotype moderated the development of psychopathology after exposure to physical abuse in a cohort of 975 7-year-old British boys. Their meta-analysis of the results of five independent investigations (from Great Britain, New Zealand, and the United States) demonstrated that across studies the association between childhood maltreatment and mental health problems was significantly stronger in the group of males with the genotype conferring low MAOA activity. These findings provide the strongest evidence to date, suggesting that the *MAOA* gene influences vulnerability to environmental stress and that this biological process can be initiated early in life. However, that evidence so far is based only on samples of Caucasian males.

Meta-analyses of studies of the interaction between the serotonin transporter gene (*5-HTTLPR*), stressful life events, and increased risk of major depression have yielded mostly negative results—though substantial resources have been devoted to replication efforts.

Risch et al. (2009) conducted a meta-analysis of 14 studies, using both published data and individual-level original data. Of a total of 14,250 participants, 1769 were classified as having depression. In the meta-analysis of published data, the number of stressful life events was significantly associated with depression. No association was found between the *5-HTTLPR* genotype and depression in any of the individual studies, and no interaction effect between genotype and stressful life events on depression was observed. This meta-analysis yielded no evidence that the serotonin transporter genotype alone or in interaction with stressful life events was associated with an elevated risk of depression in men alone, women alone, or in both sexes combined.

Munafo et al. (2009), at the University of Bristol, carried out an independent meta-analysis on 15 studies that focused on gene–environment interactions at the serotonin transporter locus and concluded that the main effects of the *5-HTTLPR* genotype and the interaction effect between *5-HTTLPR* and stressful life events at risk of depression are negligible. Only a minority of studies (Kaufman, 2008; Kendler et al., 2005) report a replication that is qualitatively comparable to that in the original report. In general, the positive results for the interactions between *5-HTTLPR* and stressful life events were compatible with chance findings.

Diversity of methods and approaches used to measure environmental risk may explain the inconsistencies in results across G x E studies. Health practitioners, educators, and behavioral scientists need to recognize the importance of the replication of findings from genetic analyses that seek to anchor in neurobiology individual differences in resilience (Reiss, 2010; Stein et al., 2009).

Findings from the Virginia Adult Twin Study of Psychiatric and Substance Use Disorders (VATSPSUD) found that both genetics and environmental influences contribute roughly equally to resilience in adulthood (Amstadter et al., 2014).

Personality

Findings from Project Competence found that showing higher childhood conscientiousness, agreeableness, and openness and lower neuroticism was associated with increased resilience during adulthood. Even when controlling for adversity throughout the lifespan, positive personality traits have been found to be predictive of positive outcomes in adulthood (Shiner & Masten, 2012).

Resilience in a Cross-Cultural Context

Research on resilience needs to acquire a cross-cultural perspective that focuses on children in the developing world who have been exposed to many biological and psychosocial risk factors that increase their vulnerability far beyond that of their peers born in more stable and affluent conditions.

Immigrant and refugee children are the fastest growing segment of the US child population. The Children of Immigrants Longitudinal Study (CILS) has examined the aspirations, educational performance, and psychological adaptation of more than 5000 teenage youths in 2 key areas of immigrant settlements in the United States: Southern California and South Florida (Rumbaut, 2000). The original survey (T1) conducted in spring 1992 interviewed 2420 students enrolled in the eighth and ninth grades in the San Diego Unified School District and 2842 students in public and private schools in the Miami area. Three years later, from 1995 to 1996, a second survey (T2) of the same youth was conducted, supplemented by interviews with their parents. The students from San Diego were mostly of Mexican and Southeast Asian origin, and the students from Florida came mostly from Latin America.

Regardless of their country of origin, immigrant children with higher school achievement, aspirations, and self-esteem relied on high levels of social support by their parents and the extended family and on competent peers from the same ethnic group. Among the protective factors that enhanced their psychological well-being were closeness with parents, religion, and social support from family, friends, and teachers.

A 5-year Longitudinal Immigrant Student Adaptation (LISA) Study, directed by Carola and Marcel Suarez-Oroczo (2001), reports similar findings. The LISA study followed some 400 immigrant children (ages 9–14) who came from 5 regions (China, Central America, the Dominican Republic, Haiti, and Mexico) to the Boston and San Francisco areas.

Qualitative interview data and quantitative survey data employed in the LISA study illustrated the importance of supportive friends, counselors, and members of the extended family in the social world of immigrant youth and the protective role of religion and church-based relationships in the lives of immigrant teenagers.

Young Lives is a longitudinal study of childhood poverty in four developing countries: Ethiopia, India (Andhra Pradesh), Peru, and Vietnam (Hardgrove et al., 2010). So far, data have been gathered on some 12,000 children and their families over a span of 15 years. The children are in two age groups: the older cohort was born in 1994–2010 and the younger in 2001–2002. Some of the overall trends across the three rounds of available survey data (2002, 2006, 2009) are as follows:

Maternal education is a significant correlate of an array of positive outcomes for poor children, especially their nutritional status. In turn, there is a strong relationship between nutrition and children's cognitive achievement and psychosocial well-being.

Intergenerational interdependency is crucial to children's well-being and resilience in poor families where children's efforts are combined with those of parents and elders to meet family needs. Norms concerning what constitutes a

"good child" tend to reinforce their work contributions.

Evidence on children's active contributions to the domestic economy suggests that it is not just essential to household maintenance in poor families but can also foster their sense of belonging and responsibility and ease their transition to adulthood (Boyden, 2009). We found the same to be true in our longitudinal study of multiracial families in Kauai (Werner & Smith, 2001).

Evaluation Studies of the Effectiveness of Programs Designed to Foster Resilience

Scarr (1992) points out that it is not easy to intervene deliberately in children's lives. We know how to rescue children from extremely bad circumstances and to return them to normal developmental pathways but only within the limits of their own heritable characteristics, such as intelligence, temperament (activity, excitability, sociability), and psychobiological reactivity (cardiac and immunological responses under stress). Since the 1980s, many "competence enhancement" and "strength" or "asset" building programs for high-risk children have been introduced in North America, most of which have focused on preschool and school-age children. So far, there have been very few evaluation programs that have examined their long-term effectiveness. Some of these programs are discussed in other chapters of this book.

A notable example is the Chicago Longitudinal Study, begun in 1983, an ongoing investigation of the effects of the CPC, the oldest extended childhood intervention program in the United States of America and the second oldest federally funded preschool program (after Head Start). The program stresses center-based language learning and parent participation and provides educational and family support services to disadvantaged children from preschool to the early elementary grades (3–9 years). The data available on more than a 1000 participants in the Chicago public schools cover nearly four decades of life.

Reynolds and Ou (2003) reported the results of several path analyses that modeled the effect of preschool participation (from years 3 to 5), cognitive skills (at age 5), parent involvement at school (in the years 8–12), quality of school (at ages 10–14), on school achievement and grade retention (at ages 14–15), and on the diminished likelihood of special education placement and dropping out of high school by age 20.

Effect sizes on measures of social competence averaged 0.70 standard deviations (SDs), modest but higher than those reported from several meta-analyses on the effectiveness of preventive mental health programs (average 0.34 SD) and of a wide range of psychological and behavioral treatments (0.47 SD). Children who attended programs in the poorest neighborhoods benefited the most from the CPC programs.

Because the pathways that lead to positive adaptation despite childhood adversities are influenced by context, it is not likely we will discover a "magic bullet," a model intervention program that will succeed every time with every youngster who grows up under adverse circumstances. Knowing this does not mean we should despair. However, it does mean, as Rutter (2002) admonishes us, that "caution should be taken in jumping too readily onto the bandwagon of whatever happens to be the prevailing enthusiasm of the moment" (p. 15).

Conclusions

Large-scale longitudinal studies, extending from childhood to adulthood, have documented the shifting balance between stressful life events and risk factors that increase children's vulnerability and internal dispositions and outside sources of support that enhance their resilience. This balance may change at different stages in life for each gender and is affected by the cultural context.

The frequency with which the same predictors of resilience emerge from longitudinal studies conducted with different ethnic groups and in different geographic settings is impressive. In most cases, the factors that mitigated the negative

effects of childhood adversity also benefited children who lived in stable and secure homes, but they appear to have particular importance when adversity levels are high.

Large-scale longitudinal studies have demonstrated that an early history of developmental competence, engendered by consistent and supportive care, is a powerful and enduring influence on children's adaptation at later stages of the life cycle and increases that likelihood that they will rebound from a "troubled" adolescence.

The pathways that lead to positive adaptation, despite childhood adversity, are complex, and there is great need to map the interconnections between individual dispositions and outside sources of support that increase competence and self-efficacy, decrease negative chain effects, and open up opportunities, whether in natural settings or in structured intervention programs.

Longitudinal research needs to focus more on the role of gene–environment interactions that moderate an individual's response to stressful life events. It also needs to acquire a cross-cultural perspective that focuses on children from the developing world. We need to know more about individual dispositions and sources of support in the family and community that enable these children to operate effectively in a variety of high-risk contexts.

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Part II

Resilience as a Phenomenon in Childhood Challenges

Resilience in Situational and Cultural Contexts

6

Linda Theron and Michael Ungar

Introduction

A growing body of work is concerned with the resilience of children and youth whose race, ethnicity and/or membership in the majority world (i.e. populations living in low- and middle-income countries, or in high-income countries, who experience social challenges and fewer material resources) place them at risk for negative life outcomes (Theron et al., 2015). Like children and youth in minority world contexts (i.e. populations that enjoy social and economic advantages), the capacity of majority world young people to function normatively is generally associated with access to promotive and protective factors that attenuate or counteract the predicted negative effects of risk exposure (Fergus & Zimmerman, 2005). Put differently, this capacity for better-than-expected outcomes draws on resilience-enabling factors that affect developmental outcomes in the contexts of atypical and non-normative stress (van Breda & Theron, 2018; Ungar, 2011).

These resilience enablers comprise both tangible resources (e.g. material means, safe spaces or enabling adults) and intangible resources (e.g. psychological processes such as self-regulation or meaning-making; social processes such as cultural rites of passage or collective belonging; personal qualities such as temperament; sociocultural heritage that includes enabling values). They can be found at any level of a biopsychosocial–ecological system (Masten & Cicchetti, 2016; Ungar, 2018). For instance, a review of 61 studies that documented the resilience of South African children and adolescents reported resilience enablers at the level of the biological and psychological self, the social environment and the built environment (Van Breda & Theron, 2018). These multi-level resilience enablers have been summarized into lists of resources that recur across studies of child and youth resilience. Masten (2014) proposed a "short list" that specified those resources that are regularly reported at the level of the individual (e.g. intelligence or self-efficacy) and other co-occurring systems (e.g. effective parenting, effective schools or effective neighbourhoods). Similarly, Ungar et al. (2007) proposed seven core resilience-enabling processes that were associated with the resilience of 89 participants from 11 countries (including majority context ones). Amongst others, these processes included power and control, social justice and cultural adherence.

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_6

Nevertheless, the putative commonness of resilience enablers should not eclipse the fact that their form and expression is sensitive to social–ecological dynamics, such as situational realities and cultural norms and values, all of which are fluid (Theron, 2019; Ungar, 2011). For instance, in minority (e.g. Euro-American) world contexts, "effective parenting" is generally associated with a primary caregiver, usually a biological parent (Masten, 2018). However, in majority world contexts, such as sub-Saharan Africa or Latin America, "effective parenting" is associated with any number of people, including grandparents, older siblings, caring neighbours and even teachers (Parra-Cardona et al., 2019; Theron, 2020). The flexibility of who the parents are is typically a response to contextual realities (such as the high incidence of communicable diseases that has resulted in child- or grandparent-headed households) and/or local understandings of kinship that transcend biological bonds. Even so, African scholars (e.g., Ramphele, 2012; Ratele, 2019), for example, are concerned about the effects over time of Euro-American values on traditional African ways of being and doing. The same challenges are being confronted by many other majority world populations, including Indigenous peoples from collectivist cultures (Atallah, 2016; Ullrich, 2019; Ulturgasheva et al., 2014). This could result in time-honoured interdependent ways of being and doing being replaced with Western-oriented emphases on the self and the nuclear family. In short, inattention to the potential variability of the form or expression of resilience enablers is likely to frustrate our best efforts to champion child, youth and family resilience across cultures and contexts (Ungar, 2015).

This chapter aims to shift attention to variability in the form and expression of resilience enablers across situational and cultural contexts. It advances an understanding of resilience enablers as protective factors and processes that are responsive not only to risk but also to social–ecological or contextual dynamics (see Fig. 6.1). It proposes that responsive resilience enablers have three dimensions: (i) they fit specific social ecologies; (ii) they embrace adaptive strategies that are sometimes considered unconventional; and (iii) they accommodate changing contextual realities. To detail each dimension, we draw mostly on studies of child and youth resilience that were conducted in the majority world. To conclude this chapter, we identify strategies for championing child and adolescent resilience in contextually responsive, decolonized ways.

Responsiveness and a Social–Ecological Approach to Resilience

A social–ecological approach to resilience emphasizes that positive adaptation to risk exposure is a process that draws on promotive and protective factors within the child and the child's social and physical ecology (Ungar, 2011). Rather than attributing resilience only to resources within the individual child, social–ecological accounts of resilience recognize that children's biological and psychological resilience is co-facilitated by resilience enablers within their immediate environment (e.g. the family, peer group or neighbourhood) and distal environment (e.g. the country of residence and its associated laws and social policies) (Masten & Cicchetti, 2016). Environments are characterized by contextual elements (or, as shown in Fig. 6.1, situational factors) over which marginalized young people have limited, if any, control (Pimmer et al., 2013). These factors typically relate to the "aspects of social location" (Walls et al., 2016, p. 739), including the spaces and places where children live, learn and hopefully play, and the socio-economic, historical and political standing of the household, community and ethnic group to which a child belongs. Contextual elements also relate to the built and natural ecological aspects of children's environments – such as green spaces, material from which homes are constructed or levels of pollution – and the impact of these on children's health and well-being over time (Watts et al., 2019).

Young people's interactions with their environments are culturally patterned (Rogoff et al., 2018). Elements of the environment and their relevance to a child's well-being are shaped by

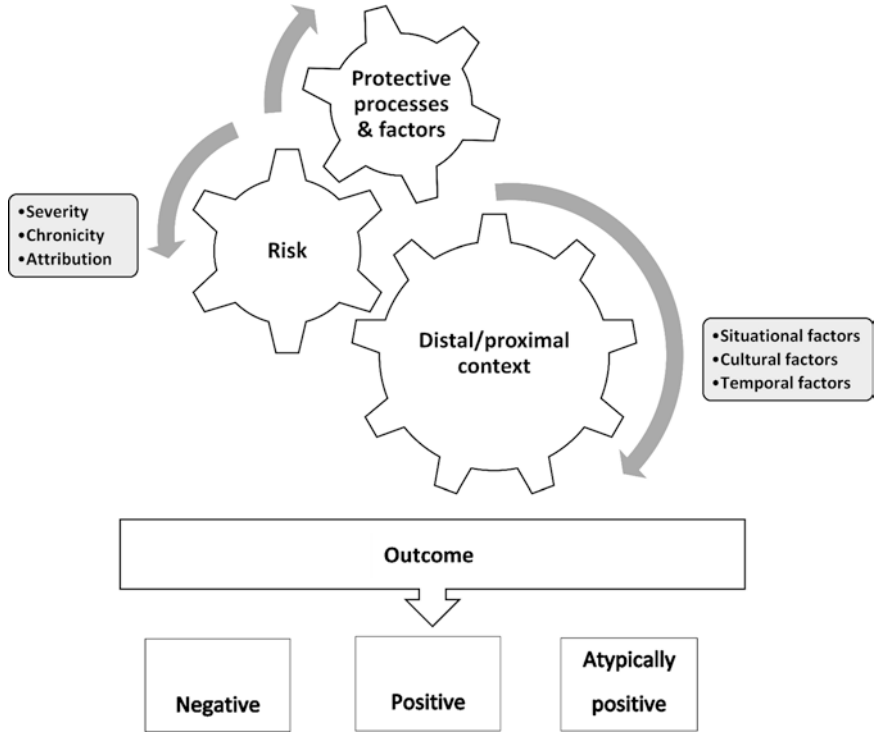

Fig. 6.1 Resilience enablers in context

social discourses that decide which resources should be made available and how they should be accessed. Given these patterns, scholars such as Kirmayer (2005), Panter-Brick (2015) and Trickett et al. (2011) understand culture as the values, beliefs and practices that shape successive generations of children's ways of being and doing. Although there is likely to be some heterogeneity, children with shared values, beliefs and everyday cultural practices generally have similar ways of being and doing. Even so, because culture is fluid, it is expected that traditional ways of being and doing will evolve over time and that such flux will make child–environment interactions more nuanced (Rogoff, 2011). This includes children's interactions with their parents. While competent parenting is universally a protective factor in a child's life, what parenting looks like is far from standardized across cultures. Strahan et al. (2010), for example, argue for a balance between good parenting and finding the evidence that good parenting practices actually improve children's functioning in a specific context. The problem is the cultural relevance of parenting practices when studied by cultural outsiders. Not all parenting practices are likely to produce positive development if they are a poor match to a child's risk exposure, value system (and other cultural factors) or the outcomes that are desired. For example, authoritative parenting practices that encourage negotiation with children and reasonable structure (Baumrind, 1971) have long been proposed in Anglo-European cultures as effective, though more recent research has suggested that this parenting style is only suited to middle-class families and not those struggling to survive in dangerous environments. In those contexts, a more controlling and assertive form of parenting may produce better outcomes (Driscoll et al., 2008). As Strahan et al. (2010) explain: "The culture you live and the values you hold will be crucial in helping you determine what constitutes good parenting. There simply isn't one model of parenting that works equally well for all children everywhere" (p. 4).

In summary, a social–ecological approach to resilience urges closer attention to children's resilience in context, with context being understood as situational, cultural and fluid. As detailed next, contextual dynamics impact the ways in which the resilience process plays out, including the form and value of specific resilience enablers for individuals or groups of individuals in a specific sociocultural context at a specific point in time (Ungar & Theron, 2019). While resilience in context draws on protective factors that are well documented in child and youth resilience, these factors nevertheless respond to the cultural and situational dynamics of children's everyday lives. They fit children's daily contexts, embrace unconventionality and accommodate flux.

The Fit Between Social–Ecological Resources and an Individual's Culture and Context

Ungar (2011, 2012, 2018) has argued that resilience-enabling resources are not equally valued by all young people at risk nor do they exert the same amount of positive impact on children's developmental outcomes. Instead, they exhibit a differential impact (Ungar, 2017) depending on both the child's individual capacities to use the resources and the fit between the resources and the child's situational and cultural contexts. This is certainly apparent in how majority world young people describe their experience of resilience and the emphasis they place on specific resources as the most enabling (Theron & Van Rensburg, 2018, 2019). Invariably, the resources that are afforded prominence fit their contextual realities and the culturally valued ways of being and doing that they have been socialized to endorse and enact. The resilience of sub-Saharan children affected by human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS), left-behind children in rural China and Arctic Indigenous youth (examples follow) are all cases in point.

In the case of sub-Saharan children affected by HIV and AIDS, the risks of ill or deceased parents and associated pressures to leave school and take on caregiving or breadwinner roles loom large (Betancourt et al., 2013). Not surprisingly, parents are not prominent in the multiple accounts of these children's resilience: other adult caregivers – mostly kin – are. In sub-Saharan Africa, informal kinship care is the preferred form of care for children who are orphaned and vulnerable (Ariyo et al., 2019). In many ways, this relates to the traditional African valuing of interdependence and associated expectations that kin and communities, rather than formal caregiving institutions, accept responsibility to care for children who are at risk. Although there are accounts of grandparents or other extended relatives, neighbours, teachers or non-governmental organization (NGO) staff championing the resilience of African children in their care (Bireda & Pillay, 2018; Block, 2016; Pienaar et al., 2011; Sharer et al., 2016; Skovdal et al., 2009), some young people also report experiences of maltreatment or extortion at the hands of these caregivers (Baxen & Haipinge, 2015; Evans, 2015; Lee, 2012; Motsa & Morojele, 2017; Pillay, 2019; Skovdal, 2010). This ambivalence fits with Ariyo et al.'s (2019) conclusion that specific situational and temporal factors (e.g. socio-economic resources, age of the child being cared for) influence the degree to which kinship care sustains children's well-being. In contrast, siblings or peers who are similarly affected by HIV generally provide dependable resilience-enabling support (Khanare, 2012; Lee, 2012; Nabunya et al., 2019; Rukundo & Daniel, 2016; Skovdal & Ogutu, 2012). Sub-Saharan children affected by HIV and AIDS make frequent references to this support being emotional and pragmatic (e.g. assistance with domestic responsibilities, income generation and access to material resources). These accounts suggest that in the context of HIV and AIDS, siblings and friends can be effective substitutes for adult caregivers.

The role of extended family, however, is a recurring theme in studies of child resilience in many poorly resourced social ecologies. Shang et al. (2011), for example, report that collectivist values like those found in South Africa inform the care of orphans in rural China, whereas Hu (2019) describes kinship networks, which pro-

vide care to children left behind in rural China by their economic migrant parents. These kinship ties also matter for the resilience of Indigenous youth in Arctic communities (Ulturgasheva et al., 2014). As in sub-Saharan Africa, household membership is fluid with Arctic young people being welcomed into the homes of their extended family as the need arises. Other networks also have demonstrated efficacy as resilience enablers, with a range of non-kin adults often identified as critical to a child's well-being, especially those already in the life of a child or the child's peers (like a peer's parent or professional helper in the child's community) (Nystad et al., 2014).

When adults are not available, or their support is insufficient to moderate risk exposure, children will turn to other proximal sources of support such as their peers. The literature on the resilience of street-connected children from minority and majority contexts (e.g. Bangladesh, Canada, Ghana, South Africa), for example, includes references to the resilience-enabling value of street-connected peers (Hills et al., 2016; Joly & Connolly, 2019; Koller et al., 2018; Oppong Asante & Meyer-Weitz, 2015; Reza & Henly, 2018). As in the accounts by young people affected by HIV, street-connected youth value the emotional and pragmatic support that other street-connected youth provide.

There is a caveat, though, to this pattern of peer-to-peer support. When peers decrease young people's capacity to adjust, they are more likely to constrain resilience than to enhance it. For example, a study with 77 New York adolescents (aged 11–15; 49% female, 53% African American, 30% Hispanic) with a parent that was HIV+ suggested that peers were resilience-enabling so long as they were not engaged in deviant behaviours (e.g. substance abusers) (Rosenblum et al., 2005). In addition to other factors (e.g. the adolescent was older; the adolescent perceived his/her community as not protective), deviant peers were associated with increased chances that adolescents from HIV-affected families would begin to use substances. In short, in contexts in which peers decrease resilience, young people's capacity to withdraw from these peers is essentially resilience-enabling, provided other resources can compensate for the lack of peer support. Sanders et al. (2017) referred to this as the "peer paradox" (p. 3). Similarly, Kolar et al. (2012) referred to "social distancing" as "a double-edged survival strategy" (p. 749).

In summary, when extended family and community networks of adults are dependable and accessible, they matter a great deal to the resilience of young people from many different cultures. When adults are not consistently supportive or trustworthy – including in contexts in which cultural norms encourage kinship care – peers are likely to be prominent in young people's accounts of resilience. Resilience enablers tend to be those factors, including relationships, which reflect young people's everyday contextual reality.

These tangible, situationally relevant resources are intricately tied to a child's culture and the system of values and beliefs that the culture supports. For example, educational aspirations and opportunities to realize these aspirations feature in accounts of Chinese young people who do not fit with the prevailing understanding that being left behind is associated with a significantly negative impact on education and well-being, particularly when both parents have migrated (Zhou et al., 2014). Instead, meaningful systems specific to a context like rural China create a set of protective cognitive attributions. This pattern was shown through a mixed methods study with 452 rural Chinese adolescents. Hu (2019) concluded that those who were left behind showed a "lack of significant disadvantage" (p. 658). In addition to the presence of kin (mostly grandparents) who took on caregiving roles and migrant parents who maintained contact by telephone, Hu attributed the resilience of left-behind children to their capacity to interpret their parents' absence in positive ways. Essentially, they interpreted being left behind as an opportunity to attend and excel at school, thereby making their parents proud and facilitating follow-up opportunities to attend university. Similarly, when Ho et al. (2019) investigated the mental health of 433 Chinese students (aged 18–24) who were at risk because of adverse childhood experiences, they found a positive relationship between resilience and participants' mental health. A qualitative follow-up study with

34 of the original participants prompted the authors to theorize that participants' resilience was partly related to their determination to succeed academically, demonstrate excellence and make their families proud. The findings of both these studies fit with the Confucian beliefs that inform Chinese ways of being and doing, including the expectation of individuals to be compliant, value self-development and exercise filial piety and restraint (Fuligni & Zhang, 2004; Rochelle, 2019).

Likewise, cultural values and practices shape the resilience of Arctic young people but in very different ways from their Chinese peers. Like other Arctic young people, the health and well-being of Sa'mi youth in Nordic countries have been challenged by significant changes to their natural and social environments (Ingemann & Larsen, 2018). In addition to enabling kinship ties, the resilience of Sa'mi youth is largely associated with interactions with the physical ecology, including opportunities to herd reindeer, engage in recreational outdoor activities and harvest natural resources (e.g. pick cloudberries) (Nystad et al., 2014). Access to and interactions with the natural environment are instrumental to the resilience of other Artic youth in circumpolar contexts too, including youth living in Inupiaq and Yup'ik, Alaska; Nunavut, Canada; and Eveny, Siberia (Ulturgasheva et al., 2014). In contrast, self-reports of the factors associated with resilience by young people in densely populated contexts like sub-Saharan Africa make no mention of connections to the natural environment; instead, they emphasize the importance of community regulations or safe urban spaces (Dushimirimana et al., 2014; Mosavel et al., 2015; Scorgie et al., 2017).

Unconventional Adaptive Strategies

At times, young people report resilience enablers that fit their context but that mainstream society would generally describe as harmful. For instance, street-connected youth in South Africa have reported violent behaviours, engagement in petty crime and substance use as facilitative means to increase their capacity to adapt to the rigours of street life (Hills et al., 2016; Malindi & Theron, 2010). Ungar (2011) considered such factors to be atypically protective and argued that it would be dangerous to reprove these practices without considering the contextual dynamics to which they respond.

A case in point is adolescent engagement in consensual sex with a "sugar daddy" or a "sugar mommy" (or "blesser", the African term for older adults that are sexually involved with adolescents or students; Gobind and du Plessis (2015), Hoss and Blokland (2018)). These relationships are widely condemned, not just for their ensuing physical and mental health risks but also because they are associated with coercive precursors such as structural disadvantages and adverse childhood experiences (e.g. poverty, homelessness, social discrimination, parental neglect or sexual abuse) (Cronley et al., 2016; Fedina et al., 2019; Gerassi, 2015; Karamouzian et al., 2016; Kropiwnicki, 2012; Tener, 2018, 2019). In many countries, adolescent–adult sexual relationships are also illegal.

Even so, when young people explain their reasons for being involved in sexual relationships with older persons, it becomes apparent that they perceive these transactions as having an adaptive function. Tener's (2018, 2019) systematic reviews of studies with young people from Western countries (i.e. Australia, Canada, UK, USA) and Africa showed that adolescent or student sexual involvement with an older person was frequently motivated by the younger person's need, or desire, for financial and/or instrumental material support and the capacity of older persons to facilitate access to resources. Furthermore, younger persons reported engaging in relationships with older persons to compensate for emotional neglect by caregivers, with absentee fathers being explicitly mentioned as a risk factor for these relationships. Although these patterns may be common across countries, in the African studies that Tener reviewed, there was explicit reference to Gerassi's (2015) concept of "survivor sex" (p. 593): trading sex for housing, food or medical supplies that support an African young person alone or the young person's entire family, helping

them to adapt to a reality of inescapable poverty (Tener, 2019). Other studies, meanwhile, referred to financially secure African girls' choice to engage in sexual relationships with older men as a means of securing additional funding to finance the purchase of designer clothes and other luxuries (Gobind & du Plessis, 2015; Leclerc-Madlala, 2008).

In addition to the personal and apparently adaptive motivations for engaging in age-disparate sexual relationships, social norms appeared to make adolescent/student sexual relationships with older persons possible (Hoss & Blokland, 2018). In the studies from Western countries, for instance, young people reported that even though adolescent sexual involvement with an adult was illegal, a culture of indifference (i.e. no intervention despite knowledge of the relationship) or deceit (i.e. the custom of young people pretending to be older) enabled the practice (Tener, 2018). In contrast, some of the African studies referred to the long-standing social norm of exchanging sex for material goods and peer support of young people's engagement in this practice (Hoss & Blokland, 2018; Tener, 2019). Moreover, social stereotypes (e.g. older wealthy men with younger women) and a socially competitive culture that values markers of wealth strengthened adolescents' (and their partners') rationale for their involvement in age-disparate liaisons as a means of overcoming intransigent forms of economic or social marginalization and improving the young person's resilience (Gobind & du Plessis, 2015; Leclerc-Madlala, 2008).

A similarly complex and pervasive adaptive practice that is culturally and situationally specific, and associated with the resilience of African children and adolescents, is what some African people refer to as "black tax" or, less pejoratively, "family responsibility" (Mhlongo, 2019). This resilience-enabling strategy entails individuals sharing whatever income or resources they have with family or acquaintances who have little or no income. Even young Africans who have studentships or bursaries to pursue tertiary education are expected to share these financial resources with family who have little or nothing: "Firstly, with their bursaries and then with their salaries, they must … rescue their families from poverty" (Masinga, 2019, p. 139). Africans who interpret the expectation that resources be shared as "family responsibility" understand it to be a conventional and noble resilience enabler (Makholwa, 2019). Its conventionality relates to the time-honoured values of Ubuntu, the interdependence that is characterized by reciprocity and family-like caring that transcends blood ties (Mangaliso, 2001). Ubuntu, a resilience-enabling strategy, is a way of living that prioritizes group solidarity and the understanding that "an African is not a rugged individual, but a person living within a community" (Mandidzidze & Kusemwa, 2018). Still, such values are being discursively challenged as societies around the world become more homogeneous, with many young Africans now viewing the expectation to provide support to family and acquaintances as a colonial or Apartheid-induced practice that is coercive and restrictive (Magubane, 2017; Mhlongo, 2019), particularly when it results in debt, financial distress or the postponement of personal development such as post-graduate education (Khumalo, 2019). In these instances, African young people may reject a cultural norm in favour of an atypical set of behaviours adapted from more individualistic cultures and perceived as functionally helpful to the young person's resilience.

Similarly, caregivers' capacity to behave in culturally unconventional ways has been shown to matter for the resilience of children. For instance, a study with Ugandan adolescents whose parents were HIV+ showed that an adolescent's capacity to manage associated risks such as stigma and bereavement was related to their parents' willingness to flout cultural conventions of not discussing sex or death with children (Daniel et al., 2007). Parental disclosure about their HIV+ status strengthened relationships with their children and supported children to better negotiate membership in the community following their parent's death. Similarly, Stark et al. (2016) found that some Ugandan parents' willingness to disregard sociocultural expectations that girls marry the men who rape them supported their daughters' resilience in the face of sexual violence.

Responsive Resilience Enablers Accommodate Changing Contextual Realities

As the examples above show, the situational and cultural contexts in which young people are embedded are fluid (Rogoff, 2011). Situational fluidity could be something as simple as seasonal change. For instance, Canadian youth with disabilities that impair movement (e.g. cerebral palsy) have reported that they often need the support of others to safely navigate the ice and snow in winter. During summer months, a supportive social ecology is less necessary for them to experience individual resilience (i.e. independence and mobility) than in winter (Lindsay & Yantzi, 2014). However, contextual fluidity could also be more complex as is the case with acute shocks (e.g. extreme weather events) or slow waves of change (e.g. a shift in cultural values). Regardless of the reasons for change, a meaningful support of child and youth resilience requires responsiveness to flux and the discovery of new coping strategies to adapt to change in ways that stimulate positive development (Ungar, 2011).

To illustrate, studies of Chinese children during the 1990s produced results that were quite contrary to Western views that shyness puts children at risk for poor psychosocial and educational outcomes; instead, these studies showed a significant, positive relationship between shyness and school adjustment, including shy children's ability to lead, connect to peers and achieve academically (Chen et al., 1992, 1995). However, subsequent studies a decade later suggested the opposite (Chen et al., 2005; Coplan et al., 2016, 2017). The change in the resilience-enabling value of shyness likely relates to situational and cultural changes in China, including greater valuing of individualism and increased unemployment and related competitiveness associated with capitalism (Chen et al., 2005). In this changed context, attention shifted to how to support Chinese children to overcome shyness in contemporary China (particularly in urban contemporary China). This focus has prompted recommendations on how best to support shy Chinese children to embrace more confident ways of being (e.g., Coplan et al., 2017; Li et al., 2016; Liu et al., 2019).

Similarly, changes to culturally prescribed patterns of behaviour can be triggered by any significant change in the environment. There are, for example, emerging reports of African grandfathers taking on the role of primary caregiver to compensate for the impact of the HIV epidemic and economic migrancy. The composition of households in rural areas of Lesotho has been altered, with the role of primary caregiver shifting from being the sole responsibility of African women (particularly grandmothers; Casale (2011), Mashegoane and Mohale (2016)) to a less gender-specific pattern where adaptation is required (Block, 2016). Although not common, Block (2016) reported a small population of men (mostly grandfathers) who had accepted that they were the only available caregiver (e.g. grandmothers had died or biological parents had migrated to cities in search of employment). Such adaptations appear to champion the resilience of their offspring.

Strategies for a Culturally Responsible Understanding of Resilience

As the examples in this chapter show, resilience-enabling processes are culturally and contextually responsive. There is a danger, however, of being either too focused on emic perspectives and therefore missing the more common aspects of resilience evident across populations experiencing stress or being too etic in assumptions about resilience and presuming homogeneity where individuals are in fact far more heterogeneous, even within a population (Ungar, 2019). In this section, we identify several strategies that appear relevant to the application of resilience to both practice and policy in different cultures and contexts.

Strategy 1: Avoid Competing Definitions of Resilience Enablers as Positive or Negative Good practice and policy maintain an openness to the many different ways in which

resilience enablers can affect individuals and groups. Specific resilience enablers may have a positive or negative effect on development depending on the meaning attributed to the resources and behaviours that are facilitated in different contexts. For example, Ugandan children with long-term exposure to war and related atrocities or hardships generally do not voice any psychological discomfort, even though they do voice minor physical discomfort such as stomach pain or a headache. This prompted Akello et al. (2010) to introduce the notions of "mimetic resilience" (p. 217) and "mirroring resilience" (p. 218) to explain the capacity of Northern Ugandan children to accommodate chronic and severe risks. In the former, children compared their situation with that of others who were similarly/more affected and then imitated their endurance. In the latter, children were mindful of the collective and their potential to affect the collective and so behaved in ways that would not trigger discomfort for those around them. In ethnographic work with local adults, Akello et al. learnt that adults advocated and endorsed children's capacity to be silently long-suffering. Put differently, children's disinclination to communicate psychological distress aligns with the Ugandan respect for stoicism and related behaviours, such as silent suffering. Although it is highly likely that mental health practitioners in non-Ugandan contexts would advocate the opposite, defining silent suffering as a negative resilience enabler would constitute a failure to appreciate that resilience enablers are responsive to contextual (i.e. situational and cultural) dynamics.

When contextual dynamics or specific risks coerce unconventional and potentially harmful adaptive practices (such as survival sex), it is hard not to label the resilience enabler as negative. Still, a more useful response would be to remedy whatever is causing the need for that unconventional adaptive practice. Although this might entail challenging specific values or stereotypes, it will likely also require preventing or limiting risk exposure. When human rights abuses have informed unconventional adaptive practices, the facilitation of transitional justice will be important too (Clark, 2022).

Strategy 2: Consider the Way Resilience Enablers Enhance Social Justice A resilience focus should not diminish attention to contextual and other risks that call for resilient responses from children and their social ecologies (Wessells, 2015). Ultimately, policy and practice need to redress these risks. One way to do so is to advocate for and enable social justice (Hart et al., 2016). This might include facilitating resilience enablers that address differences in power between populations or helping marginalized populations experience equitable access to the resources they need (i.e. education, employment, health care). These mechanisms are always contextually specific, with recent efforts to explain resilience showing more tolerance for differences in the indicators chosen for positive development. For example, de Coning (2018) has developed the concept of adaptive peacebuilding, arguing that societies that have been severely disrupted by violence (i.e. genocide, war) may show unique patterns of recovery in how they are governed afterwards. His work challenges Western notions of order and democracy and shows that other forms of more autocratic or centralized governance may work better in some cultural spaces, given people's histories and social norms regarding authority.

Strategy 3: Resilience Enablers Need to Be Supported with Infusions of Appropriate Resources to Make Them Sustainable Following their study of resilience to ongoing political violence, Hobfoll et al. (2011) cautioned that "over time resiliency resources can be overburdened" (p. 10). Similarly, Luthar and Ciciolla (2015) and Luthar and Eisenberg (2017) advised that children's capacity for adaptation is intertwined with the resilience of children's everyday social systems (e.g. families or schools) and emphasized the importance of sustaining the resilience of these systems. Applying these insights to resilience in situational and cultural contexts means that it is

not enough to recognize that the factors and processes that support children's resilience are responsive to contextual dynamics. In addition, it is important to recognize that the resilience enablers themselves need to be nurtured and to do so in contextually sensitive ways. In contexts such as sub-Saharan Africa, rural China or the Arctic, this could mean sustaining the capacity of extended families to enable youth resilience by way of pertinent interventions. In South Africa, for example, intervention work by Cluver et al. (2019) showed significant benefits to youth mental health when families were supported through government-sponsored cash transfers in tandem with parenting programs. Likewise, and in a very different context, Chandler and Lalonde (2008) showed that youth suicide was more prevalent in Indigenous communities that lacked social cohesion or a strong sense of culture, with families being an important resource for young people's community connections and cultural continuity.

Strategy 4: See Culture as Ever-changing; Identify Resilience Enablers That Are Emerging Ramphele (2012) lamented the loosening of ties between younger Africans (particularly those living and working in urban areas) and their extended kin. Likewise, our earlier discussion about unconventional adaptive practices reported the tendency of some younger Africans to distance themselves from Ubuntu values (including the financial support of kin; Mhlongo (2019)). These examples discourage assumptions about the longevity of resilience enablers and encourage attention to emerging resilience enablers that are temporally and contextually responsive, such as grandfathers in rural Lesotho (Block 2016) or self-confidence in urban China (Coplan et al., 2017). One way to avoid such assumptions is to regularly invite young people to update adult understandings of resilience enablers and to use their insights to revise policy and practice in ways that advance situational, cultural and temporal fit (Theron & Van Rensburg, 2018).

Strategy 5: Evaluate the Impact of Resilience Enablers Using Methods That Capture Locally Relevant Patterns of Change Decolonizing knowledge is an important aspect of research on resilience as it challenges assumptions of what is and what is not a protective factor, ensuring that people's histories of exclusion are acknowledged (Atallah et al., 2019). Researchers need to design studies, which account for the biases inherent in the selection of research questions and methods. For example, when developing the Child and Youth Resilience Measure, Ungar and Liebenberg (2011) worked with 14 communities on 5 continents, purposefully including more majority world participants than those from minority world (economically and socially privileged) contexts. The result was a measure with unique qualities that distinguishes it from many other measures developed solely with educated participants or in contexts of economic advantage (Windle et al., 2011).

Similarly, following their work with 569 Indigenous adolescents and 563 Indigenous adult caregivers – most of whom lived on reserves – Walls et al. (2016) cautioned that risk- and resilience-focused research with Indigenous populations needs to account for the complex interplay of risk, resilience enablers and contextual dynamics. Specifically, their study showed that spirituality (a commonly reported resilience enabler for Indigenous youth) correlated with poorer psychological outcomes, including depressive symptoms, anger, anxiety, somatization and relational problems. However, when statistical models were adjusted to include perceived discrimination and historical losses, the aforementioned effects diminished. This result highlighted the importance of "cultural expression, diversity, and contexts" (Walls et al., 2016, p. 740) to meaningful resilience research. As noted elsewhere (McCubbin & Moniz, 2015), respectful collaboration with young people and their communities is key to better understanding youth resilience in situational and cultural contexts.

Conclusions

Although most of the research on resilience has been conducted in minority world contexts, or has been carried out by minority world researchers with majority world populations using tools adapted from economically and socially advantaged contexts, there is a growing interest in the emic constructions of resilience to be found among marginalized populations. Several innovative studies, both qualitative and quantitative, are now investigating what resilience means and the processes that are the most relevant within and between cultures. Syrian refugee children displaced to Jordan (Panter-Brick et al., 2018), child soldiers in Sierra Leone (Betancourt et al., 2010), working children in Brazil (Liborio & Ungar, 2010) and Indigenous youth forced to attend boarding schools in Australia (McCalman et al., 2016) are just a few of the studies introducing new voices into the study of resilience. There is, however, continuing bias towards Western constructions of resilience enablers. Studies of resilience in the majority world are far more likely to assess factors associated with resilience that were found relevant in minority world contexts, than to see studies in minority world settings assessing the presence of majority world resilience enablers like Ubuntu, attachments to extended kinship networks or parentification as an adaptive strategy when parents are incapacitated (see, for example, Liebel (2004)). If we are to broaden our understanding of the concept of resilience and the specificity of the promotive and protective processes that are as yet unnamed, then future resilience research must decolonize and contextualize knowledge of resilience and its enablers.

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7 Appreciating and Promoting Resilience in Families

John W. Eagle and Susan M. Sheridan

Families comprise the primary context for a child's development. As the composition of the family system continues to change, the adult caregivers' role has become increasingly important in fostering healthy developmental trajectories for their children. Family relationships and interaction styles are central to developing competence and promoting adaptive educational, social, emotional, and behavioral functioning. Families give children an informal education (Turnbull et al., 2015), which is a prerequisite to successful experiences in the classroom (Adams & Christenson, 2000). Whereas the school environment sets up developmental tasks for students, the family serves as an important resource for the acquisition of these developmental tasks (Stevenson & Baker, 1987). Parents are providers of linguistic and social capital by presenting their child with learning experiences from early childhood through adult years. Such experiences consist of (a) exposing a child to ideas and activities that promote the acquisition of knowledge; (b) assisting in the socialization of gender, cultural, and peer roles; (c) establishing standards, expectations, and rules; and (d) delivering rewards and praise (Clark, 1988). Parents also play an important role in the development of children's behavioral, social, and academic skills.

Inevitably, all families face various forms of stress and adversity over the course of their life. These situations challenge the family's ability to optimally support the development of child and adult family members. The purpose of this chapter is to articulate the concept of family resilience and its importance in helping families ensure healthy development and adaptation. Following a brief discussion of realities facing families in contemporary society, the notion of family resilience will be defined and couched in ecological theory. The characteristics of resilient families will be reviewed, and approaches for building family strength and resilience will be presented.

Portions of this chapter were published originally in Sheridan, S. M., Sjuts, T. M., & Coutts, M. J. (2012). Understanding and promoting the development of resilience in families. In S. Goldstein & R. Brooks (Eds.), *Handbook of resiliency in children; 2nd Edition* (pp. 143–160). New York: Kluwer/Plenum Press.

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https://doi.org/10.1007/978-3-031-14728-9_7

Definition of Family

The term "family" has been defined in a variety of ways and has evolved over time with recent trends within today's society. The US Census Bureau defines "family" as consisting of two or more people (one of whom is the householder) related by birth, marriage, or adoption and residing together (U.S. Census Bureau, 2019a). Although this restricted definition is practical for collecting census data, it is neither inclusive nor functional for many contemporary households. Current conceptualizations of "family" no longer consider a direct relation through birth, marriage, or adoption to be requisite conditions for defining the term "family." In contemporary society and related research on the topic, families are viewed through a holistic lens to include individuals who fulfill important roles in one's life that are traditionally met by immediate family members, regardless of a direct relation (Turnbull et al., 2015). Thus, a family may best be viewed not as a direct kinship but as a group of people that together fulfill roles and functions historically bestowed upon family members. In this chapter, we will use the following definition when discussing families:

> Families include two or more people who regard themselves as a family and who carry out the functions that families typically perform. These people may or may not be related by blood or marriage and may or may not usually live together (Turnbull et al., 2015, p. 6).

The Evolving Family Structure

Over recent decades, the landscape of the family structure has changed dramatically. The United States has seen a decline in the "traditional" family, which is composed of two biological parents with one parent in the workforce and the other in a caregiver role. The traditional family is now being replaced in many instances by an ever-increasing diverse family structure. The population of children living with two parents decreased from 85% in 1970 to 72% in 1990 and 69% in 2000. This decline has leveled off since 2000, with 69% of children living with two parents in 2019 (U.S. Census Bureau, 2019b). Single-parent families and stepparent families have become more common. Children from these families are at greater risk for low academic achievement, dropping out of school, teenage pregnancy, and experiencing psychological factors including depression, anxiety, stress, and aggression (Fields et al., 2001). Currently, 21% of children are living in single-parent families headed by women compared to only 4% of children living in single-parent families headed by men (U.S. Census Bureau, 2019a).

The cultural and educational climate of the American family has also changed over the years. In 2019, 50% of all children in the United States were identified as White, non-Hispanic (U.S. Census Bureau, 2019a). This is a sharp decline from the 64% reported in 2000 (U.S. Census Bureau, 2000). Currently, more than 3% of children living in the United States are foreign-born, with at least one foreign-born parent. Additionally, 28% of parents report the highest level of education of either parent in the home as a high school degree or less (U.S. Census Bureau, 2019a).

The recent decline of the American economy has left many parents without jobs. In 2007, 91% of fathers and 68% of mothers were employed (Kreider & Elliott, 2009); however, in 2019, 68% of fathers and 63% of mothers were employed (U.S. Census Bureau, 2019a). This drastic change in parental employment has led to poverty-related challenges. In 2019, 17% of children were living below the poverty line and 38% were considered low income (living below 199% of the poverty line); 17% of children were living in families that received food stamps; and 6% were not covered by health insurance (U.S. Census Bureau, 2019a). Poverty's negative impact on children is well documented. Children living in poverty or socioeconomic disadvantage experience lower levels of cognitive functioning, academic achievement, physical health status, and positive adjustment as well as increased rates of internalizing and externalizing symptoms (Hurt & Betancourt, 2018; McLoyd, 1998; Petterson & Albers, 2001).

Poverty is one, but not the only persistent, social issue facing families in the United States. Current generations of families are also impacted by the deployment of parents for military service. More than two million children have had a parent deployed on military assignment since September 11, 2001 (Cozza & Lerner, 2013). These deployments leave families and children devoid of one parent for extended periods of time with the added stress of worrying about their parent's safety. The risk factors associated with a military family's lifestyle (e.g., parental absence, frequent relocation, exposure to combat) have been theorized to have negative, indirect effects on child outcomes through increases in parental stress and psychopathology (Palmer, 2008). When a parent leaves the home for military duty, families are left with the responsibility of adapting to one less adult in the household and are required to replace the missing member's roles within the family. This change can lead to ambiguity and role confusion within families and cause stress to the remaining family members (McFarlane, 2009). Furthermore, military families are two to three times more likely to relocate than are their civilian counterparts.

The stress associated with issues such as poverty and deployment places a significant strain on parent–child relationships, which can have a detrimental impact on child development (Conger et al., 2002; Palmer, 2008). The presence of protective factors is related to families' abilities to successfully support their children's development even in the face of stress or adversity (e.g., poverty, military deployment). In times of family stress, protective factors take on an even greater importance. Therefore, promoting families' protective characteristics is crucial in helping create resiliency and perform their primary function of building competence in their children and enabling them to deal effectively with challenging life circumstances (Seccombe, 2002). Given the large percentage of American families facing serious hardships, it is important to understand the factors associated with resilience and the methods for its promotion.

Definitions and Underpinnings of Family Resilience

Multiple definitions of resilience have been posited in the literature, and several have extended beyond a focus on individuals to encompass aspects important for family functioning (i.e., family resilience). Patterson (2002a) suggested that family resilience is "the processes by which families are able to adapt and function competently following exposure to significant adversity or crisis" (p. 352). Similarly, Simon et al. (2005) defined family resilience as "the ability of a family to respond positively to an adverse situation and emerge from the situation feeling strengthened, more resourceful, and more confident than its prior state" (p. 427). Luthar et al. (2000) proposed resilience as "a dynamic process encompassing positive adaptation within the context of significant adversity" (p. 543). Finally, Walsh (2003) offers a framework for family resilience as a process aimed at assisting families to "reduce stress and vulnerability in high-risk situations, foster healing and growth out of crisis, and empower families to overcome prolonged adversity" (p. 5).

Common definitions, such as those presented herein, have features that embrace context, process, and outcomes collectively characterizing the construct of family resilience. From a contextual perspective, it is commonly thought that resilience takes place within the context of an adverse situation or event within which the family finds itself. Adversity may take several forms and arises through issues internal to the family or its members (e.g., problems experienced by an individual, divorce) or within the broader society (e.g., economic strife, military activity). The manner and degree to which a family develops resiliency is typically considered a dynamic process requiring flexibility and adaptation. The outcomes achieved as families develop resilience include greater levels of resourcefulness, confidence, and the ability to avoid serious problems in the future (Conger & Conger, 2002). Thus, the notion of family resilience considers key processes that help families face challenges and that strengthen the family as a unit.

In this chapter, we define "resilience in families" as the ability of the family to respond to stress and challenge in a positive and adaptive manner, characterized by the demonstration of competence and confidence among its members, with the intentional goal of socializing children. It includes concomitant attention to the development of resilience in its individuals, while at the same time embracing the resilience of the entire family system. It is further conceptualized along a continuum. Families are not necessarily "resilient"; rather, they demonstrate varying degrees of resiliency in response to different stressors and may be more or less capable of adapting depending on unique situations and their consequences.

Several theories have shaped the contemporary understandings of family resilience. An integration of ecological systems and developmental theories has contributed to our conceptualization of the construct. An ecological systems approach (Bronfenbrenner, 1979) considers both the characteristics of the family and the reciprocal interactions between the family and the broader systems within which they function (e.g., workplace, community). Ecological theory posits that individual family members (and by extension, family units) exist in the context of multiple interacting systems and that the experiences and interactions within and among those systems both influence and are potentially influenced by each other. The multiple, interacting systems in the life of a family exist at both the immediate and proximal levels (i.e., microsystem, such as neighborhoods, church group affiliations) and at indirect or distal level (i.e., exosystem, such as governmental policies or cultural norms). The ability of a family and its members to develop resilience is thus influenced by relationships, patterns of interaction, and direct and indirect experiences within and across various systems. All systems have strengths that can be leveraged to help build family resilience. Therefore, by virtue of being embedded within interacting ecological systems, all families have the potential for resilience. The identification of family strengths and their ability to take advantage of social supports and resources from within their embedded systems provide mechanisms for the development of resilience.

A developmental perspective is also relevant to our notion of family resilience. In contrast to perspectives that view family resilience as a set of fixed traits or attributes, a developmental vantage point views resilience as a process in which interactions between risk and protective factors mediate a specified outcome (Walsh, 1996). Within a developmental framework, a family's ability to adapt and cope with adversity is a process determined by many coexisting and evolving factors that occur over time and are developed in response to complex and changing conditions within and outside of the family. Furthermore, what is "resilient" at one point in time may be considered ineffective or inappropriate at another, depending on the developmental progression of its members.

The concept of family resilience, embedded within ecological systems and developmental paradigms, is an ongoing and evolving process occurring at multiple levels (Patterson, 2002b). One level focuses on the interactions among individual family members within the family unit, and another centers on interactions between the family unit and the broader ecology. This view of family resilience highlights the connection between the family system and larger community contexts, thereby emphasizing the importance of both family and community efforts in fostering resilience.

Finally, cultural awareness is critical when conceptualizing family resilience. Family traits or characteristics may vary in their relevance and salience in relation to family resilience. For example, varying levels of family cohesion may be valued differently in Eastern and Western cultures. Additionally, the strategies families use to cope with adversity may be relevant to one culture but considered inappropriate to another. The resilient response of a family in the face of adversity is dependent upon the values present in a particular culture, how the members of that culture conceptualize the adverse event, and the cultural expectations regarding coping and adaptation.

Characteristics of Resiliency

An understanding of the characteristics that resilient families may exhibit is necessary when determining methods by which to promote family resilience. Key characteristics that are often present in resilient families include cohesion, positive parenting, affective involvement, parent engagement, communication, problem-solving, and adaptability (see Table 7.1). Taken together, these characteristics support families in times of challenges and crises, helping them respond in a positive and adaptive manner.

Table 7.1 Characteristics of resilient families

Characteristic	Definition
Cohesion	Family cohesion is defined as "family members' close emotional bonding with each other as well as the level of independence they feel within the family system" (Turnbull et al., 2015, p. 108)
Adaptability	Family adaptability or flexibility refers to a family's ability to modify its rules, roles, and leadership, thus restoring balance between (a) family members and the family unit and (b) the family unit and the community (Patterson, 2002b)
Communication	Communication is the exchange of information, ideas, or feelings from one person to another
Affective involvement	Affective involvement refers to the extent to which family members value and display interest in the activities of other family members (Epstein et al., 1993)
Engagement	Parent engagement is parents' psychological, affective, and active commitment to experiences supporting children's learning and development
Positive parenting	Five core components define positive parenting: ensuring a safe an engaging environment, creating a positive learning environment, using assertive discipline, having realistic expectations, and taking care of oneself as a parent (Sanders, 1999)
Problem-solving	Problem-solving can be defined as a systematic process that allows individuals to formulate solutions to identified problems involving objectively identifying and defining a problem; generating potential alternatives; assessing, selecting, and implementing the best choice; and evaluating the outcomes in relation to its success at addressing the original problem

Cohesion

According to Turnbull et al. (2015), family cohesion is defined as "family members' close emotional bonding with each other as well as the level of independence they feel within the family system" (p. 108). The degree of emotional connectedness varies significantly between and within families and is influenced by the culture, age, and stage of life of the family members. Within connected relationships, family members display emotional closeness and loyalty while maintaining some friendships and leisure activities outside the family unit. There is mutual support and emphasis on shared time, collaboration, and a commitment to work together through struggles, but there is also a respect for individual needs and boundaries (Cohen et al., 2002; Walsh, 2003). Behavioral outcomes highlight the importance of cohesion in a family. Behavioral problems are common in families with low levels of cohesion and high levels of internal conflict. Specifically, Lucia and Breslau (2006) reported that the level of family cohesion was associated longitudinally with the extent of children's internalizing and attention problems as well as with their externalizing behavior problems.

Cohesion between a parent and child is enhanced by parent–child interactions; child outcomes are mediated by the affective nature of these interactions. Effective attachment, defined as the affective bond between a child and his or her caregiver, provides the child with a sense of security, assuring the child that the caregiver is available during times of adversity (Pianta & Walsh, 1996). Formation of an affective bond is related to the quality and quantity of caregiver responses (Dunst & Kassow, 2008), and responses marked by warmth, nurturance, and sensitivity to

the child's needs facilitate resiliency and adaptive development (Maccoby & Martin, 1983).

The link between caregiver responsiveness and child functioning permeates numerous areas of development. Responsive caregiving is related to positive socioemotional outcomes in children (Clark & Ladd, 2000). Specifically, parent–child connectedness is associated with peer acceptance (Cohn, 1990), quality friendships (Kerns et al., 1996), and altruism and moral development (MacDonald, 1992). The nature of the affective bond also sets the stage for cognitive development and school achievement. Children with secure attachment bonds display problem-solving capabilities, emergent literacy skills, and overall school adjustment (Pianta & Walsh, 1996). In contrast, insecure attachments have been linked to low levels of mastery and peer competence in school settings (Sroufe, 1989).

Positive Parenting

Resilient families are also characterized by high levels of positive parenting. According to Sanders (1999), there are five core aspects of positive parenting: ensuring a safe and engaging environment, creating a positive learning environment, using assertive discipline, having realistic expectations, and taking care of oneself as a parent. In a safe and engaging environment, children are supervised while they explore, experiment, and play. Environments that are safe and engaging foster development while preventing injuries. A positive learning environment is established when parents respond positively and constructively to child-initiated interactions through incidental teaching opportunities. In environments that promote learning, children develop language, social, and problem-solving skills. The third aspect of positive parenting, assertive discipline, is accomplished when parents set and discuss specific ground rules, give age-appropriate instructions in a clear and calm manner, and use behavioral consequences such as time out and planned ignoring. This manner of discipline serves as an alternative to harsh and ineffective practices, and it promotes a positive parent–child relationship. Fourth, creating realistic expectations involves choosing developmentally appropriate goals for the child's behavior. This reduces the risk of child abuse, which often stems from unrealistic expectations. The last core aspect of positive parenting focuses on promoting a parent's self-esteem and sense of well-being. Thus, parents are able to develop and use coping strategies to address challenging emotions and stress.

Taken together, these five core principles of positive parenting promote family resilience and reduce the risk of negative child outcomes. Negative effects that are correlated with poor parenting practices include behavioral and emotional problems, substance abuse, antisocial behavior, and juvenile crime (Sanders, 1999). However, when parents set age-appropriate rules and these rules are enforced in a predictable manner, family resilience is enhanced and child outcomes improve (Black & Lobo, 2008). Kwok et al. (2005) reported that positive parenting mediated the relationship between widowed parents' psychological distress and their children's mental health concerns. A longitudinal study (Conger & Conger, 2002) indicated that nurturing and involved parenting compensated for child distress related to economic hardships and interparental conflicts. Additionally, positive outcomes of nurturing and involved parenting during adversity included positive school performance, effective social relationships, and high self-confidence. Low levels of antisocial behaviors and emotional distress, as well as few externalizing and internalizing problems for adolescents, were also correlated with positive parenting practices.

The parenting style and practices adopted by primary caregivers play a critical role in the growth and development of children. Parenting style is defined as "a constellation of attitudes toward the child that are communicated to the child and that, taken together, create an emotional climate in which the parents' behaviors are expressed" (Darling & Steinberg, 1993, p. 493). Authoritative parenting, which aligns with positive parenting (Kwok et al., 2005), has been demonstrated to be typically the most efficacious style of parenting, and it is marked by predictable

discipline, mutual respect, warmth, affection, clear expectations, and a level of flexibility. Authoritative parenting has been positively linked to academic achievement, positive peer relationships, and independence in children (Keith & Christenson, 1997). Furthermore, parenting practices characterized by positive, consistent discipline are correlated with resiliency to stress in children (Wyman et al., 1991). Conversely, authoritarian styles are less positively related to child development and resilience (Kerr et al., 2012). Authoritarian or harsh, inconsistent parenting has been associated with verbal aggressiveness and argumentativeness (Bayer & Cegala, 1992; Grusec & Goodnow, 1994), conduct problems (Frick, 1993), and conduct disorders (Short & Shapiro, 1993).

Affective Involvement and Family Engagement

Another correlate of resilience is active and affective family involvement. Affective involvement refers to the extent to which family members value and display interest in the activities of other family members (Epstein et al., 1993). An emphasis is placed on the amount of interest and the manner in which family members demonstrate their interest and investment in one another. Active family involvement fosters the development of resiliency and healthy adjustment in children, and a key area influenced by family involvement is educational outcomes. Parental involvement in school is correlated with children's positive attitudes toward school, school attendance, positive behaviors, and study and homework habits (Christenson & Sheridan, 2001). Furthermore, family involvement is positively linked to student performance; optimal levels of family involvement are positively related to children's scores on pre-reading (Hill, 2001), reading (Clark, 1988), and math tasks (Galloway & Sheridan, 1994). Whereas family involvement may be conceptualized as involvement with other family members, it can also be considered in the context of connections to broad support networks and community bases. Family resilience is fostered when there are ties between the family and the community and when kin and social support are present (Cohen et al., 2002; Walsh, 2003). Black and Lobo (2008) describe family resiliency as an interaction between the family and community networks wherein the family receives information, companionship, services, and respite. This connection to the community is a two-way process; the family not only receives support but also invests in the community and gives back. This connection to the community allows children to feel safe in their community and neighborhood, achieve higher grades, and exhibit fewer behavioral problems. Additionally, parents benefit in domains including perseverance, hope, and companionship.

An extension of family involvement, family engagement, is another characteristic of resilient families. Family involvement and family engagement are closely related, but a key distinction divides the two. Whereas family involvement can be defined in terms of activities, family engagement is concerned with the quality of interactions between parents and children and parents and other caregivers as they participate in or are involved in those activities. Specifically, we define family engagement as parents' psychological, affective, and active commitment to experiences supporting children's learning and development. Engagement is demonstrated through parents' consistent and responsive interactions between themselves and their children and between themselves and other caregivers in their children's lives. Key features of this interaction might include attentiveness, warmth, sensitivity, enthusiasm, and positivity. Interactions between parents and children characterized in these ways foster family resilience.

Communication and Problem-Solving

Another characteristic central to resilient families is communication. Communication is defined as the exchange of information, ideas, or feelings from one person to another. In families, clear communication fosters family resilience by

allowing family members to develop a shared sense of meaning regarding stressors or crises as well as coping strategies, informed decision-making, and collaborative problem-solving (Walsh, 2003). Clear communication also helps protect children because it discourages them from filling the gaps in their knowledge or understanding with inaccuracies. Communication allows families to reach an agreement and achieve balance, as well as to be connected, be flexible, and able to organize resources (Bayat, 2007).

Active problem-solving within families demonstrates resilience in the face of a crisis or consistent adverse conditions. Problem-solving is defined as a systematic process that allows individuals to formulate solutions to identified problems. When done effectively, it involves determining the basis of the problem through analysis, objectively identifying and defining a problem; generating potential alternatives; assessing, selecting, and implementing the best choice; and evaluating the outcomes in relation to its success at ameliorating the original problem. Problem-solving contributes to resiliency when the problem is recognized by the family, lines of communication are open, and parents work together to coordinate each family member's ideas and opinions (Black & Lobo, 2008). Additionally, problem-solving builds family resilience when it involves creative brainstorming among family members, joint decision-making, productive conflict resolution, and a plan to prepare for future challenges (Cohen et al., 2002).

Parent communication during the problem-solving process has been linked to children's social functioning (O'Brien et al., 2009), interpersonal skills, and conflict resolution (Costigan et al., 1997). Additionally, there are strong links between the approaches that parents and adolescents take in problem-solving and communication. Alternatively, deficits in family problem-solving skills are related to several types of childhood problems, including depression (Sanders et al., 1992), delinquency in adolescence (Krinsley & Bry, 1991), and reduced psychosocial competence (Leaper et al., 1989).

Adaptability, Flexibility, and Stability

Every family faces situations throughout their life course, which present challenges to the manner in which family members relate to one another or how the family unit functions within the community (Patterson, 2002b). Family adaptability or flexibility refers to a family's ability to modify and reorganize its rules, roles, and leadership, thus restoring balance between family members and the family unit and the family unit and the community (Black & Lobo, 2008; Patterson, 2002b). Walsh (2003) conceptualizes flexibility as providing families with an opportunity to bounce forward as opposed to bouncing back. This distinction is made because a family can recover from a crisis, but they will not revert to their previous state. Instead, with resilience, they will improve and move forward.

To function as a healthy system, families must be both adaptive and stable. Families that are able to determine the appropriate times to maintain stability or attempt change are more likely to be healthy, functional families (Black & Lobo, 2008; Cohen et al., 2002). Successful and adaptive families are proactive in the socialization and development of individual family members and understand the importance of maintaining the family unit (Patterson, 2002a). Accordingly, there are two central components of family adaptability: adoption of optimal parenting styles and problem-solving practices and developing a shared set of beliefs or values within the family unit. This is consistent with an ecological framework that views both the interactions among family members and the relationship between the family unit and the community as essential factors for developing family resilience.

An important component for the development of family adaptability is the establishment of shared beliefs within the members of the family. Shared values and beliefs are essential for family resilience and reinforce specific patterns in how a family reacts to new situations, life events, and crises (Antonovsky & Sourani, 1988; Walsh, 1996). When families have a strong set of shared beliefs, they may view their interaction with the

world from a collective "we" versus "I" orientation (McCubbin et al., 1993). Resilient families often have a shared set of values for critical aspects of family life, including financial issues and time management (McCubbin & McCubbin, 1988).

Promoting Resilience in Families

Our conceptualization of family resilience is one wherein family strengths and resources are leveraged to overcome obstacles and challenges. The ultimate function and purpose of families is to ensure the positive development and adaptation of children. Services or interventions intended to build resilience realize this fundamental responsibility. Thus, services that are family-centered and strengths-based (i.e., that support families as they strive to become effective and self-sufficient in promoting positive child development) are the cornerstone of programs for building resilience. In other words, the ultimate goal of services to promote family resilience is to build caregivers' competence and confidence in order to build competence and confidence in their children (Sheridan et al., 2008).

Family-Centered Services

Family-centered services are intended to build family resilience, based on the extensive and seminal work of Dunst and colleagues (Dunst & Trivette, 1987; Dunst et al., 1988, 1994b). Four operating principles define family-centered approaches: (1) intervention efforts are based on families' needs; (2) existing strengths and capabilities of families are used to mobilize resources and promote abilities; (3) social networks are used as a source of support; and (4) specific forms of helping behaviors on the part of professionals promote acquisition of family competencies. In addition, family-centered services promote resilience when they ensure positive and adaptive outcomes for families. These are described next, with an emphasis on their relevance for bolstering family resilience.

Base Intervention Efforts on Family-Identified Needs From a family-centered perspective, families are considered to be in the best position to identify their most salient needs. Thus, services are developed that are responsive to the priorities identified by the family in collaboration with supportive professionals. Likewise, commitment to change may be greatest when families' needs are self-determined. To build resilience, professionals can assist families as they strive to identify issues interfering with optimal or desired levels of functioning, define them in manageable terms, establish shared and long-term goals, state clear objectives, determine objectives essential to attaining short- and long-term goals, and clarify foci for intervention.

Use Existing Family Strengths and Capabilities to Mobilize Family Resources An overarching principle of family-centered services is the recognition that all families have strengths and abilities. Circumstances causing a family stress or adversity may limit their abilities to recognize, access, or use their strengths. Services based on family-centered principles help family members identify and mobilize their strengths and use them to attain goals that they articulate for enhanced familial functioning (Garbarino, 1982).

Maximize Social Networks and Supports The development of collaborations and partnerships within and across systems is essential to facilitate families' development of resilience. Positive, proactive linkages and networks help family members mobilize resources and supports that are available to them but that may have been perceived as inaccessible. An essential system interacting with children and families is that of the school. Schools and classrooms represent significant contexts for development, and teachers are meaningful individuals in a child's life (Sheridan & Gutkin, 2000). The establishment of partnerships between families and schools can be critical for maximizing the growth potential for a child. Positive, constructive relationships with other primary systems (i.e., schools) can be instrumen-

tal in helping families develop competencies and utilizing resources on behalf of their child's development (Dunst et al., 1988; Sheridan & Burt, 2009). The notion of a "partnership" implies that family members are coequal partners in the identification of needs and goals, creation of strategies and plans, and evaluation of outcomes as programs and resources are utilized (Christenson & Sheridan, 2001; Welch & Sheridan, 1995). Thus, services are not delivered "to" or "for" families but "with" family members as active partners and decision-makers.

Use Helping Behaviors that Promote the Acquisition of Competencies When building resilience through a family-centered framework, professional roles focus on developing competence and confidence among all family members. Capacity building begins with an understanding and appreciation for "where the family is." Rather than utilizing strategies to "treat" problems or remediate deficiencies, family-centered approaches strive to promote the acquisition of family and child competencies. Models focused on "correcting a problem" result in a limited, often short-term resolution of one presenting concern. To build family resilience, services must attend proactively to growth-producing behaviors. The development of strengths, assets, and skills is expected to lead to generalization and maintenance of resources to address a range of presenting challenges in the future.

Ultimately, for families to be competent, confident, and resilient, they must be empowered. Empowerment models support families in proactively identifying needs, mobilizing resources, and accomplishing goals through the development of personal capacities, strengths, and abilities. This is in contrast to expert models, which often lead to dependency on the professional, fail to produce personal resources (competence) and positive belief systems (confidence), and result in limited skills in assessing personal needs and mobilizing personal resources and support systems in the future.

Concern is with Process as well as Outcomes The emphasis in family-centered services is not only on the final outcomes experienced by the family system but also on the processes by which families work toward the desired outcomes. In fact, it is thought that the strengths-based, empowering process is the mechanism through which adaptive outcomes are achieved. As a process that promotes resilience through involvement, communication, and adaptability, family-centered services assist family members to actively participate in enhancing their own lives. Families are engaged in identifying their own needs, mobilizing resources on their own behalf, and accomplishing self-determined goals through the development of personal capacities, strengths, and abilities. Through such processes, attainment of long-term, generalized positive outcomes is maximized.

The strengths-based process by which professionals help families achieve their own goals is the cornerstone of family-centered service delivery. By helping family members identify and prioritize needs, establish reasonable goals, and develop appropriate plans, opportunities for positive family outcomes are maximized. Furthermore, strategies that are relevant to and feasible for families, which result in desired outcomes and provide new knowledge and skills, will likely be used by family members in the future when similar needs arise.

Adverse Childhood Experiences

Over the past few decades, the impact of adverse experiences upon children's development and adult familial behavior has been explored. Individuals with a greater number of adverse childhood experiences (ACEs; Felitti et al. (1998)) tend to have more long-term negative outcomes unless they are moderated by protective factors, such as resiliency. There are three identified categories of adverse childhood experiences: abuse, household challenges, and neglect. The category of abuse includes (a) emotional

abuse, (b) physical abuse, and (c) sexual abuse. Neglect includes (d) emotional neglect and (e) physical neglect. Finally, experiences that are grouped together as household challenges are (f) mother treated violently, (g) substance abuse in the household, (h) mental illness in the household, (i) parental separation and divorce, and (j) an incarcerated household member. As the number of identified ACEs increases for an individual, so does the degree of impact upon lifelong health and behavioral health factors. Increases in the number of positive ACE indicators are connected to health problems, mental illness, and substance misuse in adulthood (Anda et al., 2006). Additionally, the more ACEs experienced, the greater the likelihood of poor school attendance, behavioral problems, and failure to meet academic standards in reading, math, and writing (Blodgett & Lanigan, 2018).

ACEs occur in all populations and are common; almost two-thirds of adult respondents indicated experiencing at least one ACE, and more than one in five reported three or more ACEs (Felitti et al., 1998). Although ACEs are identified for the first 18 years of life, their impact covers the entire life span. Thus, families are impacted by not only the ACEs of the children in the family but also the adults' own history of adverse childhood experiences.

Addressing these adverse factors is an important component for strengthening family resilience. The most efficient way to reduce the impact of ACEs is through prevention. Strategies that support a nurturing, stable, and safe home environment will reduce the likelihood of ACEs. Family-centered services that address adult problems with substance abuse, mental health issues, or negative parenting strategies are also recommended. A systems approach to mitigate or prevent ACEs is the Health Outcomes from Positive Experiences (HOPE; Sege & Harper, 2017) framework. This framework promotes positive childhood experiences and enhances child health and behavioral, social, and academic development. In doing so, the HOPE framework centers on building skills and resources within caregiving adults to promote healthy development (Sege & Harper, 2017).

ACEs are an important, but limited, measure of adversity for individuals and families. ACEs include individual and family factors but do not include experiences outside of the home in the neighborhood, school, or community. Thus, they do not account for adverse factors associated with systemic poverty, discrimination, and marginalization (Bruner, 2017).

Teachers and Parents as Partners (TAPP)

In order to promote resiliency in families, our work has centered on consultation models that are designed to enhance families' abilities to acquire new skills or competencies that lead to effective outcome goals for the family. There are a variety of different consultation models existing in the literature (Gutkin & Curtis, 2009); however, one model, behavioral consultation (Bergan & Kratochwill, 1990), has received the most research support (Martens & DiGennaro, 2008; Sheridan et al., 1996b). An adaptation of behavioral consultation, conjoint behavioral consultation (CBC; Sheridan et al., 1996a; Sheridan & Kratochwill, 2008), not only maintains the research-based problem-solving process but also systematically centers on the needs and goals of families when working with professionals (i.e., teachers, early childcare specialists, doctors). The newest iteration of this family/partnership-centered form of consultation is the Teachers and Parents as Partners (TAPP; Sheridan, 2014) model.

Founded on an ecological systems perspective, the Teachers and Parents as Partners (TAPP) process is a strengths-based service delivery model acknowledging that individuals function within and across various systems/environments (i.e., home, school, peers) (Bronfenbrenner, 1979; Sheridan et al., 1996a; Sheridan, 2014). TAPP recognizes that children, families, schools, and other systems have a reciprocal influence on each other and that the connections between systems are essential for facilitating positive outcomes for children. TAPP systematically enhances these connections by bringing together families, schools, and other support systems in a

collaborative manner to build social support networks while addressing the needs of children. Through the process of TAPP, families are empowered to be equal participants in the problem-solving process.

Teachers and Parents as Partners is defined as "an evidence-based process for parents and teachers to work together in support of positive school-related outcomes for students" (Sheridan, 2014, p. 8). TAPP can be instrumental in promoting family resilience when challenges associated with children's behavioral, academic, or social–emotional functioning create hardships for the family system. Throughout the TAPP process, parents and teachers engage in a structured problem-solving process with a consultant to collaboratively address the needs of children across home and school settings. Parents and teachers partner together to share in the identification of children's strengths and needs and to develop, implement, and evaluate interventions to meet those needs. This is established through proactive interventions aimed at strengthening children's skills and competencies.

The TAPP process is based on several principles that parallel family-centered constructs (see Table 7.2). The indirect nature of services allows professionals to work with families and other caregivers (e.g., teachers), who are ultimately responsible for implementing programs and plans. By definition, consultation models (and TAPP) strive to enable individuals (including families) to "…become better able to solve problems, meet needs, or achieve aspirations by promoting the acquisition of competencies that support and strengthen functioning in a way that permits a greater sense of individual or group control over its developmental course" (Dunst

Table 7.2 Characteristics of family-centered services and Teachers and Parents as Partners

Family-centered services (Dunst et al., 1994a)	Teachers and Parents as Partners (Sheridan, 2014)
Help giver: • Employs active and reflective listening • Helps clients clarify concerns and needs • Pro-offers help in response to the help seeker's needs • Offers help that is congruent and matches the help seeker's appraisal of needs	Consultant/facilitator: • Uses open-ended questions and frequent summarizations to ensure understanding • Provides help that is congruent with parents' needs • Does not determine target behaviors and/or interventions independent of parents' priorities • Jointly develops data collection and intervention strategies based on what works in families' environments
• Promotes acquisition of competencies to meet needs, solve problems, and achieve aspirations • Allows the locus of decision-making to rest with the family member	• Focuses on existing skills, strengths, and competencies • Creates opportunities for families to acquire knowledge to manage concerns (e.g., problem-solving approach, data-based decision-making strategies, specific interventions) • Encourages skills learned in TAPP to generalize for future problem-solving • Focuses on increased sense of self-efficacy and empowerment among parents
• Promotes partnerships and parent–professional collaborations as the mechanism for meeting needs	• Promotes collaborative problem-solving • Promotes joint responsibility among home and school systems for problem and problem solutions • Assists parents in learning strategies for working across systems to meet the needs of the child • Approaches systems work in a positive and proactive manner • Focuses on common goals across systems rather than on problems within systems

Adapted from Sheridan et al. (2004)

et al., 1994a, p. 162). Like family-centered services, TAPP is implemented in a manner that is responsive to families' needs, builds competencies and resilience within members, and promotes participation and collaboration among systems.

The TAPP process consists of three stages and three corresponding meetings that provide the essential components to produce effective outcomes. These stages are implemented in a collaborative manner with families and school personnel working under the guidance of a consultant. Each stage is inclusive of one meeting but includes action steps (e.g., observations, data collection, plan implementation) and additional communication outside the meeting framework. The three stages are: (1) building on strengths, (2) planning for success, and (3) checking and reconnecting (Sheridan, 2014). The process is fluid, and each stage can be revisited as needed. The objectives of each stage, including those necessary for both addressing concerns and enhancing relationships, are shown in Table 7.3. Each meeting is structured around agendas, interview protocols, and support plans. The effectiveness of the TAPP process is related to the established partnership between families and school staff and the collaboration in determining and assessing the targeted need, implementing interventions, and evaluating success.

During the first stage, building on strengths (also called problem/needs identification; Sheridan et al. (1996a, b); Sheridan and Kratochwill (2008)), the focus is on relationship building and initiating the problem-solving process. Parents and teachers jointly identify a child's strengths and needs across the home and school settings, decide upon target behaviors for intervention, and establish methods for collecting baseline data on the target behaviors across settings.

The second stage, planning for success, consists of analyzing the context surrounding the targeted behavior and collaboratively developing support plans for the home and school settings. In the consultation literature, this is known as the problem/needs analysis stage (Sheridan & Kratochwill, 2008). Baseline data collected in stage 1 are evaluated, and specific behavioral goals are developed. Part of this stage includes the initial implementation of the support plans. Parents and teachers generate hypotheses regarding the environmental or functional conditions that may contribute to the occurrence of the target behaviors. Families have the ability to develop support plans that are linked to the proposed hypothesis and appropriate for the context of their home. If needed, parents also gain skills needed to support effective implementation of the plan. Once plan strategies and tactics are agreed upon, parents and teachers implement behavioral plans to support the student in the home and school settings, respectively.

The final stage, checking and reconnecting (also known as problem evaluation), consists of evaluating the effects of the support plan in helping students achieve their goals, making necessary modifications to enhance the plan's effectiveness, and continuing the plan. A major component of this stage is the continued reinforcement of the parent–teacher partnership long after the TAPP process has been concluded.

Goals of TAPP

The TAPP process described above provides a format for operationalizing the principles of family-centered services, as the goals of TAPP directly address these important principles. Paralleling the goals of family-centered services outlined above, the important goals of TAPP include the following: (a) to promote positive outcomes for children and families; (b) to promote family engagement; (c) to establish and strengthen partnerships; and (d) to build skills and capacities of family members (Sheridan, 2014; Sheridan & Kratochwill, 2008). These relevant TAPP goals and family-centered principles are described below.

Promote Positive Outcomes for Children and Families

The primary goal of TAPP is to effectively address the needs that parents, teachers, and other

Table 7.3 Behavioral and relational goals and objectives by TAPP stage

Behavioral (child) goals/objectives	Relationship goals/objectives
Stage 1 *Building on strengths* *(needs/problem identification)*	
• Identify strengths of the child, family, teacher, systems • Behaviorally define the concern or need as it is represented across home and school settings • Explore environmental conditions that may be contributing to or motivating problem behavior • Determine a shared outcome goal • Clarify specific settings within systems that will be the focus for intervention • Explore within- and across-setting environmental factors that may contribute to or influence behaviors • Establish and implement baseline data collection procedures to set the stage for careful, systematic, data-based decision-making	• Establish joint responsibility in goal setting and decision-making • Establish/improve working relationship between parents and teachers • Validate shared goals of supporting the child • Identify strengths of the child, family, and school • Increase communication and knowledge regarding the child, goals, concerns, and culture of family and school
Stage 2 *Planning for success* *(needs/problem analysis; plan implementation)*	
• Explore baseline data collected across settings • Identify setting events, ecological conditions, and cross-setting variables that may be impacting the target concerns • Investigate trends across settings (e.g., home and school) and highlight when appropriate • Elicit and provide information about the function or motivating features of the behavior that are based on environmental (rather than internal) explanations • Collaboratively design an effective intervention plan across settings that is sensitive to setting-specific variables • Link assessment to intervention through the interpretation of concerns in terms of environmental conditions and not internal causes • Discuss general strategies and plans to be included in a treatment package across home and school settings • Summarize the plan, review what is to be done, when, how, and by whom • Implement agreed-upon intervention across home and school settings • Address questions, provide feedback, make immediate modifications to plan as necessary • Assess changes in student's behavior	• Use inclusive language to strengthen partnerships between home and school • Encourage and validate sharing of parents' and teachers' perspectives of the priority behavior • Foster an environment that facilitates "give-and-take" communication across settings • Promote collaborative decision-making and shared responsibility for plan development • Increase continuity in addressing child's needs across settings • Communicate about strategies as they are being implemented across home and school

Table 7.3 (continued)

Behavioral (child) goals/objectives	Relationship goals/objectives
Stage 3 *Checking and reconnecting* *(plan evaluation)*	
• Analyze treatment data in relation to baseline data • Determine whether the shared goals of consultation have been attained • Evaluate the effectiveness of the plan across settings • Discuss strategies and tactics regarding the continuation, modification, or termination of the treatment plan across settings • Schedule additional interviews if necessary • Discuss ways to continue joint problem-solving or shared decision-making	• Continue to promote open communication; home–school collaborative decision-making • Reinforce joint efforts in addressing needs • Discuss parents' and teachers' perceptions • Reinforce parents' and teachers' competencies for addressing future needs • Establish means for parents and teachers to continue to partner

caregivers have for children. These needs comprise the focus of the TAPP process and are the basis for providing services across settings. The process does not make assumptions regarding the needs of families (i.e., what will become the focus of TAPP services); rather, opportunities are provided for families to express their concerns and determine mutual goals with other caregivers.

The TAPP process provides an opportunity for families to describe and prioritize their needs and select targets that are thought to benefit family functioning. Thus, the needs addressed in TAPP are those that are most central to families. This in turn increases the likelihood that families will devote their time and energy to follow through on plan development, implementation, and maintenance of positive change.

Promote Family Engagement

Family engagement is a cornerstone of the TAPP process. Importantly, the TAPP process allows for an examination of family strengths to address children's needs. Families are engaged and empowered to participate through all three stages, from the identification of targeted needs, analysis of contextual factors related to the behavior, and implementation of a support plan to the evaluation of the plan's outcome. Throughout the process, parents are considered equal partners with school personnel and each meeting provides the structure to ensure family engagement. Additionally, the TAPP process benefits from family knowledge (e.g., information about supports in the home, interactions with children, children's developmental histories) that can be used to address children's needs.

Throughout the TAPP process, families' strengths and contributions are affirmed, further promoting their involvement in identifying and developing intervention components. Highlighting the family's existing strengths in the home setting provides a sense of self-efficacy for parents by acknowledging their abilities to affect positive change in their child's life (Dunst et al., 1988).

The atmosphere provided within TAPP supports families and allows their existing resources to set the foundation upon which resilience can be developed, rather than focusing on barriers or families' lack of resources to cope with problems or hardships. Such a strength-based approach ensures that the focus is placed upon families' capabilities rather than on what is lacking in parenting skills and resources. Building on existing family strengths is essentially a matter of "meeting the family where they are" (Dunst et al., 1988) and viewing family members as having strengths to be utilized to address the child's needs. In this way, services are provided that are congruent and consistent with the family's needs, goals, and values.

Establish and Strengthen Partnerships

Another important principle outlined in family-centered services is to strengthen social supports and promote partnerships and collaborations among systems (Dunst & Trivette, 1987).

TAPP's focus on establishing home–school partnerships operationalizes this principle directly. Within the TAPP process, home and school systems work in collaboration with one another to address mutual goals for children. This allows schools and families to partner in decision-making and adopt equal responsibility for both the assessment of needs and development of solutions. As a team, parents and teachers examine and evaluate data to verify the nature and extent of children's needs, jointly determine goals, and collaboratively develop and implement plans. This helps ensure a continued partnership between the primary caregivers (i.e., parents and teachers) in the child's social support systems (i.e., the home and school).

Along with a structured process to promote collaboration, the TAPP model utilizes communication strategies that highlight the concept of partnership. Pluralistic, collaborative language (e.g., we, us) is used to ensure that everyone feels they are working as a team and not individually. Furthermore, the process continues to stress the importance of working together, through clear and frequent communication and the use of open-ended questions to elicit more in-depth information from parents. Through this partnership, "trust, two-way communication, perspective taking, clear roles, collaboration and cooperation, and shared responsibility" (Sheridan, 2014, p. 47) is developed.

Build Skills and Capacities of Family Members

Consistent with the family-centered principle of building competence among parents (Dunst et al., 1994a), an important goal of the TAPP process is to promote parents' acquisition of skills and knowledge (Sheridan & Kratochwill, 2008). Being an integral part of the support process, families develop competencies in the areas of children's behavioral, social, and academic development. They also acquire skills in the areas of providing support to children and achieving the families' defined goals.

The TAPP process achieves this goal through supporting and guiding the families' engagement in identifying needs and formulating solutions. Given their active involvement, parents, teachers, and other caregivers gather essential knowledge about various aspects of the process such as the importance of identifying and defining the child's or family's needs, assessing factors that may contribute to the maintenance of a specific behavior, mobilizing the family's strengths and resources, and developing interventions to achieve positive outcomes.

Through the TAPP process, families learn to prioritize their concerns for children. During stage 1, building on strengths, parents identify specific behaviors to target for intervention, allowing for a more focused approach to problem-solving. Likewise, detailed strategies for monitoring primary concerns are discussed (i.e., methods of data collection and evaluation). Throughout the TAPP process, parents and teachers collect data on specific targets and information regarding environmental conditions that may affect children's behaviors. Consultants assist parents in using this information to develop meaningful interventions that address children's needs. Similarly, data are used to develop socially valid goals and monitor progress. Continued assessment throughout the TAPP process provides parents with an understanding of the data-based decision-making process. Parents learn strategies for determining whether the goals have been met based on existing data rather than subjective perceptions. Additionally, TAPP participants learn procedures for modifying plans when behavioral goals are not met. Through this process, families learn the value of using data to guide decision-making regarding the child's progress and the efficacy of the intervention. Each of the aforementioned skills developed through participation in the TAPP process provides families with tools that can be used to address future family needs. Families are empowered by recognizing their existing com-

petencies, strengthening their skills, and acquiring tools for independence, which lessens their dependence on professionals for assistance in the future.

Conclusions

Families, today, face many internal and external challenges that impact the development of children and adult family members. Family resiliency is a concept by which families meet these challenges in a positive and adaptive manner. Understanding how resiliency is developed and fostered within the family context can play a central role in the development of effective interventions as well as help strengthen families when life stressors disrupt family functioning. Interventions that strengthen family resiliency can provide families with skills for enduring challenging situations as well as preparing families for handling similar situations in the future. The Teachers and Parents as Partners (TAPP) process has been described in this chapter as an example of how current interventions can be used to promote family resiliency through an ecological, developmental, and multicultural framework.

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8 Resilience and Disruptive, Impulse Control, and Conduct Disorders of Childhood

Sam Goldstein, Richard Rider, and Alex Velez

Introduction

The disruptive, impulse control, and conduct behavior disorders (DICCBDs) of childhood comprise attention-deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), kleptomania, pyromania, intermittent explosive disorder, and conduct disorder (CD) (APA, 2013). These conditions are among the most commonly treated in mental health settings, with epidemiological studies suggesting that between 3% and 16% of all youth meet the diagnostic criteria for at least one, if not two or more, of these conditions (Tistarelli et al., 2020; Loeber et al., 2000; Eiraldi et al., 1997; for reviews, see Ringer (2020), Goldstein and Goldstein (1998), Barkley (1998)). These disorders can cause children and adolescents to behave angrily or aggressively toward people or property. They may have difficulty controlling their emotions and exhibit rule- and law-breaking behaviors (Puiu et al., 2018). As with the two versions of this chapter appearing in the first and second editions of this volume, the primary focus will be on ODD, ADHD, and CD as they occur with much a greater frequency in the childhood and adolescent populations. Additionally, as much of the literature cited in those versions is still very relevant today, it will be included with updated citations as needed.

An estimated 6% of children are affected by ODD or CD (Christenson et al., 2018). Each year, an estimated 2.7% of children and adults in the United States are affected by intermittent explosive disorder (Coccaro & McCloskey, 2019). Kleptomania and pyromania are rare, affecting 1% or fewer of people in the United States (Allely, 2019).

The angry, aggressive, or disruptive behaviors of people with these disorders are more extreme than typical behaviors. These behaviors:

- Are frequent
- Are long-lasting
- Occur across different situations
- Cause significant problems

One difference between these disorders and many other mental health conditions is that with disruptive disorders, a person's distress is focused outward and directly affects other people. With most other mental health conditions, such as depression and anxiety, a person's distress is generally directed inward toward themselves.

These disorders begin in childhood or adolescence and are more common in males than females. Several factors make it more likely that a person will exhibit a DICCBD, including harsh parenting, physical or sexual abuse, or parents

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_8

with a history of addiction or problems with law enforcement.

These conditions have traditionally been referred to as "externalizing disorders" as opposed to "internalizing disorders" such as anxiety, depression, or learning disabilities. The former disorders are disruptive and disturb the immediate environment and are easily visible to the observer. Symptoms and impairments of the latter are not as often observed nor are environments as disrupted by affected children and adolescents. Furthermore, there is a growing body of the literature suggesting that the incidence and prevalence of these disorders is increasing (Fairman et al., 2017).

Given that the behavior of children with DICCDBs is rarely viewed as benign by parents, teachers, and community professionals, it is not surprising that these conditions comprise patterns of impulsive, hyperactive, aggressive, and defiant behaviors. These pose a significant adverse risk to a host of outcome variables in late adolescent and young adult years. In fact, even a single DICCBD compromises the probability of positive life adjustment in young adulthood. A combination of DICCBDs (e.g., ADHD and CD; ODD and CD) addresses significant adverse outcomes in major life domains, including school, family, health, vocation, and even activities such as driving (Uchida et al., 2017; Goldstein, 2002; Barkley & Gordon, 2002). DICCBDs may also act catalytically, reducing a child's opportunity for normal life adjustment by precipitating a cascade of adverse outcomes into adulthood.

A small percentage of children with ADHD and CD and an even greater percentage of children with ODD alone manage to transition and adjust reasonably well into young adulthood (Uchida et al., 2017; Teeter-Ellison, 2002). Thus, if a specific risk such as chronically demonstrating a DICCDB significantly contributes to adverse outcome, and current treatment efforts for DICCDB demonstrate that symptoms can be managed but symptom relief in the long term does not appear to significantly alter the adult outcomes of these conditions, then researchers and clinicians must identify and understand those variables within the child, immediate family, and community that predict better outcomes (Goldstein & Brooks, 2022). Thus, there has been an interest in studying resilience processes in children with DICCDBs. If a group of children suffering from one or more DICCBDs can be identified, who demonstrate the ability to transition successfully into the late adolescent and young adulthood years, then perhaps the lessons learned from studying these youth can generate a treatment protocol for those thoughts, feelings, behaviors, experiences, attitudes, and opportunities to enhance resilience in a group of children whose adult outcomes have been demonstrated to be significantly more risk-filled than those of others. Particularly for youth with DICCBDs, an increasing body of the literature operating from a developmental pathway model has demonstrated that a number of childhood variables can be used to predict the risk of adult problems as well as identifying insulating or protective factors that reduce risks and increase the chances of a satisfactory transition into adult life (for review see Goldstein and Brooks (2022), Katz (1997)). As a field, researchers of DICCBD are slowly beginning to examine these protective factors. Although much is known about the risk factors, for the time being, there are only limited data available about protective factors; however, it is quite likely that those factors that insulate and protect children from other psychiatric conditions affect those with DICCBDs as well. Thus, living in an intact household, above the poverty level, with parents free of serious psychiatric problems and consistent in their parenting style and available to their children when needed appear to be among the most powerful factors predicting resilience in all children as well as in those with DICCBDs (for review see Goldstein and Brooks (2011, 2022), Goldstein and Goldstein (1998)).

In long-term follow-up studies, at least 70–80% of adolescents with a childhood diagnosis of ADHD or another DICCBD continue to meet the diagnostic criteria for at least one DICCBD, with at least 60% reporting impairing symptoms but fewer meeting the diagnostic criteria during the adult years (for review see Ramos-Olazagasti et al. (2018), Ingram et al. (1999)). These authors suggest that the decrease in preva-

lence is in part due to the developmental nature of the diagnostic protocols for DICCBDs. Over the past 40 years, the prognosis for individuals with ADHD in adulthood, for example, appears to be influenced by the severity of their symptoms, comorbid conditions, level of intellectual functioning, family situations such as parental pathology, family adversity, socioeconomic status (SES), and treatment history (for review see Goldstein (2002)). These variables are likely predictive for other DICCBDs as well.

There is a broader literature available concerning the absence of certain negative phenomena in predicting outcomes. For example, Herrero et al. (1994) demonstrated that females may experience less risk of adverse outcome with disruptive behavior disorder (DBD) simply due to their gender. Subtype differences in ADHD, specifically children with the inattentive type, may also reduce risks. The absence of impulsive behaviors appears to predict better outcomes. In fact, it has been hypothesized that problems with self-control characteristic of all three of the DICCBDs may be the best predictors of future adult outcomes into young adulthood when evaluating young children (for review, see Barkley (1997)).

Not surprisingly, aggressive behavior in general, a diagnostic characteristic of ODD and CD as well as a common consequence of ADHD, has been found to predict outcomes in adulthood (Robson et al., 2020; Girard et al., 2019; Loney et al., 1983). Emotional lability has also been highly correlated with aggression (Hechtman et al., 1984). It is also likely that within the symptom listing for DICCBDs, some may hold stronger positive or negative predictive power. Research employing algorithms with these conditions has slowly begun to identify the presence or absence of certain symptoms as not only predictive of conditional presence but also addressing outcomes (Goldstein & Brooks, 2022; Mota & Schachar, 2000).

This chapter will provide an overview of DICCBDs, diagnostic symptoms, definitions, and prevalence. We will provide an overview of risk and resilience factors that may contribute to the acquisition and exacerbation of these conditions over time. This chapter will conclude with a proposed set of guidelines for clinicians.

Overview

Over the past half century, multiple longitudinal and retrospective studies have demonstrated that youth exhibit two broad dimensions of disruptive behaviors (Ogundele, 2018). The first dimension presents for many children at a young age and is characterized by a trinity of inattentive, hyperactive, and impulsive behaviors. Over the last 100 years, this trinity, first described by George Still (1902) as a disorder of defective moral control, has been described by various labels attesting to hypothesized cause (minimal brain dysfunction) or key symptom (hyperactivity or inattention) but is increasingly recognized as not so much a behavioral disorder but one of faulty cognitive functioning (Barkley, 1997). The second dimension of disruptive behavior falls under two distinct groups. The first, a group of oppositional and aggressive behaviors, has consistently been found to be distinct from the second group of covert behaviors (Fergusson et al., 1994; Frick et al., 1993; Quay, 1986). Overt behaviors include, but are not limited to, fighting, disobedience, tantrums, destruction, bullying, and attention-seeking. The second set of covert behaviors include, but are not limited to, theft without confrontation of the victim, choice of bad companions, school truancy, running away, lying, and loyalty to delinquent friends (Loeber & Schmaling, 1985; Achenbach et al., 1989). Two aspects of this dimension have traditionally been thought to be strongly influenced by experience but likely also find their roots in genetic vulnerability. Furthermore, overt behaviors can be divided into those that are nondestructive, such as simply resisting adult authority, and those that are aggressive toward others and destructive of property. Covert behaviors can be further divided into those that are destructive but do not confront victims, such as vandalism, and those that are nondestructive, such as truancy or running away from home (Lahey et al., 1990b).

Within DICCBDs, ADHD has consistently been found to be distinct from ODD and CD (for review, see Barkley (1998), Goldstein and Goldstein (1998), Hinshaw (1987)). DICCBDs can also be clearly distinguished from internalizing disorders such as depression and anxiety (Taylor et al., 1986). ODD and CD appear to be distinct, although the two disorders may well overlap in a number of behaviors such as mild aggression and lying. The onset of ODD in comparison to that of CD appears to be earlier. Children manifesting CD before age 10 appear to have a much worse prognosis than those demonstrating symptoms after that time (Moffitt, 1990; Patterson et al., 1989). Although some children demonstrate the onset of CD and ODD simultaneously, the most serious symptoms of CD, including vandalism, repeatedly running away, truancy, shoplifting, breaking and entering, rape, assault, and homicide, generally emerge at a later age than do symptoms of ODD.

It can be easily argued that the DICCBDs fall on a continuum from mild to severe, beginning with ADHD and then progressing through to ODD and CD. Although not all children with ADHD develop ODD and CD, a significant percentage of youth with CD have histories of ADHD. The younger a child progresses to CD, the more adverse their outcome (Biederman et al., 1996a; Campbell, 1991). Furthermore, boys experiencing CD in comparison to those with only ODD scored lower on tests of intelligence, came from families of lower socioeconomic status, and had a history of greater conflict with school and judicial systems (Robins, 1991). Boys with CD demonstrated the strongest family history of antisocial personality, a problem that could reflect a combination of family, environment, and shared family genetics.

Diagnostic Overview

ADHD

ADHD is described as a "persistent pattern of inattention and/or hyperactivity" more frequent in severity than is typical of children in a similar level of development (APA, 2013). Some symptoms must have been apparent before the age of 7 years, although many children are diagnosed at later ages after symptoms have been observed for several years. Impairment must be present in at least two settings and interfere with developmentally appropriate functioning in social, academic, or work setting. Assessment of impairment has been an increasing focus in making the diagnosis of ADHD (Fortes et al., 2020), yet it still remains unclear how to best define a critical threshold for sufficient impairment to meet diagnostic thresholds (Arildskov et al., 2021). ADHD appears more common in males than females, a problem that may or may not be a function of the Diagnostic and Statistical Manual of Mental Disorders (DSM) field studies and/or differences in prevalence and presentation (Goldstein & Gordon, 2003). ADHD is characterized by developmentally inappropriate, often limited, attention span and/or hyperactivity and impulsivity. Six of nine inattentive symptoms must be present to confirm the inattentive aspect of the disorder. The DSM-5 (2013) did not delineate these symptoms by importance. As noted, research employing algorithms has found that some symptoms may in fact demonstrate better negative or positive predictive power than others (Mota & Schachar, 2000). The inattentive symptoms include failing to pay close attention to details, problems with sustained attention, not listening when spoken to directly, failing to complete tasks, difficulty with organization, avoiding or reluctant to engage in tasks requiring sustained mental effort, losing things, being easily distracted, and forgetful in daily activities.

Six of nine hyperactive–impulsive symptoms must be met to confirm the hyperactive–impulsive aspect of the disorder. Hyperactive symptoms include fidgeting, having trouble remaining seated, demonstrating inappropriate activity, difficulty engaging in leisure activities quietly, acting as if driven by a motor, and talking excessively. Impulsive symptoms include blurting out answers before questions have been completed, difficulty waiting for one's turn, and interrupting others. If in fact ADHD represents failure to develop effective self-discipline as evidenced by impulsive

behaviors, then 3 of 18 symptoms reflecting this phenomenon may well be a problem (Barkley, 1997). Diagnosis is made by confirming six or more symptoms in the inattention domain, hyperactivity–impulsivity domain, or both. An individual may qualify for ADHD inattentive type, hyperactive–impulsive type, or combined type. It is important to note that the diagnosis (Part D) requires that there must be "clear evidence of clinically significant impairment in social, academic or occupational functioning."

ODD/CD

In the DSM-5, ODD is described as a recurrent pattern of negativistic, defiant, disobedient, and hostile behavior toward authority figures. This pattern of behavior must have lasted for at least 6 months and be characterized by frequent occurrence of at least four of the following: loss of temper, arguments with adults, defiance or refusal to comply with adults' requests or rules, deliberately doing things that annoy people, blaming others for personal failings, touchiness, anger, resentment, spite, or vindictiveness. In the DSM-5, CD is described as a "repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated." ODD reflects an enduring pattern of negativistic, hostile, and defiant behaviors in the absence of serious violation of societal norms and the rights of others. Thus, children with ODD argue with adults, lose their temper, and are quick to anger. They frequently defy reasonable requests or rules and deliberately annoy others. They tend to blame others for their mistakes.

CD appears to reflect an enduring set of behaviors that evolve over time. It is characterized most often by significant aggression and violation of the rights of others. The average age of CD is younger in boys than in girls. Boys may meet the diagnostic criteria for CD if it is going to develop by 12 years of age, whereas girls often reach 14–16 years before a diagnosis is made. Three or more of the following behaviors must occur within a 12-month period with at least one present in the past 6 months for youth to qualify for a diagnosis of CD: bullying, threatening, or intimidating others, initiating physical fights, using a weapon that causes serious harm, stealing with confrontation of the victim, physically cruel to others, physically cruel to animals, forcible sexual activity with others, lying to avoid obligations, staying out overnight without permission, stealing items of nontrivial value, deliberately engaging in fire-setting with the intention of causing harm, deliberately destroying others' property, running away from home overnight at least twice, truancy from school, and burglary. The diagnostic protocol for CD includes two different types, namely, child-onset and adolescent-onset. These are largely based on the classification system identified by Moffitt (1993). Moffitt utilized a developmental approach to distinguish between individuals who engage in temporary versus persistent antisocial behavior. Life-course-persistent individuals were thought to demonstrate risk factors such as neuropsychological abnormalities and poor home environments, contributing to their difficulty. Individuals classified as adolescent-limited did not demonstrate these risk factors and had no prior engagement in antisocial behavior.

The life-course-persistent pattern might well equate with the juvenile court characterization of delinquency. To test her dual trajectory theory, Moffitt examined a birth cohort of over 1000 children in New Zealand for trends in parents, teachers, and self-reported antisocial behaviors biennially from ages 3 to 15 years. In all, 5% of the sample accounted for nearly 70% of stability in crime across time. Despite these efforts at delineation, there continues to be little consensus as to the distinction between CD as a clinical diagnosis and delinquency as a legal/societal description.

DICCBDs and Delinquency

There is little consensus in defining delinquency as a condition distinct from CD. In fact, most professionals and lay persons use the terms CD, delinquency, and even anti-social behavior inter-

changeably. However, in a legal sense, a delinquent is defined as someone who breaks the law, and this applies to youth as well as adults. Tremblay (2003) suggests that the term "delinquent" should be used to describe youth in studies that specifically focus upon legal issues. He suggests three classes of delinquent behaviors from a legal perspective: (1) vandalism and theft with or without confrontation of a victim; (2) physical, verbal, or indirect aggression, predatory or defensive; and (3) status offenses of underage youth (e.g., consuming alcohol prior to the age of 21). Aggression alone has not always been found to predict delinquency (Anderson et al., 1989). These authors suggest that delinquency is best predicted when aggression is accompanied by peer rejection and other problems, many of which are present in most youth with ADHD. In young children, a combination of aggression and social problems appears to be predictive of later drug abuse and duress (Kellam et al., 1983). Rose et al. (1989) suggested that early antisocial behavior predicts more than the single well-established developmental path that ends in delinquency. Early signs of DBD among a preschool population, including tantrums, defiance, and overactivity, predicted the diagnosis of a DBD by mid-childhood in 67% and later delinquency (Campbell & Ewing, 1990). These risks are further fueled by substance abuse (Najman, 2019).

In 2001, Moffitt and Caspi attempted to identify the childhood risk factors for life-course-persistent delinquency. Their results with the same 1000 individuals found that males and females classified as life-course-persistent delinquents were highly similar on most risk factors and had significantly higher levels of risk factors than their adolescence-limited peers. With regard to childhood risk factors, life-course-persistent individuals demonstrated significantly a greater risk for 21 of the 26 factors measured. In contrast, the risk factors reported by adolescence-limited individuals were similar to those by their comparison peers with no history of juvenile court involvement on all but one of the factors measured. Thus, youth who exhibit rule violations that are limited to their adolescent years tended to have fewer pathological histories, personality problems, reading problems, inadequate parenting, and broken attachments and relationships than life-course-persistent delinquents. Although Moffitt and others (Moffitt et al., 2002; White et al., 2001) refer to both adolescence-limited and life-course-persistent youth problems as delinquency, it would appear that the latter group certainly provides a better working definition of the community's perception of the chronic, recurrent antisocial behaviors exhibited by delinquents. White et al.'s (2001) extension of Moffitt's work demonstrated that delinquents manifested higher disinhibition, impulsivity, and parental hostility and lower harm avoidance and less intact family structure than nondelinquents.

Perhaps, a distinction between CD and delinquency should also focus upon persistence. CD, based upon DSM-5 field studies, tends to have an average length of duration of 3 years. That is, most youth meeting the CD criteria recover within this period of time. CD may thus equate with Moffitt's conceptualization of adolescence-limited delinquency. It should be noted, however, that receiving a diagnosis of CD is not a benign phenomenon over time. Associations between parents and teachers report of conduct problems at age 8, and psychosocial outcomes at age 18 report elevated rates of educational underachievement, juvenile offending, substance abuse/dependence, and mental health problems even after adjusting for social disadvantage, attention problems, and intelligence quotient (IQ) (Fergusson & Lynskey, 1998). Furthermore, maternal communication/problem-solving skills and family variables (e.g., marital status, maternal depressed mood, and interparental conflict) during early adolescence, both independently and interactively, predict severe delinquent behaviors during early adulthood (Klein & Forehand, 1997).

Developmental Course

The greatest comorbidity for DICCBDs may be with each other rather than other psychiatric conditions. Comorbidity may in fact reflect the dif-

ferentiation in what begins as unitary pattern of disruptive symptoms. For example, Bauermeister (1992) generated factor analytical data suggesting that at 4–5 years of age, disruptive symptoms appear to fall on a single dimension.

ADHD

ADHD appears to develop relatively early in childhood before the other DBDs present. The majority of children with ADHD are identified within their first year of school. Early signs of inattention, hyperactivity, and impulsivity in children quickly cause impairment in multiple settings, leading to problems with social relations, self-esteem, and underachievement (Barkley et al., 1990). Interpersonal difficulties with peers, adults, and family members often result in rejection and subsequent social neglect due to the inappropriate pattern of behavior resulting from an impulsive manner of dealing with thoughts, feelings, and others (Jiang et al., 2019; Milich & Landau, 1981; Milich et al., 1982). Problems with language impairment may further contribute to poor interpersonal relations, school achievement, and developing self-regulatory patterns of behavior (Cantwell et al., 1981; Cantwell & Baker, 1977, 1989). In a vicious cycle, isolation from peers due to the combined effects of ADHD and its impact on the normal course of development as well as other adversities leads to reduced opportunities to develop appropriate social interaction, self-esteem, coping skills, academic progress, and likely resilience processes (Brooks, 1998). The academic performance and achievement problems in youth with ADHD have been reported to be well over 50% (Fischer et al., 1990; Semrud-Clikeman et al., 1992). Poor persistence and limited motivation (Milch, 1994), organizational deficits (Zentall et al., 1993), careless mistakes (Teeter, 1998), and noncompliant behavior (Weiss & Hechtman, 1993) have all been implicated as contributing to the pervasive scholastic problems experienced by youth with ADHD. Problems with independent seat work, school performance, deficient study skills, poor test-taking, disorganized notebooks, desks, and reports, and lack of attention to lectures and group discussions are consistent themes for youth with ADHD (DuPaul & Stoner, 2003). This pattern of impairment results in a variety of negative consequences in the social arena (Coie et al., 1982), poor test performance (Nelson & Ellenberg, 1979), impaired working memory (Douglas & Benezra, 1990), and poor overall success in school (DuPaul & Stoner, 2003). As Teeter-Ellison (2002) notes, an inability to persist and be vigilant interferes with classroom behavior, especially when tasks are repetitive or boring. These difficulties, unfortunately, present early and in particular when classroom expectations require sustained attention, effort, and goal directedness. Many children with ADHD, as Teeter-Ellison notes, are "exquisitely attuned to the fact that they are not performing up to their peer group, that they are not meeting the expectations of important adults in their lives and that they are not well liked by their peers" (p. 10). This cycle, described by others (for review, see Goldstein and Goldstein (1990)), creates increased vulnerability, limiting opportunities for youth with ADHD to develop resilient qualities. Self-doubt and lack of confidence, combined with academic, social, and avocational (e.g., sporting activities) failure, impede self-esteem, increasing vulnerability to conditions such as depression and anxiety. By late elementary, many youth with ADHD may disengage from the learning environment as a means of avoiding failure, choosing instead patterns of inappropriate behavior, preferring to be labeled misbehaving rather than "dumb" (Brooks, 1991). Because elementary experience provides the basic foundational skills necessary to learn, including basic achievement, study, test-taking, and organizational skills, many youth with ADHD enter the middle school years ill-prepared for the increasing demands of autonomy required by the upper grades. This then fuels their problems leading to a cycle of increased risk for drop outs, school failure, academic underachievement and significant risk in transitioning successfully into adulthood (Cherkasova et al., 2021; Barkley & Gordon, 2002; Barkley et al., 1990).

The preponderance of these data argues strongly that symptoms of ADHD, in particular failure to develop what can be referred to as self-discipline, dramatically reduce positive outcomes and thus opportunities to demonstrate resilience in the face of these adversities (Brooks & Goldstein, 2009). Unfortunately, this pattern continues and intensifies in the adolescent years. What is most disturbing about the increasing body of research about ADHD in the adolescent years is the growing evidence of the widespread effects of ADHD on all aspects of academic, interpersonal, behavioral, emotional, and daily living activities. Up to 80% of youth carrying a diagnosis of ADHD continued to demonstrate clinically significant symptoms into their adolescent years (Barkley et al. (1990), Biederman et al. (1996a), Weiss and Hechtman (1993)). Even early studies examining outcomes found only a significant minority (between 20% and 30%) of children with ADHD followed into their adolescent years, demonstrating limited differences from controls. In all, 70% of a cohort followed up for over 20 years demonstrated significant academic, social, and emotional difficulties relative to their ADHD (Hechtman, 1999). The literature over the past 35 years suggests that adolescents with ADHD demonstrate significantly greater-than-expected presentation of comorbid disorders that during the adolescent years also appear to influence the development of adverse personality styles (e.g., antisocial or borderline personality disorder). Furthermore, adolescents with ADHD demonstrate signs of social disability and appear at significantly greater risk for mood, anxiety, disruptive, and substance abuse disorders in comparison to boys without social disability (Morris et al., 2020; Greene et al., 1997). In this 4-year longitudinal study of boys with ADHD, the presence of social disability predicted poor social and psychiatric outcomes including substance abuse and conduct disorder. The authors concluded that assessing social function in adolescents with ADHD is critical to their treatment. Once again, ADHD is demonstrated to strip away or limit the potential to develop critical, resilient phenomena. These include the ability to connect and maintain satisfying reciprocal relationships with others, achieve in school, and maintain mental health to facilitate resilience (Brooks & Goldstein, 2001).

ODD/CD

Not surprisingly, with ODD and CD, less serious symptoms tend to precede moderate symptoms, which precede the presentation of more serious symptoms. Preschoolers demonstrate a single disruptive pattern of behavior often composed of oppositional and mild, aggressive behaviors (Achenbach et al., 1987). These findings are consistent with the developmental view that ODD usually precedes the onset of CD. The risk of onset of CD was found to be four times higher in children with ODD than in those without (Cohen & Flory, 1998). Multiple authors have investigated developmental pathways of these patterns of behavior, identifying three often parallel pathways as (1) overt, (2) covert, and (3) authority conflict (Kelly et al., 1997; Loeber et al., 1988, 1997). On the overt pathway, minor aggression leads to physical fighting and finally violence. On the covert pathway, minor covert behaviors such as stealing from home often lead to property damage (e.g., fire-setting) and then to moderate to serious forms of recurrent status and criminal behavior. On the authority conflict pathway, problems progress from stubborn behavior to defiance and authority avoidance (e.g., truancy and running away). Youth often start down this pathway well before age 12, though it is not well understood whether aggression in preschoolers in and of itself significantly increases the risk to precede down one of these pathways (Nagin & Tremblay, 1999).

Prevalence

When DSM symptoms are used epidemiologically, an incidence rate of up to 15% is found for ADHD. In a study of nearly 500 children evaluated on an outpatient basis at a children's hospital, 15% received a diagnosis of ADHD based on a comprehensive assessment (McDowell &

Rappaport, 1992). Field studies for the DSM-IV identified nearly 9% of the population as meeting at least one of the diagnostic subtypes of ADHD (Applegate et al., 1997). Unfortunately, the DSM-5 field trials documented lower diagnostic reliability than past field trials and the general research literature, resulting in substantial criticism of the DSM-5 diagnostic criteria (Chmielewski et al., 2015).

When a careful analysis is conducted, the rate of ADHD most likely falls between 3% and 6% (for reviews, see Goldstein and Goldstein (1998)). A higher incidence of ADHD as well as other DICCBDs occurs in lower socio-economic families. A variety of additional life variables appear to affect the prevalence of ADHD as well as other DICCBDs. For example, among adopted or foster families, the incidence of ADHD has been found to be twice as high as that among other children (Molina, 1990).

Few studies have generated consistent prevalence data for ODD or CD as a function of age. Epidemiological studies estimating the occurrence of CD in the general population vary from just over 3% of 10-year-olds (Rutter et al., 1970) to almost 7% of 7-year-olds (McGee et al., 1984). Based on a review of the existing literature, Kazdin in 1987 suggested a range of 4–10% for CD. The rate of ODD in the general population has been reported to be equally high (Anderson et al., 1987). Oppositional, negativistic behavior may be developmentally normal in early childhood. However, epidemiological studies of negativistic traits in nonclinical populations found such behavior in 16–22% of school-age children (Loeber et al., 1991). Although ODD may begin as early as 3 years of age, it typically does not begin until 8 years of age and usually not later than adolescence. In boys ages 5–8, fighting, temper tantrums, disobedience, negativism, irritability, and quickness to anger appear to decrease with increasing age. MacFarlane et al. (1962) found similar decreases with age for both sexes in the prevalence of lying, destructiveness, negative behaviors, and temper tantrums. The greatest decline in these problems appeared to take place during the elementary years. Tremblay (1990) reported a decline in oppositional behavior in boys, particularly between the first and second grades. Anderson et al. (1987) report that mothers' ratings of aggressive behavior decreased between the ages of 5 and 11 years in children without a reported history of psychiatric problems. In contrast, teacher-rated aggression scores for this same group increased for children with histories of psychiatric problems. Certain covert disruptive behaviors such as alcohol and drug use as well as various forms of theft appear to increase from late childhood to adolescence (Loeber & Schmaling, 1985). Lying, interestingly enough, appears to present at all age levels (Achenbach & Edelbrock, 1981). Furthermore, there is little doubt that prevalence varies as diagnostic criteria change. For example, when comparing the revised third edition of the DSM with the original third edition of the ADHD criteria, the revised criteria were found to identify 14% more children than the original criteria identified (Lahey et al., 1990a). Lahey et al. (1990a) concluded that boys are more likely to meet the criteria for DSM definitions of CD than their female counterparts.

Table 8.1, though a number of years old, provides an overview of risk factors that increase the probability of youth receiving a psychiatric diagnosis, including DICCBDs. Although none of these studies assess variability of problems across situations, a consistent set of diagnostic criteria were utilized. Furthermore, educational risk factors including lower cognitive skills, weaker academic self-esteem, lower academic achievement, and school repetition appear to be consistently present in youth at increased risk for emotional and behavioral problems in these studies. Readers will note that many of these risk factors have been identified as those that increase vulnerability and adverse outcomes in studies of resilience in childhood.

Comorbidity

ADHD co-occurs with other DICCBDs as well as multiple other developmental and psychiatric disorders in children to such an extent that authors have suggested subtypes of ADHD to

Table 8.1 Other factors associated with an increased risk for psychiatric disorders

Factor	Risk increased for	
Anderson et al. (1989) (age 11 years)	Lower cognitive abilities	ADD, multiple
	Lower academic self-esteem	Emotional, ADD, [a]multiple
	Lower general self-esteem	Emotional, ADD, multiple
	Poor health	Any
	Poor peer socialization	Multiple
	Family disadvantage	Emotional, ADD
Bird et al. (1988) (ages 4–16 years)	Lower academic achievement	Behavioral, depressed
	Poor family functioning	Depressed
	High life stress	Behavioral, depressed
Velez et al. (1989) (ages 9–19 years)	Family problems	Behavioral
	Repeated school grade	Any
	High life stress	Behavioral, overanxious
Costello (1989) (ages 7–11 years)	Urban (vs. suburban)	Behavioral
	Repeated school grade	Behavioral
	High life stress	Any
	No father in home	Oppositional
Offord et al. (1987) (ages 4–16 years)	Family dysfunction	Any
	Repeated school grade	Behavioral
	Parental psychiatric problems	Somatization (only boys)
	Parent arrested	Conduct and oppositional
	Chronic mental illness	Any (4–11) only for hyperactivity)

Source: Costello (1989). Copyright, 1989. Used with permission of the author and publisher
[a]*ADD* attention deficit disorder

include combinations of ADHD with other DBDs (e.g., ADHD and CD) as well as with internalizing disorders (e.g., ADHD and anxiety) (Jensen et al., 1997). ADHD coexists with other disorders at a rate well beyond chance (Seidman et al., 1995). As described, impulsiveness likely acts as a catalyst, increasing the risk for development of other problems, especially in the face of additional risk factors (e.g., familial, developmental, educational).

Goldstein and Goldstein (1998) posit that certain events instigate or increase the probability that ADHD will be diagnosed. These include individual characteristics such as intellectual functioning, biological predisposition, and physical and psychosocial environments. Events in the school or home then either strengthen or weaken the behavioral symptoms of ADHD. Once ADHD is diagnosed, the risk of depression is increased as a result of social problems, school failure, and, possibly, the side effects of medication. The risk for CD is increased by school and social problems as well as the presentation of antisocial role models, which has been demonstrated as a critical risk factor.

In a review of empirical studies, Biederman et al. (1991) attempted to define the comorbidity of ADHD with other disorders. The authors suggest that the literature supports the considerable comorbidity of ADHD with CD, ODD, mood disorders, anxiety disorders, learning disabilities, and other disorders such as mental retardation, Tourette's disorder, and borderline personality disorder. The qualities of ADHD may act as a catalyst: leave them alone and they may not be terribly aversive; mix them with negative life events or risk factors and they appear to catalytically worsen those events and the impact they have on children's current and future functioning (Goldstein & Goldstein, 1998).

In a community sample of over 15,000 14- to 18-year-old adolescents, Lewinsohn et al. (1994) compared 6 clinical outcome measures with 4 major psychiatric disorders (depression, anxiety, substance abuse, and disruptive behaviors). The impact of comorbidity was strongest for academic problems, mental health treatment utilization, and past suicide attempts; intermediate for measures of role, function, and conflict with parents; and insignificant for physical symptoms. The greatest incremental impact of comorbidity was on anxiety disorders and the least was on

substance abuse. Substance use and disruptive behavior were more common in males and depression and anxiety in females. The effect of comorbidity was not due to psychopathology. The authors conclude as others have that there is a high rate of comorbidity in adolescents referred in clinical practice.

In clinic-referred populations, the comorbidity between ADHD and CD has been reported to be as high as 50% with an incidence of 30–50% reported in epidemiological or comorbidity samples (Szatmari et al., 1989). Children with ADHD and comorbid ODD and CD exhibit greater frequencies of antisocial behavior such as lying, stealing, and fighting than those with ADHD who do not develop the second disruptive comorbid disorder (Barkley, 1998). It has also been suggested that this combined group is at greater risk for peer rejection. These children may be neglected due to their lack of social skills and rejected due to their aggressive behavior. Common sense dictates that the comorbid group is going to require more intensive and continuous service delivery. The comorbid group also holds the greatest risk for later life problems. In fact, it is likely that the co-occurrence of CD with ADHD addresses the significant adult problems a subgroup of those with ADHD appear to develop. As Edelbrock (1989) noted, more predictive of outcomes than severity of ADHD symptoms is the development in children with ADHD of oppositional and aggressive behaviors. Environmental consequences, including parent psychopathology, marital discord, ineffective parenting, parent aggressiveness, and antisocial parent behavior, are better predictors of life outcomes for children with ADHD than the ADHD diagnosis per se. In fact, these factors become highly stable over time and are resistant to change. Data also suggest that the comorbid conditions presenting before age 10 have a much worse prognosis than if the second behavior disorder develops after age 10 (McGee & Share, 1988).

After careful reviews of the literature, Loeber et al. (1991) suggest that CD and ODD are strongly and developmentally related but clearly different. Factor analyses indicate that distinct covarying groups of ODD and CD can be identified but that certain symptoms relate to both disorders, particularly mild aggression and lying. As noted, age of onset for ODD is earlier than that for most CD symptoms. Nearly all youth with CD have a history of ODD, but not all ODD cases progress to CD. Interestingly, in some studies, children with ODD demonstrate the same forms of parental psychopathology and family adversity but to a lesser degree than that for CD. Clearly, the age of onset of some CD symptoms, specifically fighting, bullying, lying, and vandalism, suggest that some youth with CD show nearly simultaneous onset of ODD and CD. However, the more serious symptoms of CD such as vandalism, running away, truancy, shoplifting, breaking and entering, rape, and assault appear to emerge at a much later age than ODD symptoms. Biederman et al. (1996b) generated data suggesting two types of ODDs, which appear to have different correlates, course, and outcomes. One type appeared prodromal for CD and the other subsyndromal to CD and not likely to progress into CD in later years. Not surprisingly, the higher risk form of ODD was characterized by a stronger profile of negative, provocative, and spiteful behavior. Recent studies have suggested that little has changed to modify this view (Fairchild et al., 2019; Erskine et al., 2016).

There is an extensive body of the literature suggesting that DICCBDs and anxiety disorders are often comorbid. Loeber and Keenan (1994) found that CD and anxiety disorders are comorbid substantially higher than chance during childhood and adolescence.

Epidemiologically, the overlap between ADHD and depression occurs at a level beyond chance, with some studies suggesting an overlap of nearly 30% (McClelland et al., 1989). While Capaldi (1992) found that CD is likely a precursor to depression in some children, Biederman et al. (1995) questioned the psychiatric comorbidity among referred juveniles with major depression. In a sample of 424 children and adolescents consecutively referred to a psychiatric facility, nearly 40% were identified with a depressive disorder. They had a history of chronic course and severe psychosocial dysfunction. They also demonstrated a high rate of CD, anxi-

ety disorder, and ADHD. In all, 74% with severe major depression and 77% with mild major depression received a diagnosis of ADHD compared to 74% of the psychiatric controls and none of the normal controls. The authors hypothesized that major depression was more likely to be the outcome rather than the cause of co-occurring disorders based on an analysis of the age of symptom onset. In this area as well, little has changed in the past 20 years (Gnanavel et al., 2019).

Risk Factors for Acquisition and Exacerbation

Biological, psychological, and psychosocial factors are all posited to be risk factors for the development of a DBD. Burke et al. (2002) considered genetics, intergenerational transmission, neuroanatomy, neurotransmitters, pre-autonomic nervous system, pre- and perinatal problems, and neurotoxins as biological risk factors for the development of a DBD. Although the evidence is not conclusive, several studies suggest a moderate genetic influence on DICCBDs. Eaves et al. (2000) concluded that there is a high genetic correlation across genders in the liability for ODD and CD.

Several researchers, for example, Lahey et al. (1998), have found that a history of parental antisocial behavior disorders is associated with preadolescent onset of CD. Loeber et al. (1995) concluded that parental substance abuse, low socioeconomic status, and oppositional behavior are key factors in boys' progression to CD. The bidirectional nature of these risks continues to be studied (Usami, 2016).

Biological Factors

Frontal lobe dysfunction has been associated with the increased risk of violent behavior (Pliszka, 1999). Impairments in the functioning of the amygdala are associated with deficits in the reading of social cues, and the connection between the amygdala and prefrontal cortical regions serves to aid in the suppression of negative emotions (Davidson et al., 2000).

Low levels of serotonin in cerebral spinal fluid have been linked to aggression (Kruesi et al., 1990; Clarke et al., 1999). Moffitt et al. (1998) found that in men, metabolites of serotonin in a general population sample of 21-year-olds were related to past-year self-reported and life time court-recorded violence. Burke et al. (2002) concluded that the link between serotonin and aggression reflects a complex relationship between neuroanatomical and neurochemical interconnectivity, executive brain function, and behavioral dysregulation.

Pliszka (1999) reported that individuals with DICCBD experienced general physiological under-arousal. Lower heart rates have been reported to be associated with adolescent antisocial behavior (Mezzacappa et al., 1997) and predictive of later criminality (Raine et al., 1990).

Evidence exists of the contributions of genetic factors to DICCBDs as well as the contributions of prenatal and early developmental exposure to toxins, other perinatal problems, and physical damage to brain structures (Alegria et al., 2016; Burke et al., 2002). Maternal smoking during pregnancy has been found to predict CD in boys (Wakschlag et al., 1997). Pregnancy and birth complications have also been shown to be associated with the development of behavioral problems in offspring (Raine et al., 1997). Environmental toxins such as lead have also been implicated in the development of DBDs. Elevated levels of lead in the bones of children at age 11 are associated with greater parent and teacher ratings of aggressiveness, higher delinquency scores, and greater somatic complaints (Needleman et al., 1996). The psychological substrates of temperament, attachment, neuropsychological functioning, intelligence, academic performance, and social cognition have all been found to influence an individual's propensity to develop a DICCBD. Sanson and Prior (1999) concluded that early temperament (specifically negative emotionality, intense and reactive responding, and inflexibility) is predictive of externalizing behavior problems by late childhood.

Low intelligence is often considered a precursor to DICCBD. However, as Loeber et al. (1991) point out, the issue of the association between CD, ADHD, and IQ is not well understood. Additionally, IQ appears to be related to low achievement and school failure, which are also related to later antisocial behaviors (Farrington, 1995). Moreover, high intelligence does not preclude conduct problems. Boys with psychopathic characteristics, parental antisocial personality disorder, and conduct problems were found to have IQs equivalent to those of controls and higher than those of boys with conduct problems but without psychopathology and parental antisocial personality disorder (Christian et al., 1997).

Psychological and Psychosocial Factors

Several aspects of child rearing practices such as the degree of involvement, parent–child conflict management, monitoring, and harsh and inconsistent discipline have been correlated with children's disruptive or delinquent behaviors (Tistarelli et al., 2020; Fricke, 1994; Wasserman et al., 1996). Coercive parenting behaviors appear to lead to aggressive behaviors in younger girls as well as in boys (Eddy et al., 2001).

Fergusson et al. (1996) reported that harsh or abusive parenting styles, such as sexual or physical abuse, significantly increased the risk of CD. Childhood victimization of boys and girls, including abuse and neglect, is predictive of later antisocial personality disorder (Luntz & Widom, 1994). Peer effects also appear to be importantly related to the potential development and maintenance of DICCBD symptoms. The stability of peer rejection in children identified as having conduct problems is significant (Coie & Dodge, 1998; Coie & Lenox, 1994) and related to aggressive responding (Dodge et al., 1990). Associations with deviant peers appear to lead to the initiation of delinquent behaviors in boys (Elliott & Menard, 1996). Exposure to delinquent peers may enhance pre-existing delinquency (Coie & Miller-Johnson, 2001).

Disruptive behaviors among children are particularly associated with poor and disadvantage neighborhoods (Loeber et al., 1995). Wickström and Loeber (2000) found that the effects of living in public housing countered the impact of any individual protective factor that was present. Specific social and economic risk factors such as unemployment (Fergusson et al., 1997), neighborhood violence (Guerra et al., 1995), family poverty and children's aggression, low SES, and duration and poverty (McLoyd, 1998) are associated with antisocial behaviors. Finally, exposure to daily stressors may add to the risk for DBDs in children and as noted can be exacerbated by life circumstances caused by having a DBD.

Are Some Youth with DICCBD More Resilient Than Others?

The study of the biological bases of resilience remains in its infancy but likely will be found to play a role in predicting outcomes (Hofgaard et al., 2021; Armitage et al., 2021). Traditionally, within DICCBDs, the study of positive outcomes has focused on the reduction of symptom severity over time and the reduction of exposure to significant adverse familial, educational, and environmental phenomena. Yet, there is an increasing interest in studying individuals who suffer from DICCBDs, in particular CD, and manage to transition successfully into adult life despite struggling through adolescence and at times young adulthood. Stories collected by the Office of Juvenile Justice and Delinquency Prevention (Office of Juvenile Justice and Delinquency Prevention, 2000, 2021) exemplify that efforts focusing upon rehabilitation, providing mentors and individual attention, and, most importantly, providing youth with a second chance can and have been demonstrated to be part of the formula that leads to resilience.

Enhancing Resilience in Youth with DICCBDs: Guidelines for Clinical Practice

What are the factors that help some youth and adults bounce back, whereas others become overwhelmed with feelings of helplessness and hopelessness. Some attain success that could have never been predicted by early life circumstances, finding the inner strength to overcome obstacles in their paths. Those who find success are viewed as resilient. Their positive outcome in the face of adversity precisely reflects the scientific studies that have demonstrated positive outcomes in the face of a variety of youth problems, including those related to DICCBDs. A number of chapters in this volume are devoted to developing and applying a clinical psychology of resilience. The remainder of this chapter provides a very brief overview of nine proposed guidelines beyond standard psychology and psychiatry treatments for youth with DICCBDs.

1. Develop strategies with these youth to help them learn to rewrite negative scripts. Negative scripts are those words or behaviors that are followed day after day with predictable negative results.
2. Provide youth with a DICCBD opportunities to develop stress management skills.
3. Take the time to help develop the capacity for empathy in youth with DICCBDs.
4. Teach effective communication through modeling and instruction. Effective communication includes an appreciation for both understanding and seeking to be understood.
5. Help youth with a DICCBD accept themselves without feeling inadequate or like second-class citizens.
6. Facilitate connections to others, including providing opportunities for youth with DBDs to help and serve as teachers for others.
7. Youth with DICCBDs view mistakes as challenges to appreciate and overcome rather than signs of inadequacy.
8. Help every youth with a DICCBD experience success and develop an island of competence, an area of strength in which success is experienced and appreciated by others.
9. Patiently help youth with a DICCBD develop self-discipline and self-control.

Summary

DICCBDs encompass the most common and disruptive childhood symptom composites. Their etiology is biopsychosocial. They affect a wide percentage of children, often present in combination, and are catalytic in fueling a variety of adverse outcomes. DICCBDs act to reduce protective influences, decreasing the opportunity to develop a resilient mindset and a resilient outcome into adulthood. As such, it is not unexpected that one of the many adverse consequences of the recent worldwide coronavirus-19 (COVID-19) pandemic is an increase in the numbers of youth meeting the DICCBD criteria (Bartek et al., 2021). An increasing body of research is providing an understanding of those protective factors that may mitigate and insulate youth with DICCBDs. Efforts at clinically applying the qualities of resilience and strategies to enhance a resilience mindset offer the promise of helping youth with DICCBDs overcome the adverse odds as they transition to adulthood.

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9 From Helplessness to Optimism: The Role of Resilience in Treating and Preventing Depression in Youth

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Some of the most common psychological disorders in children and adolescents are internalizing disorders such as depression and anxiety. Research on the development of depression and anxiety suggests that internalizing disorders can be reduced, even prevented, by promoting more accurate cognitive styles, problem-solving skills, and supportive family relationships. Several cognitive–behavioral interventions have shown promise in treating and preventing depression and anxiety. We review the Penn Resiliency Program (PRP) as an example of such an intervention. We suggest that most of the skills covered in the PRP and similar preventive interventions are not specific to depression or anxiety and can be useful for increasing young people's resiliency more generally. Interventions that teach and reinforce these skills can help children to navigate a variety of difficult situations they are likely to encounter during adolescence and adulthood.

Depression in Children and Adolescents

At any point in time, approximately 2–3% of children and 6–9% of adolescents have a major depressive disorder (Cohen et al., 1993; Lewinsohn et al., 1993). Approximately one in five adolescents will have had a major depressive episode by the end of high school (Lewinsohn et al. 1993). Anxiety disorders, which often precede and co-occur with depression, are found in 10–21% of children and adolescents (Kashani & Orvaschel, 1990; Romano et al., 2001). It is notable that the rates of depression increase as children enter adolescence (Hankin et al., 1998), indicating that the transition to adolescence is a particularly vulnerable developmental period for depression. In addition, several studies indicate that the rates of depression and anxiety have increased dramatically over the past 50 years (Klerman et al., 1985; Twenge, 2000) such that young people today are much more likely to suffer from depression and anxiety than were their parents or grandparents.

This chapter focuses on unipolar depression,[1] one of the most common types of internalizing disorders, because our research program primarily focuses on the prevention of this disorder and

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[1] We will not focus on bipolar disorder, or manic depression, which is relatively rare in children and which appears to be more heavily biologically based (Hammen & Rudolph, 2003).

S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_9

its symptoms. We will also discuss anxiety symptoms since there is considerable co-occurrence of depression and anxiety among children and most of the cognitive–behavioral risk and resilience factors and interventions discussed here in the context of depression also apply to anxiety disorders and symptoms (Kendall, 1994).

Unipolar depression, also known as major depression, is characterized by intense sadness or irritability, disrupted concentration, sleep, eating, and energy levels, and feelings of hopelessness and suicidal thoughts. Major depression in youth is not simply a phase of development; rather, it is a serious psychological problem that shows stability over time and can significantly interfere with children's ability to function. Depressed youth have a lowered ability to function in daily life, with 85–87% of adolescents with depressive disorders rated as having "major" impairments in functioning (Whitaker et al., 1990). Moreover, a significant portion of children with major depression continue to show depression in adulthood. For example, Harrington et al. found that 60% of children treated for major depression had at least one bout of major depression in adulthood (Harrington et al., 1990). Depression is not only burdensome to the individual but also very costly for society. In the United States, the yearly expenditure for major depressive disorder is about $43 billion, including loss of productivity, premature death, and cost of treatment (Hirschfeld et al., 1997).

The problems associated with depression extend beyond those meeting the diagnostic criteria for a depressive disorder. Many children and adolescents have elevated, but subclinical, levels of internalizing symptoms. For example, 10–15% of middle school children may report moderate to severe levels of depressive symptoms (Nolen-Hoeksema et al., 1986). Research suggests that children with high levels of depressive symptoms experience the same kinds of difficulties as do children with depressive disorders (Gotlib et al., 1995). Children and adolescents who suffer from high levels of depressive symptoms or depressive disorders are more likely to have academic and interpersonal difficulties. They are more likely to smoke cigarettes, use other substances, and attempt suicide (Covey et al., 1998; Garrison et al., 1991). Despite the often severe concomitants of depression, it is underdetected and undertreated in adolescence—only about 20–25% of adolescents who are clinically depressed receive adequate treatment (Hirschfeld et al., 1997). Given the seriousness of depression and the number of children and adolescents who experience it, the identification, treatment, and prevention of depression in youth have become important areas for research.

Cognitive–Behavioral Models of the Development of Depression

Developmental psychopathologists theorize that depression is caused by a complex interaction of biological, cognitive, emotional, and interpersonal risk factors (Sroufe & Rutter, 1984). The focus of this chapter is mainly on cognitive and behavioral factors involved in the development of depression, although we acknowledge the importance of other systems and the interactions of those systems with cognitive and behavioral systems. For example, the interpersonal risk of fighting with a parent can interact with a child's negative cognitive style ("It was all my fault. I am a bad kid.") and the presence of a biological risk factor such as shyness or an anxious temperament to produce depression.

The Learned Helplessness Model was one of the first cognitive–behavioral models of depression (Seligman, 1975). Seligman observed that individuals who were exposed to uncontrollable negative events often overgeneralized from this experience and became passive in other situations that were in fact controllable. These individuals exhibited apathy, decreased appetite, despair, and other symptoms of clinical depression. The experience of uncontrollable negative events seemed to produce expectations of helplessness. That is, the individuals believed that they could not control future negative events in their lives. Seligman also observed that some individuals seemed resistant to helplessness. These individuals remained persistent and hopeful even when exposed to uncontrollable negative

events. Further cognitive–behavioral theories were developed to explain these individual differences.

More recent cognitive–behavioral theories have generally posited that a tendency to view one's self, the world, and the future in overly negative ways, combined with a lack of behavioral coping skills, puts one at risk for depression and anxiety (Beck, 1976). Conversely, a realistic thinking style and positive coping skills promote resilience and may buffer children from internalizing problems. The Reformulated Learned Helplessness (RLH) model was introduced to explain why some people exhibit helplessness and depression in the face of adversity, whereas others are more resilient. According to this theory, over time, people develop cognitive styles for explaining the events in their lives. Individuals who develop a pessimistic explanatory style attribute negative events to internal, stable, and global factors and positive events to external, unstable, and specific factors (Abramson et al., 1978). More recently, the hopelessness theory of depression has posited that a pessimistic explanatory style is one of three cognitive styles that can lead to depression. The others are the tendency to view the self as flawed and deficient following negative events and the tendency to catastrophize the consequences of negative events (Abela, 2001; Abramson et al., 1989). Taking the Reformulated Learned Helplessness and Hopelessness theories together, an adolescent with a hopeless cognitive style who fails a math test might think to him- or herself "Math is impossible," "I'm stupid," or "I'm never going to do well." Following a success, this adolescent might think "that was lucky" or "the test was easy." These patterns of thoughts lead to helplessness (the student expects failure to continue and believes that there is nothing he or she can do to improve performance). When this kind of interpretive style is used to explain multiple events over time, it can lead to a more generalized sense of helplessness, which, in turn, leads to passivity, hopelessness, and despair. Numerous studies have linked a pessimistic or hopeless interpretive style to depression in adults and children (for reviews, see Abela and Hankin (2008), Gladstone and Kaslow (1995), Robins and Hayes (1995), Sweeny et al. (1986)).

Other interpretive styles and problem-solving deficits have also been implicated in the development of depression. For example, Quiggle et al. (1992) found that depressed children show a hostile attributional bias; that is, they tend to see the actions of others as hostile, even when the action is actually ambiguous. This may help explain the overlap between depression and conduct disorder that is often seen during adolescence (Rhode et al., 1991). In addition to difficulties with interpreting social cues, depressed children may also lack behavioral skills for coping with social situations and regulating emotions (for a review, see Kaslow et al. (1994)). For example, Altmann and Gotlib (1988) found that depressed fourth- and fifth-grade children spent more time alone and had higher numbers of negative interactions with peers in their school playground than did their nondepressed classmates. Longitudinal research indicates that reliance on maladaptive coping strategies increases the risk for depression. For example, children and adolescents with ruminative response styles (who dwell on negative emotions and negative experiences) are at an increased risk for depression (Abela et al., 2007; Abela & Hankin, 2011). In contrast, children and adolescents who engage in problem-solving or adaptive coping are at a lower risk for depression (Abela et al., 2007; Auerbach et al., 2010).

Developmentally, cognitive–behavioral factors associated with depression appear to become more important as children mature and become more cognitively sophisticated. In early childhood, occurrences of depression are relatively rare and tend to be reactions to overwhelming life events, such as the loss of a caregiver or a prolonged period with inadequate caregiving (e.g., Bemporad, 1994; Spitz, 1946). As children mature, depression occurs at higher rates and increasingly involves cognitive interpretations of events (Garber & Flynn, 1998; Garber et al., 1990). By middle childhood, pessimistic explanatory styles can be reliably measured and are related to symptoms of depression (e.g., Blumberg & Izard, 1985; Nolen-Hoeksema et al. 1992). The increases in abstract thinking, self-

consciousness, and thinking about future possibilities that occur in adolescence can intensify pessimistic explanatory styles, helpless expectations, and, in turn, depressive symptoms. Socially and biologically, adolescents face a number of transitions, including physical changes associated with puberty, changes in peer and family relationships, and changes in school structure from elementary school to middle school (Eccles & Midgley, 1990; Petersen & Hamburg, 1986). These events are often quite stressful and require adolescents to utilize resilient coping and problem-solving strategies. Children who enter adolescence without solid problem-solving skills can be at an increased risk for depression.

Cognitive–Behavioral Therapies for Depression in Children and Adolescents

Cognitive–behavioral therapies for depression and anxiety target cognitive styles and problem-solving skills. Clients are taught to identify their negative interpretations, to consider the evidence for and against these interpretations, and to generate alternative interpretations that are more realistic. Additionally, clients are often taught specific coping and problem-solving skills, including relaxation and assertiveness techniques (e.g., Beck et al., 1979).

Several studies have demonstrated the efficacy of cognitive–behavioral therapies in treating depression in adults (e.g., Elkin et al., 1989). More recent research indicates that cognitive–behavioral therapies can be effective in treating depression in children and adolescents (for a review, see Weisz et al. (2006)). For example, Lewinsohn et al. developed a cognitive–behavioral group treatment for depressed adolescents, which focuses on decreasing automatic negative thoughts, increasing engagement in positive activities, and enhancing behavioral coping skills and interpersonal skills (Lewinsohn et al., 1990, 1996). Lewinsohn et al. tested this program both with and without a complementary parent training program and found that both forms of the program decreased depression significantly more than a wait-list control. Similar cognitive–behavioral therapies have also been successful in treating anxiety disorders in children (e.g., Flannery-Schroeder & Kendall, 2000; Kendall, 1994; Muris et al., 2002).

Cognitive–Behavioral Prevention of Depression

There is growing evidence that cognitive–behavioral techniques can be effective in preventing depression as well as in treating it. For example, adults treated with cognitive–behavioral therapy are less likely to experience a recurrence of depression than are adults treated with medication (Shea et al., 1990). Additionally, several cognitive–behavioral interventions have shown promise in preventing depressive symptoms or depressive disorders in adults and children (see Cjuipers et al. (2008), Horowitz and Garber (2006), Stice et al. (2009)). The intervention with the best results to date was developed by Clarke et al. (1995). Clarke et al. evaluated their prevention program with 13- to 18-year-olds with high, but subclinical, levels of depressive symptoms. Adolescents who participated in this intervention were significantly less likely to develop depressive disorders than were controls (Clarke et al., 1995, 2001; Garber et al., 2009).

The Penn Resiliency Program

Our research group has developed a cognitive–behavioral intervention, the PRP, for younger adolescents. The PRP has 12 90-min intervention sessions designed to be delivered by school counselors and teachers who are trained and supervised in intervention delivery. The techniques we used have been adapted from adult cognitive–behavioral therapy (Beck, 1976; Beck et al., 1979; Ellis, 1962) and are incorporated into many other intervention programs. Our emphasis is on helping students use their skill sets to improve their problem-solving and to enhance their ability to navigate the daily stressors of life as well as to bounce back from major setbacks such as paren-

tal loss or divorce. In this section, we describe several techniques included in the PRP, which may be especially important for building and promoting resilience and for preventing anxiety and depression.

Based on our work, and the resilience literature more broadly, we have identified seven key intrapersonal factors or abilities that appear to increase overall resilience (see Reivich and Shatte (2002) for a full description of these factors). We will show how the skills of the PRP impact each of these abilities (see Table 9.1). Briefly, the seven abilities are as follows: (1) emotion regulation—being able to identify, label, and express emotions and control emotions when it is appropriate to do so; (2) impulse control—the ability to identify impulses and resist impulses that are counterproductive to the situation at hand or to long-term goal attainment; (3) causal analysis—being able to identify multiple and accurate causes of problems; (4) realistic optimism—thinking as optimistically as possible within the bounds of reality; (5) self-efficacy—being confident in one's ability to identify and implement coping and problem-solving skills that are well suited to the situation; (6) empathy—being able to accurately identify and connect with the emotional states of others; and (7) reaching out—being comfortable and willing to connect with others in order to deepen one's relationships and gain support through difficult times.

The PRP builds on the ABC model developed by Ellis (1962), which suggests that different people feel and respond differently to the same event because of their idiosyncratic beliefs about those events. In Ellis's model, A stands for an activating event. The A's are not the direct cause of the consequences (C's, emotions and behaviors) that we experience. Rather, according to Ellis, it is our thoughts and beliefs about the event (our B's) that mediate the effects of events on our behaviors and feelings. We teach adolescents in our program how to identify the link between their thoughts and feelings/behaviors, and, in this process, they come to understand that their belief systems may not be wholly accurate. Practicing ABC is particularly important for children and adolescents who are struggling with anxiety and depression issues because it serves as the first step toward changing the beliefs that are fueling their maladaptive emotional reactions. More generally, the ABC model helps build emotion awareness, a central component of emotion regulation, because through the use of this skill, adolescents practice identifying their emotional reactions, differentiating among emotions, and assessing the intensity of the emotion that they feel. In addition, we believe that this skill helps promote empathy by helping adolescents learn how to anticipate, identify, and label the emotions that others experience in a variety of common stressors and adversities.

We first teach students the ABC model with three-panel cartoons. In some instances, they are presented with an adversity and the emotional consequences and they must fill in a thought bubble with a belief that fits the logic of ABC. In others, they are provided with the adversity and the character's beliefs and they must identify the emotional reaction that the belief would likely generate. For example, in one cartoon, the first frame depicts a student being yelled at by a coach. The third frame has an illustration of the student feeling extremely sad. The adolescents are asked to identify what the boy is feeling and then to suggest what he might be saying to himself that is causing him to feel that emotion (e.g., "I'm never going to be good enough" or "I stink at sports," etc.). Once the students are able to accurately link B's and C's in the cartoon worksheets, they practice identifying their own self-

Table 9.1 Summary of the PRP skills and the resilience abilities targeted

PRP skill	Resilience ability targeted
ABC	Emotion regulation and empathy
Explanatory style	Realistic optimism and causal analysis
Self-disputing	Self-efficacy
Putting it in perspective	Realistic optimism and self-efficacy
Goal setting	Impulse control
Assertiveness and negotiation	Reaching out
Decision-making	Self-efficacy, impulse control, empathy

talk in current problem situations and the emotions and behaviors generated by that self-talk. We have found that it is helpful to the adolescents to liken their B's to an internal radio station (one that plays nothing but you, you, you 24/7) and we help them turn the volume of this radio station up so that it is loud enough for them to hear what it is they are saying to themselves, particularly during times of adversity or stress. In so doing, the adolescents become more aware of their beliefs as well as the effect that their beliefs have on their mood and behavior. We emphasize that negative emotions are not "bad"—that instead, they are a healthy part of life and serve an important function from an evolutionary perspective. We also make clear that the goal is not to eradicate all negative emotions from one's life. Rather, we guide the students in thinking about whether they tend to overexperience certain emotions and to identify the patterns in their thinking that might be leading them to experience one emotion much more frequently than others.

The ABC skill provides a glimpse into one's thoughts or beliefs during a particular activating event. Although this is useful, it is also important that the adolescents begin to observe patterns in how they think about the events in their lives. It has been well documented that our automatic thoughts are influenced by our styles (or schemas) of processing information, which, to some degree, predetermine our responses to any given event. Our goal is to help the adolescents detect patterns in their thinking and emotions that may be counterproductive for them. As one seventh-grade boy put it, "I never really thought about how much of the time I feel embarrassed. I guess I kind of thought all kids feel embarrassed all the time. Now I'm starting to see that maybe I don't have to feel this way so much; that maybe I'm worrying too much about what other kids are thinking of me—when they probably aren't even thinking about me!"

One example of a style or schema is the explanatory style, our habitual and reflexive way of explaining the events in our lives (Abramson et al., 1978). We teach adolescents to identify their explanatory style (using the terms "me versus not me," "always versus not always," "everything versus not everything") and, most importantly, to question the accuracy of their beliefs. Although pessimistic explanations tend to lead to helplessness, depression, and anxiety, our goal is to teach the students how to think accurately about the causes and implications of the problems they face, not to swap a pessimistic style for an optimistic one. This reattribution training specifically targets realistic optimism and causal analysis. Our aim is to help students think more flexibly about the multiple and varied causes of problems, instead of merely replacing negative thoughts with "happy thoughts." In fact, some of the adolescents we have worked with have had explanatory styles that were too optimistic. These adolescents believed that others were always to blame for their problems and that they had complete control to change any aspect of a situation that they did not like. We helped these students understand how this extremely optimistic view might actually be hindering their resilience and problem-solving rather than bolstering it.

We call this skill of generating more accurate beliefs "self-disputing." Adolescents are guided in using the three dimensions of explanatory style for generating other ways of understanding the causes of the event. In essence, we help them "think outside the box" that their explanatory style puts them in. For example, if they tend to be overly internal, they are encouraged to generate plausible explanations about how other people or circumstances contributed to the problem. Similarly, if their explanations indicate that they believe the causes of the problem are wholly unchangeable, they are encouraged to think about other explanations that focus on more changeable, controllable, and temporary causal factors. We have found that using the knowledge of one's explanatory style in the process of generating alternatives is quite important. When students are not aware of their tendency to explain the causes of events in a set pattern, the alternatives they generate tend to fall within their pattern rather than become more inclusive. So, an adolescent who tends to be highly external can generate four alternatives to the belief "I fought with my parents because they are too strict," but the alterna-

tives are each as external as that initial belief (for example, "They're old-fashioned," "They don't understand me," "They're control-freaks," etc.). There are several problems with this, none the least of which is that this process serves to reinforce the adolescent's style rather than broaden it.

After the students have generated alternative beliefs, they are taught how to use evidence to determine which beliefs are most accurate and to identify potential solutions that their new, richer understanding of the situation affords them. We have found that self-disputing is a powerful tool for overcoming the negative beliefs that often fuel hopelessness and depression, and we believe that the process of self-disputing increases adolescents' self-efficacy because they have learned a skill that enables them to more effectively solve problems. As we often tell the participants in our program, you cannot solve a problem until you know what caused it.

The PRP also teaches a skill called "putting it in perspective," which can be used when beliefs are about the implications of an activating event or what we call "what-next" beliefs. At this point in the program, we begin to focus on beliefs about the future rather than on beliefs about the causes of problems. Like self-disputing, putting it in perspective helps students view their future with greater realistic optimism, and it also increases their self-efficacy for dealing with anticipated negative events. We have found this skill to be particularly helpful for children and adolescents who are at risk for depression and anxiety because, as ABC predicts, catastrophizing is often the consequence of unrealistic beliefs about the likelihood of horrible things happening in the future. For adolescents prone to anxiety, small problems are seen as insurmountable and dreaded outcomes are feared.

Putting it in perspective encourages adolescents to identify and list their worst-case thoughts about the implications of adversity. By getting these thoughts out of their heads and onto a piece of paper, the adolescents begin to have distance from their beliefs and are better able to start considering the likelihood of the feared events. These thoughts tend to come in chains of ever-increasing severity; for example, imagine a student who does not get asked to a school dance. "If I don't get asked to the dance then everyone will talk behind my back. If they're all talking about me, then I'll become the joke of the school and everyone will make fun of me. If that happens I'll have to switch schools because I'll never be able to put it behind me. But if I switch schools, then I'll be the new kid and the outcast at that school too!" The causal link between not getting asked to a dance and becoming a social outcast across schools is extremely weak, but the connection from link to link seems more plausible, particularly for the anxious adolescent.

To stop the process of catastrophizing, we guide children out of their dreaded fantasy by teaching them to estimate the probability of each link, given that only the initial adversity (not being asked to the dance) has occurred. Participants are then taught to generate equally improbable best-case scenarios (for example, "Everyone will realize that the mailman made a mistake and failed to deliver an engraved invitation to the dance from the most popular boy"). This step is important because the very silliness of the best-case scenario helps jolt the adolescent out of his or her catastrophic thinking and tends to lower anxiety and increase positive affect. The next step is to use worst-case and best-case scenarios as anchors to arrive at most likely outcomes. Once the most likely outcomes have been identified, the adolescents are taught to develop a plan for dealing with them. The skill of putting it in perspective not only reduces adolescents' anxiety but also helps them develop strategies for dealing with the real-world outcomes of the problems they face—and thus increases optimism and self-efficacy. In PRP we also teach goal setting, a skill that is important for all adolescents and particularly valuable for those who feel pessimistic or hopeless about their futures. Adolescents who learn to set obtainable goals and to develop plans for reaching their goals have developed a valuable system for combating the impulsiveness that can undercut their resilience. In PRP, we teach realistic goal setting and the "one-step-at-a-time" technique for making large projects more manageable by breaking the projects into doable steps. We also help adolescents identify beliefs

that can fuel procrastination or impulsiveness and derail them from their plan, and we apply the skill of self-disputing to test the accuracy and usefulness of these beliefs.

The PRP also includes assertiveness and negotiation training. We have found that these skills, particularly assertiveness, help adolescents feel more hopeful about approaching others with their concerns, needs, or requests. From a resilience perspective, assertiveness helps foster reaching out by helping adolescents connect with others in ways that will maximize the likelihood that their needs will be heard by others. Because depression-prone adolescents often underestimate the likelihood that a situation can be improved, they tend to respond to interpersonal problems with passivity. In PRP, we first apply the skills of self-disputing and putting it in perspective to beliefs that fuel passivity such as: "She won't listen to me anyway" or "If I ask her to stop she'll think I'm a nag." Other adolescents often have beliefs that fuel aggressiveness, such as: "The only way to get respect is to come on strong" or "If I don't fight for what I want, no one will listen to me." Regardless of whether the adolescent is relying on the passive or aggressive interaction style, our goal is to help the adolescent evaluate how well the strategy is working and to challenge the beliefs that may be fueling counterproductive behaviors. In addition, we make it explicitly clear that speaking up and asking for help is a valuable coping strategy that is helpful when dealing with adversities and traumas.

After the adolescents have challenged the beliefs that fuel their nonassertive behaviors, we teach them a four-step approach to assertiveness. This skill is particularly challenging for adolescents—especially those feeling hopeless—so we include assertiveness practice in many of the sessions. We have found that many adolescents are initially reluctant to practice assertiveness but that with practice they find assertiveness to be one of the most useful and potent skills they have learned in the program. Given their initial reluctance, it is important to continue to identify their beliefs about trying the skill and to help them use the basic cognitive skills of the program to challenge any pessimistic beliefs.

We also teach decision-making and creative problem-solving as part of the PRP skills. Both skills work to increase students' self-efficacy, optimism, impulse control, and empathy. As with assertiveness and "one step at a time," our goal is to first identify those beliefs that might be pushing the adolescent toward counterproductive and nonresilient decisions or solutions. Once students are able to evaluate the accuracy and usefulness of these beliefs, we then provide them with decision-making and problem-solving models. In both decision-making and creative problem-solving, we emphasize the importance of slowing the process to make sure that they are not responding impulsively. We guide them in identifying their goals, gathering thorough information about the situation, and then work with them to generate a series of possible routes to achieve the goal. We also help them consider the plusses and minuses associated with each potential decision, both from a time perspective (short term versus long term) and a self–other perspective (How will this affect me? How will this affect the other people in the situation?). By focusing on how their decisions and solution strategies can affect others, we help them build empathy for the other people involved in the situation. As the students start to see real-world differences in their ability to handle difficult, complex situations, we hear them share stories about increased confidence, greater hope for the future, and a sense of feeling more in control of their actions.

Penn Resiliency Program Findings

In our initial studies of PRP, we evaluated it as a depression prevention program among students who reported higher-than-average symptoms of depression, family conflicts, or both. Students who participated in the intervention were compared with a matched control group. Our findings indicated that the intervention improved explanatory styles and that this effect lasted 3 years following the intervention. The intervention group also reported lower levels of

depressive symptoms through 2 years of follow-up, and the group members were less likely than were controls to report moderate to severe levels of depressive symptoms (Gillham & Reivich, 1999; Gillham et al., 1995). Yu and Seligman (2002) replicated these findings through 6 months of follow-up with a sample of Chinese school children. Roberts et al. (2003) attempted to replicate these findings with 11–13-year-olds in rural Australia who reported elevated depressive symptoms. In this study, PRP significantly reduced anxiety symptoms but not depressive symptoms relative to a standard health curriculum. We are continuing to evaluate PRP as an intervention for high-risk participants. However, we have also begun to evaluate PRP as a universal intervention, an intervention that is offered to all students regardless of risk level. We believe that the cognitive and problem-solving skills covered in PRP are important for increasing resilience more generally and are beneficial to most children. In support of this, a recent meta-analytic review of PRP studies has found significant benefits of PRP when tested with both high-risk and universal samples (Brunwasser et al., 2009). In addition, in some studies, we have found that PRP prevents depressive symptoms in children with low levels of symptoms (as well as in children with high levels of symptoms) (Gillham et al., 1995), although findings have not always been consistent. For example, Cardemil et al. (2002) evaluated the PRP as a universal program for inner-city students. In an inner-city Latino sample, PRP participants reported significantly fewer symptoms than did controls following the intervention. However, in an inner-city African-American sample, depressive symptoms fell dramatically in both the intervention and control groups, and the difference between the groups was not significant. Pattison and Lynd-Stevenson (2001) evaluated PRP as a universal intervention with children in rural Australia. They found that PRP did not significantly reduce depression or anxiety relative to a control group. However, this study followed a very small sample, which may have limited the researchers' ability to find effects. Our research group is currently conducting further evaluations of PRP that focus on ways to boost the intervention's effectiveness.

Including Parents in Resilience Training

One of the ways we are enhancing the PRP is by including parents in the intervention. Depression in youth can be best prevented by interventions that include parents. Children of depressed parents are at greatly increased risk for depression themselves (Downey & Coyne, 1990). The link between parental and child depression appears to be due to several factors that tend to co-occur or result from parental depression but also can occur in parents who are not depressed. Parents who are depressed have been found to have fewer positive interactions with their children (Field, 1984). Depressed parents are also more likely to display and model negative interpretive styles and passive or maladaptive coping skills. When parents give pessimistic explanations for events in their own lives, children can adopt these same types of interpretive patterns when confronting problems of their own. They might expect that negative events will be long-lasting and difficult or impossible to overcome. When parents give pessimistic explanations for child-related events (for example, "You failed the test because you're lazy"), children can internalize these explanations and view and interpret future adversities through a similar lens. Garber and Flynn (2001) found that children's explanatory styles are correlated with their parents' explanatory styles, particularly parents' explanatory styles for child-related events.

The Penn Resiliency Program for Parents (PRP-P) was designed with two major goals in mind: (1) to increase the parents' overall resilience by teaching them the core skills of PRP (adapted for adults) and (2) to teach parents how to model the skills effectively in their children and to coach their children in the skills taught in PRP. The PRP-P meets for six 90-min sessions, facilitated at schools by school guidance counselors, social workers, and psychologists who have been certified through a 30-h training program with senior members of our research team.

The sessions comprise two components. The first, and central, component focuses on teaching the parents how to use the skills in their own lives. Parents discuss adversities ranging from professional issues to marital issues to specific challenges confronted by parents with children at risk for depression. The second component addresses how to model/coach the skills with their own children. Our emphasis here is on helping parents observe "teachable moments" and help them become comfortable sharing their own practicing of the skills in ways that are both appropriate and nonintrusive for their adolescents.

The first five sessions of PRP-P are devoted to the core cognitive resilience skills: ABC (the link between thoughts and feelings/behaviors); self-disputing (challenging inaccurate beliefs), putting it in perspective (challenging catastrophic beliefs), real-time resilience (disputing counterproductive beliefs in real time), and assertiveness. The final session is devoted to reviewing the skill set, reinforcing ways to effectively promote the skills in the context of the family, and identifying upcoming stressors and the skills that could be used to deal with them.

We conducted a small pilot study of the combined parent and adolescent PRP intervention. Forty-four middle school students and their parents were randomly assigned to the combined intervention or a control condition. Students who were assigned to the intervention condition participated in the PRP for adolescents; their parents participated in the PRP for parents. Results indicated that the combined intervention prevented depression and anxiety symptoms through the 1-year follow-up. Findings were particularly strong for anxiety; controls were almost five times more likely than were intervention participants to report moderate to severe levels of anxiety (Gillham et al., 2006). Although promising, these findings should be interpreted with caution since this was a pilot study with a very small sample. We are currently conducting a large-scale evaluation of the PRP for parents as an added component to PRP.

Surprisingly, only a few other programs have attempted to prevent depression or anxiety by including parenting components. The results of other programs have also been positive. Beardslee et al. (1997) developed an intervention for families in which one or both parents suffered from unipolar or bipolar depression. The major goal of the intervention was to educate parents about the effects of depression, to improve family communication, and to increase children's understanding of parental depression so that they would be less likely to blame themselves for parental symptoms and behaviors. Beardslee et al. found that the participants in the family intervention reported improved communication relative to participants in a lecture intervention condition. Children in the family intervention reported a greater understanding of parental depression and greater global functioning. Children in the family intervention were less likely than were those in the lecture intervention to develop depressive disorders, although this difference was not statistically significant. Dadds et al. (1997) found that a cognitive–behavioral school-based intervention that included a parent component was effective in preventing anxiety in children and adolescents. Recently, Compas et al. have found that their cognitive–behavioral family-based prevention program significantly reduced depression and anxiety symptoms in children and adolescents (Compas et al., 2009).

Discussion, Limits, and Future Directions

Making Interventions More Powerful

Research on the psychological interventions that treat and prevent depression and anxiety has identified several promising interventions. However, intervention success rates are often far from ideal. Although effective for many participants, a sizable minority of participants in cognitive–behavioral therapy do not improve significantly. For example, in a large study on therapy for depression, 65% of depressed adults who were treated with cognitive–behavioral therapy showed a full improvement in symptoms, but 35% continued to show fairly high levels of

depression even after completing the intervention (Elkin et al., 1989). Similarly, some participants in prevention programs develop clinical depression or anxiety, despite efforts in the program to promote resilience. Future research should focus on strengthening interventions and making them effective for more people.

One way to strengthen the effects of interventions is to incorporate other parts of the adolescent's world as targets of interventions. Historically, psychological treatments have focused on the individual child or adolescent. However, children's lives are imbedded within the family, school, peer, and neighborhood systems (Bronfenbrenner, 1986). Thus, it is important to understand how resiliency is built within family systems and larger communities. In the PRP intervention, initial findings suggest that providing an intervention for parents in addition to the adolescent groups can be an effective way to increase the effectiveness of the intervention. In addition, efforts could be made to incorporate interventions into the larger community through neighborhood programs or school-wide programs that work to create more positive relationships and more hope for communities as a whole.

Universal Versus Targeted Interventions

One of the debates within the prevention literature concerns the feasibility and effectiveness of targeted versus universal interventions. Targeted interventions, like Clarke et al.'s (1995) prevention program and our initial evaluations of PRP discussed earlier, are provided to at-risk participants, such as those with elevated levels of symptoms. In contrast, universal interventions are administered broadly to the entire population regardless of the risks involved. In general, the effects for the average participant are larger in targeted interventions than those in universal interventions. This is because targeted intervention participants are more likely to develop a disorder or problem and, thus, there is greater room for change in each individual. However, universal interventions that have small effects for the average participant can have large effects for society (Offord, 1996).

Over the past decade, we have come to believe that cognitive–behavioral interventions, like the PRP, can have important applications as universal interventions. The shift in our thinking is reflected in the change to the name of the program, from the Penn Prevention Program to the PRP. All children and adolescents encounter challenges and stressful events in their lives. Most of the skills covered in PRP and other programs are useful for responding to these day-to-day challenges as well as more serious events that children encounter. These cognitive–behavioral skills (e.g., thinking realistically about problems, perspective taking, considering a variety of solutions to a problem, considering consequences when making decisions) overlap with competences that are discussed in the resilience literature (e.g., Brooks & Goldstein, 2002). Some of these skills are also taught in problem-solving programs and interventions designed to reduce or prevent aggression, substance abuse, and other maladaptive behaviors (Caplan et al., 1992). Interventions that incorporate these skills should be relevant to most students and could have effects on a variety of positive and negative outcomes. We believe that the development and evaluation of such broad-based interventions will equip children to respond resiliently to the challenges that they will no doubt encounter in their future.

Acknowledgments Research on the effectiveness of the Penn Resiliency Project is funded by a grant from the National Institute of Mental Health (MH52270). The Penn Resiliency Program is owned by the University of Pennsylvania. The University of Pennsylvania has licensed this program to Adaptive Learning Systems. Drs. Reivich and Seligman own Adaptive stock and could profit from the sale of this program.

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Resilience and Self-Control Impairment

10

Wai Chen and Eric Taylor

Introduction

The Concept of Self-Control and ADHD

Self-control has been a pervasive idea in developmental psychology. At a neurocognitive level, the organism's control (or lack of it) over its own responsiveness to stimuli has been regarded as a central topic in attention/executive function research and attention deficit (e.g., Taylor, 1995). Behavioral control is a more complex idea: clearly, a planned and rule-governed organization of activity can have many advantages and has arguably been a crucial acquisition in the evolution of man. Emotional control relates to the idea that it is adaptive to moderate the immediate affective reaction and to respond in a willed and deliberate rather than a passionate fashion.

Self-control and its absence are appealing concepts for explaining a wide variety of psychopathological presentations. Impaired self-control can be seen as a risk for nearly all the disorders presenting with unruly or undesirable behavior—hyperactivity, attention deficit, impulse disorders such as gambling, bulimia, or kleptomania, substance abuse, oppositional and conduct disorders, and the complex tics of Tourette disorder (Strayhorn Jr., 2002a); or it can be seen as a part of those disorders or the result of them. The ability to control oneself can be seen as a protective factor in an even wider range of disorders—either because one can use self-control to avoid acquiring even greater developmental risks, such as substance abuse, or because the ability to control oneself is a necessary condition for the success of some forms of treatment, such as cognitive therapy (Strayhorn Jr., 2002b).

This widespread use of the idea already points to a difficulty. If the idea is applicable to so many sorts of problem, perhaps it should not be seen as an explanatory concept, but rather as a somewhat nonspecific description. There is a certain circularity in it: if the only evidence needed for poor behavioral self-control is the presence of undesirable behavior, then it cannot also be used to explain that behavior. It constitutes, in effect, a

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_10

theory about the cause of behavior disorders. In this case, independent evidence for its presence is essential. Operational definitions have been hard to achieve. The difficulty is akin to that inherent in the closely related idea of the will: if an act is caused by a volition, what causes the volition?

When considered as a theory of cause, then impaired self-control must compete with others. Consider a group of children in a classroom who are behaving riotously. Some may be doing this in a planned and wilful fashion; for instance, they may prefer to impress their peers rather than please their teacher. This may be regrettable, but it is not uncontrolled; it is a different organization rather than a lack of organization. Others may have no idea that they are infringing serious expectations; their egotism is so great that they are following their own inclinations without regard to the reactions of others. Another child would, in reflecting on it, realize that his or her interests would better be served by being less unruly; but the child either will not or cannot take the time to reflect and translate the understanding into action. It is this latter child who could be described as 'lacking in self-control' or 'impulsive' or 'lacking in inhibition'; but it is not an operational definition of behavior—rather, it is based on inferences about the current and other possible states of mind.

In this chapter, we will focus on the most clearly operationalized behaviors that can be seen as evidence for impaired self-regulation: overactivity and impulsiveness. Within this narrow operationalized definition, attention deficit hyperactivity disorder (ADHD) represents a classic paradigm. ADHD is characterized by age-inappropriate levels of inattentiveness, hyperactivity, and impulsivity, with an onset in early to middle childhood. We describe the behaviors as they have emerged from observational studies and briefly summarize a large literature on their neurocognitive basis, which has suggested an altered function of brain structures involved in self-organization. The outcome studies will then be reviewed, to the effect that the resulting behavioral changes are indeed a risk factor for later psychological adjustment. This leads to a consideration of the factors that can promote resilience in the face of this risk, including what can be achieved by treatment.

Core Problems in ADHD, DSM-5 and ICD-11 Revisions

In ADHD, symptoms and impairments should be persistent over time and pervasive across settings. Inattentiveness denotes a reduced length of time spent on a task or toy; an increase in the number of orientations away from a centrally presented task; and more rapid changes between activities (Dienske et al., 1985; Milich et al., 1982). Overactivity implies an excess of movements, and this cannot be simply reduced to impulsiveness or inattentiveness (Porrino et al., 1983). Impulsivity means acting without reflection, and it can be conceptualized as over rapid responsiveness, sensation seeking, excessive attraction to immediate reward, aversion to waiting, and a failure to plan ahead.

DSM-5 and DSM-5-TR classification of ADHD (DSM-5, 2013; DSM-5-TR, 2022) contains three presentations: (1) *predominantly inattentive*; (2) *predominantly hyperactive–impulsive*; and (3) *combined.* The third presentation is comparable to the European diagnosis of *hyperkinetic disorder* specified in ICD-10; moreover, in ICD-10, the 'talkative' symptom is grouped as impulsivity rather than hyperactivity. However, ICD-11 has revised and updated its definitions of the clinical presentation (ICD-11;, 2022); and these now broadly align with the DSM-5 definitions of ADHD. These include the three analogous 'presentations' (6A05.0-2) as well as the 'other specified' (6A05.Y) and the 'unspecified' (6A05.Z) categories. In other words, the term *hyperkinetic disorder* has been superseded by *attention deficit hyperactivity disorder* in the ICD-11 revision (with a broaden inclusion of the phenotypic spectrum). For ADHD, there is now greater convergence in both definition and conceptualization between the two systems.

The change from 'subtype' to 'presentation' in DSM-5/DSM-5-TR was influenced by the research evidence demonstrating temporal insta-

bility of 'subtypes.' In particular, that the symptoms of behavioral hyperactivity in childhood are often replaced by 'mental restlessness' in adolescence and adulthood, leading to seemingly the desistence of hyperactivity symptoms, thereby a transmutation of the 'combined subtype' into the 'inattentive subtype,' but without substantive changed in the ADHD psychopathologies. Moreover, DSM-5 introduces a dimensional approach combined with binary diagnostic categories. This allows a clinician to code 'mild,' 'moderate,' and 'severe' as a qualifier of the chosen category. Finally, the *'pervasive*' criterion has also been revised: now the symptoms need to be present across more than one setting (i.e., Criterion C); but *'impairment'* needs to be present only in one setting (i.e., Criterion D). This change is subtle but important, as it permits more children to receive a formal ADHD diagnosis, unlike DMS-IV which was more stringent and required both *pervasiveness* and *impairment* to be present across more than one setting (Furlong & Chen, 2020).

In the last 10 years, different approaches of bifactor confirmatory factor analysis (CFA) modeling have been applied to probe the core latent structure of ADHD symptoms, underlying the clinical expression of observable symptoms, including inattention (IA), hyperactivity (HY), and impulsivity (IM). Bifactor CFA posits one general ADHD factor (g-factor) with either two or three specific factors according to the classification system is being used. For instance, two specific factors (IA and HY/IM) according to DSM-5 characterization; or three specific factors (IA, HY, IM) according to ICD-10. In a symmetrical bifactor CFA model, all the ADHD symptoms load on the g-factor, as well as on to their own respective specific factors. In such models, the g-factor captures the common variances of all items whereas the specific factors capture the unique variances of its respective items unaccounted by the g-factor. As such, the specific factors are therefore conceptually different from the 'primary factors' represented in more conventional first-order factor CFA models. Published studies of bifactor models have demonstrated better data fit than first-order CFA models, suggesting that an overarching ADHD g-factor drives all aspects of its psychopathology (rather than driven by discrete separate components). More recently, the novel S-1 bifactor CFA approach has been explored and identified an improved fit for ADHD data. 'S-1' means 'one less specific factor'. This is an asymmetrical bifactor model where one set of reference indicators does not load onto its own specific factor. The g-factor is therefore primarily a reflection of these reference indicators. Recent studies suggest that the model which provides the best data fit is one in which HY/IM symptoms form the reference indicators for the g-factor. This means that the g-factor of ADHD is best modeled as primarily driven by the HY/IM indicators (Burns et al., 2020; Junghänel et al., 2020; Gomez et al., 2021, 2023). As such, emerging data suggest that ADHD is most likely to be an impulsivity disorder at the latent structure level. Nevertheless, through cognitive, motor and behavioral impulsivity substrates, clinical symptoms are expressed as IA, HY, and IM symptoms at the observable level. As more advanced modeling techniques become available in the coming years, alternative and more innovative conceptualizations of ADHD's latent structure will most likely emerge, informing future revisions of ADHD taxonomic definitions.

Overall, ADHD is a disabling condition, associated with increased risk for learning disabilities, educational failure, impaired social functioning, relationship problems, employment difficulties, delinquencies, and multiple psychiatric disorders. These secondary comorbid conditions include oppositional defiance disorder and conduct disorder in childhood, and then progress to substance misuse disorder, anxiety disorders, mood disorders and personality disorders in adulthood.

Neuropsychological Correlates of ADHD

In the field of ADHD research, the hypotheses of deficits in response inhibition and self-control as the core psychopathology have been gaining attention. Though the apparent inattentiveness and distractibility are prominent observed fea-

tures of ADHD, research of neuropsychological correlates has consistently failed to detect deficits in selective attention or attention filter. That is, the deficit appears not to lie in sensory inputs or screening out unwanted information, but rather in response outputs. In other words, ADHD is more a disorder of inhibition and of maladaptive response patterns than a disorder of attention.

There are several theoretical accounts of this change in response organization, and they compete to give the closest representation of the problems: (1) response inhibition theory (Barkley, 1997); (2) delay aversion theory (Sonuga-Barke et al., 1992a, b); (3) state regulation theory (Van der Meere, 2002); (4) working memory deficit theory (Castellanos & Tannock, 2002); (5) cognitive-energetic theory (Sergeant, 2000); and (6) temporality (perception of time) deficits theory. Moreover, a dual pathway model has been proposed, combining response inhibition theory with delay aversion theory (Sonuga-Barke, 2003).

The contention of response inhibition theory is that the core deficit of ADHD resides in impaired inhibition of unwanted outputs, for instance, in inhibition of a prepotent response; withholding an established ongoing response pattern (thus permitting a delay for a decision); and protecting this period of delay from interference or disruptions from extraneous events. These give rise to other secondary impairments in executive functions involved in self-control.

State regulation theory gives more emphasis to the contextual factors; the poor performance of children with ADHD on certain tasks is believed to reflect a nonoptimal state of energetic pools, arousal, activation, and effort. By introducing, for example, reward or a faster event rate, the states of these ADHD children can be optimized so their performance can be potentially brought to the level of control children. This theory offers an explanation for the observed variability or inconsistency in response in ADHD subjects; and also, that the degree of their variability is altered under different experimental situations of stimuli presentation, such as improvements under reward conditions and under a fast rate of stimuli presentation.

Delay aversion theory proposes that impulsive, and therefore uncontrolled, behavior does not stem from an inability to withhold response, but from a motivational change: a deep-rooted dislike for waiting and therefore a reluctance to delay. The influence of context is even stronger in this formulation because if the delay characteristics are controlled—if the child has to wait no matter which choice he or she makes—then it is possible to set up experimental arrangements in which children with ADHD do not demonstrate impulsiveness.

In short, it cannot be assumed from the cognitive studies so far that we are dealing with a deficit of inhibitory control rather than an alteration in the ways that decisions about inhibition are made. Either notion could apply. They are not mutually exclusive; in fact, they could give rise to each other. A deficit of inhibition can cause children to be averse to delay because they have suffered many experiences of failure in delay situations. Delay aversion will discourage children from experiencing situations in which delay is involved, and can therefore hold them back from learning the skills of inhibition. Indeed, we do not see the theories of inhibition and delay aversion as competing for the sole explanation of impulsive behavior. Rather, they describe two possible pathways into impulsiveness, resulting either in two subgroups of children with ADHD or in the problems for the same individual. In the model of volitional control presented by Taylor (1999), the two theories represent changes at different stages of the formulation of a planned and intended response—the executive planning and decision of what to do, the elaboration of the intent into a plan, the choice of one plan over others, and the suppression of competing plans.

All these abnormalities of inhibitory control could follow directly from genetically determined changes in the microstructure and metabolism of the brain. The brain structures that are involved in the suppression of inappropriate responses (e.g., right frontal and striatal areas) are rich in dopamine and dopamine receptors. Their activity could well be impaired by genetically determined reductions in the efficiency of synaptic transmission. It would, however, be too simple to assume

that this direct route must be the key one; interactions with the psychological environment also need to be considered. There are strong genetic influences on hyperactive behavior, but much less is known about the inheritance of the putative cognitive abnormalities. Experience may influence both simple and complex processes, but it is perhaps easier to see how complex processes can be modified by learning and motivation. The decision to inhibit—to withhold a prepotent response or one known to lead to immediate gratification—must be determined in part by the organism's previous history. A child, for example, whose experience favors the idea that delayed reinforcers will never in fact arrive (as might be the case in the children of some impulsive parents) may well not evolve a style of preferring to wait. Similarly, the decision to allocate protracted consideration and analysis to a problem is likely to be conditioned by the extent to which doing just that in the past has been rewarded by success or by the reactions of caregiving adults. In theory, this opens the way to cognitive and self-instructional methods of intervening; in practice, they have not yet proven their clinical value.

Kuntsi et al. (2010) conducted a multivariate familial factor analysis to examine whether the apparent multiple neuropsychological impairments share common or separate etiological pathways. The goal was to examine and identify common latent familial factors which underlie the slow and variable reaction times, impaired response inhibition, and choice impulsivity associated with ADHD. The study used an ADHD and control sibling-pair design. The results of the final model consisted of two familial factors. The first larger factor captured the familial influences on mean reaction time and reaction time variability. This factor explained 98%–100% of the familial influences of these measures. The second, smaller factor, captured 62%–82% of the familial influences on commission and omission errors. Choice impulsivity was excluded in the final model because of poor fit. The findings suggest the existence of two familial pathways to cognitive impairments in ADHD.

The idea that there are several different neurocognitive routes into dysregulation implies that it could be useful—both for research and clinical practice—to distinguish subtypes on this basis and offer separate approaches to remediation. Indeed, studies which discriminate those with ADHD from controls on the basis of combining tests of different processes look very promising. Solanto et al. (2001) achieved a much stronger discrimination with a combination of inhibitory control and delay aversion tests than with either type of test alone; Gupta, Kar, and Srinivasan (2010) have achieved better than 90% correct classification using a set of four tests. More research is needed to establish the reliability and stability of test results, but it looks as though we may be moving toward more objective assessment and more prescriptive education.

Resilience, Outcome Studies, and Methodological Issues

Taylor, Chadwick, Heptinstall, and Danckaerts (1996) described a follow-up study of children with pervasive hyperactivity who were identified by parent and teacher ratings in a large community survey of 7- and 8-year-olds. Nine years later, at the age of 17, they were reassessed with parental ratings, as well as a detailed interview using Parent Account of Childhood Symptoms (PACS) rating system. Hyperactivity was a risk factor for later maladjustments, even after allowing for the coexistence of conduct disorder problems and excluding children who showed the problems of emotional disorder. Nearly half of the affected children had developed a psychiatric diagnosis, and more showed problems such as persisting hyperactivity, violence and other conduct problems, and social and peer problems. Although hyperactivity presents as a chronic and debilitating disorder, a minority of the children interestingly seemed to escape complications and grew out of the disorder, so that their young adult outcome was not severely compromised. In other words, resilience in the presence of pervasive hyperactivity does indeed exist. Yet resilience among children with ADHD has not been a major focus of research.

In the field of resilience, a number of studies have been conducted on children exposed to early adversities and deprivations. The researchers examined predictors of good adjustments in later life as indicators of resilience.

Furthermore, empirical studies sometimes can yield counterintuitive findings, that is, results opposite to what one may logically predict. This subject is discussed in a review article by Hechtman (1991) and Chap. 6.

In ADHD psychological treatment, in relation to resilience, a new trend has emerged, challenging the conventional conceptualization of resilience based on the deficit or weakness-based model (Brooks & Goldstein, 2001). In the deficit or weakness-based model, a disorder is conceived to embody symptoms, abnormalities, deficits, and weaknesses; resilience is conceptualized as factors that reduce symptoms and thereby improve outcome. As an alternative, a strength-based model has been proposed. This model places emphasis on the development of skills, strengths, and 'islands of competence,' in spite of the disorder (Brooks & Goldstein). In essence, the new approach demarcates 'abilities' from 'disabilities'; and it advocates the development of 'abilities' and the 'talents' associated with the condition. In contrast to the traditional paradigm, the new paradigm also postulates that 'strengths' can minimize the negative impacts of 'symptoms' in promoting resilience. One such strength-based approach (in spite of disabilities) is Recovery, and recently there have been preliminary studies exploring the principles of recovery in individuals with ADHD.

Personal Recovery and 'Recovernance' for Resilient Individuals with ADHD

Personal Recovery is well-established concept in the adult psychiatry literature (Bird et al., 2014); and is also referred to as Social Recovery or Personal Recovery (hereafter 'Recovery') as distinctive from symptom recovery or reduction. It denotes '… a deeply personal, unique process of changing one's attitudes, values, feelings, goals, skills and/or roles. It is a way of living a satisfying, hopeful, and contributing life even with limitations caused by illness. Recovery involves the development of new meaning and purpose in one's life as one grows beyond the catastrophic effects of mental illness' (Anthony, 1993). Symptom reduction, by itself, does not equate to positive well-being or personal fulfillment, analogous to the absence of depression not being equivalent to the presence of happiness.

Published models of Recovery have been based mainly on the experiences of adults with severe mental illnesses – particularly schizophrenia and psychosis (Slade, 2009)—focusing on regaining function despite symptoms (Leamy et al., 2011). The acronym 'CHIME'—for Connectedness, Hope, Identity, Meaning and Empowerment (Leamy et al., 2011; Slade, 2009)—has been coined to capture the key processes in Recovery. *Connectedness* denotes interpersonal relationships and social supports; *hope* refers to aspirations for the future realized through efforts based on personal values; *identity* involves overcoming stigma and building a positive sense of self; *meaning* refers to the finding of meaning and purpose in the experience of having a mental illness, and of finding new social roles and making positive contributions to self and others; and *empowerment* entails finding personal strengths, taking personal responsibility, and gaining control over adversities (Leamy et al., 2011; Slade, 2009).

The applicability of CHIME to adolescents and youths with ADHD has been explored in two recent studies (Edward et al., 2021; Chen et al., 2022). These two recent studies have revealed novel elements in recovery beyond CHIME, underscoring the need for a novel lexicon for clients with ADHD in order to map more accurately the recovery pathways (predicated on a strength-based foundation) specific for young people and their families.

Edward et al. (2021) evaluated the lived experiences of parents who have children with ADHD where children have been resilient despite having ADHD. The 'resilient' recruitment criteria were operationalized as engaging in education/occupation, not involved in crime or substance misuse and not having recently been hospitalized for mental health issues all in the preceding the study period. This qualitative study examined the fac-

tors identified by the parents as facilitating, promoting and enabling their offspring to lead an engaged, meaningful and productive life, despite experiencing and dealing with the challenges of ADHD. In this study, nine primary themes were identified, and represented by the acronym THRIVESSS. The themes are '(1) parental Time investment, (2) parents Having a plan; (3) parents establishing Routine and structure within the home; (4) fostering the child's positive Identity, (5) parents having Valued social supports; (6) parents Educating themselves about the condition, then educating the child early to self-management strategies, followed by parents collaborating with school staff; (7) parents and the child establishing a level of personal Self-awareness; (8) with increasing maturity the child attaining a degree of Self-acceptance; and (9) Symptom control' (Edward et al., 2021). Notably, according to the parents, the child's Recovery journey takes place within a wider social system, which includes parent, family, peer, school, and wider societal factors. Importantly, parents play a pivotal role in scaffolding the processes by which the affected child engages with these agents.

In practice, at least one parent, often the mother, has to make personal sacrifices (i.e., giving up full time employment and career development to be at home). Doing so enables the parent to devote extra time and attention for child-rearing—by acting as a coach, chaperone, advocate, 'teacher' and 'police'—well above and beyond that needed for an unaffected sibling. In most cases, a mother without ADHD herself is most effective.

For parents and carers with ADHD themselves, it is critical that the adults themselves are diagnosed and medicated. This permits good executive functioning in significant adults to provide appropriate parenting, as well as better coping with daily hassles, resolving conflicts among siblings and enables the parents to communicate with school and teachers more effectively while under full emotional control. Otherwise, a dysregulated adult cannot fulfill these roles however well-meaning and well-intended.

The *extra **T**ime* referred above is used to establish and maintain a structured daily routine within the home. ***H**aving a plan* is therefore critical. In practice, this means (1) devising in advance and (2) flexibly applying planned strategies to deal with challenges. As such, the parent becomes ready to respond effectively and consistently; and is not caught off guard and does not react without forethought. The plan however needs to be flexible and adaptable, as a child with ADHD will not respond well to a fixed plan, and may oppose erratically to the same set of strategy; therefore, the plan cannot be rigidly applied.

***R**outine and structure* anchor daily living, serving to provide control over the child's chaotic and erratic behaviors, which are driven by inattentive and hyperactive/impulsive symptoms. Unstructured environments are major triggers for negative behaviors. In practice, this means parents need to constantly set limits around the child's and the family's daily functioning, and teach self-control skills (such as self-regulation of emotions, coping with frustrations and reducing opportunities for temper outbursts or negative squabbles with siblings). These measures reduce negative exchanges and lessen the amount of parental criticism; and in doing so, can improve a child's self-esteem and foster a positive identity.

A positive *self-**I**dentity* is the fourth key theme, central to fostering the child's healthy sense of self. A child with ADHD often feels criticized and labeled as 'naughty' with character flaws, and develops a negative self-image as a result of constant exposure to the negative messages. In practice, three aspects critical to fostering self-identity were identified in the study (Edwards et al., 2021): personal stigma, peer groups, and role models. First, the diagnostic label of ADHD embodies negative connotations, leading to prejudgment, stigmatization and ostracization. Second, parents who invest time in teaching social skills and organizing social gatherings with peers to promote peer interactions and acceptance can enhance the child's self-confidence and positive identity, as a person liked and valued by peers. Third, parents can facilitate a child developing a positive connection with a positive role model (such as an adolescent or adult with ADHD within the community) who leads a productive life despite having ADHD.

Both peer groups and role models provide valuable social supports for the affected child.

In contrast, ***V****alued social supports* is about parental social relationships which support their parenting; and these include barriers and enablers. Enablers include a teacher who supports a parent in caring for a child with ADHD, or providing emotional and practical support. Engaging with a coach specialized in ADHD, or joining a self-help organization for parents and children with ADHD has been pivotally important for some parents. The converse is true that a patronizing and critical teacher can undermine a parent. For some parents, the Recovery process can also involve educating professionals and teachers who are uninformed about ADHD, in order to convert them into positive agents to promote their child's Recovery.

E*ducating and collaborating* is about parents searching for information about ADHD after receiving an ADHD diagnosis, and about their subsequent roles evolving into ADHD experts and becoming an educator or advocate for their child.

Parents often traverse a journey themselves, starting with little or no knowledge about ADHD, and then become self-educated and then, for some, develop into well-informed experts. Once the parents know about ADHD, they can educate their child about ADHD, and educate other key adults in the child's life about ADHD. Overall, it is about psychoeducation; but the parents do, however, have to take an active role in acquiring health literacy. Once armed with knowledge, the parents can educate teachers and school staff about ADHD and the best ways to handle their children with ADHD. At times, the tasks involve advocating the provision of extra resources (such as a classroom assistant) to help their child to function better at school. Often, these motivated parents become tenacious advocates with school; and also play active roles in helping other parents who have children with special needs.

S*elf-awareness* is about developing a level of knowledge of self (in terms of thinking, perception, emotions, and autonomic reactions) for both the parents and child with regard to living with ADHD. Parents can become more attuned to their child's needs; and they also help their child to become more self-aware of their emotions and how to regulate them, rather just reacting impulsively without forethought. It is also about the parents becoming self-aware of their own individual strengths, rather than just autonomic triggers, and vulnerabilities. Parents with ADHD themselves have impairments which can hamper their own self-awareness and parenting capacity. Some parents disclose feelings of hatred toward their child with ADHD—especially when they lack knowledge about ADHD and self-awareness. The aforementioned resilient factors are critical in preventing parental rejection of their child with ADHD, who can be draining and unrewarding to rear. Over time, self-awareness can foster self-acceptance in both child and parent alike.

S*elf-acceptance* is the eighth theme, focusing on parental desires to reduce their child's self-incrimination and despair. Self-forgiveness encompasses related themes on self-love and self-compassion (for both parent/child), which are the foundation of fostering a child's self-esteem. In practice, self-acceptance is the balancing of optimism with realism. It starts when an affected child reaches a stage when he/she can form realistic and appropriate expectations and aspirations for themselves beyond the limitations of ADHD and the different life trajectory flowing from having gain mastery over ADHD. Self-awareness and self-compassion are the cornerstones for self-acceptance. All these challenges are made much easier when there is good symptom control.

S*ymptom control* includes medication optimization and coping with stigma. Treatment optimization often involves a 'trial and error' journey before the best kind and dosage of medication can be found.

Once established, continuous adjustments of medication may be needed for some cases, especially when the child enters puberty and has a growth spurt. Yet for some, receiving an ADHD diagnosis and needing to take medication can be stigmatizing, especially when a child needs to go to the teacher or school nurse to take the medication in the middle of the day at school. However, when these problems are well managed, the

symptom reduction can lessen the disease burden and facilitate Recovery and resilience.

In summary, the study by Edward and colleagues (2020) has identified complex factors in parental investment and contribution in order to promote resilience in children with ADHD. These factors can be broadly summarized as the aforementioned nine key themes, captured by THRIVESSS. And they represent key enablers (i.e., practical steps) which can be taken by the parents.

Notably, Recovery is not a linear process with an end point; in practice, it is an ongoing and relentless process, which needs to be repeated in an iterative manner, akin to that of 'Sisyphus labor'—which echoes the findings from another recent study on the Recovery journey from the perspectives of adolescents and youths with ADHD (Chen et al., 2022). Chen et al. (2022) coined the term *Recovernance* to represent a specific kind of Recovery—as a portmanteau by merging '*Recover*y' and 'Mainte*nance,*' and it denotes the ongoing adjustment required to maintain optimization without an obvious end point.

Chen et al. (2022) interviewed adolescents and youths (aged 15–31 years), who had experienced success in their lives as indicated by employment or school attendance, and an absence of acute mental health episodes or chronic alcohol or drug use. The findings indicate that recovery of the participants with ADHD is an ongoing, iterative and unending process which can be at times exhausting, demoralizing and frustrating. Overall, the *Recovernance* journey tracks an overall upward spiral, but with antegrade and retrograde steps and missteps. The process results in greater self-knowledge, life skills and mastery of the challenges of ADHD. As such, the progress is leveraged on internal and external resilience factors mitigating the constant threat of setback.

Six specific internal and external resilience factors were identified in their study. Internal resilience factors are within the person (about developing positive skills and attributes), whereas external resilience factors are located in the environments, such as family, friends, therapists, and a supportive school or workplace. The internal factors include (1) finding different ways of managing life with ADHD, (2) discovering and recognizing one's own strengths and abilities (and differentiating them from one's weaknesses and disabilities), and (3) developing a future-orientated outlook. In contrast, external resilience factors include (1) striving for and attaining achievements in educational and occupational domains, (2) successful engagement with treatment and therapy to reduce symptoms and improve function, and (3) forming positive and supportive social relationships.

Managing life with ADHD cast 'receiving an ADHD diagnosis' as an enabler, empowering the individual through acquiring helpful knowledge about ADHD and explaining day-to-day challenges. In other words, accurately labeling 'the problem' as 'ADHD' (i.e., a medical condition) provide a starting point for constructive solutions. More specifically, **structural and organizational** strategies to assist with the completion of tasks (e.g., separating school assignments into smaller, more manageable parts) become practically useful. These lead to tangible achievements providing the experience of **success and productivity in the real world**. Finding **recreational fulfillment** such as, engaging in activities of personal interests, engaging in creative pursuits such as music, physical activities (e.g., gym workouts), and joining youth organizations (e.g., cadets) all can provide opportunities for self-directiveness, accomplishments as well as for socializing. For some, affiliating with religious, spiritual, or faith-based identities or beliefs (including church membership, attendance or religious services) allows **self-transcendent development.** Over time, by experiencing achievements and successes in the real world, the participants build up **self-assurance** and **self-confidence**, which develop and broaden into **self-compassion**. *Recognizing one's strengths and abilities* means differentiating these from one's weaknesses or disabilities. Some participants utilize their ability to **hyperfocus for productivity** to their advantage, facilitating uninterrupted workflow with intense concentration; and some apply **lateral thinking** ('thinking outside the box') to arrive at creative, unique and inventive solutions, which elude non-ADHD colleagues,

and these participants can learn to utilize their abilities consciously and deliberately to their advantage.

Developing a future-ocused outlook provides a meaningful and goal-directed orientation for life—which drives self-directive thinking, agency, and competence. In practice, these translate into different projects/goals for each individual, such as living independently, establishing financial stability, traveling or living abroad. This outlook was accompanied by strong **motivation for achievement** characterized by **determination, persistence, and a fighting spirit**. Our participants made effortful plans, took practical steps, and overcame obstacles to develop **life skills and the necessary independence** to achieve these; and in doing so, they developed greater self-reliance and self-sufficiency. Nevertheless, all these accomplishments could not take place within a vacuum, but only within positive, supportive and enabling environments.

Attaining achievements in education or/and occupation provides a tangible and powerful confirmation of success. To get **academic achievements** in some cases, it may be particularly helpful if a school or university allows accommodations for special needs, such as additional time for completing tests and exams. Facilitating such accommodation can be critically important. Similarly, engaging with **employment and career development** provides opportunities for occupational accomplishments and skill building. It also offers experience in attaining accomplishments in the real world, thereby boosting morale and self-confidence.

Successful engagement with treatment and therapy can reduce symptoms and improve functioning. Successful **pharmacological management** can optimize symptom control, thereby improving concentration, organization and work productivity. In some cases, engagement with an ADHD coach can help someone to achieve life skills to manage ADHD-related challenges—above and beyond what can be achieved by medications alone. Treatments of functional impairments and comorbid conditions (such as depression, anxiety) may need specialist **professional help,** such as from an ADHD-coach, psychologist or psychiatrist.

For some, past **law infractions** arose from their uncontrolled impulsivity before diagnosis and treatment; whereas, for others, **substance use** was a way of coping with stress. Such high-risk behaviors can become a major hindrance to resilience and recovery. These behaviors need to be acknowledged and addressed openly and directly through professional treatment and therapy, as avoidance can worsen the problem and impede recovery.

Forming positive and supportive social relationships plays an important role in providing social support for individuals with ADHD. Social networks change over time and developmental stages. **Familial, peer, and romantic relationships** each can provide enriching connections and companionship. The importance of **human–animal bonds** (such as affection from household pets) is special for some. Closer and more confiding relationships with peers or extended family members allow individuals to **disclose their ADHD diagnosis** to others. Acceptance by others is associated with both empowerment and reassurance.

If ‘Recovernance’ were to be compared with ‘CHIME,’ two important and striking differences emerge. The first is the emphasis on ‘self-awareness’; the second is about gaining mastery of specific challenges.

Self-awareness of the symptoms and impairments caused by ADHD for the resilient individuals—this is the essence of the Sun Tzu dictum of ‘know thy enemy and know thyself’; this appears to be a prerequisite step to resilience. Self-awareness and self-knowledge also serve as antidotes to the double-curse arising from the combination of ‘incompetence’ and ‘cluelessness,’ also known as the *Dunning–Krueger effect* (Kruger & Dunning, 1999; Dunning, 2011), which describes the cognitive bias causing ‘the ignorance of one’s own ignorance.’ Incompetent performers of a given task are unaware of their incompetence and overestimate their own abilities; as a result, they are ‘doubly cursed’—both incompetent and ignorant of their incompetence, thereby curtailing opportunities and motivation

for improvement. Charles Darwin observed in the nineteenth century that 'Ignorance more frequently begets confidence than does knowledge,' nevertheless the phenomenon was only empirically tested and reported by Dunning and Krueger in the late twentieth century (Kruger & Dunning, 1999). Taking practical steps to counter this effect forms a cornerstone in Recovernance for the studied participants with ADHD.

The second is about gaining mastery of specific challenges within the person and within the environments related to ADHD, underscoring the importance of overcoming both internal and external limitations. In particular, mastery involves learning skills and optimizing symptom control. For this reason, ADHD specific coaching can be very valuable, notably, in the active self-management of ADHD-related deficits in the lived experience of the study participants. Another desirable finding was seeing the development of compensatory skills (in effect, each as a 'prothesis') as 'enablers.' Finally, becoming savvy and discriminating in managing others will help to minimize stigmatization and discrimination from the wrong people while maximize support from the right people across the home, social, friendship, and work domains. Though resilience is partly temperamental and related to inherited endowments the major part is nevertheless effortful, more related to acquiring skills, compensatory strategies, and securing external support networks—all of these are purposefully acquired and accumulated through an individual's efforts over time.

In the rest of this review, we shall therefore examine the available published evidence on (1) the natural history of the condition and its implication on resilience; (2) predictors of resilience and predictors of adverse outcomes in ADHD; (3) predictors of treatment response; (4) whether an emphasis on strengths in the absence of symptom reduction is likely to promote resilience in children with ADHD; (5) DSH, suicidality in ADHD and their prevention; and (6) resilience factors and resilience-based intervention in ADHD.

Before this main review, we would like to draw attention to some methodological issues in evaluating published evidence in this field. Research evidence on ADHD broadly derives from two groups: those conducted on subjects with hyperactivity (on a dimensional scale) and those with ADHD or a comparable diagnosis (by a categorical definition). The latter category comprises children who have been diagnosed to have a clinical disorder (i.e., ADHD) by clinicians or by researchers using validated diagnostic instruments. These subjects are usually ascertained through specialist clinics. On the other hand, study subjects with hyperactivity are often derived from community samples and classified according to the level of activity (plus or minus inattentiveness). These perceived hyperactive subjects represent the extreme end of a continuous dimension but may not necessarily have the clinical disorder of ADHD.

Research on ADHD children is often subject to referral bias, that is, children who are referred to doctors may have more severe symptoms or comorbid conditions that are troublesome to adults, such as aggression and conduct problems, which are more common among boys. Furthermore, results from these studies are heavily influenced by whether the control or comparison groups have been well chosen and representatively selected. A comparison group can be overmatched, leading to underdetection of differences, and undermatching can lead to detection of false differences.

On the other hand, research on hyperactivity, the extreme end of the dimensional spectrum, is usually conducted on community samples. They are less subject to selection bias. But the qualities of the data gathered often lack details and precision. Often they are confined to rating scale measures, recording behaviors over a short time frame, and completed by parents or teachers who are not trained to distinguish normality from disorder. The information gathered is therefore vulnerable to measurement errors, rater bias, and information bias, leading to misclassification of subjects. Furthermore in the analysis, the cut-off between 'normality' and 'abnormality' can be arbitrarily defined, for example, with a cut-off threshold made at the top 5%, 10%, 20%, or 25%. Thus, a child can be designated as a 'case' for a

range of reasons: he or she has been overrated by an overstrict parent, going through a bad phase at the time of data collection, or having an activity at the upper end of normality but below the lower boundary of a disorder. Birth cohorts are sometimes too small to contain adequate numbers of children who meet the criteria for the presence of disorder and thus lack statistical power to identify the true effects of a disorder. As such, the inferred relevance of the findings of these studies to ADHD needs to be taken with caution.

Natural Outcomes of Hyperactivity and ADHD

Evidence from Community Samples of Subjects with Hyperactivity

The natural course of the undiagnosed and untreated disorder can be inferred from longitudinal studies of epidemiologically ascertained community samples, that is, subjects drawn from large-scale surveys of unreferred individuals such as birth cohorts. These longitudinal epidemiological studies are difficult and expensive to carry out, and have generally been reported from cohort studies that were designed for other purposes. The classification of hyperactivity may be derived from proxy measures, which often lack precision and specificity for ADHD. The key studies are derived from five major cohorts: Dunedin, Christchurch, Isle of Wight, East London (Taylor et al., 1996), and Cambridge.

Fergusson, Lynskey, and Horwood (1997) have analyzed the Christchurch birth cohort with parent and teacher rating scales ascertained at different time points of development. They found no significant association between hyperactive/inattentive behavior and later offending, once coexisting conduct problems were adjusted in the analysis. The former only appeared as a risk because of its prior association with conduct disorder, which, they suggested, was the true risk. However, the negative consequence of hyperactivity was not trivial, for it did predict educational underachievement. Furthermore, a very strong correlation exists between the two conditions. Moffitt (1990) analyzed the Dunedin birth cohort and came to different conclusions. Even when early aggressive behavior (at age 5) was statistically controlled, hyperactive behavior predicted antisocial behaviors in adolescence.

This finding was confirmed by the Cambridge cohort, which Farrington reanalyzed to evaluate the effect of childhood inattention/hyperactivity on later criminal outcome (Farrington et al., 1990). Four hundred and eleven males were derived from a working-class area in London and followed up at age 8, 10, 14, 16, 18, 21, and 25. He found that inattention/hyperactivity predicted later criminality, and this was partly independent of conduct problems, especially for early conviction and multiple offending before age 25. His analysis indicated that hyperactivity and conduct problems were discrete, but overlapping, predictors for delinquency.

Only a few studies have been able to base their conclusions about natural history on cases of disorder. Schachar, Rutter, and Smith (1981) reanalyzed the Isle of Wight longitudinal epidemiological study and concluded that hyperactivity, if it was pervasive across situations and informants, strongly predicted the persistence of psychological deviance between the ages of 9 and 14. However, the initial stratification of cases had been studied for other types of disorders, so their cases of hyperactivity were particularly likely to show comorbid disorder. It is therefore possible that their prediction resulted, not from hyperactivity being a specific risk, but from its being a marker to increased severity of psychological disturbance.

The East London cohort delineated a diagnostic syndrome in an urban community sample by a two-stage process of screening followed by detailed assessment of high-risk and a proportion of low-risk subjects. This brings the advantages of having precise clinical details on subjects derived from a sample unaffected by clinic referral bias. Taylor et al. (1996) found that initial hyperactivity predicted later conduct problems, violence, and also covert antisocial behaviors, even after allowing for baseline coexisting conduct symptoms.

On balance, the evidence from community samples indicates that hyperactivity is associated with later maladjustments, ranging from poor academic achievement to antisocial behaviors, violence, and overt and covert conduct problems. We can now turn to the findings from individuals diagnosis of ADHD or its equivalents, and examine their outcomes.

Evidence from Diagnosed ADHD Samples

On syndromal persistence, a meta-analysis (Faraone et al., 2006) combined the findings of published longitudinal studies and estimated an approximate persistent rate of 15%. When the adult phenotype included 'ADHD in partial remissions' (i.e., symptomatic cases below the threshold for childhood syndrome), the persistence rate increased to 65%, indicating that about two-thirds of childhood cases continue to show significant symptoms and impairment in adulthood, despite a smaller proportion fulfilling the strict diagnostic definition.

A consistent finding across follow-up studies of children with ADHD is that they continue to have persistent problems with restlessness, overactivity, impulsive behavior, and inattention. Much of the published data on natural history of the disorder was derived from six major cohort samples (with representative authors in parentheses): New York (Gittelman & Mannuzza), Montreal (Weiss, Hechtman, & Milroy), Wisconsin (Barkley, 1997; Fischer et al., 2002), California (Lambert), East London (Taylor et al., 1996), and Sweden (Rasmussen & Gillberg, 2000). Other clinic cohorts with a shorter follow-up period included Harvard (Biederman et al., 2000), Pittsburgh (Molina & Pelham Jr., 2003), Portland (Satterfield et al., 1994), and Iowa (Loney et al., 1981). The East London and Swedish cohorts are unique in that the diagnosed cohorts were ascertained through epidemiological samples by screening. The other cohorts were clinic patients and thus subjected to selection bias.

In the New York cohort, Gittelman et al. prospectively followed 101 hyperactive males in adolescence and adulthood and compared them with matched normal controls. They found that the majority (68 out of 101) of the subjects still suffered from ADHD in early adolescence; 27% had conduct problems, and 20% had multiple convictions (Gittelman et al., 1985; Mannuzza et al., 1989). Gittelman et al. identified the continuing presence of hyperactivity, not the baseline hyperactivity at early childhood, as the best prediction for later risk of conduct problems and delinquency in adolescence, suggesting that chronic persistence of hyperactive symptoms is the key risk factor for adverse outcomes (Gittelman et al., 1985). In adulthood, only 4% still fulfilled the criteria for ADHD diagnosis, but more of the hyperactive subjects had antisocial personality disorders and nonalcohol drug use (Mannuzza et al., 1998). Their low rate of persistence of diagnosis may be due to the artifacts of diagnostic threshold for adult condition or high attrition rate. It is well known that those who refused or were lost at follow-up tend to have more problems. A follow-up study was carried out when the subjects reached 18 years of age (Mannuzza et al., 2004); the authors found that low levels of CD-type problems are not innocuous, because they predict later CD among children with ADHD but without a comorbid CD diagnosis at baseline. When the subjects reached 39 years of age, Mannuzza, Klein, and Moulton (2008) found that even in the absence of comorbid conduct disorder in childhood, ADHD increased the risk of developing antisocial and substance use disorders (SUDs) in adolescence, which, in turn, increases the risk for criminal behavior in adulthood.

In the Montreal cohort, Weiss, Minde, Werry, Douglas, and Neneth (1971) compared 91 clinic-referred hyperactive subjects with a control group matched for age, sex, IQ, and social class. At the 5-year follow-up, they found that the hyperactive adolescents had lower self-esteem and more academic problems. Most continued to be distractible, impulsive, and emotionally immature, although less hyperactive. In addition, 25% of the hyperactive subjects had delinquent behaviors.

Similar results were found by Akeman, Dykman, and Peters (1977); the hyperactive subjects had more oppositional or delinquent behavior and lower self-esteem when compared with a group of normal controls and other comparison group with learning difficulties. Satterfield et al. (1994) found a five times higher rate of arrest among the hyperactive subjects compared with matched controls in committing a felony (burglary, theft, or assault with a weapon). At a 10–12-year follow-up of the Montreal cohort, at approximately age 19, Weiss, Hechtman, Perlman, Hopkins, and Werner (1979) found them to have less education, have had more car accidents, and to have made more geographical moves when compared with normal matched controls. Hyperactive subjects had less friends, completed fewer years of education, failed more grades, and received lower marks. They also had more court referrals, had tried nonmedical drugs more often, and had more personality trait problems, most frequently of 'impulsive' and 'immature-dependent' types. They were more impulsive on cognitive style tests. During face-to-face research interviews, they reported more feelings of restlessness and exhibited more signs of restlessness. At the 15-year follow-up when the same cohort was in their early 20s (Weiss et al., 1985), they found 66% of hyperactive subjects still had at least one disabling symptom of ADHD and 23% suffered from an antisocial personality disorder. There had also been more suicide attempts in the hyperactive group.

According to Hechtman, Weiss, Perlman, and Tuck (1981), there are three categories of outcome. The first group had a fairly normal outcome. The second group consist of those with persistent attentional, social, emotional, and impulse problems; and as adults, they continued to have difficulties with work, interpersonal relationships, low self-esteem, impulsive behavior, irritability, anxiety, and emotional lability. The majority of young adults fell into this group. The third group included those with more serious psychiatric complications, including heavy dependence on drugs or alcohol, severe depression with suicidal problems, and antisocial personality pathologies. Their last finding published some 20 years ago has recently been replicated in other studies. One recent follow-up study extended the analysis further to identify predictors of antisocial personality disorder. Fischer et al. (2002) conducted a self-report survey on psychiatric and personality disorders in a follow-up study on the Wisconsin ADHD cohort (then in their early 20s) and examined a number of predictors for psychiatric morbidity. About 21% of hyperactive probands qualified for antisocial personality disorder (ASPD), a fivefold increase compared with the control group. Their findings were in keeping with previous studies at New York (27% vs 8% of controls), Montreal (23% vs 2.3%), and Sweden (18% vs 2.1%). They all suggest hyperactivity in childhood predisposes a person to ASPD in adulthood. Fischer's study, however, has extended the finding further by demonstrating that this elevated risk for ASPD is substantially influenced by severity of childhood conduct problems (odds ratio [OR]; OR = 4.54 with 95% confidence interval of 1.44–14.31), as well as teenage conduct problems (OR = 1.56 with 95% confidence interval of 1.20–2.02), even after controlling for the severity of childhood symptoms as covariants. Their findings provided support to Lynam's (1996) view that coexisting hyperactivity and conduct problems in the same child constitute a greater risk for antisocial outcomes in adulthood than when either problem occurs alone. Another interesting finding was that histrionic and passive-aggressive personality disorders were also significantly overrepresented among their subjects (12% and 18%, respectively); and these disorders were not a function of childhood conduct problems. However, elevated borderline personality disorder (14%) was associated with teenage conduct disorder (OR = 1.32 with 95% confidence interval of 1.05–1.66). Major depression was significantly greater in the hyperactive than control group, especially in the presence of ASPD (OR = 3.59) and borderline PD (OR = 5.56). In this study, they found no evidence of increase in substance abuse.

Research has been inconsistent with regards to increased risk for substance abuse. Some found a greater prevalence of alcohol or drug use in

New York (16% vs. 3% by age 18) (Gittelman et al., 1985), 12% vs. 4% at age 24 (Mannuzza et al., 1998), and 16% vs. 4% at age 26 (Mannuzza et al., 1993). In the Swedish sample, only alcohol misuse disorders occurred more often (24% vs. 4%) (Rasmussen & Gillberg, 2000). In the Montreal sample, significant differences were found for 'use of narcotics in last 5 years' (14% vs. 4%), 'use of nonmedical drug' (74% vs. 55%), and 'sold nonmedical drug' (18% vs. 5%); while no significant difference was found for 'use of hash, speed, and barbiturates' (Weiss et al., 1979). In Fischer et al.'s (2002) study, the rate of 'any drug disorder' among hyperactive subjects was 43%, which is high compared with controls of other studies. But in their study, this rate was not significantly different from their normal control (31%). The authors believed that this was due to an elevated rate of substance use in their control group, perhaps reflecting a secular trend in more prevalent substance misuse in the US population, leading to no increase in relative risk (Fischer et al., 2002). It is likely that the risks in development of substance abuse among hyperactive subjects is influenced by both exposure to and availability of illegal drugs, which in turn are related to the time, country, and urban or nonurban settings in which they live. Hence, prevalence of substance abuse as an outcome is more variable across studies.

Molina and Pelham (2003) evaluated the correlates and predictors of substance use in a follow-up study of 142 children with ADHD into adolescence (13–18 years old) comparing with 100 same-aged non-ADHD controls. They found associations between hyperactive subjects with higher levels of alcohol, tobacco, and illegal drug use. They identified three correlates: first, severity of childhood inattention symptoms predicted later multiple substance use; second, childhood oppositional defiant disorder/conduct disorder symptoms predicted later illegal drug use; and third, persistence of ADHD and adolescent conduct problems correlated with elevated substance use behaviors. Their findings suggested that elevated risks of subsequent drug use were mediated via both oppositional/conduct problems and severity of inattentive symptoms.

Lynskey and Hall (2001) suggested that the key mediator for substance abuse in ADHD is the presence of conduct problems. In other words, in the absence of conduct disorder, ADHD is not associated with an increased risk of substance use problems in males. Biederman, Wilens, Mick, Faraone, and Spencer (1998b), however, found ADHD to be associated with substance abuse independent of comorbid conditions. In their study of a clinic-referred ADHD adult sample, they found twofold increased risk for psychoactive substance use disorder (PSUD) and an increased likelihood of progressing from alcohol use disorder to a drug use disorder (hazard ratio = 3.8) for ADHD subjects. The authors suggested that individuals who used drugs for psychopathological reason (i.e., ADHD symptoms and pathologies) were more likely to progress to dependence and abuse after exposure and were less likely to abstain than those who used drugs for social or recreational reasons. In another study on adults with ADHD, the researchers found a slower remission rate, longer duration of PSUD, and slower recovery in their hyperactive subjects compared with nonhyperactive users (Wilens et al., 1998). Flory, Milich, Lynam, Leukefeld, and Clayton (2003) reported that ADHD and conduct disorder (CD) symptoms interacted to predict marijuana dependence symptoms as well as hard drug use and dependence symptoms. They concluded that individuals with comorbid ADHD and CD are at a greater risk for substance abuse than either condition occurring alone.

Overall, studies suggested three different paths leading to substance abuse: conduct problems, core pathology of ADHD, and unique interaction between comorbid ADHD and conduct problems. As persistent ADHD is highly correlated with CD, family history of ADHD, and psychosocial adversity, these findings suggest that the subgroup exposed to both a high dose of ADHD genetic loading and a high dose of environment insults are most likely to be at risk and thus least resilient.

Summary

Several themes emerge from the reviewed longitudinal studies. First, ADHD is not a benign condition, it is a chronic illness with significant psychological, social, and emotional morbidity. Second, for the majority of cases, significant or residual ADHD symptoms will persist and result in serious academic, social, and emotional problems in adolescence and in adulthood, even in the absence of more severe complications. Third, certain patterns are more indicative of a malignant course: persistence of symptoms over time, the presence of conduct problems and aggression, and the emergence of substance abuse and personality difficulties in adolescence and early adult life. The coexistence of conduct problems with ADHD appears to represent the strongest risk factor for severe maladjustments in later life. The implications of these findings are that (1) adequate control of ADHD symptoms (i.e., reducing persistence of symptoms) and (2) controlling aggression and factors leading to conduct problems can improve resilience.

Predictors of Resilience and Adverse Outcome in ADHD

In a review paper, Hechtman (1991) examined a range of factors associated with resilience among at-risk children (though not ADHD subjects), and related these factors to ADHD in a single case report. Factors reviewed included child characteristics (health, temperament, IQ, autonomy, psychological parameters) and family characteristics (socioeconomic status, emotional warmth and support, family size, and characteristics of the wider community). Research on at-risk children (though not ADHD subjects) shows that resilient children are healthier. They have fewer health problems in utero, perinatally, and in infancy. Their temperaments are more likely to be active, adaptable, and socially responsive, eliciting a more positive response from their caretakers and environment. They are more able to find solace and satisfaction. They also have more reflective vs. impulsive cognitive styles and more able to control their feelings appropriately. Children with higher IQs fare better in difficult circumstances, much as those with more advanced self-help abilities and more problem solving capacities and language development and communication skills. Resilient children had a greater sense of autonomy, internal locus of control, and more positive self-esteem. They have better ego strengths and coping skills. They can ask help of others and are generally more optimistic about themselves and their futures, along with showing better capacities for empathy, good peer relationship, and sense of humor. Protective family characteristics include closer supervision, higher social status, and a warm, cohesive, and supportive family atmosphere, where emotional expression, open communication, and independence are encouraged. Parental mental health and physical health are associated with the presence or absence of such a positive environment. Positive factors in the network of extended family, friends, school, and church can provide support that is lacking at home and can also confer protection. In this case study of an ADHD subject, Hechtman reported the subject to have a high IQ, a good sense of humor, and charm. His family was middle class, stable, loving, and supportive. There were significant figures in his life who believed in him. He thrived and coped well in his early adulthood, despite significant impairments and setbacks experienced at higher education and at work related to persistent symptoms of hyperactivity, restlessness, impulsivities, and inappropriate talkativeness. This was a single case report with evident methodological limitations. It nevertheless suggests that similar resilient predictors for at-risk children can be applied to ADHD subjects. There is a paucity of ADHD research that systematically examines whether this wide range of predictors for resilience for at-risk children also applies to ADHD subjects. Nevertheless, our review of published evidence suggests that child, family, and environmental factors can influence resilience in ADHD. Favorable child-predictive factors include (1) lack of perinatal complications, (2) higher baseline IQ, academic, emotional, and social functioning, (3) childhood temperament, frustration

tolerance and emotional stability, (4) desisting symptom trajectory or symptom reduction as response to treatment, (5) lower baseline symptoms, and (6) lack of baseline aggressive and conduct disorder symptoms, all predicting better subsequent adjustments. Favorable family and environmental factors include (1) lower family conflict, (2) lower parental negative expressed emotions, (3) higher socioeconomic status, (4) emotional health of family members and emotional climate of the home and child-rearing practices, (5) parental supervision and control, and (6) nonurban dwelling, which appear to modify the risk of exposure to drugs, deviant peers, and criminal activities. Weiss et al. (1971) found that children with initial high IQs and lower initial scores of hyperactivity and distractibility fared better academically in adolescence. Furthermore, a quarter of hyperactive adolescents with significant antisocial behavior had higher initial ratings of aggressive behaviors. This finding was also replicated by Loney et al. (1981) who demonstrated that initial aggression predicted later aggression and antisocial behavior in adolescence.

Loney's sample was derived from 124 children (ages 2–12) with the diagnosis of hyperkinetic/minimal brain dysfunction syndrome who had been referred to an Iowa child psychiatry clinic. In their follow-up at age 12–18, they measured three broad domains of outcomes: (1) symptoms at outcome, (2) delinquent behaviors, and (3) academic achievement. They carried out multiple regressions, expressing effect size of the predictors as 'squared multiple correlation,' which can be transformed to represent a percentage that accounts for the total variation of the outcome measure.

For the symptoms outcome domain, they examined three separate variables: (1) adolescent hyperactivity and inattention, (2) aggression, and (3) negative effects at follow-up. For adolescent hyperactivity scores (rated by the mother), they found three predictors to account for about 20% of the outcome measure: (1) parental socioeconomic status, (2) baseline aggression, and (3) a history of perinatal complications. Interestingly, baseline hyperactivity scores did not predict later hyperactive symptoms. Inattention was predicted by age of onset (effect size—5%). Adolescent negative effects were weakly predicted by response to medication and parental control (combined effect size—9%). For delinquency outcome domain, they examined aggression/offenses and illegal drug use. 'Offenses against property' were predicted by urban dwelling, size of family, and baseline aggression (combined effect size—37%). 'Offenses against person' was predicted by parental control, the presence of neurological signs, and aggression at baseline (combined effect size—36%). 'Involvement with illegal drugs' was predicted by baseline aggression, age of referral, urban dwelling, and response to drug treatment (negative) (combined effect size—40%). For academic achievement domain, they examined reading, arithmetic, and spelling abilities. Reading scores were predicted by past reading and response to drug treatment (combined effect size—63%). Arithmetic skills were predicted by past academic ability, response to treatment, family size (negative direction), maternal hostility, reading abilities, and perinatal complications (combined effect size—69%). Spelling was predicted by past academic ability, maternal control, hyperactivity, and family size (combined effect size—79%).

To put the results another way, their findings suggest that response to treatment (symptom reduction) promotes resilience in lowering the risk of later drug use and improving later academic achievement. Parent control confers resilience by increasing academic skills and reducing negative effect. However, perinatal complications predicted aggression, persistence of hyperactivity, and lower arithmetic skills. Urban dwelling increases the risk of drug use and offenses against property. Large family size increases the risk of offenses against property and lowered later academic achievement. Thus, lack of the latter factors would increase resilience, in a similar way that the absence of conduct and aggressive problems at baseline would improve outcome.

A prospective study of 123 hyperactive children also examined similar predictive factors (Fischer et al., 1993). For positive predictors they found that childhood cognitive and academic

competence predicted adolescent academic skills; and parental personal competence predicted social competence in adolescence. For negative predictors they found that family stress at baseline predicted conduct problems; and the combined effects of paternal antisocial tendencies and the severity of childhood impulsivity–hyperactivity predicted later oppositional defiant behaviors. Child defiance, but not hyperactivity, predicted later arrests. Overall, the study suggested that no single predictor cut across all domains.

In the Montreal cohort at 10- to 12-year follow-up (Weiss et al., 1979), hyperactive subjects (around age 20) were asked what had helped them most during their childhood. The most common response was a positive relationship with a significant adult; for instance, one parent (nearly always the mother) who believed in their final success or a teacher who seemed to turn the tide of failure. Another response was discovering that they had some special talents. When asked what made things worse, the most common responses were family fights (usually concerning the hyperactive subject), feeling different (inferior, 'dumb'), and being criticized. Significantly more hyperactives than controls rated their childhood as unhappy. However, the authors did not report whether these factors were correlated with outcomes in their study.

In a later publication by the same group, Hechtman, Weiss, Perlman, and Amsel (1984) examined a range of childhood predictors of outcome in early adulthood. The outcome measures studied include: (1) emotional adjustment, (2) academic performance, (3) police involvement, (4) car accidents, and (5) substance and alcohol misuse. The authors identified baseline personal characteristics such as IQ, aggressiveness, emotional stability, and low frustration tolerance, and family characteristics, such as socioeconomic class, child-rearing practices, home emotional atmosphere, and parental mental health, to be significant predictors of successful adult outcome.

Within family measures, the specific effect of parental negative expressed emotions influencing the development of antisocial behaviors in hyperactive children has been studied by Rutter et al. (1997). Negative expressed emotions denote parental criticism, disapproval, negative attributions, as well as rejecting and hostile attitudes toward the child. They are coded independently of emotional warmth. Emotional over involvement (EOI) was originally conceptualized as a component of 'expressed emotion' in the Camberwell Family Interview for adults. As dependency is age appropriate for children, the validity of this construct in childhood-related measurement is questionable. EOI has thus not been included in most childhood studies of expressed emotions.

Rutter et al. (1997) conducted a longitudinal follow-up study on pervasively hyperactive subjects ascertained in a community epidemiological sample and examined the effect of expressed emotions on disruptive behaviors. Hyperactive children who were exposed to a high level of negative expressed emotions from parents exhibited more antisocial and disruptive behaviors at follow-up compared with the hyperactive counterparts exposed to a low level. The pathogenic effect of negative child–parent relationship applied also to nonhyperactive subjects in the same study, though the effect was less marked, that is, the rates of antisocial and disruptive behaviors were also raised in the nonhyperactive children exposed to a high level of negative expressed emotion; but the overall rates were lower than in the hyperactive counterparts. The findings suggest a possible causal relationship between expressed emotions and antisocial/disruptive behaviors.

The impact of emotional dysregulation on adjustments has recently received attention. Barkley and Fischer (2010) published a study, which followed up 135 hyperactive children into adulthood and measured their Emotional Impulsiveness (EI) symptoms. Of the hyperactive children now adults, 55 were classified as having persistent ADHD (ADHD-P); and 80 as having nonpersistent ADHD (ADHD-NP). They were also compared with a community sample of 75 subjects followed-up concurrently. They found significantly more EI symptoms in ADHD-P subjects, than their nonpersistent and community

control counterparts. EI was measured with seven items: (1) find it difficult to tolerate waiting—impatient; (2) quick to get angry or become upset; (3) easily frustrated; (4) overreact emotionally; (5) easily excited by activities going on around me; (6) lose my temper; (7) am touchy or easily annoyed by others. EI was found to contribute uniquely to major impairments in multiple domains—occupational, educational, criminal, driving, financial, and social relationship—after adjusting for the confounding effects of inattention and hyperactivity/impulsivity symptoms. The authors concluded that 'EI is as much a component of ADHD as are its two traditional dimensions and is associated with impairments beyond those contributed by the two traditional dimensions.'

Wilmshurst, Peele, and Wilmshurst (2011) found that subjects with a diagnosis of ADHD who nevertheless became college students represented an especially resilient group. This group reported significantly higher paternal support and greater support from friends than non-ADHD college students. The authors suggested that college students with ADHD should form a focus of research, as they had achieved success against the odds.

Mikami and Hinshaw (2003) found a complex relationship between protective factors and adaptive behaviors in girls with and without ADHD. Peer rejection was related to higher levels of aggressive behavior and depressed/anxious behavior, confirming peer problems as a risk factor. For all girls, popularity with adults predicted lower levels of aggression while goal-directed solitary play predicted lower levels of anxiety/depression. Popularity with adults was most protective among the peer-accepted subgroup, whereas solitary play was most protective among the peer-rejected subgroup. For ADHD girls (not controls), engaging in meaningful solitary play was a stronger predictor of lower levels of anxious/depressed behavior. In the follow-up study, Mikami and Hinshaw (2006) hypothesized protective factors to be childhood measures of self-perceived scholastic competence, engagement in goal-directed play when alone and popularity with adults. In adolescents, the authors examined a range of outcomes, including externalizing and internalizing symptoms, academic achievement, eating pathology, and substance use as outcomes. ADHD and peer rejection predicted an increased risk for all these outcome measures except for substance use, which was predicted by ADHD only. ADHD and peer rejection predicted lower adolescent academic achievement but not adolescent externalizing and internalizing behavior. As a buffer, self-perceived scholastic competence in childhood (with control of academic achievement) predicted resilient adolescent functioning. However, the protective effect of meaningful solitary play was not detected in adolescents.

To investigate biological factors that promote resilience, Nigg, Nikolas, Friderici, Park, and Zucker (2007) examined two independent samples: children were classified as resilient if they avoided developing ADHD, oppositional defiant disorder (ODD) or conduct disorder (CD) in the face of family adversity. The first sample consisted of ADHD cases and controls. The second replication sample was a prospective cohort of children from high-risk families with high levels of alcohol and drug misuse. Adversity was indexed by low socioeconomic status, parental psychopathology, marital conflict, and exposure to stressful events. Resilience was defined as being below the diagnostic threshold for attention, oppositional, and conduct problems despite adversity. Two specific biological protective factors were examined, given their potential relevance to prefrontal brain development. These were (1) neuropsychological response inhibition, as assessed by the Stop task, and (2) a composite catecholamine genotype risk score. Resilient children were characterized in both samples as displaying more effective response inhibition. A composite high-risk genotype index was developed by summing the presence of high-risk allele markers on three genes expressed in prefrontal cortex: dopamine transporter (SLC6A3), dopamine D4 receptor (DRD4), and noradrenergic alpha-2 receptor (ADRA2A). Homozygous insertion genotype was classified as high risk for DRD4. High-risk SNP (single-nucleotide polymorphism) alleles were 'G' (A/G or G/G) for SLC6A3, and 'T' (C/T or T/T) for ADRA2A. The

authors found that a low score in risk genotype was a reliable resilience indicator against development of ADHD and CD—but not ODD—in the face of psychosocial adversity. Amidst moderate or moderate-to-high adversity, biological characteristics of the child provided broad protection, if the child had protective genotypes or had strong response inhibition or both. Notably, genotype and response inhibition were uncorrelated and did not interact; the authors suggested these to be two distinct neurobiologically based protective mechanisms. The catecholamine genes analyzed are expressed primarily in prefrontal cortex and involved in executive functions; whereas response inhibition is associated with the integrity of basal ganglia and striatum as well as prefrontal–subcortical network, influenced by other putative factors. The authors suggest that moderate to high levels of family adversity, which disrupt socialization experiences and prefrontal cortical functions necessary for adjustment and regulation, could be one route in a multipathway causal model of ADHD. Furthermore, stress events alter neural development in regions involving hippocampus, amygdala and frontal cortex, important in inhibitory control. The results provided preliminary evidence for key biological factors linked to prefrontal cortex function, which may enable children to avoid developing ADHD and CD in the presence of psychosocial adversity.

In summary, studies on predictors of outcomes in hyperactive subjects suggest that factors in the child, family, and environment can all influence later resilience and maladjustments. We now turn to examine the issues of resilience and developmental trajectories.

Developmental Trajectories and Resilience: The Effects and Predictors of Remitting and Persistent Life Course and Normalization of Function for Persisters

In a prospective study on a clinic sample of ADHD subjects, Biederman et al. (1996) examined the rate of desistence and persistence over time, and identified the predictors for desistent and persistent life course of ADHD. Their sample consisted of Caucasian boys aged 6–17 with IQs over 80 and who had an intact nuclear family. At 4-year follow-up, they identified a high rate of persistence of 85%, with only 15% remitted. The high rate of persistence found was likely due to the broad definition of persistence they used (see later). Of the 15% whose ADHD was a transient disorder, half of the remission occurred in childhood and the other half in adolescence. Predictors of persistence included family history, severity of ADHD, psychosocial adversity, and comorbidity with conduct, mood, and anxiety disorders. ADHD in the family history influenced persistence: 45% for persisters vs. 33% for late desisters vs. 10% for early desisters. The persistent form of ADHD also differed in the family history (34% vs. 11% vs. 10%). This suggested a stronger effect of familiality and perhaps a heavier genetic loading in the persisters. As an indicator of psychosocial adversity, persisters were exposed to a higher level of family conflict. Subjects' own characteristics also differed. Among the persisters, there were more severe inattentive and hyperactive symptoms and a greater level of functional impairments at both baseline and follow-up. Persisters also had more symptoms of oppositional/defiance disorder and depression and anxiety problems. Furthermore, the persisters showed a trend of having a lower IQ at baseline, but the differences did not reach statistical significance (109.2 vs. 110.8 vs. 111.7; $P = 0.063$). The GAF (global assessment functioning) scores were significantly lower for the persisters at baseline (47 vs. 53 vs. 53; $P = 0.0001$) and at follow-up (52 vs. 60 vs. 64; $P = 0.0001$). Overall, the persisters had higher exposure to family conflicts, a stronger family history of ADHD, and were more severely affected and impaired by ADHD at both baseline and follow-up. In other words, resilience (better functioning and escaping impairments at outcome) was associated with a desisting life course, which in turn was predicted by lower symptom levels, better adjustment, lack of family history, and lack of family conflict at the baseline.

With regards to the definition of persistence, Biederman et al. (2000) identified a shift in the patterns of symptoms and impairments with age. The symptoms of inattention remitted for fewer subjects than did symptoms of hyperactivity or impulsivity. To some extent, it seemed the proportion of subjects experiencing remission varied considerably with the definition used (highest for syndromatic remission, lowest for functional remission). This finding was also supported by an earlier longitudinal follow-up study of 106 boys with DSM-III-R ADHD (Hart et al., 1995). Hyperactivity/impulsivity symptoms declined with increasing age, but inattention symptoms did not. Inattention declined only from the first to the second assessment and remained stable thereafter in boys of all ages. The rate of decline in hyperactivity–impulsivity symptoms was independent of the amount and type of treatment received. Furthermore, they found that boys who still met the criteria for ADHD at follow-up were significantly more hyperactive/impulsive and more likely to exhibit conduct disorder at baseline than boys who no longer met the criteria at follow-up. The findings suggest possible heterogeneity in the childhood form of ADHD, with one subtype traversing a symptom-declining trajectory and another a more symptom-persistent trajectory.

So far we have examined maladjustment in relation to persistent ADHD trajectory and resilience in relation to desisting trajectory. We now turn to the interesting question on predictors of resilience despite persistence of symptoms. That is, can resilience exist in spite of persistent ADHD, and if it does, what are they? In a follow-up study of a clinic sample comprised of 85 boys with persistent ADHD diagnosed by DSM-III-R criteria, Biederman, Mick, and Faraone (1998a) attempted to disentangle syndromic persistence from functional outcome in ADHD youths. The subjects were followed prospectively into mid-adolescence and compared with 68 non-ADHD boys. Three domains of functioning were recorded at baseline and follow-up: school, social, and emotional. At follow-up, the persistent ADHD sample fell into three groups: 20% functioning poorly in all domains, 30% functioning well, and 60% with intermediate outcomes. They found that impulsivity reduced the likelihood for normalization of functioning (odds ratio [OR] for normalization of functioning = 0.7 with 95% CI of 0.5–0.9). That is, among those persistent ADHD subjects, those with a high level of impulsivity had more impaired function. Likewise, psychiatric comorbidity (OR = 0.3 with 95% CI of 0.1–0.7), exposure to maternal psychopathology (OR = 0.3 with 95% CI of 0.1–0.8), and larger number of siblings (OR = 0.5 with 95% CI of 0.3–0.9) all predicted lower adjustments. Learning difficulties impeded normalization of school functioning (OR = 0.15 with 95% CI of 0.05–0.53). The converse was also true, that is, the absence of these risk factors was associated with improved functioning despite persistence of ADHD. Furthermore, improvement in one area of functioning had a snowball effect, increasing the chance of improvement in other areas. Good baseline functioning also predicted normalized functioning at follow-up. Good emotional functioning at baseline predicted normalized function of both emotional functioning (OR = 5.6 with 95% CI of 2.2–14.6) and school functioning (OR = 2.4 with 95% CI of 1.01–5.8). Good social functioning at baseline predicted normalized emotional functioning at follow-up (OR = 3.1 with 95% CI of 1.05–9.3). Good school functioning at baseline predicted normalized school functioning at follow-up (OR = 3.6 with 95% CI of 1.4–9.1). In short, good baseline functioning and lack of adverse predictors confer relative resilience despite persistence of ADHD. This suggests that normalization of functioning and syndromic persistence of ADHD may be partially independent.

Genetic Influence: The Role of Gene and Environment Interaction

There is only scanty published evidence in the field of ADHD demonstrating the effect of gene and environment interaction in moderating resilience. As already mentioned, a study examined the effect of psychosocial adversity and genetic risks in developing ADHD, ODD, and CD. A

composite catecholamine genotype risk score was used by summing presence of risk across markers on three genes expressed in prefrontal cortex: dopamine transporter, dopamine D4 receptor, and noradrenergic alpha-2 receptor. A low score in risk genotype was reported to be a reliable resilience indicator against development of ADHD and CD, but not ODD, in the face of psychosocial adversity (Nigg et al., 2007). We anticipate this topic to be an area of interest for ADHD research. For non-ADHD subjects, two highly cited publications have demonstrated that genetic factors can influence resilience following exposure to childhood abuse and life stress.

Caspi et al. (2002) investigated the role of genetic contribution to account for why some children who are maltreated grow up to develop antisocial behavior, whereas others do not. A functional polymorphism in the gene encoding the neurotransmitter-metabolizing enzyme monoamine oxidase A (MAOA) was found to moderate the effect of maltreatment. Subjects with a genotype conferring high levels of MAOA expression (associated with an increased level of this enzyme in the brain) were less likely to develop antisocial problems following exposure to childhood maltreatment. Those with a genotype conferring low levels of MAOA expression had an increased risk of developing antisocial behaviors. Their findings suggested that the genotype associated with a high level of MAOA expression can also confer resilience following exposure to childhood abuse. They also provided early evidence that genotypes can moderate children's sensitivity to environmental insults; and this finding has been replicated and supported by further evidence from a meta-analysis (Kim-Cohen et al., 2006).

In the second study by the same group, Caspi et al. (2003) investigated why stressful experiences led to depression in some people but not in others. They used a prospective longitudinal study of a representative birth cohort and investigated the moderating effects of a functional polymorphism in the promoter region of the serotonin transporter (5-HTT) gene. There are two common variants of this gene: a short and a long form (or allele). They found that subjects who are homozygous or heterozygous (with one or two copies respectively) of the short allele of the 5-HTT promoter polymorphism exhibited more depressive symptoms, diagnosable depression, and suicidality following exposure to stressful life events than individuals homozygous for the long allele. This study again provides another piece of early evidence that an individual's response and resilience to environmental insults can be moderated by his or her genetic makeup.

In the field of ADHD, there is early evidence that comorbid ADHD and CD may be an etiologically distinct disorder entity as suggested by analysis of familial history and aggregates (Faraone et al., 1997; Thaper et al., 2001); and also that adult ADHD may be a more homogenous condition with stronger familial etiological risk factors than the childhood form (Biederman et al., 1995). Within the childhood form, there are likely to be subtypes of persistent and nonpersistent variants, possibly mediated by different genetic and environmental influences. A transient course of ADHD is associated with better prognosis; in contrast, both persistent ADHD and the comorbid form of ADHD/CD are associated with greater maladjustment. If genetic factors are proven to be associated with these varying subtypes of clinical phenotypes, genetic makeup will also influence resilience and vulnerability in the presence of ADHD. We anticipate that genetic research and gene–environment interaction research in the near future may provide interesting insights into the biological and environmental substrates that confer long-term resilience.

Resilience, Treatments, and Lessons from the MTA

Here, we examine the effects of treatment and medication in terms of symptom reduction and 'normalization' of behaviors. In particular, we summarize some of the key relevant findings from the publications from the Multimodal Treatment of Attention-Deficit Hyperactivity Disorder (MTA, 1999) study. A reader may refer

to an overview summary paper on the MTA (Jensen, Hinshaw et al., 2001b) and one on the effect of comorbidities in the MTA (Jensen et al., 2001a).

There are in excess of 200 published studies reporting the efficacy and effectiveness by stimulant treatment on inattentive and hyperactive symptoms. More interestingly, there are other studies examining the effects of stimulants on symptomatic impulsivity, aggression, and conduct problems, as well as on executive function and the impacts on parental negative expressed emotions.

In both laboratory and naturalistic settings, stimulants have been found to be effective in reducing aggression and impulsivity. Improvements in social and interpersonal functioning as a result of reduction in aggression and impulsivity have been confirmed in naturalistic studies. In other words, the effects of stimulants are not only confined to attention, they also affect emotional and social processing and can correct disruptive, intrusive, and aggressive behaviors, which often render hyperactive children unpopular among their peers. In nonhyperactive children with CD, a study (Klein et al., 1997) reported improvements in conduct symptoms with stimulant treatment, confirming the effect of stimulants on nonhyperactive symptoms.

The positive effects of stimulant medication on social functioning within the family have been demonstrated. In a double-blinded crossover treatment study, Schachar, Taylor, Wieselberg, Thorley, and Rutter (1987) found that the family function and relationships improved in children who responded to methylphenidate treatment: there was a reduction in negative sibling encounters and a reduction of parental negative expressed emotions. Treatment response was defined as 50% or greater reduction in hyperactive symptoms while on stimulant treatment. Measures of maternal warmth, criticism, contacts with parents, parental coping, and positive/negative encounters with siblings were gathered by raters blinded to the treatment and response status. Among responders, methylphenidate was significantly associated with more expressed maternal warmth, less criticism, increased contact between mother and child, and fewer negative encounters between the child and his siblings.

If symptom control by treatment can improve social, interpersonal, and cognitive functioning, then it is important to identify the most effective form of treatment. The MTA study compared the effects of different modes of treatment.

ADHD Symptoms

In the MTA, subjects were randomized to four arms: community care (CC), intensive behavioral treatment (Beh), state-of-the-art medication management (Med), and a combination of Beh and Med (Comb). The key initial finding was that for core ADHD symptoms, the Comb and Med treatments were more effective than Beh and CC (i.e., Comb ~ Med > Beh – CC, with an effect size [ES] of 0.50–0.60). Ninety percent of children on Comb and 88% on Med no longer met the full criteria for ADHD at the study end point. Two more recent secondary analyses (one using a composite outcome measure and another using a categorical outcome measure) identified a significant but marginal superiority of Comb over Med in additional to the initial findings (i.e., Comb > Beh ~ CC, with ES = 0.70; and Comb > Med with ES = 0.28).

The difference between Med and CC was striking. Interestingly, two-thirds of CC subjects also took medication. But there were important differences between the community practice and study protocol in medication management. Subjects in the Med arm were given a detailed initial dose titration over 28 days. This was followed by monthly review, with adjustment of dosage, or change of medication if indicated. The prescribing clinicians also contacted the teachers before each monthly review. Adjustments of medication after initial dose titration were common, and only about 30% of the children remained on the initial dose established by initial titration by the end of the 14-month trial period. This means that about 70% of the children needed continuing monitoring and dose adjustment to

obtain the optimal treatment response. Interestingly, most of the dose adjustment was toward a higher dosing, especially for those starting on a low and intermediate post-titration dose. Med subjects were on three times daily dosing, with a higher average daily dose (average total daily dose = 32.8 mg) and 12 visits per year; in contrast, CC subjects were on twice daily dosing, with a lower average daily dose (average total daily dose = 18.7 mg) and an average of 2.3 visits per year. It appears that initial dose titration followed by close monitoring and effective dosing with careful adjustment to maintain response over time and to avoid side effects will markedly improve the immediate efficacy of stimulants.

Non-ADHD Symptoms

The study also examined non-ADHD outcome measures. These measures included parent–child relationship, teacher-rated social skills, anxiety/depression symptoms, and oppositional/defiance symptoms as well as academic achievement and functioning. Comb had a small but statistical significant superiority to Beh for (1) academic functioning, (2) WIAT reading scores, (3) controlling internalizing, and (4) oppositional/defiance symptom (with ES range 0.26–0.28). Comb was also superior to CC in improving parent–child relationship, additional to the above four measures. Med was located in between Comb and CC, not statistically different from either. The nonsignificant differences should not be regarded as 'no difference' as MTA was designed to have 80% power to detect ES of 0.4 or greater; so any real difference of a magnitude smaller than this ES is less likely to be detected.

Moderators

Factors whose presence alters the likelihood of treatment response are known as moderators. Moderators identified by the MTA were: (1) comorbid anxiety disorder and patterns of comorbidities, (2) socioeconomic status and educational background of the parents, and (3) comorbidity status. These factors were already present prior to the randomization, so the influences of moderators on the outcome of the study are protected by the randomization process. They should be distinguished from 'mediators,' which are factors that occur after the randomization process, such as clinic attendance, compliance, adherence to treatment, and therapeutic alliance with the therapists; and the latter are thus not protected by the randomization process.

Children with comorbid anxiety are more likely to respond to Beh. That is, Beh appeared more effective than indicated in the primary analyses. First, it diverged from CC, and converged with Med. Second, Comb treatment was also more effective, diverging from Med. Differences in treatment effects were most evident in outcome measures on (1) parent-reported hyperactivity and inattention, (2) parent–child relationship, and (3) teacher-rated social skills. Perhaps children with anxiety symptoms are biologically more sensitive and hence responsive to conditioning. About 33% of subjects met DSM-III-R criteria for an anxiety disorder excluding simple phobias. Moderating effect of anxiety favors the inclusion of psychosocial treatment for them. This positive effect was also identifiable in parent-reported outcome measures on disruptive behavior, internalizing symptoms, and inattention (March et al., 2000).

Family socioeconomic status (SES) can be fractionated into two independent measures: parental education and parental occupation. The key departures from the primary finding (Comb ~ Med > Beh ~ CC) due to moderating effect of SES were for disruptive behavioral, inattentive, and hyperactive symptoms. For families with a low SES, Comb was more effective than all three other treatments (Comb > Med ~ Beh ~ CC) for oppositional/defiance symptoms only. There is no additional advantage of Comb for ODD symptoms among children from families with higher occupational status. For the high educational status group, Comb is more effective than Med (Comb > Med > Beh ~ CC) for hyperactive and inattentive symptoms. One explanation for these findings is that perhaps ODD symptoms in children from advantageous background were more

biologically determined, whereas in children from disadvantageous backgrounds the same symptoms were more attributable to poor parenting. Correcting parenting skills in low SES families thus had a more marked effect than the other group. Second, core ADHD symptoms could be more recalcitrant to behavioral treatment, requiring parents with higher educational backgrounds to implement the program more effectively. In recommending treatment, clinicians should identify target symptoms and familial characteristics and offer the optimal intervention plan accordingly (Rieppi et al., 2002).

Finally, the presence of comorbid conditions also moderates treatment response. Jensen, Hinshaw, Kraemer, et al. (2001a) found that the presence of anxiety symptoms (ANX) with ADHD regardless of CD status increased the likelihood of response to behavioral treatment. ANX status confers benefits on ADHD children regardless of the presence of oppositional defiance/conduct disorder symptoms (ODD/CD). Its presence exerted ameliorating effects on concurrent ODD/CD (i.e., ADHD + ANX + ODD/ CD vs. ADHD + ODD/CD). As a simple rule for predicting treatment response, ADHD plus ANX subjects were likely to respond to any of the three treatments: behavioral alone, medication alone, and combination of medication and behavioral intervention. In other words, all interventions are likely to be effective for them. In contrast, ADHD only and ADHD plus ODD/CD subjects usually responded only to interventions that included medication. That is, for these two groups, medication appeared especially indicated, and behavioral intervention alone seemed contraindicated. However, for the doubly comorbid group with ADHD plus ANX plus ODD/CD, combination interventions appeared to offer substantial advantages over other treatments.

In summary, the MTA study identified that management with state-of-the-art medication alone is—at least over 14 months—more effective than conventional medication management and behavioral management combined. The additional benefit of combination treatment should be reserved for special cases, such as children with double comorbidities (ADHD + ANX + CD/ODD) and children from low SES background with severe ODD/CD symptoms. Children with comorbid anxiety disorder can be given behavioral management as the first line of treatment, especially if they are from high SES background and targeted for inattentive and hyperactive symptoms. Behavioral treatment alone is not as effective for children with ADHD only and ADHD+CD (but of course some families will prefer the option, knowing that adverse effects are probably less likely in behavioral treatment). Treatment should be tailored according to the psychosocial and clinical profiles of a child. There is no single treatment strategy that would confer universal benefits for all subtypes of ADHD.

The 3- and 8-year follow-ups of the MTA subjects have, however, found no superiority of the intensively medicated group to that receiving only behavioral approaches or, indeed, to the routinely treated community control group. The practical conclusions of this equifinality can be argued over. Some will say that this calls for extending intensity of treatment delivery over a longer time span. Others will consider that equifinality is only to be expected, given that randomization stopped at the 14-month point. The self-selection that followed would mean that families chose whichever therapy was best for them, and would imply that they mostly chose wisely. The main implication for this chapter is that a period, even as long as 14 months, in which symptoms are intensively controlled is not sufficient to promote resilience.

Resilience, Stimulant Treatment, and Subsequent Substance Abuse

Data from more than 200 randomized clinical trials have consistently found stimulants an effective treatment for children and adults with ADHD. One study reported that childhood treatment with stimulants for ADHD increased the risk for subsequent cigarette smoking and nicotine and cocaine dependence in adulthood (Lambert & Hartsough, 1998). This study received much media attention, and public con-

cerns have been raised whether early exposure to stimulant medication predisposes to subsequent substance abuse and dependency.

This study, however, represents the only study so far reporting such an association. Twelve other studies have not found evidence that childhood stimulant treatment for ADHD leads to an increased risk for substance experimentation, use, dependence, or abuse by adulthood. Wilens, Faraone, Biederman, and Gunawardene (2003) conducted a meta-analysis on six of the larger published studies, two studies with follow-up in adolescence and four in young adulthood. The analysis comprised 674 medicated and 360 unmedicated subjects. The combined estimate of the odds ratio using random-effect meta-analysis indicated a 1.9-fold reduction in risk (95% CI 1.1–3.6) for SUD for those exposed to childhood stimulant treatment compared with those not exposed. The age effect showed that studies with follow-up into adolescence showed a greater protective effect (OR 5.8) than studies with follow-up to adulthood (OR 1.4). It was possible that the extended follow-up period to adulthood increased the likelihood of exposure to drug experimentation and hence misuse. Alternatively, this might be due to higher dropout in stimulant treatment in early adulthood, leading to loss of risk protection. However, data on duration of exposure to pharmacotherapy were not available and did not allow further analysis to test the hypothesis. Another explanation was that enhanced parental supervision for youths receiving medication might have confounded the analysis.

Furthermore, there were major methodological problems with the study by Lambert et al. They found that stimulant treatment increased the risk of subsequent drug use in young adults. In particular, they found that exposure to earlier stimulant treatment was linearly related to nicotine and cocaine abuse, with similar trends to alcohol abuse. There were, however, significant differences on baseline characteristics between the medicated and unmedicated subjects, conduct disorder was overrepresented in the medicated group. Prospective studies have consistently identified conduct disorder as a major risk factor for the development of SUD among ADHD subjects. Conduct disorder, therefore, represents an important confounder in their analysis, which was likely to give rise to a false association. Overall, the evidence indicates no harmful association between childhood exposure to stimulant treatment to ADHD and subsequent substance abuse in adolescence and adulthood. There is evidence from the pooled estimates derived from meta-analysis to suggest that effective treatment reduces the risk of subsequent substance abuse, and thus confers resilience.

Preserving Life and Overcoming the Risks of Deliberate Self-Harm (DSH) and Suicidality as Prerequisites of Promoting Resilience

The strong associations between DSH, suicidality and ADHD are often overlooked in the ADHD and resilience literature. This topic, in our view, warrants its own section given its critical importance—as the preservation of life and reduction of self-harms are fundamental to developing and promoting resilience.

Childhood ADHD robustly predicts increased risk of depression in late adolescence by about fivefold; and also the risk of suicidal attempts in adolescence, especially for those also exposed to maternal depression in childhood (Chronis-Tuscano et al., 2010). One study on college students found that the links between depressed mood and suicidal ideation/attempts were stronger in students who experienced higher levels of ADHD symptoms; but not for self-harm and seeking medical attention. The alarming implication is that students with greater ADHD symptoms are at an increased risk of attempting or completing suicide when experiencing depressed mood—rather than inflicting nonfatal self-injuries; and they are also less likely to seek medical attention (Patros et al., 2013). A Swedish population study found that individuals with ADHD had elevated risks of attempting and completing suicide, with an OR at 3.62 (95% CI, 3.29–3.98) and at 5.91 (95% CI, 2.45–14.27) after adjusting for comorbid psychiatric disorders

(Ljung et al., 2014). Apart those evaluating youths and adults, three studies investigated the impact of ADHD on suicidality in children and adolescents. One Australian study examined 18,729 children and adolescents (aged 5–15 years) who were admitted to hospitals due to assaults, accidental injuries, self-harm and suicide attempts; and found that participants with ADHD were at a higher risk of being victims of assaults (OR = 2.77), as well as committing suicide attempts or self-harm acts (OR = 3.76) (Lam, 2005). An American study examined a clinical sample and found that adolescent males who attempted suicide had more mood, alcohol misuse, ADHD, and conduct problems (Kelly et al., 2004). A longitudinal study evaluated a large French community sample comprising of children and adolescents aged 4–18 years (which was not subjected to referral bias as in clinic or hospital samples). The study followed up the sample 8 years later; and the authors found a significant link in males between childhood ADHD symptoms and the subsequent risk of suicide planning and attempts (OR = 3.25). This association was found to be independent of other co-occurring psychiatric or substance misuse conditions, though mood and disruptive behavioural problems and cannabis misuse contributed additional risks. Notably, the association was confined to more severe and risky suicidal behaviors, rather than suicidal ideations (Galéra et al., 2008). The findings from the juvenile samples converge with those from the adult literature—showing a significant association between ADHD and suicidal behaviors.

A review study examined the risk of ideations and completed suicide; and reported 1.7- to −3.6-fold higher risks of identifying adults with ADHD in the completed-suicide group, while adults with ADHD expressed more suicidal ideations and made more attempts, especially in the context of conduct and substance misuse problems (Impey & Heun, 2012). Another literature review study identified an increased risk for ADHD cases to complete suicide (hazard ratio = 2.91), especially for young males and when co-occurring with depression or conduct problems (James et al., 2004).

Importantly, treatment of ADHD can reduce the risk of suicidal attempts. A large Taiwanese population longitudinal cohort study recruited 20,574 adolescents and young adults with ADHD; and found that ADHD predicted a suicide attempt (hazard ratio = 3.84, 95% CI = 3.19–4.62) and repeated suicide attempts (hazard ratio = 6.52, 95% CI = 4.46–9.53) (Huang et al., 2018). However, a significant risk reduction in repeated suicide attempts was found among in men taking long-term methylphenidate treatment (hazard ratio = 0.46, 95% CI = 0.22–0.97). Recently, this protective effect of ADHD medication has been replicated by the US study, which examined a very large cohort (N = 3,874,728, 47.8% were female patients) of patients with ADHD (Chang et al., 2020). ADHD treatment with medication significantly lowered the odds of suicide attempts (OR = 0.69 (95%, 0.66–0.73)). Similar reductions were found across age and gender subgroups, including patients with ADHD with pre-existing depression or substance use disorder. The protective effect was mainly seen for stimulant medication (OR, 0.72; 95% CI, 0.66–0.77); nonstimulant medication was associated with statistically nonsignificant risk reduction in suicide attempts (OR, 0.94; 95% CI, 0.74–1.19).

In 2020, a meta-analysis was conducted to pool estimates from previous studies by using (1) population-level analysis and (2) individual-level analysis. Both strategies yielded similar results, indexing risk reduction of suicidal attempts associated with ADHD medication intervention. Population-level analysis found a reduction in relative risk at 0.76 (95% CD at 0.58–1.00; P = 0.049), while the individual level of analysis showed at 0.69 reduction (95% CI, 0.49–0.97; P = 0.049) (Liu et al., 2020). This means that ADHD medication intervention can potentially reduce the risk of suicidal attempts by about 24%–31%. Again the risk reduction was found for participants treated with stimulants (RR = 0.72; 95% CI, 0.53–0.99; P = 0.042 on population-level analysis and RR = 0.75; 95% CI, 0.66–0.84; P < 0.001 on within-individual analysis). Moreover, the protective effect was not observed in participants taking medication in the

first 90 days (RR = 0.91; 95% CI, 0.74–1.13; $P = 0.416$), implicating that the protective effects were only seen in those taking long-term treatment (Liu et al., 2020).

Girls with ADHD may present with suicidal self-injury (NSSI) and symptoms similar to borderline personality disorder, dominated by severe emotional dysregulation symptoms. They are also more at risk to exposure to assaults and trauma due to their impulsivity, thrill-seeking, and sensation-seeking behaviors. Beauchaine, Hinshaw & Bridge (2019) examined the roles of impulsivity, ADHD symptoms and trauma in girls with suicidal behaviors and nonsuicidal self-injury (NSSI); and found striking associations and interactions between these risk factors. The rate of suicide attempts is low in the general population, but this is elevated in those either with ADHD or maltreatment exposure in isolation (Beauchaine et al., 2019). Strikingly, those girls with both ADHD and maltreatment exposure (physical abuse, sexual abuse or neglect) have a 33% risk of making one or more serious suicide attempts; and for this group the rate of NSSI is at 50%.

Therefore, ADHD and maltreatment are independent risk factors for NSSI and suicidality for girls, but they interact to amplify the risk multiple fold. For this reason, the detection and treatment for ADHD in girls are critical in addressing and managing the recurrence risks of self-harm and suicidality.

For these reasons, a clinical evaluation of suicidal ideations and attempts—within the context of family history of completed suicide—form an essential component of ADHD assessment and management. If present, these problems need to be treated actively and monitored carefully. Treatments of co-occurring depression, post-trauma stress disorder or substance misuses also need to be undertaken without delay.

ADHD and trauma can co-occur, especially for youths from high-risk family background. Their co-occurrence interacts to amplify risks and challenges. These two conditions are not mutually exclusive; therefore, neither a neurobiological reductionist approach, nor a psychosocial reductionist approach, nor a trauma reductionist approach can provide adequate care for these complex high risk clients. Some may die from completed suicide if not detected in time and managed inappropriately. Successful management of all these issues should form key prerequisites of resilience intervention for these complex cases with ADHD.

Resilience Factors Relevant to ADHD, and Resilience-Based Intervention for ADHD

Factors Associated with Resilience in Youths with ADHD

Resilience is often referred to as 'positive patterns of adaptation in the context of adversity' (Masten & Obradović, 2006). Therefore, the concept requires both (1) exposure to adversity and (2) positive adjustment despite exposure to these risk and detrimental factors. Risk, by definition, embodies increased probability of developing negative outcomes for those exposed (i.e., a youth with ADHD); however, risk is multifaceted, and does not define the exact nature of the threat or the mechanisms leading to harms, because risk factors often co-occur, and are confounded with other unfavorable parameters (Dvorsky & Langberg, 2016). As such, the identified risk factor (i.e. ADHD) may not provide the causal mechanism leading to an adverse outcome (i.e., substance misuse). For example, a substance misuse outcome might arise from comorbid depression, or impulsivity and thrill-seeking tendencies inherent in the temperament of a child with ADHD, or because a child is living in poor socioeconomic neighborhood where drugs are readily available; and parental ADHD and poor occupational status were the reason that the family is living in such a neighborhood. Evidently, association is not necessarily causal.

Overall, the risks associated with ADHD can therefore be partitioned into three different types: (1) ADHD symptom severity, (2) complications and impairments arising from ADHD (such as educational failure, peer rejection, association with delinquent peers), and (3) other attributes and psychiatric conditions associated with

ADHD (such as lower IQ, the presence of other psychiatric conditions including oppositional defiance disorders, conduct disorder, anxiety, depression, behavioural addiction, and substance misuse).

Moreover, risk and protective factors can be inversely linked, whereby the presence of one signifies the absence of the other, thus they can be mutually exclusive. For example, low IQ indexes risk whereas high IQ is associated with resilience; but the presence of one precludes the other given they occupy the polar opposites on the spectrum of the same construct.

Despite the well-documented risks associated with ADHD, resilience in children with ADHD is not uncommon as demonstrated by a recent cross-sectional study of a clinically referred sample (Chan et al., 2021). About 53%–59% of the sample were rated as 'resilient' by their parents and teachers, as captured by the BASC-2/3 Resiliency subscale (Reynolds & Kamphaus, 2004, 2015). Resilient children with ADHD, in this study, were perceived by their teachers as having higher IQs, as being more likely to have anxiety, and as less likely to have oppositional defiance symptoms. However, children with ADHD may not benefit from having parents of a higher social economic status when compared with non-ADHD peers. Anxiety in ADHD reduces the risks of oppositional defiance and conduct problems, and this is not surprisingly associated with teachers' perception of better adjustment; however, anxiety can increase the risk of depression in adolescence and therefore may, by inference, embody disadvantages, though not detected by this study.

Other factors associated with positive outcomes in youths with ADHD have been reviewed by Dvorsky and Langberg (2016) under the broad groupings of *promotive* or *protective effects*. In statistical terms, *promotive effects* are generally considered to be exerting a direct main effect on the outcome variable, where *protective* refers to the interaction with risks. At a more intuitive level, promotive factors can be understood as beneficial to all individuals (both high and low levels of risk); in contrast, protective factors are pertinent only to those exposed to high risk and are responsible for mitigating the effects of risk exposure and engendering adaptive and favorable outcomes (Dvorsky & Langberg, 2016).

Resilient factors for ADHD can, furthermore, be considered at the level of (1) individual, (2) family, and (3) social-community. At the individual level, protective effects include goal-directed solitary play predicting lower depressed/anxious behaviors in childhood but this factor ceased to be protective in adolescence ((Mikami & Hinshaw, 2006). Promotive effects include: self-perceived competence which can mitigate against depression (McQuade et al., 2011); and self-perceived scholastic competence predicted less internalizing and externalizing symptoms and substance use (Mikami & Hinshaw, 2006). Moreover, academic enabling skills (e.g., motivation, study skills, engagement), positive interpersonal skills and prosocial behaviors all have beneficial effects (Dvorsky & Langberg, 2016).

At the family level (Dvorsky & Langberg, 2016), there is strong research evidence for promotive and protective effects from positive parenting, parental emotional support, and parental affection. Family cohesion also improves quality of life. Notably, a maternal authoritative parenting style is associated with higher status rated by peers in the child with ADHD, which reflect greater peer acceptance.

At the social level, the promotive and protective effects of having friendship, good friendship quality, and peer acceptance have been demonstrated by longitudinal data (Dvorsky & Langberg, 2016). 'Peer relationships are unique in the sense that both parties involved in the relationship are of equal status,' and peer friendship provides an important context in which children learn about cooperation, affiliation, affection, disagreement, negotiation, and resolving conflicts (Hoza, 2007). Observational learning, implicit learning, and attending to social cues are essential ingredients in forming and maintaining such friendships, but ADHD symptoms often cause significant impairments in these areas; and not surprisingly, about 50%–80% of ADHD children are rejected by peers (Hoza, 2007). Given that having positive peer relationships is developmentally important, interventions which normal-

ize or mitigate ADHD-related deficits may therefore, in theory, endow resilience; and this avenue of research represents an important area to explore in the future.

Resilience-Based Intervention Targeting Specific ADHD-Related Deficits

In the last decade, there has been an emerging corpus of literature on specific interventions designed to promote resilience for both nonclinical and clinical populations (Prince-Embury & Saklofske, 2014). The clinical groups include individuals with trauma-exposure, chronic illnesses, intellectual disabilities, neurodevelopmental disorders (Prince-Embury & Saklofske, 2014), and ADHD (Senior et al., 2020). Readers interested in resilience-specific interventions in the broader context can refer to the book titled *Resilience interventions for youth in diverse populations* by Prince-Embury and Saklofske (2014) for more detail.

Of interest, Prince-Embury has proposed a three-factor model of personal resilience to capture, simplify and articulate the essence of resilience theories, and translate this for therapeutic application (Prince-Embury & Saklofske, 2014). This model comprises three core developmental systems: (1) Sense of Mastery, (2) Sense of Relatedness, and (3) Emotional Reactivity. These systems are posited as key therapeutic targets in resilience-based interventions. The interrelationship of these factors also plays critical roles in informing therapies. The model postulates that a child's experience mediates the relationship between external protective factors and positive outcomes, thereby influencing the child's subsequent coping and success. This approach contrasts with more conventional interventions based on more fixed personality or neuropsychological attributes. The postulated three factors can be measured by the Resiliency Scales for Children and Adolescents (RSCA; Prince-Embury & Saklofske, 2014). The three-factor model therefore provides a useful theoretical basis both for designing interventions as well as for measuring outcomes. The *Behavioral Assessment System for Children* (BASC-2/3) (Reynolds & Kamphaus, 2004, 2015) is also a measure which yields a 'resilience' subscale, which has been used in other studies.

In line with the three-factor model, the effectiveness of a resilience based-intervention program for participants with ADHD has recently been evaluated (Senior et al., 2020). The authors postulated that this broader over-arching approach—one that encompasses teaching skills to manage ADHD symptoms and emotional dysregulation problems as well as to correct social deficits—can promote relatedness, emotional regulation, and resilience above and beyond optimization of symptom control. Their program goes further than conventional skill training interventions, which in general focus on narrower and more concrete skills. The key functional domains targeted by this novel program are social rejection, emotional dysregulation and daily functional impairments.

Indeed, over 50% of children with ADHD were classified as 'rejected' and 56% had no reciprocal friendships, as compared to 32% of typically developing comparison children (Hoza et al., 2005). Children with ADHD evoke social rejection due to their abrupt and impulsive behaviors, such as ill-timed interruption, intrusion, excessive talking, and rule violation during play (Mikami, 2014). Moreover, due to their inattention and distractibility during play and conversation, children with ADHD often miss important social cues such as facial expressions and nonverbal communication patterns (Uekermann et al., 2010). They annoy their peers by disrupting the flow of social interactions. As a result, they experience more difficulties with peers, leading to fewer friends and more outright rejection than their typically developing peers (Gardner & Gerdes, 2015; Hoza et al., 2005). These deficits do not reliably respond to conventional social skill training interventions (Senior et al., 2020).

Another key factor is that children with ADHD tend to over-estimate their social abilities, such as a positive bias for their deficits (Hoza et al., 2002, 2004). Children with ADHD display negative behaviors almost immediately after being introduced into a new social situation. They elicit negative evaluation by a new peer shortly after

such an introduction; however, children with ADHD evaluate their own social performance highly despite their interaction ending in failure and rejection by the new peers (Hoza et al., 2000). Children with severe ADHD symptoms and emotion dysregulation problems tend to evoke even more negative response from peers than typically developing children (Thorell et al., 2017), suggestive of a dose–response relationship. ADHD severity may impair the ability to read, identify and process facial expressions, such as annoyance, anger and fear in others (Williams et al., 2008).

Overall, ADHD can encompass social incompetence and cluelessness of one's own social deficits. This 'double curse' phenomenon - as already mentioned - is coined the *Dunning Krueger Effect* (Kruger & Dunning, 1999; Dunning, 2011); and such double-curse inadvertently forecloses the opportunities to learn from one's own mistakes, resulting in worsening of social difficulties and peer rejection over the developmental course. Moreover, chronic peer rejection leads to demoralization, social anxiety, and depression, which in turn can lead to irritability, anger, and aggression. Such downward spiral can further impair social relationship, increase loneliness and social isolation (Barkley, 2014). Therefore, correcting social incompetence and tackling the lack of insights at the same time are both important.

Improving resilience therefore entails a broad intervention strategy which can address the multifaceted needs of participants with ADHD. Senior et al. (2020) posited that a comprehensive intervention based on a manualized Resilience Builder Program (RBP) (Alvord et al., 2011) could target (1) impulsive and disruptive behaviors, (2) emotion dysregulation, and (3) peer problems. The resilience skills developed from the intervention, they argue, would improve behavioral and emotional self-regulation processes. Improvement may also be seen in proactive thinking orientations (e.g., self-efficacy in taking initiative), and prosocial coping in the face of stressors.

RBP was developed by Alvord, Zucker, & Grados (Alvord et al., 2011), which is a manualized group intervention for youths with psychosocial skill deficits, developing a broad set of transdiagnostic social competence and emotion regulation skills. The program addresses maladaptive thought patterns, self-awareness deficits, and problem-solving skills. In doing so, it aims to promote social competence, supplemented by relaxation skills to improve control of emotion dysregulation and impulsivity. Some recent pilot studies evaluated the effectiveness of the RBP, and provided evidence for improvement in social skills and peer relationships, in emotional and behavioral regulation, and in family functioning: for participants with ADHD (Alvord et al., 2014), high functioning autism (Aduen et al., 2014; Habayeb et al., 2017); and for anxious children (Watson et al., 2014).

Senior et al. (2020) recently tested whether RBP group intervention can lead to functional and symptomatic improvements in participants with ADHD. Outcome measures were completed by parents, teachers and child-participants: *The Behavioral Assessment System for Children* (BASC-2); *Social Skills Improvement System Rating Scales* and *How I Feel*, which assessed child-report of emotional arousal and regulation. The study recruited 159 children with ADHD (aged 7–13); and found significant improvements (using pre- and post-treatment analysis) in symptoms, functioning and social improvement scores. Significant improvements were found for internalizing and externalizing symptoms, as well as social skills (as reported by parent, teacher, and child informants. Both parents and children reported better self-control and emotion control, through applying relaxation techniques as well as cognitive restructuring, and proactive problem solving. Adaptive skills as captured by BASC-2 Leadership (parent-report) and BASC-2 Resilience (parent- and teacher-report) also improved. The findings of this study (Senior et al., 2020) provide preliminary evidence for the effectiveness in RBP resilience-based intervention for youths with ADHD.

However, at this point of time, empirical evidence on resilience-based intervention for youths with ADHD and neurodevelopmental disorders remain preliminary. Nevertheless, resilience-targeted interventions for youths with ADHD will be an important and promising field of intervention research over the coming years.

Conclusion

This review of available published literature suggests that resilience is related to characteristics of the child, family, peer, and environment. Aggression, low frustration tolerance, severity, and persistence of ADHD symptoms appear to increase risks of later maladjustment in the child. Urban dwelling, poor parental control, a high level of parental expressed emotions, and the presence of parental psychopathologies also increase risks. The presence of conduct problems in conjunction with ADHD represents a particularly strong predictor of adverse outcome, in terms of subsequent antisocial behaviors, social and occupational impairments, substance abuse, antisocial personality disorders, and associated mood problems. Therefore, the absence or reduction of these risk factors, in theory, can improve outcomes.

In contrast, positive endowments such as high IQ, emotional stability, minimal impairments of functioning, and favorable family background with the presence of supportive adults all confer resilience. Symptom reduction, associated with either a desisting hyperactive symptom trajectory or response to treatment, predicts better outcomes. Behavioral modifications can sometimes be enough in themselves, in milder cases, without recourse to medication: when given without medication, they can be helpful particularly for preschool children, children with anxiety symptoms, and children with very resourceful parents. For more severe cases and older children, they are nearly always desirable in conjunction with medication, and especially for comorbid children and those in disadvantaged families. Strengths and skills development by cognitive methods alone have not been shown to confer protection against social impairment. Social skills training however (together with parent training and the use of behaviorally oriented recreational camps) has received support in controlled trials (reviewed by Fabiano et al., 2009). The use of 'neurofeedback' (Arns et al., 2009) represents useful intervention for some individuals with ADHD. The role of genetic and environmental contributions to resilience is likely to represent an area of expanding research interest, and may well generate new ideas about what the targets of intervention should be.

The strong associations between NSSI, DSH, and suicidality can be overlooked. Therefore, both assessment and treatment of suicidal risks are critical, as preserving life is fundamental to resilience.

There are recent studies exploring the applicability of Personal Recovery and resilience-specific training in youths with ADHD. The early studies on Personal Recovery have provided preliminary data on the unique features in resilient individuals with ADHD and their families, such as qualities captured by the acronym of 'THRIVESSS' (applied to the parents), and developing self-awareness in ongoing struggles with ADHD-related challenges (applied to youths with ADHD themselves) (coined 'Recovernance'). Moreover, a study on resilience-targeted training has also provided promising results which suggest more research is needed in this area. Research and empirical findings on resilience in youths with ADHD remain nascent and preliminary; and will likely be an area of growth and development in the forthcoming decades.

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Part III

Assessment of Resilience

Measuring Resilience in Children: From Theory to Practice

11

Jennifer L. Robitaille and Jack A. Naglieri

Introduction

The concept of resilience, like all psychological constructs, must have certain characteristics in order to be subjected to experimental testing so as to be effectively applied to benefit our constituency. A primary characteristic is that resilience must be operationally defined in a way that is reliable across time, participants, and researchers. Once a concept is operationalized in a reliable manner, then its validity can be examined. When we have sufficiently operationalized the concept of resilience, and there is evidence that it can be measured in a reliable and valid way, then application in clinical and educational settings becomes possible. This is an ideal sequence for the development of tools for testing new concepts, but it is not how many concepts and tests used in education and psychology have been promulgated.

In practice, there is great emphasis on helping clients and pressure to implement new approaches even if they have only been minimally tested. If an idea appears logical and appears to help clients, then it seems reasonable to believe that the construct possesses validity, however ill-defined that may be. Unfortunately, what seems logical and consistent with clinical experience may not be true. As noted by Garb (2003, p. 32), "Results from empirical studies reveal that it can be surprisingly difficult for mental health professionals to learn from clinical experience." This sobering point suggests that we should weigh empirical findings more heavily than clinical experience, not vice versa. Science should temper enthusiasm. This is especially true when a new approach to treatment or a new concept is introduced.

There is a natural and desirable interplay between scientific research and applied practice in psychology because of the very nature of the

Author Note We write this chapter in order to provide essential information about measurement of resilience and the tools that are currently available for that purpose. It is important for the reader to recognize that the authors of this chapter are authors of several of the scales included here. In order to provide as complete a view as possible of all the scales currently available for measuring protective factors, we also included scales developed by other authors. We have, therefore, limited any evaluative comments about these scales but do provide a factual presentation of their characteristics. It is our expectation that this information will provide readers sufficient information to arrive at their own conclusions regarding the relative advantages and disadvantages of these tools.

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_11

field. We can assume that ultimately the field will advance because of the mutual respect and collaboration of those that emphasize science more than practice, and practice more than research. The need for the balanced contribution of science and practice is well illustrated by the study of factors related to resilience. Clearly, this area of study has benefited from the outstanding contributions made by those professionals whose goal has been to help children and adults survive and thrive in the face of adversity and by those researchers who have studied the complex interrelationships of variables that may be predictive of good outcome. All of these individuals, however, must be able to clearly define their constructs and measure them reliably before the validity of the concept can be assessed. That is the focus of this chapter: the challenge of reliable and valid measurement of factors related to resilience.

Resilience: Measurement Issues

Defining the Concept: What Is Resilience?

Although resilience has been studied and described since the 1950s, it has been only in about the past three decades that some consistency has emerged in the definition of this construct. Most contemporary researchers now agree that resilience refers to positive outcomes, adaptation, or the attainment of developmental milestones or competencies in the face of significant risk, adversity, or stress. As Masten (2001) points out, the claim of resilience in an individual requires two judgments. First, that the individual has been exposed to significant risk or adversity and, second, that the individual has attained at least typical or normal developmental outcomes.

The paradigm for resilience research therefore consists first of enumerating or measuring the risks and sources of adversity in individuals' lives. Two general approaches have been used to ascertain and measure risk. The *major life events* approach focuses on episodic, highly traumatic events such as the death or divorce of a parent. Typically, major life events are measured using checklists that assess a wide range of traumatic events that have occurred in the individual's lifetime. Examples include the *Sources of Stress Inventory* (Chandler, 1981) or the *Life Events Checklist* (Work et al., 1990).

Although major life events are clearly important sources of risk and adversity, a reliance on this approach in isolation has been criticized as incomplete. To gain a more complete picture of risk and adversity, a measure of daily hassles is recommended. Daily hassles denote sources of risk that have lower acuity, but greater chronicity when compared to major life events. Examples for young children might include frequent changes in caregivers, poor quality childcare, and inconsistent or overly harsh discipline. The *Daily Hassles Scale* (Kanner et al., 1981) is a good example of this approach.

After having ascertained the risk in an individual's life, developmental outcomes can be assessed. This may consist of the attainment of developmental milestones or the accomplishment of major developmental tasks within normal limits. Positive outcome has also been characterized as the absence of psychopathology in an at-risk population. If the individual has attained typical or superior outcomes in the presence of risk or adversity, then resilience is inferred (Masten, 2014).

Challenges in Measuring Resilience

Measurement of those variables that allow some children to cope successfully with adversities in their lives is not simple. This is especially so because resilience is assessed on an inferential basis by an examination of risk and positive adaptation factors (Luthar & Zelazo, 2003). Resilience is an outcome, rather than a psychological construct in and of itself that can be defined and, perhaps, measured. This has led to efforts to identify variables that lead to, and therefore, can be used to predict resilience rather than measuring it directly. Studies of resilient individuals have identified a consistent set of attributes and assets that contribute to resilient

outcomes (Masten, 2014). These factors that lead to resilient outcomes are referred to as protective factors and are defined as characteristics or processes that moderate or buffer the negative effects of stress resulting in more positive behavioral and psychological outcomes than would have been expected in their absence (Masten & Garmezy, 1985). Rather than measuring resilience per se, assessments have instead focused on measuring these protective factors that predict resilience.

Further complicating the situation is the fact that researchers in this field (e.g., Werner, 2005; Wright & Masten, 2005) have found that risk and protective factors occur at multiple levels including the community (e.g., dangerous neighborhoods/quality after school programs), the family (e.g., domestic violence/effective parenting), and characteristics of the child (e.g., difficult temperament/good coping skills). Although resilience is a function of the complex interaction of these multiple level protective and risk factors, and therefore, most likely is a multivariate construct, most assessments have focused only on the personal characteristics, often referred to as "within-child" protective factors. Moreover, this complex interaction may differ from person to person; that is, the impact of risk factors and the protection afforded by specific protective factors may be very person-specific. As an example, being part of a faith community is widely regarded as an important protective factor, yet the impact of a faith life in moderating risk and adversity differs from person to person. Given this complexity, how can these variables be reliably measured? How can these variables be aggregated to yield a reliable predictor of resilience?

Measurement of the wide array of variables used to study resilience in children has been accomplished using a variety of experimental methods as well as formal and informal tests, including both standardized and unstandardized methods. The list ranges from published behavior rating and self-concept scales to informal ratings based on clinical criteria; sociometric ratings to social skills rating scales; tests of achievement to yearly grades and IQ test results; parent interviews to parenting quality questionnaires; and positive and negative emotionality, to name just a few. The field is awash in variables that have been studied. It appears that measures of most of the major psychological and educational constructs have been included in one study or another as putative protective factors. It leads one to ask the question: "What has *not* been included in the study of protective and risk factors?" Are there any variables that are *unique* to this line of research?

The inclusion of such a wide variety of variables used to assess the potential for resilience suggests that researchers have taken a case study approach to the research question. The typical list of measures of protective factors reads like a psychological report that includes major areas such as the child's history (physical attributes); status of the home environment (socioeconomic status, parents, siblings, etc.); current academic performance (class grades, standardized achievement test scores); intelligence test scores, and behavioral and emotional status (parent and teacher rating scales, interviews, measures of self-concept, clinical classifications). The goal of casting such a broad net has been to determine which of these many variables are most important. This assessment, however, is complicated by the fact that not all of these variables share equal psychometric qualities.

The use of both formal and informal measures of protective factors offers a means of studying the field but the disadvantage of leading to inconsistencies within and across research investigations. For example, social status can be assessed using interviews, unstandardized questionnaires, and peer nominations but the extent to which such methods can be reliably reproduced by other researchers should also be studied. Moreover, the transition from research setting to practical application will require more refined instrumentation than is currently available to practitioners. While these methods may assist in the development of the research base for the study of resilience, well-developed, reliable, and valid measures are required if the important theoretical contributions made thus far can be utilized in applied settings so that children and other consumers may benefit.

In order to advance instrumentation and measurement in the field of resilience, we will present some suggestions to researchers and practitioners. In the sections that follow, we will discuss some basic measurement issues and illustrate their relevance to clinical and educational practice. Our emphasis is on the application of concepts of resilience by child-serving professionals including both teachers and mental health professionals.

How a Test of Resilience Could Be Developed

Development of a system for measuring variables related to resilience is a task that requires important and well-established test development procedures to be followed. The many methods and issues are amply described, for example, by Crocker and Algina (1986), Nunnally and Bernstein (1994), and Thorndike (1982). Essentially, the typical test development process involves a series of steps designed to yield a defensible and usable measure of a construct or constructs. The process begins with a clear operational definition of the construct or constructs to be measured. This means that all variables of interest must be defined with such clarity that they can be evaluated via some method, be that a rating scale, observational method, or performance test. In the area of resilience, concepts such as sociability, negative affectivity, adaptability, or self-referent social cognitions have been invoked to explain or understand resilience, and would have to be defined with clarity because without a clear definition, hopes for reliable and valid measurement would be difficult at best. Definitional clarity is the sine qua non for the development of psychometrically sound assessment measures and approaches. This requirement is made considerably more difficult because of the evolving nature of the field of resilience.

After clearly defining the construct or constructs to be measured, the next step is the development of an initial pool of items to measure those constructs, followed by pilot testing of the items. A key consideration at this stage is adequate sampling of the various behaviors related to the construct under consideration to ensure adequate breadth of coverage, that is, content validity. The items also need to be clear, one-dimensional (i.e., describe only one behavior) and, to the extent possible, free of cultural bias. The subsequent pilot tests are designed to evaluate the clarity of the items as well as the general approach to obtaining scores. At this initial stage, the ways the items are presented on the page or online form, size of the fonts, clarity of the directions, colors used on the form, position of the items, and so on are considered. Questions like reliability and validity are not usually examined at this point because sample size typically precludes adequate examination of such questions. The goal of pilot testing is very simple – to quickly and efficiently determine whether the form seems to work, whether the users understand what they need to do, and whether development is proceeding on the right track.

The next step is to conduct experiments with larger samples that allow for an examination of the psychometric qualities of the items and their correspondence to the constructs of interest. This phase is repeated until the author has sufficient confidence that the items and the scales have been adequately operationalized and the constructs adequately sampled. In each of the many iterations, experimental evidence is used to answer questions such as:

- What is the mean and standard deviation (SD) of each item?
- Do items designed to measure the same construct correlate with each other?
- Do items designed to measure the same construct correlate with other items designed to measure that same construct at higher levels than they correlate with items designed to measure different constructs?
- What is the internal reliability of those items organized to measure each construct?
- What effect does elimination of each item have on the reliability of the scale on which it is temporarily included?

- What is the factor structure of the set of items and how can item elimination be used to clarify the factor structure?
- Does the scale seem to have validity for its intended uses (defined in a number of different ways)?

This phase, sometimes referred to as a "tryout" stage is repeated until the scale has demonstrated at least minimally acceptable reliability and validity to warrant proceeding with standardization. The number of actual data collection efforts depends on the quality of the original concepts, the quality of the initial pool of items, the quality of the sampling used to obtain the data used to examine these questions, and the results that are found. The goal is to produce a version that is ready to be subjected to large-scale national standardization. The idea is that the cost of standardization is so great that the current status of the instrument must be of high enough quality that the risk of the final assessment failing to demonstrate adequate reliability and validity is greatly reduced.

The next to the last step in development of a measure for use in clinical and educational settings is standardization and data collection to establish the reliability and validity of the final measure. This process first requires that a sample of persons who represent the population with whom the measure will be used is administered the measure so that (a) a final group of items and scales is determined and (b) normative values can be computed. Typically, this is a nationally representative sample. Development of norms is an art as much as a science and there are several ways in which this task can be accomplished (see Crocker & Algina, 1986; Nunnally & Bernstein, 1994; Thorndike, 1982). The second task at this stage is collection of data for the purpose of establishing reliability (internal, test-retest, inter-rater, intra-rater) and validity (construct, criterion, and content, for example). Of these two, validity is clearly the more difficult psychometric quality to assess.

There are many types of validity and, therefore, validity is not established by any single study. According to the Standards for Educational and Psychological Testing (AERA, APA, & NCME, 2014) evidence for validity "integrates various strands of evidence into a coherent account of the degree to which existing evidence and theory support the intended interpretation of test scores for specific uses" (p. 21). It is important to note that it is not the test that is valid (as is commonly thought) but rather the interpretations and uses of test scores. In other words, the authors of the assessment have to demonstrate that the inferences about the construct (e.g., the strength of the individual's protective factors) and the decisions that are made (e.g., the individual is at risk) based on the interpretive guidelines presented in the manual are supported by evidence. The Standards for Educational and Psychological Testing provides 25 standards that relate to validity issues that should be addressed by test developers. This includes, for example, the need to provide evidence:

- To support interpretations based on the scores the instrument yields
- About the internal structure of the test
- About the organization of scales and composites within a test
- Of the relationship between the scores the instrument yields and one or more criterion variables
- For the utility of the measure across a wide variety of demographic groups or its limitations thereof
- That the measure differentiates between groups as intended

This list represents some of the issues that need to be addressed and is not intended to describe all the issues that should be examined. In the field of resilience, we believe that there are some particularly salient validity issues. For example, can variables related to resilience be operationalized into some measurable system? How effective is the measure for differentiating between children who are at risk and those who are not? How many variables need to be measured to maximally predict resilience? Is a combination of variables related to protective factors in the environment, the family, and the child, the

best way to predict resilience? Do protective factors enhance outcomes only for children who are at significant risk, or all children? Can the extensive lists of child protective factors be reduced to a few key characteristics that predict which children may be resilient? The answers to these questions will help define the future of this field.

Once development of an instrument is completed, then the important task of documentation begins. There is wide variation in the extent to which test authors document the development, standardization, reliability, and validity of their measure. Some test manuals provide little if any information of the types we have described above, others provide ample descriptions. We refer the reader to examples such as the Kaufman Assessment Battery for Children-Second Edition (Kaufman & Kaufman, 2004), the Devereux Student Strengths Assessment (LeBuffe et al., 2009/2014), and the Cognitive Assessment System (Naglieri & Das, 1997). We use these examples because not only do these authors provide detailed discussion of the various phases of development, but they provide extensive discussion of how the tests should be used and the scores the tests yield be interpreted.

Development of a measure does not end with the writing of the sections in the manual that describe the development, standardization, and reliability/validity of the instrument. The authors have the added responsibility to inform the users about how the scores can be used to enhance practice and improve outcomes for the individual being assessed (AERA, APA,, & NCME, 2014). This may include how the scores on various scales should be compared with one another and with scores from other tests (if appropriate) to gain a better understanding of the relative strengths and needs of the individual. Increasingly important in this era of evidence-based practice is guidance on the use of scale scores from pretests and posttests to document growth, change, or response to treatment in the individual. It is essential that the authors provide the users with the values needed for determining significance when the various scores a measure provides are compared. The test manuals should provide a thorough discussion of interpretive methods to guide the practitioner. This will enable the user to interpret the scores from an instrument in a manner that is consistent with the intent of the authors and the reliability and validity evidence that was accumulated.

The Importance of Psychometric Characteristics

Why Reliability Matters

Good reliability is essential for all measurements used for research as well as in applied settings to ensure accuracy. Reliability is important to the practitioner because it reflects the amount of error in the measurement. Recall that any obtained score is comprised of the true score plus error (Crocker & Algina, 1986). Because we can never directly determine the true score, we describe it on the basis of a range of values within which the person's score likely falls with a particular level of probability. The size of the range is determined by the reliability of the measurement with higher reliability resulting in smaller ranges. This is why in practice we say, for example, that a child earned an IQ of 105 (±5); meaning that there is a 90% likelihood that the child's true IQ score falls within the range of 100–110 (105 ± 5). The range of scores (called the confidence interval) is computed by first obtaining the standard error of measurement (SEM) from the reliability coefficient and the standard deviation (SD) of the score in the following formula (Crocker & Algina, 1986):

$$SEM = SD \times \sqrt{1 - \text{reliability}}$$

The SEM is considered the average standard deviation (68% of the normal curve is in this range) of the theoretical distribution of a person's scores around the true score. Thus, if we add and subtract 1 SEM from an obtained score, we can say that there is a 68% chance (the percentage of scores contained within ±1 SD) that the person's true score is contained within that range. Recall that 68% of cases in a normal distribution fall within +l and −1 standard deviation. Second, the

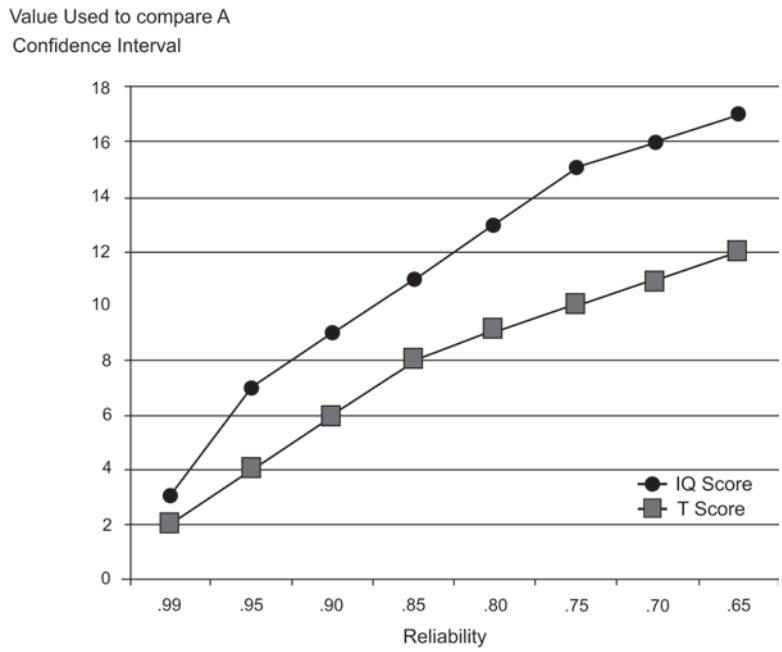

Fig. 11.1 Relationship between reliability and confidence intervals

SEM is multiplied by a *z* value of, for example 1.64 or 1.96, to obtain a confidence interval at the 90% or 95% levels, respectively. The resulting value is added to and subtracted from the obtained score to yield the confidence interval. For example, the 95% confidence range for a test score with a reliability of 0.95 and an obtained score of 100 is 93 (100–7) to 107 (100 + 7). It is important to note that the higher the reliability the smaller the interval of scores that can be expected to include the child's true score. The smaller the range, the more precise practitioners can be in their interpretation of the results, resulting in more accurate decisions regarding the child. The relationships between reliability and confidence intervals are provided in Fig. 11.1 for *T*-scores (M = 50; SD = 10) and IQ scores (M = 100; SD = 15).

The SEM is, of course, most important when individual decisions are made because the larger the SEM the more likely scores will differ as a function of low reliability. The lower the reliability, the more likely there will be disparity among scores, for example, on a variety of measures of protective factors. These inconsistent results can complicate the interpretation of findings and make a clear understanding of a child's strengths and needs more difficult. Without reliable measures of strengths and needs, planning effective support strategies or interventions becomes problematic and ultimately child outcomes may be adversely impacted.

Reliability of specific scores also influences the comparisons among scores. For example, if a researcher or practitioner is concerned with determining if a particular protective factor score received by a child is significantly higher than the scores received on other protective factor scales and therefore represents a significant strength for the child, the ability to make that determination is directly related to each factor's reliability coefficient because the calculation of the SEM is based on the reliability. In fact, the formula for the difference between two scores earned by an individual is calculated using the SEM of each score.

$$\text{Difference} = Z \times \sqrt{SEM1^2 + SEM2^2}$$

Applying this formula to IQ test scores and *T*-scores as shown in Fig. 11.2, we see that as the

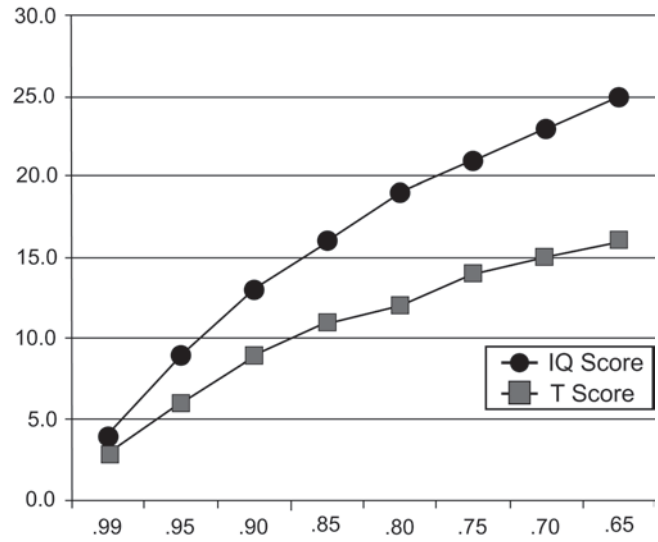

Fig. 11.2 Differences required for significance when comparing IQ or *T*-scores based on scale reliability

reliability goes down, the differences needed when comparing two scores increase dramatically. This means that scores from measures with reliability of 0.70 from two different teachers would have to differ by 15 points to be significant at the 95% level. In other words, test scores with higher reliability reduce the influence of *measurement error* on the different scores. Clearly, in research, educational, and clinical settings, variables with high reliability are needed.

How Much Reliability Is Needed?

Bracken (1987) provided suggested thresholds for acceptable levels of test reliability. He suggested that individual variables should have at least an internal reliability estimate of 0.80 or greater and total scales an internal consistency of 0.90 or greater. These guidelines should be further considered in light of the decisions being made. For example, if a score is used for screening purposes where over identification is preferred to under identification, a 0.80 reliability standard for a total score may be acceptable. If, however, important decisions are to be made, for example, special education placement decisions, then a higher (e.g., 0.95) standard should be deemed more appropriate (Nunnally & Bernstein, 1994).

In summary, it is advisable that researchers and practitioners who examine scores from measures of protective factors look for scales with internal reliability estimates of 0.80 or higher and total scores with estimates of 0.90 or greater. If a rating scale's score has not been constructed to meet these requirements, then its inclusion in research and applied practice should be questioned. This is particularly important because the extent to which two variables can reliably correlate is influenced by the reliability of each variable. Clinicians are advised not to use measures that do not meet these standards because there will be too much error in the measurement to allow for confidence in the result. This is especially important because the decisions clinicians make can have significant impact on the life of a child. We therefore urge the reader to carefully examine the reliability findings of any tool they choose to use.

Why Validity Matters

Validity refers to the extent to which empirical evidence and theory supports the recommended uses and interpretations of scores derived from an assessment. Researchers who study resilience are faced with the first responsibility of carefully and

clearly defining the construct they intend to evaluate. Given the inferential nature of the study of resilience, one of the greatest validity questions concerns which variables are associated with or predictive of resilience and how is the relevance of each variable demonstrated. Much of the research conducted in this area has attempted to examine these issues to varying degrees. The field has increasingly focused on identifying those variables that predict resilience in the face of adversity.

Validity of a measure of resilience is, therefore, more complicated than demonstrating the validity of an achievement test or measure of depression, for example. The number of variables that have been examined is substantial, there is considerable inconsistency in the psychometric quality of the variables studied, and the research on the relative importance of the many variables is still evolving. This makes for an exciting area of research but one that practitioners should approach with appropriate cautions.

Our view is that practitioners have a responsibility to use measures that have been developed in the manner we have briefly outlined above and that nonstandardized approaches should be avoided. We believe that the quality of the decisions made based on any assessment tool is directly related to the quality of the assessments themselves. Responsible practitioners should be aware of the psychometric attributes of any tools that are used. We will, therefore, discuss the psychometric characteristics of a number of measures available to practitioners so that the relative advantages and limitations of the tools can be understood.

Tools to Measure Variables Related to Resilience

The assessment of factors related to resilience in clinical and educational practice is in its early stages. Although informal, nonstandardized tests and procedures are valuable as initial approaches to assessment, they lack the needed research and development base as well as norms calibrated on a representative national standardization sample to make them useful in research and defensible in practice. To assist educational and clinical professionals who would like to incorporate the assessment of resilience in their professional practice, we provide a review of tools currently available for this purpose that meet certain criteria. To be included in this listing, the evaluation tools must (a) be published so as to be readily available to practitioners; (b) be a standardized, norm-referenced tool; (c) have a technical manual or other accessible source of psychometric information including standardization sample, reliability, and validity; and (d) be intended for use with children, defined as birth to 18 years. The tools that meet these criteria are presented in alphabetical order.

Ages and Stages Questionnaires: Social Emotional, Second Edition

Purpose The Ages and Stages Questionnaires: Social Emotional, Second Edition (ASQ:SE-2; Squires et al., 2015) was developed for early identification and remediation of social and emotional deficits in young children. The ASQ:SE-2 was designed for cost-effective large-scale screening of children aged 1–72 months. Nine separate questionnaires are provided based on age-based intervals. The primary purpose of the ASQ:SE-2 is social and emotional screening to identify young children at risk for social and emotional difficulties and identify a need for further assessment.

Scale Description Each of the nine ASQ:SE-2 questionnaires is designed for a specific age range. The number of items differs by form, with each questionnaire taking about 10–15 minutes to complete. The ASQ:SE-2 items cover seven domains: self-regulation, compliance, adaptive functioning, autonomy, affect, social-communication, and interaction with people. There is also a section to identify general concerns and comments. Responses are calibrated using a multiple point format *(often or always, sometimes,* or *rarely or never).* The rater can also indicate if a

particular item is of concern. The ASQ:SE-2 yields a total raw score, by adding the item scores; a high score is problematic. Children who receive a total score above a recommended cutoff should be referred for further evaluation. The ASQ:SE-2 is designed to be completed by a parent or caregiver.

Psychometric Characteristics The ASQ:SE-2 was standardized on a sample of 14,074 children with demographics reflective of US Census data. Cronbach's alpha coefficient was reported to range from 0.71 to 0.91. The level of agreement between the total scores over two-time intervals (1–3 weeks) was reported as 89%. The overall sensitivity (the ability to accurately identify children with social and emotional disabilities) was reported as 81%, ranging from 78% at 2 months to 84% at 24 months. The overall specificity (the ability to correctly identify children without social and emotional delays) was 83%, ranging from 76% at 18 months to 98% at 60 months.

Behavioral and Emotional Rating Scale

Purpose The Behavioral and Emotional Rating Scale, Second Edition (BERS-2; Epstein, 2004) measures behavioral and emotional strengths in children aged 5–19 years using parent, teacher, and youth self-report rating scales. The BERS-2 is intended to identify protective factors related to the child and the child's family, relying on resilience theory (King et al., 2005). Other purposes outlined in the manual are to identify children who lack strengths and who may be in need of further intervention. BERS-2 scores can also be used to guide intervention, monitor progress, and evaluate the effectiveness of instructional programs (Epstein, 2004).

Scale Description The BERS-2 has 52–57 items, depending on the rating form. The items are divided into five scales: Interpersonal Strength, Family Involvement, Intrapersonal Strength, School Function, and Affective Strength. There is also a Career Strength scale on the youth and parent form. The BERS-2 uses a Likert-type format where the rater is asked to reflect on the child's behavior from the last 3 months and answer "not at all like the youth" to "very much like" the youth. In addition, there are eight open-ended questions to capture additional information that may aid follow-up assessments or interventions (King et al., 2005). The results of the BERS-2 yield percentile ranks and standard scores for each scale, with a mean of 10 and standard deviation of 3. The summation of the five scales yields the Strength Index. The rater also receives a summary form that can be used to compare results with other raters (Epstein, 2004).

Psychometric Characteristics The BERS-2 utilized the same standardization sample from the original BERS to create the norms for the teacher form. These norms were based on a sample of 2176 normally developing children and adolescents, and 861 children and adolescents with emotional/behavioral disorders (King et al., 2005). The parent and youth forms were created and normed with the new standardization samples of 927 and 1301 youth, respectively. The standardization sample closely matched the 2002 US Census data, although slightly under- or over-representing: females, Hispanics, and certain family income levels. The authors reported alpha internal consistency with coefficients ranging from 0.79 to 0.96. Test–retest reliability studies yielded correlations of 0.87–0.99 for the Strength Index. Inter-rater reliability studies indicated correlations of 0.98 for teacher–teacher and 0.54 for parent–child for the Strength Index. The subscales were slightly less reliable with correlations of 0.85–0.96 for teacher–teacher, 0.50–0.63 for parent–child, and 0.20–0.67 for parent–teacher. Validity was examined by comparing the BERS-2 to the Walker–McConnell Scale of Social Competence and School Adjustment-Adolescent Version (Walker & McConnell, 1995), the Systematic Screening for Behavior Disorders (SSBD; Walker & Severeson, 1992), the Scale for Assessing Emotional Disturbance (SAED;

Epstein & Cullinan, 1998), the Social Skills Rating System (SSRS; Gresham & Elliot, 1990), and the Achenbach Teacher Report Form (TRF; Achenbach, 1991). Correlations are reported in the form of a table contained in the Examiner's manual (Epstein, 2004).

Devereux Early Childhood Assessment for Preschoolers

Purpose The Devereux Early Childhood Assessment for Preschoolers, Second Edition (DECA-P2: LeBuffe & Naglieri, 2012) is a nationally standardized and norm-referenced behavior rating scale designed to be used by preschool program directors, teachers, preschool mental health, and early childhood special educators to evaluate protective factors related to resilience in children aged 3–5 years. One of the main goals of the DECA-P2 is to help determine if children have developed adequate skills in three areas (Initiative, Self-Regulation, and Attachment/Relationships) that are related to resilience. Children who receive comparatively low scores in these three strength-based, within-child protective factors may be at risk for developing social and emotional challenges or disorders. By identifying these at-risk children early, strategies can be implemented at school and at home to help develop these protective factors, increasing the odds that the child will be able to successfully adapt to current and future risk and adversity. The rating scale also includes a brief rating of behavioral concerns.

Scale Description The DECA-P2 uses a behavior rating scale format which evaluates the frequency with which a preschool-aged child demonstrates specific behaviors over the past 4-week interval. A family member or early care and education professional completes the 38 items which are scored using a 0 (Never) to 4 (Very Frequently) scale. The DECA-P2 items are organized into two dimensions: protective factors and behavioral concerns. The Protective Factors included are Initiative (9 items), Self-Regulation (9 items), and Attachment/ Relationships (9 items). A screener for behavioral concerns (11 items) is included to help identify children with emerging problem behaviors. Items on the Initiative scale assess the child's use of independent thought and action to meet his or her needs. The Self-Regulation scale includes items about the child's ability to express emotions and manage behavior in healthy ways. Attachment/Relationships items measure the child's ability to promote and maintain mutual, positive connections with other children and significant adults. In addition, a Total Protective Factors composite score is provided. The Behavioral Concerns items measure a wide variety of problem or challenging behaviors seen in some young children. Separate norms are provided for parent and teacher raters and yield both percentile ranks and *T*-scores. Recommended descriptive terms are provided to aid in communication with parents, teachers, and other professionals. The term "Strength" is used for protective factor *T*-scores of 60 or above. "Typical" is used to describe *T*-scores of 41–59 inclusive. "Area of Need" is used to describe low protective factor scores of 40 or below.

Psychometric Characteristics The DECA-P2 was standardized on a national sample of 3553 children aged 3–5 years. Internal reliability coefficient for the Total Protective Factors scale was 0.92 for parents and 0.95 for teacher raters. The median reliability coefficient across the three protective factor scales was 0.88 for parent raters and 0.92 for teacher raters. The validity of the DECA-P2 was studied by comparing children who varied in their social and emotional health. Two samples of children were compared: one group with known emotional/behavioral problems ($N = 125$) and another that were considered typical ($N = 126$). The results showed that the children with emotional/behavioral problems earned lower scores (less desirable) on the measures of Initiative (effect size (ES) of 0.58), Self-Regulation (ES = 0.99), Attachment/Relationships (ES = 0.69), Total Protective Factors (ES = 0.82), and higher scores (also less desirable) on the

measure of Behavioral Concerns (ES = 1.09). These results and additional reliability and validity analyses are presented in the DECA-P2 Technical Manual (LeBuffe & Naglieri, 2012).

Devereux Early Childhood Assessment for Infants and Toddlers

Purpose The Devereux Early Childhood Assessment for Infants and Toddlers (DECA-I/T; Mackrain et al., 2007) was created to evaluate social and emotional skills in infants and toddlers. The DECA-I/T assesses three protective factors related to resilience: Attachment/Relationships, Initiative, and Self-Regulation. The results of this assessment can be used to identify young children's social and emotional skills and to help identify children who may be at risk or need additional assistance. The DECA-I/T can also be used as an outcome measure for early childhood programs and be used as a research tool.

Scale Description The DECA-I/T is a behavior rating scale for children aged 1 month up to 36 months. The Infant form has 33 items comprising two protective factor scales: Initiative (18 items) and Attachment/Relationships (15 items). The Toddler form has 36 items consisting of three protective factors scales: Attachment/Relationships (18 items), Initiative (11 items), and Self-Regulation (7 items). The DECA-I/T asks family members and early care and education providers to rate the child's behavior over the past 4-week interval using a 0 (Never) to 4 (Very Frequently) scale. The Attachment/Relationship scale assesses if a mutual, strong, long-lasting relationship has developed between the infant or toddler and a significant adult. The Initiative scale determines the infant or toddler's ability to use independent thought or action to meet his or her needs. The Self-Regulation scale assesses the toddler's ability to gain control of and manage emotions and sustain focus and attention. A Total Protective Factors scale is provided, in addition to *T*-scores and percentile ranks for each scale.

Psychometric Characteristics The DECA-I/T was standardized on a national sample of 2183 infants and toddlers between 4 weeks and 3 years of age. The internal reliability coefficients for the Total Protective Factors scale on the Infant form ranged from 0.90 to 0.94 for parent raters and 0.93 to 0.94 for teacher raters, while these coefficients on the Toddler form were 0.94 for parents and 0.95 for teachers. The median reliability coefficient across the Attachment/Relationships and Initiative scales on the Infant form was 0.87 for parent raters and 0.90 for teacher raters. The median reliability coefficient across the three Toddler form scales (Attachment/Relationships, Initiative, and Self-Regulation) was 0.87 for parent raters and 0.90 for teacher raters. Evidence for the validity of the DECA-I/T was in part investigated by a contrasted groups approach, examining the scale scores for an identified vs. community sample. Results from both the infant and toddler forms indicate significant and meaningful differences between the identified and community samples on all scales (*d*-ratios range from 0.75 to 1.52). These results and additional reliability and validity analyses are presented in the Technical Manual (Powell et al., 2007).

Devereux Early Childhood Assessment-Clinical Form

Purpose The Devereux Early Childhood Assessment-Clinical Form (DECA-C; LeBuffe & Naglieri, 2003) is designed to assess factors related to both resilience and emotional/behavioral problems. The DECA-C is intended to be used as part of a larger assessment of emotional health and to develop intervention plans that may be needed. For this reason, the DECA-C is intended to be used by those professionals (e.g., psychologists, counselors, and those with clinical training) who have the necessary qualifications to interpret and use this clinical tool as part of child assessment. The information about both protec-

tive factors and behavior concerns provides at least three important advantages to the clinician. First, a balanced examination of the child from both positive and concern perspectives is achieved. Second, the examination of the relationships between these dimensions leads to a more complete understanding of how they individually and jointly influence the child's behavior. Third, the inclusion of both dimensions provides important information for intervention planning.

Scale Description The DECA-C uses a behavior rating scale format to evaluate the frequency with which a child aged 2–5 years demonstrated specific behaviors over the past 4-week interval. A family member or early care and education professional completes the items which are scored using a 0 (Never) to 4 (Very Frequently) scale. The DECA-C is organized into three scales related to resilience (Initiative, Self-Control, and Attachment) and four scales about behavioral concerns including Attention Problems (7 items which assess difficulties with focus, distractibility, impulsivity, and hyperactivity); Aggression (7 items used to measure hostile and destructive acts); Emotional Control Problems (8 items which measure the child's difficulties in modifying the overt expression of negative emotions); and Withdrawal/Depression (9 items which address behaviors related to social isolation and lack of reciprocal interactions as well as depressed affect). Like the Total Protective Factors scale, these four Behavioral Concerns scales are combined into a Total Behavioral Concerns score.

Psychometric Characteristics The DECA-C was standardized on a national sample of 2017 children aged 2–5 years and normed to yield *T*-scores set at a mean of 50 and SD of 10. The Total Protective Factors scale reliabilities for parents and teachers is 0.93 and the average reliabilities across raters for the separate scales are: Initiative (0.87), Self-Control (0.88), Attachment (0.81), and Behavioral Concerns (0.76). The average Behavioral Concerns scale internal reliabilities across parent and teacher raters are as follows: Withdrawal/Depression (0.73), Emotional Control Problems (0.83), Attention Problems (0.83), Aggression (0.82), and the Total Behavioral Concerns Scale (0.91). Validity of the DECA-C was examined in a series of research studies summarized in the Technical Manual. In summary, the DECA-C effectively differentiated the groups of children who had known emotion and behavior problems with a matched comparison group of typical preschool children (see LeBuffe & Naglieri, 2003); children with known emotional and behavioral problems showed more signs of behavioral concerns and fewer signs of strong protective factor scores than the DECA-C normative sample; and that the children with documented emotional and behavioral problems in this study had needs in the Protective Factors and Behavioral Concerns scales of the DECA-C. The reliability and validity of the DECA-C was assessed using several other studies which are reported in LeBuffe and Naglieri (2003) and in Chap. 15 in this volume.

Devereux Student Strengths Assessment

Purpose The Devereux Student Strengths Assessment (DESSA; LeBuffe et al., 2009/2014, 2018, 2020) is a suite of behavior rating scales designed to assess the social and emotional competencies that serve as protective factors for children and youth across kindergarten through 12th grades (5–19 years of age). The DESSA for kindergarten through eighth grade (DESSA K–8) can be completed by parents, teachers, and staff at schools and child-serving agencies such as out-of-school, social service, or community programs. The DESSA High School Edition for 9th–12th grade youth (DESSA-HSE) includes a Teacher Report Form (which can be completed by teachers and staff at schools and youth-serving agencies) and a Student Self-Report form enabling high school aged youth to report on their own social and emotional competencies. At the time of this writing, a parent version is in development. The DESSA assessment tools are

all strength-based, measuring positive behaviors (e.g., get along with others) and are intended to provide detailed information about children and youth's social and emotional competencies that can be used to guide social and emotional instruction and intervention for individual students and groups of students. They can also be used for outcome evaluation and research purposes, such as to evaluate the impact of social and emotional learning (SEL) programming.

Scale Description The DESSA assessment tools are organized into eight conceptually derived scales that provide information about key social and emotional competencies aligned to the Collaborative for Academic, Social, and Emotional Learning (CASEL) framework (Collaborative for Academic, Social, and Emotional Learning, 2020). These scales include Self-Awareness, Social Awareness, Self-Management, Goal-Directed Behavior, Relationship Skills, Personal Responsibility, Decision-Making, and Optimistic Thinking. The combination of these scales is used to obtain a Social–Emotional Composite score. This composite score provides an overall indication of the strength of the student's social and emotional competence while the eight DESSA scales are used to create individual student and classroom/group profiles that describe the strengths and needs of the student and/or groups of students as compared to national norms. In addition to informing social and emotional instruction and intervention, this information can also be used to compare ratings across raters, environments, and time to monitor progress and evaluate outcomes.

Psychometric Characteristics The DESSA scales were standardized on large national samples of children and youth with raters using both paper and pencil and online versions of each scale. The DESSA K–8 standardization sample included 2494 K–8th grade students rated by teachers and parents; the DESSA-HSE sample included 1162 9th–12th grade students rated by teachers, and the DESSA-High School Student Self-Report included 700 9th–12th grade students who completed a self-rating. Each standardization sample closely approximated the relevant student population of the United States with respect to age, gender, geographic region of residence, race, ethnicity, and socioeconomic status based on US Census data. Internal reliability coefficients for the Social–Emotional Composite score are as follows: 0.98 for parents and 0.99 for teachers (DESSA K–8), 0.98 for teachers (DESSA-HSE), and 0.96 for student raters (DESSA High School Student Self-Report). The internal reliability coefficients for the eight social and emotional competence scales vary as follows: a low of 0.82 (Optimistic Thinking and SelfAwareness–Parent Raters) to a high of 0.94 (Relationship Skills–Teacher Raters) on the DESSA K–8; a low of 0.85 (Optimistic Thinking) to a high of 0.92 (Relationship Skills) on the DESSA-HSE; and a low of 0.77 (Goal-Directed Behavior) to a high of 0.83 (Self-Management) on the DESSA High School Student Self-Report. Evidence for the validity of these scales provided in the technical manuals suggest that DESSA scores differentiate between groups of students with and without the special education designation of serious emotional disturbance, that the scales show strong convergent validity with similar measures, and that the Social–Emotional Composite can be considered a measure of within-child protective factors. Additional evidence of reliability and validity are provided in the technical manuals. See also LeBuffe, Shapiro, and Robitaille (2018) as well as Chap. 15 in this volume.

Devereux Student Strengths Assessment-Second Step Edition

Purpose The Devereux Student Strengths Assessment-Second Step Edition (DESSA-SSE; LeBuffe et al., 2011) is a 36-item, standardized, norm-referenced behavior rating scale that assesses the four social and emotional competencies taught in the Second Step social and emotional learning curriculum for elementary school students (Committee for Children, 1997). The

DESSA-SSE is entirely strength-based and can be completed by parents, teachers, or staff at schools and child-serving agencies, including after-school, social service, and mental health programs. The DESSA-SSE can be used to assess and evaluate children's progress in acquiring the social and emotional competencies taught by the Second Step program.

Scale Description The DESSA-SSE is organized into five scales: Skills for Learning (9 items), Empathy (9 items), Emotional Management (9 items), Problem Solving (9 items), and a Social–Emotional Composite based on all 36 items. Raw scores on each scale are converted to *T*-scores and corresponding percentile ranks and categorical descriptions. The DESSA-SSE was standardized and normed on a sample of 2494 children in kindergarten through fifth grades who closely approximated the US population with respect to age, gender, geographic region of residence, race, ethnicity, and socioeconomic status according to the 2008 US Census.

Devereux Student Strengths Assessment-mini

Purpose The Devereux Student Strengths Assessment-mini for children in kindergarten through 8th eighth grades (DESSA-mini; Naglieri et al., 2011/2014) and the DESSA-High School Edition mini for youth in 9th–12th grades (DESSA-HSE mini; Shapiro et al., 2018) are universal screening tools developed to efficiently and accurately measure the overall social and emotional competence of children and youth in K–12th grades (ages 5–19 years). This information enables the early identification of children and youth in need of additional social and emotional support in order to make early intervention more possible. The DESSA-mini and DESSA-HSE mini are completed by teachers and out-of-school time staff and can be used by professionals with or without clinical training to offer a brief summary of a child's current overall social and emotional competence to determine if additional assessment and intervention should be provided. Four alternate forms are provided for each version that can be used for ongoing progress monitoring during the course of social and emotional interventions. The DESSA-mini is composed entirely of strength-based items (e.g., get along with others) which are scored on a five-point scale reflecting how often the student engaged in each behavior over the past 4 weeks.

Scale Description The DESSA-mini and DESSA-HSE mini each include four 8-item forms which were developed to be highly correlated with the full DESSA/DESSA-HSE and equal in reliability and very similar in overall mean scores. The standardization and normative sample included a total of 1250 children and youth in kindergarten through 8th grade and 1162 youth in 9th–12th grade who closely approximated the K–12 population of the United States with respect to age, gender, geographic region of residence, race, ethnicity, and socioeconomic status according to US Census data. Each DESSA-mini form yields a *T*-score from the sum of the eight-item ratings as well as a percentile rank and descriptive category (Strength, Typical, Need for Instruction).

Psychometric Characteristics The internal reliability of the four 8-item DESSA-mini forms range from 0.91 (mini 4) to 0.92 (mini 3). Similarly, the four 8-item DESSA-HSE mini forms range from 0.91 (forms 1 and 4) to 0.92 (forms 2 and 3). Each of the DESSA-mini and DESSA-HSE mini reliability coefficients exceed the 0.90 value for a total score suggested by Bracken (1987). Validity evidence presented in the manuals indicates that the DESSA-mini/DESSA-HSE mini can be used with confidence as a screener for social and emotional competence because (a) DESSA-mini Social–Emotional Total scores are strongly correlated with the Social–Emotional Composite scores on the full DESSA; (b) there is considerable agreement between identification rates based on the DESSA and each DESSA-mini form; (c) the DESSA-

mini *T*-scores differentiate groups of children with and without known social and emotional problems; and (d) the DESSA-mini and the DESSA identify children similarly regardless of race or ethnicity. Full details can be found in the DESSA-mini and DESSA-HSE mini technical manuals.

Penn Interactive Peer Play Scale

Purpose The Penn Interactive Peer Play Scale (PIPPS; Fantuzzo et al., 1998, 1995) was developed on the idea that children's play interactions are highly indicative of their social and emotional health and predictive of future social and academic success. This behavioral rating scale was developed with Head Start teachers and parents, assessing peer play interactions with high-risk urban youth. There is a teacher form, which is utilized in the classroom and on the playground, and there is a parent form, which is utilized in the home and neighborhood (Fantuzzo et al., 1995). The PIPPS aims to measure children's play strengths in kindergarten and is intended to be used for screening, assessment, informing curriculum, and promoting communication between parents and teachers (Fantuzzo & Hampton, 2000). The PIPPS is also only intended to be used with urban, low-income, minority children. The PIPPS was developed to identify resilient children in high-risk situations, differentiate children with positive peer interactions from those who were less successful, and to inform interventions (Fantuzzo et al., 1995).

Scale Description The PIPPS was originally standardized on a group of 312 African American high-risk children aged 38–63 months. The participants included 38 teachers from five different Head Start programs. Fantuzzo et al. (1995) utilized an exploratory factor analysis of the original items to uncover three constructs: Play Interaction, Play Disruption, and Play Disconnection. Both the teacher and the parent versions consist of 32 items. This behavior rating scale is in a Likert-type format *(never, seldom, often,* or *always)* revealing how often the teacher or parent witnessed the child displaying a certain behavior. The Play Interaction scale measures the child's play strengths, the Play Disruption scale measures antisocial behaviors that can interrupt play interactions, and the Play Disconnection scale measures withdrawal from play. The PIPPS is not intended to categorize students. If the results indicate that a child has poor play interactions, further evaluation is recommended in addition to efforts to bolster the child's skills in that area (Fantuzzo et al., 1995).

Psychometric Characteristics The PIPPS demonstrates reliability and validity in urban, low-income, African American, kindergarten youth. Cronbach's alpha for the three scales ranges from 0.87 to 0.91. The construct validity of the PIPPS was determined using exploratory factor analysis. The PIPPS was reported to be significantly correlated with the SSRS. The PIPPS also demonstrates reliability and validity in low-income preschool children, utilizing the same comparisons as articulated above (Hampton & Fantuzzo, 2003).

Preschool Behavioral and Emotional Rating Scale

Purpose The Preschool Behavioral and Emotional Rating Scale (PreBERS; Epstein & Synhorst, 2009) is an assessment that measures the emotional and behavioral strengths of preschool children aged 3–5 years. The preBERS can be used to identify children with low levels of emotional and behavior strengths, inform IEPs or IFSPs, guide intervention, and monitor progress. This rating scale can be completed by any adult with adequate exposure to the child and can be scored and interpreted by any professional adult who had appropriate training in tests and measurement. The preBERS is entirely strength-based and grounded in resilience research. The overarching goal of this assessment is early identification of children who may need additional support or interventions (Epstein & Synhorst, 2009).

Scale Description The preBERS has 42 items that are divided into four dimensions: Emotional Regulation (13), School Readiness (13), Social Confidence (9), and Family Involvement (7). There are seven open-ended questions that aim to capture any additional social, family, or community strengths. The assessment is written at a fifth-grade reading level and was created to be completed in 10 minutes. Each item is rated on a Likert-type scale (0 = not at all like the child, 1 = not much like the child, 2 = like the child, and 3 = very much like the child) (Drevon, 2011). The subscales each yield a raw score, a percentile rank, and scaled standard scores. The summation of the subscales yields the total scaled score or Strength Index, which is also reported in a percentile rank and a descriptive term *(Very Superior, Superior, Above Average, Average, Below Average, Poor,* or *Very Poor)* (Epstein & Synhorst, 2009).

Psychometric Characteristics The preBERS has a set of norms for three different standardization samples: typical preschool children, Head Start preschool children, and Special Education preschool children. The sample size for these groups was 1471, 962, and 1103, respectively. Each sample was compared to the US Census by region, race, ethnicity, gender, parental education, family income, and disability status. The samples were mostly representative, but with some regional discrepancies in both the Head Start and Special Education groups (Drevon, 2011). The preBERS reported good internal consistency for the Strength Index, with correlations ranging from 0.96 to 0.98. Correlations were good for each subscale, as well, ranging from 0.84 to 0.97. Short-term test–retest data for the Strength Index indicated high corrected correlations, equaling 0.80 in teachers and 0.95 in parents. The subscale correlations ranged from 0.81 to 0.89 in teachers and 0.88 to 0.97 in parents. Long-term test–retest data revealed a corrected correlation of 0.79 in teachers and 0.85 in parents for the Strength Index and subscale correlations ranging from 0.72 to 0.89 in teachers and 0.83 to 0.92 in parents. The preBERS reported teacher and paraprofessional inter-rater corrected correlations between 0.71 and 0.85 for the subscales, with a 0.72 corrected correlation in the Strength Index (Epstein & Synhorst, 2009).

Resiliency Scales for Children and Adolescents

Purpose The Resiliency Scales for Children and Adolescents (RSCA; Prince-Embury, 2008) aims to identify and measure personal qualities and vulnerabilities related to resiliency in youth aged 9–18 years. The RSCA is a screener but can also be utilized to plan and monitor progress and outcomes. The scales are available only in a self-report format and can be administered by qualified supervisors who are professionals, knowledgeable of psychological tests and assessments (Prince-Embury & Steer, 2010). The RSCA can be used to evaluate children and adolescents'personal resiliency.

Scale Description The RSCA items are written at a third-grade reading level and use a five-point Likert-type scale 0 *(never)* to 4 *(almost always)* to measure three global scales: Sense of Mastery (20 items), Sense of Relatedness (24 items), and Emotional Reactivity (20 items), for a total of 64 items. Each global scale consists of a group of subscales, including: optimism, self-efficacy, and adaptability (Sense of Mastery); trust, perceived social support, comfort, and tolerance (Sense of Relatedness); and sensitivity, recovery, and impairment (Emotional Reactivity). The raw scores of the RSCA are converted to *T*-scores (Prince-Embury & Steer, 2010).

Psychometric Characteristics The RSCA was standardized on a group of 650 children and youth aged 9–18 years. The sample was compared to the US Census on both parent education and ethnicity within each year of age and also by gender (Prince-Embury, 2008). All three global scales displayed good internal consistency scores, with alpha coefficients ranging from 0.83 to 0.95.

The RSCA indicated test–retest reliability through a 12-day interval (on average), yielding correlations of 0.70–0.92. To establish validity, the RSCA was correlated with the Reynolds Bully Victimization Scale (Reynolds, 2004), the Brown ADD Scales for Children (Brown, 2001), and the Beck Youth Inventories (BYI-11; Beck et al., 2005; Sink & Mvududu, 2010). Psychometric properties for the RSCA were further explored in clinical samples of children (n = 110) and adolescents (n = 178) revealing good internal consistency among the three global scales with alpha coefficients ranging from 0.82 to 0.90 in the child population and from 0.92 to 0.94 in the adolescent population (Prince-Embury, 2010).

Social Emotional Assets and Resilience Scales

Purpose The Social Emotional Assets and Resilience Scales (SEARS; Merrell, 2011) is a cross-informant and strength-based system for measuring the social and emotional competencies and assets of children and adolescents ages 5–18 years. There are four primary behavior rating scales within the SEARS system, including the SEARS-Child (SEARS-C) self-report for grades 3–6, the SEARS-Adolescent (SEARS-A) self-report for grades 7–12, the SEARS-Teacher (SEARS-T) report form for grades K–12, and the SEARS-Parent (SEARS-P) report form for grades K–12. For each of the four full-length rating forms, there is also a companion short form. Together, the SEARS system allows for screening, assessment, progress monitoring, and outcome evaluation.

Scale Description The SEARS-A, SEARS-T, and SEARS-P rating forms are organized into four scales that provide information about children and youth's adaptive characteristics that are important for success at school, with peers, and in the outside world. These scales include Self-Regulation, Social Competence, Empathy, and Responsibility. A total score is also provided for each rating form, while the SEARS-C only includes a total score representing a global assessment of a child's social and emotional assets and resilience. Information from scores can be used to create student profiles based on national norms that can inform interventions for children and youth.

Psychometric Characteristics The SEARS scales were standardized on four samples including 1224 children in grades 3–6 (SEARS-C), 1727 adolescents in grades 7–12 (SEARS-A), 1400 teachers of children in grades K–12 (SEARS-T), and 1204 parents of children in grades K–12. The samples were chosen to be representative of the US population of children for age, gender, and ethnicity based on US Census data. For the total scores of each of the four SEARS measures, internal reliability coefficients range from 0.92 to 0.98. The scale score internal consistency coefficients range from 0.80 to 0.95, while the short form coefficients range from 0.82 to 0.93. Additional evidence for the reliability and validity of the SEARS scales can be found in the technical manual (Merrell, 2011).

Conclusions

Initial conceptualizations of psychological concepts have a history of being retained across generations of psychologists. Once an idea is proposed, and especially if it is operationalized in a practical method, it can become widely used before researchers have adequately determined the ultimate value and utility of the concept. Perhaps one of the best examples is the Stanford–Binet and Wechsler IQ tests which have changed little since they were first published in the early 1900s. Similarly, because initial conceptualizations have such an important influence on the field, advocates of a concept such as resilience and the variables that lead to it should be mindful of the power of initial conceptualizations.

Researchers and practitioners need to be mindful that the various tools summarized in Table 11.1 of this chapter have both definitional

Table 11.1 Psychometric characteristics of scales used to measure variables related to resilience

Rating scale	No. of items	Age range	Informants	Scores for scales	Comparison sample size	Sample description	Match to US population
Ages and Stages Questionnaire: Social–Emotional, Second Edition (ASQ:SE-2)	Varies	1–72 months	Parents	Raw scores	14,074	National sample	No
Behavioral and Emotional Rating Scale (BERS-2)	52–57	5–19 years	Parents, teachers, youth	Standard scores	927 (parent), 2176 (teacher), 1301 (youth)	National sample	Yes
Devereux Early Childhood Assessment for Preschoolers, Second Edition (DECA-P2)	38	3–5 years	Parents, teachers	*T*-scores	1416 (parent), 2137 (teacher)	National sample	Yes
Devereux Early Childhood Assessment-Infant Toddler (DECA-I/T)	33 (infant form), 36 (toddler form)	1–36 months	Parents, teachers	*T*-scores	2183	National sample	Yes
Devereux Early Childhood Assessment- Clinical (DECA-C)	62	2–5 years	Parents, teachers	*T*-scores	2000	National sample	Yes
Devereux Student Strengths Assessment (DESSA)	72 (K–8), 43 (HSE), 55 (SSR)	5–19 years	Parents, teachers, youth	*T*-scores	2494 (K–8), 1162 (HSE), 700 (SSR)	National sample	Yes
Devereux Student Strengths Assessment-mini (DESSA-mini)	Four 8-item forms	5–19 years	Teachers	*T*-scores	1250 (K–8), 1162 (HSE)	National sample	Yes
Devereux Student Strengths Assessment Second Step Edition	36	5–14 years	Parents, teachers	*T*-scores	2494	National sample	Yes
Penn Interactive Peer Play Scale	32	preK and K	Parents, teachers	*T*-scores	312	African American Head Start populations living in high-risk, low income urban settings	No
Preschool Behavioral and Emotional Rating Scale (preBERS)	42	3–6 years	Parents, teachers	Scaled scores	1471	Typical preschool, Head Start, and early childhood special education	Yes
Resiliency Scales for Children and Adolescents (RSCA)	64	9–18 years	Self-report	*T*-scores	650	National sample	No
Social Emotional Assets and Resilience Scales (SEARS)	35 (SEARS-C; SEARS-A), 41 (SEARS-T), 39 (SEARS-P)	8–18 years	Parents, teachers, Child and youth self-report	*T*-scores	1224 (SEARS-C), 1727 (SEARS-A), 1400 (SEARS-T), 1204 (SEARS-P)	National sample	Yes

and operational influence. Although there is a growing number of new methods for assessing the likelihood of resilience there is, as yet, much more work to be accomplished just to adequately define the concept and the methods used in the assessment process. The use of any one of the tools described in this chapter may provide useful information about a child, but such information needs to be integrated into a larger picture. Each of the tools summarized in this chapter provides a limited examination of the child and they should be used accordingly. This is particularly important because the list of variables that influence resilience is very large and diverse, including the child's characteristics (psychological and physical), the family, both immediate and extended, as well as the community and larger societal factors. Additionally, the determination of which combination of variables best predicts resilience and the complex interactions of these variables is still evolving.

Transformation of research findings into clinical practice is always tricky, and it is especially so for the concept of resilience. Application of this concept in the educational and clinical environments would benefit from greater consensus regarding the definition of resilience, the identification and measurement of protective factors, and agreement on which protective factors should be measured. Most importantly, which protective factors, especially in the within-child domain, can be strengthened, and how, and to what effect?

Clinicians should be cautious when applying the concept of resilience and they should be particularly mindful of the psychometric issues that limit application. We suggest that when given the option, measures that have documented psychometric characteristics and have norms based on a national standardization should be preferred and used within the boundaries specified by the authors. The use of well-developed, psychometrically sound assessments will greatly enhance the likelihood that we will be able to (a) obtain good information about the variables related to resilience and (b) develop and evaluate ways to improve social and emotional outcomes for children.

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12 Assessing Social and Emotional Competencies in Educational Settings: Supporting Resilience in Young People

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Introduction

Over the past 50 years, there has been growing interest in promoting, sustaining, and restoring the well-being of young people by nurturing their positive attributes and assets. This strengths-based perspective, a tenet of positive youth development, is an approach that acknowledges the inherent assets within the young person and how various environments, experiences, and resources can cultivate connections, competencies, and leadership skills among other positive attributes (Interagency Working Group on Youth Programs, 2021; Lerner et al., 2021). Strengths-based perspectives are predicated on the belief that "everybody has knowledge, talents, capacities, skills, and resources that can be used as building blocks toward their aspirations, the solution of their problems, the meeting of their needs, and the boosting of the quality of their lives" (Saleebey, 2008, p. 124). Resilience theory elaborates upon this strengths-based approach by stating that in the face of adversity, individuals have the capacity to respond to challenges, adapt successfully, and achieve better-than-expected outcomes (Luthar et al., 2015; Masten, 2014). The field of social and emotional learning (SEL) offers concrete programs and strategies for youth to develop competencies associated with resilience and thriving (Mahoney et al., 2020).

This chapter highlights the connection between the measurement of social and emotional competencies and the development of resilience through three aims. First, we situate social and emotional competence both as a protective factor that supports the cultivation of resilience in the face of adversity and as a promotive factor for healthy youth development. Second, we present a suite of psychometrically sound and developmentally appropriate assessment tools designed to help practitioners collect relevant, empirical information about youth's social and emotional strengths. As part of this section, we provide examples of how these assessment tools can be used to plan and monitor interventions that promote resilience in children, with particular attention to uses with racially, ethnically, and socioeconomically diverse young people. Lastly, we conclude by discussing recent efforts to align social and emotional learning with broader initiatives to transform schools for equity and to promote global citizenship.

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_12

Practical considerations for assessment practices within these initiatives will be offered.

Factors Influencing Resilience in Young People

Risk, promotive, and protective factors at the individual, familial, community, and societal levels influence developmental trajectories and youth well-being (Masten et al., 2021). *Risk factors* (e.g., abuse and neglect, poverty, discrimination and racism, and trauma) are defined as the characteristics of the individual or their environment associated with an increased likelihood of negative short- or long-term developmental outcomes, such as academic failure and delinquency (Luthar et al., 2015; Masten et al., 2021). Advances in the study of youth development and systems theory have led to the conceptualization of *resilience* as a dynamic process (i.e., rather than a stable trait) that represents the capacity to "adapt successfully to significant challenges that threaten the function, viability, or development" (Masten, 2018, p. 16). *Protective factors* are environmental or individual attributes that lead to positive outcomes in the context of high levels of risk (Masten et al., 2021). In contrast, *promotive factors* lead to desirable outcomes, regardless of the risk-level (Masten et al., 2021). Some factors are both protective and promotive with examples including positive school climate, social and emotional skills, and supportive relationship with prosocial adults and peers (Masten, 2018).

The cultivation of resilience is malleable, dependent on conditions at multiple ecological levels (Masten et al., 2021). For instance, an individual's level of self-regulation, high-quality caregiving at home, or having a supportive community network may contribute to experiences of resilience. Educational settings, whether traditional day schools or out-of-school programs, are pivotal developmental contexts rich in resilience-promoting assets (Henderson et al., 2016) that can prevent, minimize, or disrupt negative outcomes caused by unmediated stressors. Thus, it is imperative to invest in the continuous improvement of resilience-promoting efforts in education settings to achieve positive developmental trajectories for youth (Catalano et al., 2008).

The Role of Social and Emotional Competencies in Promoting Resilience

Social and emotional competence (SEC) is a person's ability to integrate their cognitive, affective, and behavior systems to enable skillful intrapersonal and interpersonal functioning across social contexts (Domitrovich et al., 2007, Elias et al., 1997; Shapiro et al., 2017a). These competencies contribute to the experience of thriving and development of resilience (Mahoney et al., 2020). The Collaborative for Academic, Social and Emotional Learning (CASEL) conceptualized these social and emotional capacities in five categories: self-awareness, self-management, responsible decision-making, relationship skills, and social awareness (Weissberg et al., 2015). Spanning across these various skills and conceptualizations is the strengths-based belief that SECs are teachable and malleable across all developmental stages (i.e., through child and adulthood) and continuously supporting positive adaptation (Simmons et al., 2021; Mahoney et al., 2020).

Social and emotional learning (SEL) is "a coordinated set of evidence-based programs and practices seeking to establish safe and supportive learning environments and foster SECs" (Mahoney et al., 2020). These processes, whether in the form of curriculum and programs (e.g., Committee for Children, 2011) or routines and practices (e.g., Jones et al., 2017), seek to promote the social and emotional competencies of young people in educational settings. Over the past 20 years, there has been a proliferation of SEL interventions that aim to support children and adolescents' well-being. CASEL's Program Guide presents 44 universal, school-based SEL programs for K–12 students that meet their highest criteria (i.e., SELect program) because they have at least one high-quality randomized control trial or quasi-experimental evaluation study, pro-

mote social–emotional competence via multi-year, classroom-based programming, and provide high-quality implementation support (Skoog-Hoffman et al., 2020). Examples of these evidence-based SELect programs include 4R's (Jones et al., 2011), Promoting Alternative THinking Strategies (PATHS; Conduct Problems Prevention Research Group, 2010), and Second Step (Espelage et al., 2013).

Social and emotional learning has demonstrated positive impacts on a broad set of developmental outcomes. A meta-analysis of over 200 studies of universal, school-based SEL programs found the greatest effects on student social and emotional skills (ES = 0.57), followed by academic achievement, positive social behavior, reduced emotional distress, improved attitudes, and lower conduct problems (ES ranged from 0.22 to 0.27) when compared to students in comparison conditions (Durlak et al., 2011). Another meta-analysis examining follow-up effects at least 6 months after the implementation of universal SEL interventions found that many of these positive impacts persisted: in comparison to controls, participants had improved social and emotional skills, attitudes, and well-being (ES ranged from 0.13 to 0.33). Additionally, these SEL programs fostered resilience and buffered against negative outcomes such as drug use, behavioral problems, and emotional distress (ES ranged from 0.14 to 0.16). A small subset of studies measured distal effects during adolescence or emerging adulthood, detecting increases in high school graduation and college attendance and decreases in juvenile justice involvement and clinical disorders – signaling lasting benefits of SEL interventions (Taylor et al., 2017).

Measuring Student Social and Emotional Competencies to Support the Development of Resilience

The expansion of SEL research, programs, and practices, in combination with the adoption of PK–12 SEL learning standards in more than 20 states in the United States (CASEL, 2021), creates an ongoing need for an aligned assessment system to measure social and emotional competencies. An *assessment system* is a series of interconnected processes yielding sound and actionable information, guiding decision-making (Sigman & Mancuso, 2017). Best practices indicate that an assessment system should be comprehensive, balanced, aligned, defensible, and ethical to inform decisions that impact the lives of children (Shapiro et al., 2022). A *comprehensive* assessment system includes data collected at multiple levels (e.g., classroom, school, district) through a variety of information gathering procedures each deployed for distinct and predetermined purposes. A *balanced* system is careful not to overemphasize one purpose or one type of decision-maker in the allocation of attention and resources. An *aligned* assessment system is synergistic with current curriculum and instruction, and well integrated into existing routines. A *defensible* assessment system goes beyond collecting information that reinforces an existing or expected narrative, but provides high-quality information that justifies costs and burdens. Lastly, an *ethical* assessment system is inclusive, fair, and transparent both in the overall process and in each component. Since an assessment process inevitably embeds, and can unintentionally extend, hierarchies of power, an ethical assessment system should also be designed with the greatest consideration for the least powerful members of our society (Shapiro et al., 2022).

Discrete pieces of a SEL assessment system can have distinct purposes. When considering student-level assessment, some schools design assessment systems for a summative function to determine whether students have met pre-established standards or acquired the requisite skills for school and life success. Other systems use formative assessment, identifying each student's social and emotional strengths and instructional needs to inform planning and monitor progress (Shapiro et al. 2017b). The two aforementioned purposes (i.e., summative, formative) have been distinguished as an "assessment *of* learning" in contrast to an "assessment *for* learning" (Cefai et al., 2021). In addition, some schools and out-of-school time (OST) programs articulate a need

for assessment systems that will guide adult learning, prompting reflective practice among educators, improving school culture and climate, and creating SEL professional development opportunities that place well-being at the center of teaching and learning (Jennings & Greenberg, 2009). Finally, schools and OST programs that invest in developing and/or implementing SEL programs use assessment to evaluate and continuously improve SEL delivery systems and impact. The following section presents a set of tools for assessing student SEC developed in response to these diverse needs.

Overview of the Devereux Student Strengths Assessment Tools

Aperture Education, an educational organization promoting positive youth development, has published the Devereux Student Strengths Assessment (DESSA) system, a suite of assessment tools for youth-serving professionals to measure SEC in children and youth from a strengths-based perspective within a risk and resilience framework (www.apertureed.com). The DESSA tools provide users with a practical and psychometrically sound means of assessing malleable within-child protective factors in youth as part of their efforts to gather information, plan interventions, and evaluate efforts. These tools can be used in the context of universal screening or in the implementation and progress monitoring of specific positive youth development interventions (Naglieri et al., 2013). With its strengths-based orientation, the DESSA assessment tools, which are part of a series that span a developmental continuum from birth to age 21, help identify youth's skills and also areas for growth within specific SECs. The assessments then serve as goal-setting tools to direct attention and resources toward promoting skills that youth need to navigate challenges and engage in new opportunities.

The DESSA K-8 suite of tools includes two rating scales that are appropriate for students aged 5–14 years. The first is the full form of the *Devereux Student Strengths Assessment* (DESSA; LeBuffe et al., 2009/2014), which is designed to assess social and emotional competencies that serve as protective factors for children in kindergarten through eighth grade (Shapiro & LeBuffe, 2006). The DESSA was standardized on a national sample of 2494 ratings, provided by teachers, staff, and parents/caregivers using both paper and pencil and online versions. The DESSA is completed by parents, teachers, or staff at child serving agencies, including schools, extended day, summer enrichment, social service, and mental health programs (Shapiro et al., 2015). The assessment consists of 72 items that are entirely strength-based, scored on a five-point scale about how often the student engaged in each behavior over the past 4 weeks. The DESSA is organized into eight conceptually derived scales that provide information about social and emotional competencies. They are self-awareness, social awareness, self-management, goal-directed behavior, relationship skills, personal responsibility, decision-making, and optimistic thinking. The total of these scales is used to obtain a Social–Emotional Composite score. More information about the development, standardization, and psychometric properties of the DESSA are provided in the technical manual (LeBuffe et al., 2009/2014) and Chap. 11 (this edition).

The second rating scale included in the DESSA K–8 suite of tools is the *Devereux Student Strengths Assessment-mini* (DESSA-mini; Naglieri et al., 2011/2014). The DESSA-mini, with norms derived from a subset (n = 1,250) of the DESSA standardization sample, is a series of four brief (eight-item) forms, composed of strength-based items. The DESSA-mini yields a total score, from the standardized sum of the eight items. A single DESSA-mini form can be used to obtain a snapshot of a child's overall social and emotional competence to determine if additional assessment or targeted skill development should be provided (i.e., screening). The DESSA-mini forms show high agreement (95% accuracy) with the full 72-item DESSA (Naglieri et al., 2011). The four different forms can be used in rotation to avoid "practice effects" (i.e., improvements due to repeated

exposure). Because the four forms are highly correlated ($r > 0.95$), the total scores from each form can be directly compared (Lee et al., 2022c). This enables the use of the various DESSA-mini forms to monitor progress in acquiring social and emotional competence across time. More detailed descriptions about the development, standardization, and psychometric properties of the DESSA-mini are provided in the technical manuals (Naglieri et al., 2011/2014) and Chap. 11 (this edition).

As summarized in Chap. 11, the DESSA and DESSA-mini have demonstrated strong psychometric properties, including reliability (e.g., internal reliability, test–retest reliability, interrater reliability, alternate form reliability) and validity (e.g., concurrent and predictive criterion validity). In addition, recent studies have provided evidence of measurement invariance of the DESSA-mini over time and across subgroups, suggesting that the DESSA-mini measures the same construct of social–emotional competence (a) within and across academic years, and (b) across diverse subgroups of students based on gender (female and male), race and ethnicity (Asian/Asian American, Black/African American, Hispanic/Latinx, and White), family income level (eligible for free or reduced price lunch and not eligible), disability status (receiving special education and not receiving), and language (English language learner [ELL] and non-ELL) (Lee et al., 2022a, b, c). Features intended to mitigate bias are described by Mahoney and colleagues (2022) and explored empirically by Shapiro and colleagues (2016). Collectively, this provides an empirical foundation for the use of the DESSA-mini to monitor the growth of social–emotional competence over time among diverse student populations.

The Use of the DESSA Tools in a Multitiered System of Support Framework

The DESSA K-8 suite of tools can be used as part of a comprehensive assessment system to support the social and emotional development of K–8 students through a multitiered system of support (MTSS). The integrated use of the DESSA and the DESSA-mini is designed to support three aims: First, to provide school-wide screening to inform differentiated instruction through universal interventions (tier 1), targeted instruction (tier 2), and intensive and individualized supports (tier 3) in a MTSS framework (e.g., Cook et al., 2015; Horner & Sugai, 2015). Second, the tools support ongoing progress monitoring to assess student responses to intervention at the individual level and to promote continuous improvement at the system level. Last, the DESSA tools aid planning for students who need expanded SEL support. In this way, the DESSA tools can be used as part of a comprehensive and balanced assessment process to help promote the social and emotional competence of all youth (LeBuffe et al., 2018). By adopting a primary prevention, strengths-based approach, educators can intervene in a nonpunitive and nonexclusionary way before the emergence of emotional and behavioral problems, differentiate instructional supports, and enhance the school environment and programs to increase the likelihood of success in school and life for all young people.

Universal Screening, Targeted Assessment, and Intensive Supports

One way to implement the DESSA K–8 tools is to begin with universal screening of all children using the DESSA-mini. This often occurs near the beginning of a school year, after the required 4-week observation period has occurred. Most children will obtain a DESSA-mini total score of 41 or higher, placing them in the *Typical* (*T*-scores of 41–59 inclusive) or *Strength* (*T*-scores of 60 or higher) range. These children are expected to benefit from universal (i.e., tier 1) social and emotional learning programs and a safe and supportive school climate.

Students who obtain a DESSA-mini *T*-score that is in the *Need for Instruction* range (*T*-scores of less than or equal to 40) are also expected to benefit from universal instruction, but should additionally be provided targeted (i.e., tier 2) social and emotional instruction to accelerate

their social and emotional development. To better understand the students' specific areas of need, these students may be assessed with the full 72-item DESSA to help determine the nature of the targeted interventions that should be provided. These interventions should be based on specific social and emotional scores on the eight DESSA scales and an examination of individual item scores as specified in the DESSA Manual. Thus, this screening and assessment system can be used to guide differentiated instruction.

If at any time an adult becomes concerned about a child's social–emotional status, a student can be re-screened, or a full DESSA may be completed. This is in recognition that risk and protective factors can wax and wane over the course of the school year. A child who had a *Typical* score in the fall may have experienced additional risk and adversity and now scores in the *Need for Instruction* range. A student may be escalated to more intensive support (i.e., tier 3) whenever implicated.

Ongoing Progress Monitoring for Continuous Improvement

The goal of ongoing progress monitoring (OPM) is to use alternative DESSA-mini forms to provide feedback to the teacher, student support personnel, student, and caregivers on the progress all children are making in developing social and emotional competencies. Typically, the alternate forms of the DESSA-mini are administered at 30–90-day intervals, depending on the needs of the student and the system. If necessary, the DESSA-mini forms can be used repeatedly throughout the year. The results of each administration are recorded and graphically displayed using the DESSA-mini OPM form. This form provides a graphical depiction of progress, displaying changes in *T*-scores from one DESSA-mini administration to the next. Guidelines are presented in the DESSA-mini manual on how to interpret changes and modify targeted interventions and supports based on the student's progress.

When using the full DESSA, pretest–posttest comparisons can be made through procedures described in the DESSA manual (LeBuffe et al., 2009/2014); the student's statistically reliable growth or decline on each of the eight DESSA scales can be determined. This information can be useful for both documenting outcomes, planning for maintenance over the summer break, and preparing for the next school year. If the analysis indicates that a student did not respond to targeted interventions and make the anticipated level of progress, a referral for more intensive services should be considered.

In addition to evaluating the outcomes for individual students, the results of the pretest–posttest comparison technique can be aggregated across students who have been receiving targeted and intensive supports. These data can indicate areas where staff have, on the whole, been more or less successful at promoting specific competencies. For instance, this analysis might reveal that 75% of children receiving targeted support (e.g., a pull out social skills group) for self-management showed improvement, whereas only 25% of children receiving support for self-awareness showed improvement. This information can readily inform professional development strategies for staff, resource acquisition and mobilization in the school or community, and summer planning for youth.

Planning for Students Who Need Expanded Supports

The DESSA K-8 tools also provide valuable information for children who are being evaluated for or have already been deemed eligible for expanded services or special education services. In particular, the individual item analysis technique described in the DESSA manual can identify empirically grounded and instructionally relevant strengths to be incorporated into the child's Individualized Education Plan (IEP). Based on the individual item rating distributions from the national standardization sample, the individual item analysis technique enables the user to identify specific behaviors (i.e., DESSA items) that the student is exhibiting at an unusually high (*Strength*) or low (*Need for Instruction*) rate. These identified strengths can then be leveraged to help the student acquire skills rated in the Need for Instruction range, which is an important

component of strengths-based practice (Simmons et al., 2021). Additionally, identified strengths can be shared with the student or their family to foster a more positive, collaborative partnership. A review of the scale scores on the DESSA can also provide insights on how any disabilities may be affecting the child's performance of their social and emotional competence.

DESSA K-8 Uses in Research and Practice

The DESSA K-8 tools are currently in widespread use. At the time of this writing, for example, the DESSA-mini is being used to assess approximately half a million children annually. Direct citations of the assessment manuals (the K-8 DESSA, K-5 DESSA Second Step Edition (SSE)—a version of the DESSA intended for use in conjunction with the elementary Second Step curriculum (LeBuffe, Naglieri, & Shapiro, 2011), and the K-8 DESSA-mini) also reveal considerable use in research. Google Scholar identified 206 citations of the Technical Manuals through the end of 2020. After eliminating reviews and mentions of the DESSA that do not feature unique data collection, these citations represent 66 distinct studies. Out of the 66 studies, 22 focused on general assessment or measurement properties of the tool, and 44 were used in the context of an intervention. The majority of the studies ($n = 41$) used a full version of the DESSA or DESSA-SSE, while 21 used the DESSA-mini, and 4 integrated multiple tools in a comprehensive system model.

Although the DESSA was largely envisioned, and is mainly used as an assessment tool for students' social and emotional competence in the context of social and emotional learning (SEL) interventions, researchers have also used it as part of implementing and evaluating other resilience-promoting interventions. Some examples of these interventions include an equine learning program (Pendry & Roeter, 2013; Pendry et al., 2014a, b), a yoga intervention (Beattie, 2014), a digital citizenship/media literacy after-school program (Felt et al., 2013), and an intergenerational preschool program placing preschool children with residents in an assisted living center (Brant & Studebaker, 2021). These applications of the DESSA reveal the flexibility of the DESSA in novel contexts.

The DESSA tools have been used with a variety of groups reflecting diversity across racial/ethnic groups, socio-economic status, ability, and risk contexts. Within the identified 66 studies that directly cited the DESSA manuals, 59 collected information with the DESSA tools in the United States, and 7 collected information internationally. Of the 59 studies in the United States, 51 studies described the race/ethnicity of students. These included a significant group of Black/African American (e.g., An et al., 2019; Anderson, 2015, 2018; Brock et al., 2019; Doromal et al., 2019; Kim et al., 2019; Verlenden, 2016), Hispanic (e.g., Felt et al., 2013; Lee et al., 2018), Latine (e.g., Hatchimonji, 2016; Shapiro et al., 2017b; Shapiro et al., 2018), and White (e.g., Brann et al., 2020; Hughes, 2018; Kilpatrick et al., 2018; Naglieri et al., 2010; Pendry et al., 2013, 2014b) students or had an emphasis on Native American/Alaska Native children (e.g., Chain et al., 2017). Thirty-seven studies described the socio-economic status (SES) of students in their sample. These included a significant group of students who were eligible for free or reduced price lunch (e.g., Anderson, 2015, 2018; Brock et al., 2019), economically disadvantaged (e.g., Millman, 2015; Smith-Millman, 2017) and living below the poverty line (e.g. Stein et al., 2013). The tools were also administered for children across a range of developmental abilities from gifted student classrooms (Bacal 2015; Kong, 2013; Perham, 2012), to special education classrooms (Orduña, 2018), and some children with specific learning differences, such as children who stutter (Byrd et al., 2016). Furthermore, the DESSA has been used across a variety of risk contexts, such as with children with experiences of maltreatment (Daderko, 2014), living with active duty military family members (Conover, 2018), and with a neuropsychological diagnosis (e.g., ADHD, depression) (Naglieri et al., 2010).

Outside of the United States, the DESSA tools were used in research studies that cited the tech-

nical manuals across 17 countries. In Scotland, the DESSA was used to assess children's social and emotional competence following an intervention to support children experiencing loss or negative change (e.g., bereavement, incarcerated family, parental separation, transition to kinship care, etc.) (Whitehead et al., 2018). In Germany, the DESSA was used following a public skills training program (Herbein et al., 2018). In Kenya, the DESSA was administered after teachers practiced a reflective teaching approach as action researchers (Thumbi, 2019). In Australia, the DESSA was used to assess SEC following a father–daughter exercise program that addressed both sport skills and emotional well-being (Young et al., 2019). In Canada, the DESSA was used as part of a more extensive study to assess the long-term impact of a natural disaster (Arshad et al., 2020). In Israel, the DESSA was used in conjunction with a project-based learning program across Arab and Jewish schools (White, 2013). Finally, a cross-country study administered the DESSA in five languages (English, French, German, Spanish, and Mandarin) following a spiritual education program for children of divorced parents in 15 countries (India, China, Japan, Singapore, Egypt, South Africa, Nigeria, France, Germany, Sweden, Norway, United Kingdom, United States, Canada, and Australia) (Pandya, 2017). There are likely other international studies, not included here because they do not cite the English-language manuals, since they have their own technical manuals from official translations (e.g., Italian Edition; LeBuffe et al., 2015) and cultural adaptations of the DESSA to their local context (e.g., Dutch Adaptation; LeBuffe et al., 2013).

Moving from Research to Practice

Effective social and emotional assessment systems provide insights that guide the decision-making of adults who work with young people, coordinate, and provide appropriate learning opportunities, and improve the overall educational context to better serve youth (Sigman & Mancuso, 2017). These motivations are aligned with the goals of *systemic* social and emotional learning, which takes a more comprehensive perspective to coordinate *across* settings (e.g., classroom, schools, homes, communities) to advance SEC in youth (Mahoney & Weissberg, 2020). Additionally, systemic SEL underscores the importance of leveraging the strengths and supports for SEL that exist within all of these levels (Greenberg et al., 2017), and also engaging in reflective practices to ensure continuous quality improvement (Borowski, 2021). Thus, the assessment of social and emotional competencies is part of a broader effort to improve educational systems and support holistic youth development so that *all* youth have the opportunity to experience resilience and flourish.

Within this movement of systemic SEL, scholars and practitioners have noted the role of culture, variability, and equity (e.g., Mahoney et al., 2020). Specifically, racism is a form of risk that manifests in interactions between the individual and context (Masten, 2018) and increases risk exposure for racial/ethnic minority youth (Masten, 2018). Yet, resilience is both an innate and learned capacity, and can be present and cultivated in these instances of social inequities. Thus, there is an opportunity to promote resilience and equitable outcomes through social and emotional learning initiatives. Two common conceptualizations of how SEL can be used to advance equity include the United Nations Educational, Scientific, and Cultural Organization's (UNESCO) Sustainable Development Goals (UNESCO, 2021) and CASEL's transformative SEL framework (Jagers et al., 2019).

In 2015, the United Nations General Assembly set measurable economic, social, and environment targets to ultimately eradicate poverty, heal the planet, and realize the rights of all people (United Nations Department of Economic and Social Affairs, 2021). These Sustainable Development Goals include an imperative to "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" with specific targets noting processes such as "promotion of culture of peace and non-violence," "global citizenship and appreciation of

cultural diversity," and "build and upgrade inclusive and safe schools" (UNESCO, 2021). Social and emotional learning has been positioned as a key mechanism to achieve these goals (Singh & Duraiappah, 2020).

In 2020, *transformative* social and emotional learning (T-SEL) was presented as an elaboration upon the purpose of SEL and the five CASEL social and emotional core competencies. T-SEL positions social and emotional learning as a means to address social inequities (e.g., as experienced by race/ethnicity and class) and advance justice-oriented individual, community, and society well-being (Jagers et al., 2019). The focal constructs embedded within these SEC elaborations are as follows: the competency of self-awareness includes aspects of *identity* to explicitly address the importance of intersectionality, positionality, and self-respect; self-management includes *agency*, hope, and self-direction; responsible decision-making embraces *curiosity* with respect to others and the social environment; relationship skills addresses the need for *collaborative problem-solving* to become an effective global citizen; and social awareness advances sense of *belonging,* connection, and trust (Jagers et al., 2021). Taken together, T-SEL includes social justice and civic engagement as part of the process to transform inequitable education settings and support SEC development in youth (Jagers et al., 2021). This framing presses educators to grapple with the relationship between SEL and equity to consider how these T-SEL elaborations can be actualized in the practice of promoting social and emotional competencies among diverse young people for the benefit of all young people.

Leveraging systemic SEL initiatives for sustainable development or equity implies that student assessment of SEC is done through sustainable and equitable processes (Shapiro et al., 2022). In order to make decisions about how the measurement of student SEC is accomplished, prospective users of information should be consulted, including a spectrum of stakeholders from policy-makers to parents, and young people themselves (Casas et al., 2013; Ozer et al., 2021). Assessment in these frameworks should serve both formative (i.e., providing actionable feedback to inform real-time adjustments) and summative (i.e., informing a judgment as to whether a performance meets a criterion) purposes (Cefai et al., 2021), such that assessment leads to improved outcomes for young people. Local assessment teams should clearly communicate to all stakeholders their rationale for assessment and how the information will be gathered, interpreted, and used. Furthermore, the local assessment team should articulate an approach to seeking permission to collect information from individuals (e.g., parents, community elders) who are advised of the risks, benefits, and any potential alternatives.

Assessment information should be collected through standardized protocols that enable comparisons over time and across groups, such that ineffective practices and disparities can be identified and remediated. Assessment information should be easily aggregated for decision-making at various levels of the educational system and should be presented expeditiously in a format that facilitates action. A thoughtful process should determine who is invited to help interpret, learn from, and use the information generated through the assessment process. Safeguards should be put in place to avoid complex circumstances being overly simplified and misinterpreted, or used to inappropriately rank, stigmatize, humiliate, alienate, or perpetuate constructed advantages among students and communities (Shapiro, et al., 2022). It is important that parents and guardians understand how their individual children are progressing at school in the social and emotional domain; information should be shared transparently and collaboratively, perhaps by integrating into systems that share information with parents about a child's progress in other domains (Elias et al., 2015).

Conclusion

Today's youth face unprecedented social, emotional, academic, and economic challenges. However, amidst these difficulties, school-based social and emotional learning programs have

proven to be an effective and meaningful approach to supporting youth by building promotive and protective factors. In supportive school environments that are appropriately staffed and resourced, students can realize their inherent strengths, gain additional social and emotional competencies, and experience resilience and ultimately flourish. This chapter highlights how using strengths-based, reliable, and developmentally and culturally sensitive assessment tools can cultivate social and emotional competencies in young people. Youth strengths and opportunities for growth must be appropriately measured on a regular basis to help inform the planning and delivery of interventions, decision-making, and continuous improvement of school climate. When comprehensive, balanced, defensible, and ethical assessment systems are used to advance the wellbeing of all young people, then students can learn and grow in educational systems that will support their development as learners, thinkers, and global citizens.

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13 Assessing Resiliency in Children and Young Adults: Constructs, Research, and Clinical Application

Donald H. Saklofske, Rachel A. Plouffe, Claire A. Wilson, and Sandra Prince-Embury

The Resiliency Scales for Children and Young Adults

Accumulating research and theory suggest that it is possible to objectively measure qualities of resiliency. Although there are currently a number of scales available to clinicians and researchers to assess resiliency (see Prince-Embury et al., 2015), the *Resiliency Scales for Children and Adolescents*™ (RSCA; Prince-Embury, 2007) and its more recent upward extension, *The Resiliency Scale for Young Adults* (RSYA; Prince-Embury et al., 2017), are commonly used measures based on the findings of previous research on personal resiliency in children and adolescents. Both resiliency scales were grounded in developmental theory and were designed to systematically identify and quantify core personal qualities of resiliency in children and young adults, drawing from their own words about their experiences managing the everyday and more significant stresses and strains in their lives. According to theory and published research, the scales provide an empirically sound assessment of core characteristics underlying personal resiliency in children, adolescents, and young adults. The scales also allow for easy communication of this information to individuals as well as psychologists and allied professionals, youth, and their caregivers for the purpose of education, screening, prevention, and counseling. The scales are based on the position that personal resiliency reflects adequate personal resources that match or exceed emotional reactivity to internal or external stress. The RSCA, which is also more fully developed as a clinical assessment instrument, describes how this relationship may be expressed as a personal resiliency profile unique to each child or adolescent.

Dr. Sandra Prince-Embury passed way before starting work on this chapter. Much of the first part of the current chapter is drawn from her earlier chapter published in the previous edition of this book. Dr. Prince-Embury is author of the Resiliency Scales for Children and Adolescents and co-author of the Resiliency Scale for Young Adults.

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https://doi.org/10.1007/978-3-031-14728-9_13

Defining Resilience

Operational definitions presented for the different resiliency scales have varied considerably, including descriptions that are often labeled as protective factors including hardiness, grit, coping, optimism, competence, self-esteem, social skill, or the absence of pathology in the face of adversity. However, there is agreement among researchers and clinicians that resiliency may be generally defined as the ability or capacity to weather adversity or to bounce back from a negative experience. In this context, success is typically defined as having observable assets, achievement, developmental milestones, or absence of symptoms. Much of resilience research has examined the interaction between protective factors and risk in high-risk populations with the aim of identifying those factors that were present in the lives of those who thrived in the face of adversity as compared to those who did not (Garmezy et al.,1984; Luthar, 1991, 2003; Masten, 2001; Prince-Embury et al., 2016; Prince-Embury & Saklofske, 2013, 2014; Rutter et al., 1994; Werner & Smith, 1982, 1992, 2001).

Protective factors linked to the individual have been identified in previous research and include intellectual ability (Baldwin et al., 1993; Brooks, 1994; Jacelon, 1997; Luthar & Zigler, 1991, 1992; Masten & Coatsworth, 1998; Rutter, 1987; Wolff, 1995; Wright & Masten, 1997), emotional intelligence (EI) (DiFabio & Saklofske, 2018), easy temperament (Jacelon, 1997; Luthar & Zigler, 1991; Rende & Plomin, 1993; Werner & Smith, 1982; Wright & Masten, 1997; Wyman et al., 1991), autonomy (Jacelon, 1997; Werner & Smith, 1982), cheerfulness (Lau et al., 2019), self-reliance (Polk, 1997), sociability (Brooks, 1994; Luthar & Zigler, 1991), effective coping strategies (Brooks, 1994; Luthar & Zigler, 1991; Smith et al., 2016), and communication skills (Werner & Smith, 1982).

Another group of protective factors is linked to the individual's social environment, including family warmth, cohesion, structure, emotional support, positive styles of attachment, and a close bond with *at least one* caregiver (Baldwin et al., 1993; Brooks, 1994; Cowen & Work, 1988; Garmezy, 1991; Gribble et al., 1993; Luthar & Zigler, 1991; Luthar & Zelazo, 2003; Masten & Coatsworth, 1998; Masten, 2018; Rutter, 1987; Werner & Smith, 1982; Wolff, 1995; Wright & Masten, 1997; Wyman et al., 1991, 1992). Environmental protective factors outside the immediate family include positive school experiences (Brooks, 1994; Rutter, 1987; Werner & Smith, 1982; Wright & Masten, 1997), good peer relations (Cowen & Work, 1988; Jacelon, 1997; Werner & Smith, 1982; Wright & Masten, 1997), and positive relationships with other adults (Brooks, 1994; Conrad & Hammen, 1993; Garmezy, 1991; Werner, 1997; Wright & Masten, 1997).

The Changing Landscape of Resiliency Research and Application

More recently, resiliency has been identified as a characteristic of normal development in contrast to being a product in response to adverse circumstances (Masten, 2001; Masten & Barnes, 2018; Masten & Powell, 2003). Masten (2001) suggested that fundamental systems, already identified as characteristic of human functioning, have great adaptive significance across diverse stressors and threatening situations (see also Ungar & Theron, 2020). Masten recommended that these systems include individual attributes, such as attachment, defined as systems underlying close relationships in development; mastery motivation, defined as pleasure from mastering developmental tasks; self-regulation, defined as emotional and behavioral regulation and impulse control; and cognitive development and learning. Masten also suggested that the dominance of a medical model that emphasizes deficits has impeded the development of good measures of positive aspects of behavior (Masten & Curtis, 2000).

Other researchers and clinicians have expressed a need for a further shift toward clinical application and a focus on developing these

qualities in all children and youth to carry them through life. Goldstein and Brooks (2005, 2013) and Brooks and Goldstein (2001) have called for a clinical psychology of resiliency with a focus on the interaction between the child and the child's social environment. For example, Brooks and Goldstein have written on the importance of the mindset of a resilient parent in raising a child with a resiliency mindset, as well as the importance of teaching parents how to identify and foster these qualities. These authors focus on changing the family environment to be more supportive of the child's resiliency, which they have further extended to include the role of the school and teacher (Brooks & Goldstein, 2008).

Seligman (1995, 1998, 2000) has further written on the need for developing a systematic science of positive psychology to offset the prevailing focus on pathology, which is now well represented in the training of clinical, counseling, and school psychologists (see also Leschied et al., 2018). Seligman (2019) points out that the major strides in prevention have come from a perspective of systematically building competency, not on correcting weakness. Seligman's approach, based in cognitive theory, is to provide structured intervention designed to build resilient attitudes that will then buffer against symptoms of depression. These views have been embraced by researchers and clinicians and reflected in the more recently developed resiliency scales that emphasize assessment with implications for prescription.

To follow is an overview of the resiliency model developed by Prince-Embury (see Prince-Embury & Saklofske, 2013, 2014) and the subsequent measures created for assessing resilience in children (RSCA; Prince-Embury, 2007) and young adults (RSYA; Prince-Embury, Saklofske, & Nordstokke, 2017). Given the widespread and international interest in strength-based approaches to supporting mental health, the last section will focus on cross-cultural studies of the most recent RSYA.

Prince-Embury's Model of Resiliency and the Resiliency Scales

The creation of the RSCA, followed by the RSYA, began with the identification and operationalization of personal qualities that are critical for resiliency adaptation of children and youth (Prince-Embury, 2006). While acknowledging the critical importance of environmental forces, the scales are predicated on the personal attributes and knowledge that youth bring to their environments that generally allow some to do better than others in the face of adversity. This view overlaps conceptually with the notion of ego resiliency as a personal integrative characteristic in adults (Block & Block, 1980). Ego resiliency encompasses a set of traits reflecting general resourcefulness and sturdiness of character and flexibility in functioning in response to varying environmental circumstances. Personal resiliency as presented in the RSCA and RSYA is described in terms of three developmental systems that are recognized as beginning early in development and maintaining salience across the lifespan.

Resiliency and Sense of Mastery

A sense of mastery and self-efficacy is recognized by most experts as a core characteristic of resiliency in children and adults. White (1959) introduced the construct as a sense of mastery/efficacy in children and adolescents that provides the opportunity for them to interact with and enjoy cause-and-effect relationships in the environment. White contended that this sense of competence, mastery, or efficacy is driven by an innate curiosity, which is intrinsically rewarding and the source of problem-solving skills. Other theories have emphasized learning rather than intrinsic motivation. Bandura's (1977, 1993, 1997) theory focuses on the internal mediating mechanism of learned expectation and self-efficacy through direct and indirect interaction with the social environment. The critical implication of Bandura's work is that self-efficacy experiences can be systematically structured for students to maximize the likelihood of their

learning to have greater belief in their own self-efficacy. Studies have shown that positive expectation is related to resiliency (Cowen et al., 1991) as well as lower anxiety, higher school achievement, and better classroom behavior control (Wyman et al., 1993).

Resiliency and Sense of Relatedness

A second body of literature with a long history links youth's relational experience and ability with personal resiliency (e.g., Bowlby, 1969; Ainsworth & Wittig, 1969). Masten and Coatsworth (1998) identified the significance of an attachment system to the resiliency of an organism and Luthar and Zelazo (2003) argued that strong, supportive relationships lie at the core of resilient adaptation. The implication is that social relatedness contributes to external buffering in several ways. First, the youth may view relationships as generally available as needed, as well as available for specific supports in specific situations. On another level, internal mechanisms reflecting the cumulative experience of previous support may in some way shield the child from negative psychological impact. Research and theory regarding internalized mechanisms of relatedness suggest more than one pathway for this influence.

Relationships as Buffers Relationships and relational ability as mediators of resiliency have been supported in research. In *Vulnerable but Invincible,* Werner and Smith (1982) observed that resilient youth sought support not only within families, but also more often from nonparental adults, especially teachers, ministers, and neighbors. Werner's research suggested that it is not only the presence of supportive individuals at the time of adversity that protects the child, but also the internal mechanism of being able to relate to others in a meaningful and long-lasting way that constitutes resiliency. Perceived support, as distinguished from actual support and "confidence in the availability and helpfulness of social partners is crucial to maintaining a sense that assistance is available and the hope that can ensue even in difficulty (this is what is meant by a secure attachment relationship early in life)" (Thompson et al., 2006, p. 13).

Internal Mechanisms of Relatedness Earlier psychosocial theories of development, such as that of Erik Erikson (1963), identified the first developmental psychosocial processes that occurred in infancy through interaction between the child and the primary caregiver as the development of trust versus distrust. The significance of trust was identified by Erikson (1963) as the first stage of social–emotional development, upon which all other social development is built. Erikson defined basic trust as the ability to receive and accept what is given. A number of theorists observing the interaction between the infant and primary caregiver conceptualized this early social interactive process as the development of attachment, which they claimed has implications for the individual's ability to relate to others throughout their lifetime. A large body of literature further supports the relationship between attachment and resiliency in children and adolescents and youth (e.g., Darling Rasmussen et al., 2019; Fonagy et al. 1994; Kennison & Spooner, 2020; Rolfe, 2020). These studies suggest a complex interaction between early attachment and the development of the capacity for self-regulation and resiliency. The presence of a secure relationship in infancy mediates the regulation of affect and models that regulation for the child. Self-regulation then impacts the child's development in many ways, including the ability to relate to others.

Resiliency and Emotional Reactivity

Developmental psychopathology studies have found that whether a child develops pathology in the presence of adversity is related in some way to our emotional reactivity and ability to modulate and regulate this reactivity. Strong emotional reactivity and associated difficulty with self-regulation has been strongly linked to behavioral difficulty and vulnerability to pathology (Sætren et al., 2019). Conversely, the ability to modulate or otherwise manage emotional reactivity has

been found to be a significant factor in fostering resiliency. Reactivity has been labeled alternately as vulnerability, arousability, or threshold of tolerance prior to the occurrence of adverse events or circumstances.

Rothbart and Derryberry (1981) indicated that reactivity reflects the speed and intensity of a child's negative emotional response, and that regulation is the child's capacity to modulate that negative emotional response. Relative reactivity may have physiological basis, such as temperament, genetic predisposition, learning disability, physical impairment, or congenital anomaly, but it may also be modified by adverse experience. Developmental psychology has focused on self-regulation as the organism's way of maintaining the delicate balance or homeostasis required for functioning. Within this context, self-regulation has been defined in several ways: a set of abilities that allow one to regulate their own attention, emotions, and behavior (Cicchetti & Tucker, 1994; Pennington & Welsh, 1995; Rothbart & Bates, 1998); and the intra- and extra organismic factors by which emotional arousal is redirected, controlled, modulated, and modified so that an individual can function adaptively in emotionally challenging situations (Cicchetti et al., 1991; Thompson, 1990). Emotion regulation may be defined as a part of self-regulation, which in turn refers to a set of tools that allow children to regulate their own attention, emotions, and behavior (Pennington & Welsh, 1995; Rothbart & Bates, 1998).

The Resilience Scale for Children and Adolescents

Drawing from the research and clinical literature, Prince-Embury (2007) developed the RSCA for use with children and adolescents based on the three core theoretical areas described above. This was followed by the RSYA (Prince-Embury et al., 2017), which is an upward extension of the RSCA, albeit better suited for use with young adults. Each scale was designed to reflect these core areas and the implied system of underlying mechanisms that mediate between the environment and the individual's internal experience—sense of mastery, sense of relatedness, or emotional reactivity. The three RSCA self-report scales were written at a third-grade reading level and consist of 20–23 items each with a total of 64 items. Response options for each item are rated on a five-point Likert scale: 0 (*Never*), 1 (*Rarely*), 2 (*Sometimes*), 3 (*Often*), and 4 (*Almost Always*).

For purposes of this chapter, we will briefly describe the RSCA scales and then describe the changes that were required for the RSYA. Details on the psychometric properties of the RSCA will only be summarized here but are reported in full in the chapter written by Prince-Embury for the previous version of this book and in our books, articles, and the manual accompanying the scale. Readers are also encouraged to read these book chapters for further descriptions of the clinical use and applications of the RSCA.

Sense of Mastery Scale and Subscales

A sense of mastery in children and youth provides the opportunity for them to interact with and enjoy cause and effect relationships in the environment. Although the construct of mastery has been discussed by different theorists in slightly different ways, Prince-Embury's Sense of Mastery scale consists of 20 items and comprises three personal characteristics that combine to form the underpinnings of a youth's sense of mastery—Optimism, Self-Efficacy, and Adaptability. The purpose of this distinction was to include these elements and to potentially assess the relative contribution of each to a youth's sense of mastery or lack thereof. Sense of Optimism is defined by positive attitude(s) about the world/life in general and about an individual's life specifically, currently, and in the future. Self-Efficacy is defined as the sense that one can master his or her environment and is manifested by the presence of problem-solving strategies and a sense of accomplishment. Adaptability is conceptualized as the ability to learn from one's mistakes and to accept feedback from others.

Sense of Relatedness Scale and Subscales

The Sense of Relatedness scale consists of 23 items and includes four components that contribute to a sense of relatedness: Sense of Trust, Perceived Access to Support, Comfort with Others, and Tolerance. These aspects are conceptually and developmentally interrelated, but are at the same time conceptually distinct. Sense of Trust is conceptualized as the extent to which others are perceived as reliable and the extent to which one can be authentic in relationship with others. Access to Support is conceptualized as the extent to which a youth believes that there are others who care and to whom he/she can go to for help in the face of adversity. Comfort with Others is conceptualized as being at ease with others, having friends, spending time with friends, and generally being liked by others. Tolerance of differences is conceptualized as being able to express and experience differences in relationship with others; this manifests as assertiveness and forgiveness in relationships.

Emotional Reactivity Scale and Subscales

Emotional reactivity may be viewed as pre-existing vulnerability, arousal, or threshold of tolerance to stimulation prior to the occurrence of adverse events or circumstances.

Siegel (1999) proposed a conceptual framework of self-regulation in which he identified the following basic components: regulation of intensity, sensitivity, specificity, windows of tolerance, recovery, access to consciousness, and external expression. As operationalized in the RSCA, the Sensitivity subscale assesses how easily upset or triggered the child is and the intensity of the reaction. The Recovery subscale is designed to assess the perceived time it takes for emotionality to dissipate. The Impairment subscale measures the degree to which a child's emotional reactivity overwhelms his or her capacity to function effectively. In this way, Emotional Reactivity reflects the extent to which the youth experiences him or herself maintaining an "even keel" when emotionally aroused.

Personal Resiliency Profiles

The second phase of the development of the RSCA included an examination of the relationship between the three core constructs reflected by the resiliency scales in order to determine the unique profiles and associated intervention needs of youth (Luthar, 2006; Luthar & Zelazo, 2003; Zucker et al., 2003). The three resiliency scales, converted to a common metric, may be plotted together to form a unique resiliency profile for each child or adolescent. This resiliency profile allows the user to see the youth's relative strengths (resource index) and vulnerability (vulnerability index) at a given point in time. The resiliency profile also allows strengths and vulnerabilities to be considered in relation to each other for each youth. In addition, the profile may be compared to what is normative for children of a specific age and gender and/or be compared with profiles that have been observed for specific populations. Kumar et al. (2010) and Mowder et al. (2010) provided examples of personal resiliency profiles in clinical and juvenile detention populations. The indexes are meant to identify students in universal preventive screening for additional monitoring or for proactive intervention (see Prince-Embury, 2010a, b).

Reliability Evidence

The reliability evidence is excellent for the RSCA index scores, good for the three global scale scores, and adequate for most subscales (see RSCA technical manual for details, Prince-Embury, 2007). The RSCA index and global scale scores show good or excellent internal consistency across age and gender groups, and as expected, greater internal consistency was evidenced with increased age (Prince-Embury, 2007). Most RSCA scales have at least adequate test–retest consistency across 2 weeks for both the child and adolescent sample. Test–retest reli-

ability is good for the index and global scale scores. As expected, adolescents evidenced more consistency over time than children (for more detailed information on RSCA reliability, see Prince-Embury, 2007).

Developmental Consistency of Constructs

Although the RSCA scales were originally developed and normed for use among adolescents (Prince-Embury, 2006), they were designed at a third-grade reading level so that the same instrument could be used across a wide age range extending from childhood through adolescence. Preliminary analyses examined the developmental consistency of the core constructs underlying the RSCA on two levels. The more global level of analysis confirmed that the three-factor structure was a better fit than a one- or two-factor structure across the entire normative sample, aged 9–18 (Prince-Embury, 2007; Prince-Embury & Courville, 2008a). The second level of analysis examined measurement invariance of the three-factor structure across age bands. Prince-Embury and Courville (2008b) found support for measurement invariance of this three-factor structure across three age bands.

Validity Evidence

Construct validity evidence for the RSCA as a measure of resiliency has been explored in the relationship between RSCA scores and measures of related protective factors. Prince-Embury (2007) described the relationship between the positive self-concept score of the *Beck Youth Inventory – Second Edition* (BYI-II; Beck et al., 2005) and the RSCA protective factor scores for children and adolescents, supporting the convergent validity for these scores as reflective of protective factors. Further support for the validity of the RSCA was demonstrated in a study using the Piers-Harris Children's Self-Concept Scale, Second Edition (Piers-Harris 2; Piers, 2002) (Prince-Embury, 2007). Developmental theory has identified positive parental attachment as a far-reaching protective factor. Luther (2006) reported moderate convergent validity, reflected by the positive and significant relationships between RSCA protective scores and mother and father attachment scores. The Resource Index Score correlates most strongly with parental attachment, suggesting that combined resources are most related to strength of parent attachment.

Prince-Embury (2007, 2008) reported strong positive correlations between the Vulnerability Index Score and Emotional Reactivity facet, and all BYI-II (Beck et al., 2005) scores of negative affect and behavior, for the standardization sample of 200 adolescents. There are also high negative correlations between the Resource Index, Mastery and Relatedness scales, and the BYI–II scores reflecting Disruptive Behavior, Anxiety, Depression, and Anger. These findings supported the hypothesis that a high degree of emotional reactivity is associated with negative affect and behavior. Similar results were found in correlational studies of the RSCA with the Connors Adolescent Symptom Scale: Short Form (CASS; see Prince-Embury, 2007). Conduct problems were positively correlated with the RSCA Vulnerability Index and the Emotional Reactivity scale score, whereas the conduct problems score was negatively correlated with the RSCA Resource Index, Mastery, and the Relatedness scales score.

A study correlating RSCA scores with bullying and victimization scores of the *Reynolds Bully Victimization Scales* (Reynolds, 2004) suggested some gender differences between these behaviors with vulnerability and resources in children (see Prince-Embury, 2007). For boys, the Vulnerability Index and Emotional Reactivity scale scores were significantly and moderately positively related to self-reported bullying and victimization, whereas Resource Index scores were less significantly related to bullying and victimization for boys. For girls, on the other hand, a lower Resource Index score was most significantly related to both bullying and victimization. For girls, the Resource Index, Sense of Mastery, and Sense of Relatedness scale scores showed relatively strong negative correlations with self-reported bullying and victimization, whereas emotional reactivity was less strongly related to these two scales.

A study conducted by Prince-Embury (2006) reflecting the relationships between the RSCA and alcohol and drug abuse, sexual behavior, self-harm ideation, and sensation seeking showed that these risk behaviors were positively and significantly correlated with Emotional Reactivity, in contrast to negative correlations with Sense of Relatedness and Mastery. These findings suggest that higher Emotional Reactivity is related to higher frequency of risk behavior and ideation in nonclinical adolescents. This was particularly true for ideation of self-harm and use of drugs or alcohol. The protective factors of Sense of Relatedness and Sense of Mastery had modest relationships with lower frequency of risk behavior, particularly use of drugs or alcohol. These findings support the relevancy of aspects of personal resiliency to behaviors of concern among adolescents, and the relevance of screening for resiliency and vulnerability among nonclinical samples.

Finally, in support of the validity of the RSCA, Prince-Embury (2007) reported significant differences between mean scores of clinical groups and matched control groups for children and adolescents across several diagnostic groupings. The nonclinical groups scored consistently higher on the Resource Index score, Sense of Mastery, Sense of Relatedness scales, and their subscales. The clinical samples scored consistently higher on the Vulnerability Index, Emotional Reactivity scale, and subscale scores. Effect sizes were large for all differences (see Prince-Embury, 2007 for details). Figure 13.1 displays the Resiliency Profiles for five adolescent clinical groups and the nonclinical adolescent sample based on the mean *T* scores for the Mastery, Relatedness, and Emotional Reactivity scales for each diagnostic group (see technical manual for description of samples, Prince-Embury, 2007).

The Resiliency Scale for Young Adults

Following the introduction of the RSCA, the three-factor model of resiliency developed by Prince-Embury (2006, 2007), and our further collaborations (e.g., Prince-Embury & Saklofske, 2013, 2014), the decision was made to develop an upward extension of this scale for use with older adolescents and young adults. We retained the original three factor model of Mastery (Optimism, Self-Efficacy, Adaptability), Relatedness (Trust, Support, Comfort with Others, Tolerance), and Emotional Reactivity (Sensitivity, Recovery, Impairment) and only modified any items that might be made more relevant to an older group. The RSYA went through various trials and iterations resulting in several wording changes and the addition of new items for the Adaptability subscale (Saklofske et al., 2013). The 50-item RSYA, responded to using a five-point rating scale, was then administered to university students and subjected to a series of analyses intended to support its factor structure, convergent-discriminant validity, and reliability (Prince-Embury et al., 2017).

Results were very encouraging. Internal consistency reliabilities of 0.89–0.92 were found for the three factors, and coefficients between 0.75 and 0.87 were reported for nine of the ten subscales, except for Tolerance (0.65). Confirmatory factor analyses clearly supported the three-factor and 10-subscale model proposed by Prince-Embury for the RSCA. Convergent-discriminant validity of the RSYA factors and subscales was demonstrated with measures of EI, psychological flourishing, subjective well-being, depression, anxiety, and stress. Readers are referred to the paper introducing the RSYA (Prince-Embury et al., 2017) for greater details on the development of the scale and the results briefly summarized above.

Cross-Cultural Studies of Resiliency and Its Assessment

We now turn our attention to an examination of the resilience literature in the broader global context. Until recently, most studies reflecting resiliency have primarily been conducted using samples collected among Western nations (e.g., Canada, United States). However, given the universality of adverse life experiences and personal challenges around the world, it is reasonable to

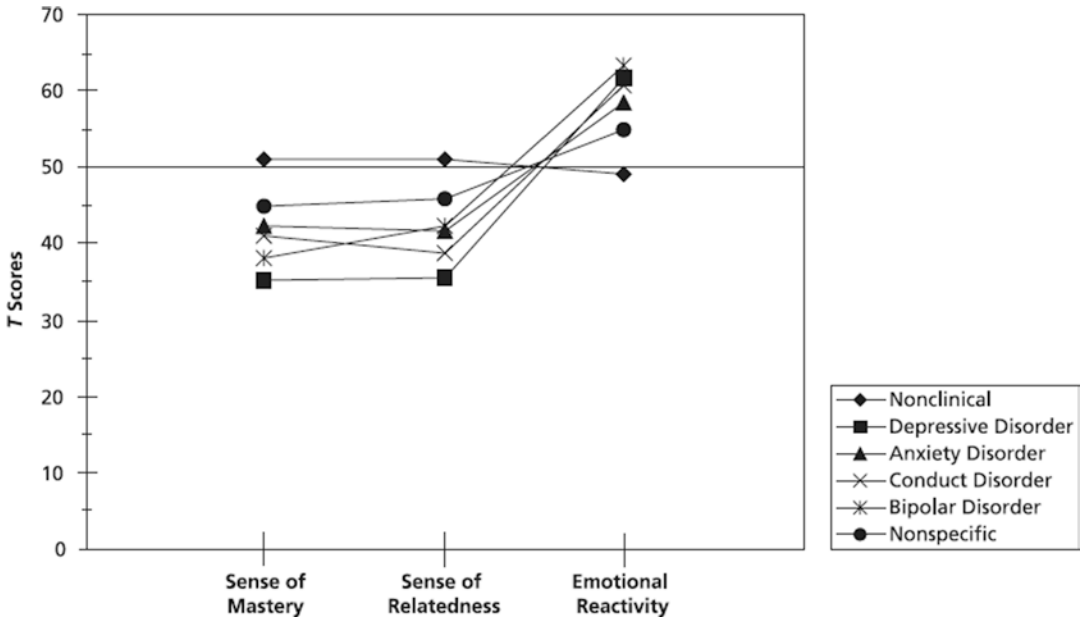

Fig. 13.1 Profiles of personal resiliency in adolescent clinical and nonclinical samples. (Reprinted Table 3.2 on page 29 of the RSCA Manual, Prince-Embury, 2007)

hypothesize that individual differences in resiliency exist across cultures. This first section reports on studies investigating the conceptualization, operationalization, and correlates of resiliency across cultures to be followed by research in which the RSYA was employed in other countries.

Understanding Resiliency Across Cultures

Prior to evaluating levels of resiliency across cultures, it is imperative that researchers understand the stressors that individuals experience across nations, and how these stressors contribute to one's capacity to cope with and adapt to adverse circumstances. To this end, Eggerman et al. (2010) qualitatively assessed narratives of adversity and resilience among youth and their caregivers in central and northern municipalities in Afghanistan to understand how individuals living in war-impacted communities were able to adapt and even thrive following exposure to conflict and turmoil. In their interviews, Eggerman et al. (2010) uncovered that economic insecurity was at the root of most of their mental and physical health burdens, as the economic insecurity created further indirect challenges including domestic violence within families, community conflict, and material poverty. Their resilience was drawn from the meaning made from these difficult situations, often through religious affiliations, internalizing the importance of education, conformity to cultural values, and social support.

Similar to Eggerman et al.'s (2010) findings that individuals residing in societies exposed to war and political conflict are still able to thrive emotionally and socially, Brailovskaia et al.'s (2018) results also supported the universality of resiliency across cultures. Specifically, in their study investigating resiliency as a protective factor against adverse mental health outcomes among German, Russian, and Chinese university students, results showed that resiliency was negatively associated with depression, anxiety, and stress across all countries. In addition, resiliency mediated the associations between social support and depression, anxiety, and stress across all countries. The authors concluded that despite

cross-cultural differences in historical, cultural, geographical, and social conditions, resiliency served as a universal protective factor across all three countries (Brailovskaia et al., 2018). Some differences did emerge, however. Specifically, resiliency was more strongly and negatively associated with poor mental health outcomes in Russia and China than Germany. The authors cited differences between countries in terms of potential financial and social support provided from family members as a plausible reason for this distinction, such that German students were more likely to live closer to home during their studies, which may have resulted in a reduced need to "activate" their personal resiliency.

Other studies conducted in non-Western nations have investigated the associations between resiliency and adaptive characteristics, including life satisfaction, EI, and the Big Five personality traits (e.g., Di Fabio & Palazzeschi, 2015; Di Fabio & Saklofske, 2018; Youngblom et al., 2014). For example, Youngblom et al. (2014) assessed correlations between resiliency and life satisfaction among high school students in Belize, Central America. Despite the high poverty and crime rates, as well as low education levels and lack of access to health care in Belize, there were individual differences among youth in levels of resiliency. In addition, resiliency factors, including Sense of Mastery and Sense of Relatedness, were positively associated with life satisfaction, whereas Emotional Reactivity (a resiliency vulnerability factor) was negatively associated with life satisfaction.

In their two-part investigation of the associations between resiliency, EI, and personality traits, Di Fabio and Saklofske (2018) found that among a sample of Italian university students, trait EI (i.e., a series of emotional self-perceptions) significantly predicted total scores on resiliency over and above various measures of general personality traits, including, for example, extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience. Similar results emerged within a sample of Italian workers employed across Tuscany (Di Fabio & Saklofske, 2018). Although there were some distinctions in the patterns of correlations between personality traits and resiliency depending on the personality measures used (e.g., HEXACO vs. Mini-IPIP), overall, trait EI provided incremental variance in the prediction of resiliency over broad traits (Di Fabio & Saklofske, 2018). This provides further evidence for the robust associations between adaptive variables, such as EI and resiliency, within an Italian context.

Di Fabio and Palazzeschi (2015) further investigated the incremental utility of resiliency over and above fluid intelligence and the Big Five personality traits in the prediction of adaptive variables including life satisfaction, positive affect, meaning of life, and authenticity among a sample of Italian high school students. Interestingly, they found that resiliency significantly predicted all four outcome variables beyond extraversion, conscientiousness, emotional stability, and openness. Their findings provided support for the positive associations between resiliency and optimal functioning with a focus on both eudaimonic and hedonic well-being, and the importance of resiliency in predicting positive outcomes among Italian high school students (Di Fabio & Palazzeschi, 2015).

In addition to investigating resiliency in a cross-national context, Wang (2009) explored associations between characteristics of resiliency, demographic/background variables (e.g., gender, marital status, English language proficiency, field of study, length of stay in the United States, country of origin, etc.), and adjustment problem areas (e.g., academic record, social, finances) among international graduate students at an American university. These international students came from 55 countries, including 60% from Asia, 20% from Europe, and 8% from South America. Interestingly, findings showed that mean scores on resiliency characteristics (positive views of oneself and the world, focus, flexibility, and proactivity), except for organization, differed significantly between country-of-origin groups. Resiliency characteristics were also significantly and negatively associated with adjustment problem areas including admission and selection, academic record, and English language proficiencies. When background variables and total scores on resiliency were included in a mul-

tiple regression analysis, resiliency was the strongest predictor of scores on adjustment problems. Wang (2009) concluded that international students with higher levels of resiliency tended to be better adjusted in a university setting, and that this association held regardless of their background and demographic characteristics. The author further provided recommendations for universities to offer resiliency training programs and activities designed specifically to enhance international student resiliency.

Although this summary of relevant studies is not exhaustive, it serves as an indication of the importance of resiliency for positive adjustment across cultural contexts. Despite differing social, cultural, and geographical conditions across nations, it is evident that resiliency is a universally important correlate of positive life outcomes and a protective factor against adverse mental and physical health outcomes.

Evaluating the RSYA Across Cultures

Psychological research findings consistently show that resiliency is a universal phenomenon experienced across cultures. However, the attitudes, goals, and behaviors associated with various societies may differ depending on the particular values of that culture (e.g., collectivism vs. individualism; Hofstede, 1980a, b; Oyserman et al., 2002), and it is thus plausible that there may be differences in how resiliency manifests across cultures. To ensure that resiliency is measured accurately and consistently across cultures, it is imperative that researchers cross-nationally translate and validate measures designed to assess resiliency.

The Three-Factor Model of Personal Resiliency (Prince-Embury, 2007, 2014) reflected in the RSYA (Prince-Embury et al. 2017) has been validated across Italian, Chinese, and Spanish young adults (Plouffe et al., 2020; Wilson et al., 2019a, b). As mentioned previously, the Three-Factor Model, rooted in Masten's (2001, 2014) theory of resiliency described as "ordinary magic," includes three factors: Sense of Mastery, Sense of Relatedness, and Emotional Reactivity.

Wilson et al. (2019a) assessed the internal consistency reliability, factor structure, cross-cultural invariance, and convergent validity of the RSYA and its Italian translation among a sample of 259 undergraduate students from central Italy and the English version among 289 undergraduate students at a central Canadian university. Their findings showed that internal consistency of the RSYA was high across both samples, and the three-factor structure was replicated. When cross-national invariance was assessed, the authors found that configural and metric invariance were satisfied, and that the Italian sample scored significantly higher on the Emotional Reactivity factor compared to the Canadian sample. The authors suggested that Italian culture may view emotionality as being more socially acceptable than Canadian culture (Wilson et al., 2019a).

In addition, most convergent validity hypotheses were supported, with trait EI, extraversion, agreeableness, and conscientiousness showing positive associations with Sense of Mastery and Sense of Relatedness and negative associations with Emotional Reactivity across samples (cf. agreeableness in the Canadian sample). However, although Sense of Mastery was negatively related to emotionality in the Italian sample, no association was found between Sense of Relatedness and emotionality. The authors explained that Relatedness is described as a protective factor of personal resiliency defined by a sense of trust, support, and comfort from others, whereas emotionality reflects anxiety across a variety of contexts, which may be conceptually unrelated (Wilson et al., 2019a). Additionally, Sense of Mastery and Sense of Relatedness were unrelated to openness to experience in the Italian sample. However, as the authors contended, openness to experience, characterized by inquisitiveness, creativity, and aesthetic appreciation, is conceptually unrelated to both Sense of Mastery and Sense of Relatedness (Wilson et al., 2019a). Overall, Wilson et al. (2019a) described the RSYA as a promising self-report resiliency measure that is

valid and reliable for use among Italian young adults.

In a similar study, Wilson et al. (2019b) assessed the factor structure, cross-cultural invariance, gender invariance, internal consistency reliability, and convergent validity of the RSYA in samples of Chinese and Canadian students. A sample of 651 Chinese undergraduate university students completed a Mandarin translation of the RSYA, and 617 Canadian undergraduate students completed the original English RSYA. Their findings showed that internal consistency of the RSYA factors was high across samples, and the three-factor structure was replicated. When cross-cultural invariance was assessed, results showed that configural, metric, and partial invariance were satisfied with intercepts representing Optimism, Trust, and Comfort with Others freed (Wilson et al., 2019b). When latent means for the RSYA factors were compared, the Chinese sample scored lower on Sense of Mastery and Relatedness than the Canadian sample. The authors stated that these findings should be replicated in future studies to better understand potential cultural differences in Mastery and Relatedness (Wilson et al., 2019b).

When gender invariance was assessed in the Chinese young adults, configural, metric, and partial scalar invariance were again satisfied, and women and men did not differ significantly across the RSYA factors. Finally, Wilson et al. (2019b) evaluated convergent validity by examining correlations between the RSYA factors and depression, anxiety, stress, flourishing, and life satisfaction. As expected in the Chinese sample, Sense of Mastery and Relatedness were positively correlated with positive mental health variables (flourishing and life satisfaction) and were negatively correlated with depression, anxiety, and stress. Emotional Reactivity was also negatively correlated with flourishing and life satisfaction, and positively correlated with depression, anxiety, and stress. Wilson et al. (2019b) concluded that like the Italian RSYA, the Chinese RSYA translation showed promising findings in terms of its validity and reliability.

Most recently, Plouffe et al. (2020) translated the RSYA to Spanish and conducted tests of reliability, cross-national invariance, and convergent and discriminant validity. In a sample of 393 Spanish university students and 365 Canadian university students, results showed strong internal consistency and a clear three-factor structure. Configural, metric, and partial scalar invariance were satisfied with the Optimism and Tolerance intercepts freed. Latent mean differences showed that the Spanish sample scored higher on Sense of Mastery and Sense of Relatedness than the Canadian sample. Plouffe et al. (2020) speculated that higher Sense of Relatedness scores for the Spanish sample are consistent with their collectivistic values compared to Canada, which is classified as more individualistic (Oyserman et al., 2002). Moreover, past research (Scholz et al., 2002) showing that Spanish individuals scored higher on perceived self-efficacy than North Americans supported findings from the Plouffe et al. study (2020) in which the Spanish sample scored higher than the Canadian sample on Sense of Mastery.

As expected, Plouffe et al. (2020) found support for convergent and discriminant validity of the Spanish RSYA, with Sense of Mastery and Relatedness significantly and positively correlating with flourishing, life satisfaction, the Connor-Davison Resilience Scale (CD-RISC; Connor & Davidson, 2003), extraversion, conscientiousness, emotional stability, openness to experience, and psychological self-capital. Emotional Reactivity was negatively related to scores on flourishing, life satisfaction, CD-RISC, agreeableness, conscientiousness, emotional stability, openness to experience, and psychological self-capital. However, agreeableness was only weakly related to Sense of Mastery and Relatedness, which was consistent with past findings in the Italian RSYA (Wilson et al., 2019a). Emotional Reactivity was also nonsignificantly related to extraversion, which was in contrast to findings from the Italian RSYA validation (Wilson et al., 2019a). However, these correlations were small in magnitude and may have been influenced by the large sample size. Based on findings of strong internal consistency reliability, an invariant factor structure, and convergent validity, Plouffe et al. (2020) concluded that the Spanish RSYA transla-

tion is a comprehensive and promising theory-based resiliency measure.

Last, it is encouraging to note that studies of other often-used resiliency scales support the robustness of the resiliency construct and its measurement in other countries. Researchers have translated and validated measures based on other prominent theories of resiliency, including, for example, the CD-RISC (Connor & Davidson, 2003). Connor and Davidson (2003) described resiliency as a series of personal qualities that allow one to thrive while facing adversity, including such characteristics as personal competence, acceptance of change and secure relationships, trust/tolerance/strengthening effects of stress, control, and spiritual influences. Based on these characteristics, they developed and validated the 25-item CD-RISC among the general United States population, primary care patients, psychiatric outpatients, patients exhibiting generalized anxiety, and two samples exhibiting symptoms of posttraumatic stress disorder. Since its initial validation, the CD-RISC has been translated and validated across over 90 languages, including, for example, Afrikaans, Arabic, French, German, Polish, Serbian, Spanish, and Vietnamese, among others.

Similarly, the Resilience Scale (RS) developed by Wagnild and Young (1993) has been validated and translated across 35 languages, including Bosnian, Chinese, Hebrew, German, Russian, Slovenian, Turkish, and Urdu, among others. The RS comprises 25 items reflecting five resiliency characteristics, including perseverance, equanimity, meaningfulness, self-reliance, and existential aloneness (Wagnild & Young, 1993). Overall, the translation studies demonstrated that these characteristics of resiliency replicate across diverse cultures and individual experiences (e.g., Chung et al., 2020).

Summary and Conclusion

Resiliency has been conceptualized and operationalized in the psychological literature as an ability or capacity to bounce back from adverse life circumstances since the 1970s. More recently, resiliency has been identified as a characteristic of normal development, otherwise described as "ordinary magic" (Masten, 2001; Masten & Barnes, 2018; Masten & Powell, 2003). To this end, Prince-Embury (2007) and Prince-Embury et al. (2017) developed the Three-Factor model of resiliency, assessed using the RSCA and RSYA. The protective factor known as Sense of Mastery reflects optimistic views about oneself and the future, a sense of self-efficacy, and personal adaptability to various circumstances (Prince-Embury et al., 2017). Sense of Relatedness, another protective factor, represents one's sense of trust, perceptions of access to support, tolerance of others, and comfort with others (Prince-Embury et al., 2017). Finally, the vulnerability factor known as Emotional Reactivity refers to one's sensitivity, recovery time from emotional difficulties, and impairment resulting from emotional upset (Prince-Embury et al., 2017). Overall, the RSCA and RSYA have demonstrated strong reliability and validity evidence across studies with samples of adolescents and young adults (e.g., Prince-Embury, 2007; Prince-Embury et al., 2017).

Until relatively recently, a majority of resiliency theory development and measurement focused primarily on Western populations. Now, however, researchers understand resiliency as a universal phenomenon that is experienced by individuals around the world, regardless of differing historical, cultural, or social conditions. Despite this, given the distinctions in values between cultures, there may be differences in how resiliency manifests across cultures. Validation studies using contemporary resiliency measures have shown that factor structures and correlations with relevant measures (e.g., the RSYA) are generally consistent across countries and languages. Going forward, it is imperative that differences in how resiliency is experienced and measured continue to be taken into consideration to ensure that sound cross-cultural conclusions can be drawn.

To date, a plethora of studies have been published reflecting the conceptualization, operationalization, and relevant correlates of resiliency. Over time, we have come to understand resil-

iency as "the power of the ordinary," as opposed to extraordinary qualities honed by few individuals (Masten, 2001). This abundant literature of the core characteristics underlying personal resiliency holds considerable promise for persons of all ages to thrive across the life span.

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14

Assessment of Resilience with the Risk Inventory and Strengths Evaluation (RISE)

Sam Goldstein and David Herzberg

Introduction

The Risk Inventory and Strengths Evaluation (RISE) is a set of rating forms for assessing risky behavior and psychological strengths in individuals age 9–25 years. RISE Parent, Teacher, and Self forms allow evaluation of behavior across home, school, and community settings, as well as from the perspectives of both informant (for individuals age 9–18 years) and self (for individuals ages 12–25). RISE provides norm-referenced T-scores for examining the broad constructs of risk and strength, as well as subscale scores and a Critical Item set for focusing on dangerous behaviors such as aggressive conduct, early sexual activity, substance abuse, and suicidality. RISE is designed for school psychologists, counselors, clinical psychologists, and other mental health professionals working with children, adolescents, and young adults.

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Why Measure Risks and Strengths Simultaneously?

Resilience research differs from risk research alone as it focuses on positive or protective factors, assets, and resources that facilitate the ability of some youth to overcome the negative effects of exposure to a broad range risks. Fergus and Zimmerman (2005) point out that resilience does not operate as a single model, suggesting that three different models, compensatory, protective, and challenging, each offers a different framework for appreciating the need to understand, measure, and evaluate strengths in the presence of adversities. These authors make a distinction between assets as positive factors that are within the individual such as coping skills and intelligence and resources outside of the individual such as parent and educational support, community organizations, etc. In studying resilience in the presence of risk, it is important to distinguish that resilience and vulnerability or lack of resilience may not necessarily be diametric opposites. Vulnerability reflects a probability of negative outcome, typically as the result of exposure to adversity. Resilience, on the other hand, as well described by many authors in this volume, refers to avoiding the problems associated with all types of adversity. Further, at times resilience is conflated with positive adjustment, coping or competence. Although each of these three enhances the process of resilience in and of

S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_14

themselves, they tend to reflect outcome. As Fergus and Zimmerman point out, positive adjustment for example is an outcome of resilience. It is also important to realize that some youth are positively adjusted but have never faced significant risks.

Compensatory and protective challenge models of resilience have been offered to explain how promotive factors operate to alter the trajectory from risk exposure to negative outcome. Nearly 40 years ago, Garmazey and colleagues (1984) described each of these as follows:

- Resilience from a compensatory model reflects a promotive factor counteracting or operating in an opposite direction of a risk factor.
- A protective factor model of resilience reflects how various resources, moderate or reduce the effects of a negative outcome. For example, a protective framework might reflect a relationship between poverty and mental health challenges in children moderated by an authoritative parenting style.
- In a challenge model of resilience, the association between a risk factor and an outcome is not direct. Exposure to low and high levels of a risk factor is associated with negative outcomes but moderate levels of the risk are related to less negative outcome (Magnani et al., 2002). As comparative research simultaneously examining risk and resilience grows, a better understanding is developed between the means by which assets or resources interact with risk exposure to produce particular outcome (Luthar et al., 2000).

Consider just a few examples of the processes by which strengths and risks interact often mitigating adverse outcome:

- Adolescents are protected from the substance use consequences of stressful or negative life events by assets such as self-esteem, an internal locus of control and positive affect (Byrne & Mazanov, 2001).
- Maternal support of parenting style compensates for the effects of risk taking and violent behavior (Griffin et al., 1999). Further, researchers have found that cumulative measures of assets and resources compensate for cumulative risk factors (Pollard et al., 1999).
- Substance use is an individual-level risk factor for adolescent sexual behavior that is compensated for by personal assets such as self-esteem, participation in extracurricular activities, school achievement, attachment to social organizations, and positive attitudes toward the use of condoms (Anteghini et al., 2001; Lammers et al., 2000; Malow et al., 2001; Paul et al., 2000).
- Programs and policies that promote internal resilience and protective factors across multiple levels of influence appear to protect juvenile offenders exposed to childhood trauma from psychological distress (Clements-Nolle & Waddington, 2019).
- Sullivan et al. (2021) following a large study of military families found significant differences in the prevalence of mental health diagnoses among military-connected youth with the lowest versus the highest level of protective factors. Very clearly from this study, the evaluation and appreciation of the outcome of risks in this population of youth was mediated by a broad range of familial protective factors.
- Among youth at risk, such as those in foster care, the presence of assets has also been demonstrated to reduce or mediate the adverse outcome contributed to by risks. Greno et al. (2018) found that the more preparation for independence youth in foster care received, the lower their psychological challenges.
- Marx et al. (2020) point out that understanding the interplay of risk and resilience in minority youth populations has across a broad range of research demonstrated the ability to better appreciate and understand how to foster positive outcomes for minority youth at risk.

Intended Use and Applications of the RISE

RISE is intended for use in both educational and clinical settings. It is employed most frequently as a core component of a comprehensive clinical assessment, conducted with

children, adolescents, and young adults referred for learning, emotional, and/or behavior problems. RISE can also be used for screening purposes. For example, RISE can be applied to an entire classroom or school, to identify youth involved in high-risk activities.

Administration and scoring of RISE forms is straightforward, and may be conducted by teachers and paraprofessionals. However, interpretation of RISE scores, as well as subsequent treatment planning, should be handled by licensed professionals with at least masters-level training in school, counseling, or clinical psychology. To be qualified to interpret RISE results, users must have completed graduate-level coursework in assessment and statistics, and have accrued supervised experience administering, scoring, and interpreting behavior rating scales. Reading this manual is also required for competent use of the RISE.

The RISE focuses on high-risk, potentially dangerous, and even life-threatening behaviors, including drug use and suicide. Users must be prepared to act immediately if RISE results provide any indication that the individual being assessed is a danger to self or others. In addition to potentially initiating emergency intervention, users need to comply with legally mandated reporting requirements.

The results from a single measure should not by themselves dictate longer-term clinical decisions and treatment planning. Within a comprehensive assessment, the RISE can be a critical source of data, alongside results from other behavior rating scales, direct performance tests, review of school and medical records, clinical interviews, and observation of the youth in naturalistic settings. Developing an appropriate treatment plan for a teenager involved in risk-taking behavior requires careful integration and analysis of a broad range of clinically relevant information.

Using RISE Within a Comprehensive Assessment

Information about risk and strength behaviors provides valuable data to include with formal assessment results, behavioral and symptom questionnaires, observation, and background information. These critical components of a thorough assessment can be compared as well as integrated with RISE results. For example, identification of risky behaviors can be evaluated within RISE relative to the presentation of strength behaviors. Knowledge of these behaviors incorporated with additional assessment measures helps users develop a comprehensive understanding of an individual's level of functioning. The RISE provides the only nationally normed assessment combing risk and strength behaviors. The RISE index provides a convenient, valid and reliable measure, simultaneously appreciating risk and strength behaviors.

In addition to understanding and appreciating RISE scores, the risk and strength behavior scores and the RISE index can be used to better understand and appreciate the presentation and impact of diagnostic symptoms and level of impairment. As such, RISE data can be integrated with broad spectrum instruments such as the Behavioral Assessment System for Children (need current reference), Conners Comprehensive Behavior Rating Scales (need current reference), and Child Behavior Checklist (Achenbach); narrow spectrum instruments such as the Multidimensional Anxiety Scale for Children – 2 (need current reference), Children's Depression Inventory – 2 (need current reference), Behavior Rating Inventory of Executive Functioning – 2 (need current reference), and the Comprehensive Executive Functioning Inventory (Naglieri & Goldstein, need year), as well as measures of impairment, including the Rating Scales of Impairment (Goldstein & Naglieri, need year) and Adaptive Behavior Inventory III (need current reference). The RISE scales and the RISE index offer real world comparison to better understand emotional, behavioral, cognitive, language, and achievement measures and their role in everyday life and activities.

Users should incorporate information provided by the RISE and other evaluative information with the current and future needs of the individual. This information prepares users to assist individuals not only in their treatment and development but also to meet the needs that characterize the environment in which intervention will be exercised. For example, an emphasis on reducing specific risky behaviors (e.g., alcohol

use) must precede other types of therapeutic interventions. Failure to do so compromises building a strong treatment foundation assisting the individual to satisfactorily progress. Further, a focus on strength behaviors and efforts to improve opportunities to build strengths, provides a critical, often overlooked component of an effective treatment plan.

Users are encouraged to use profile analysis for clinical interpretation and for the generation of hypotheses in conjunction with all of the other data gathered in a comprehensive assessment. Users are discouraged from using the RISE alone to determine whether a pattern of risk and strength behaviors observed in an individual and assessed by the RISE corresponds to the average or common profiles found in certain clinical groups. Profiles of risk and strength behaviors do not adequately discriminate between diagnostic groups.

Finally, a single assessment tool such as the RISE should never be used to develop diagnoses or determine placement or a treatment plan absent supporting data in a comprehensive assessment. Instead, diagnosis and other treatment decisions should be based on comprehensive evaluation, including multiple types of assessment instruments and techniques relying on as many sources of information are available to the user. Although RISE results may assist in decision-making about diagnoses or disorders, they should always be used in conjunction with other assessment results.

RISE Components and Scores

RISE can be administered using print materials, or via the Western Psychological Services Online Evaluation System (platform.wpspublish.com). The RISE Print Kit includes the test manual and 25 each of the Parent, Teacher, and Self Auto Score forms. The RISE Online Kit provides access to electronic versions of these same components. Spanish versions of all RISE Forms are also available.

On the RISE Parent and Self Forms, respondents answer 66 questions about risky behaviors and psychological strengths. The RISE Teacher form includes 36 items about these same topics. Item response format is a six-point Likert scale of the frequency of the target behavior during the previous 4 weeks.

All RISE forms yield norm-referenced T-scores for six scales. The Risks and Strengths Factor Scales are factor-analytically derived measures of, respectively, involvement in high-risk behaviors, and presence of psychological assets. Three Specific Strengths T-scores cover the domains of Interpersonal Skill, Emotional Balance, and Self Confidence. The RISE Index is a single T-score comparing relative levels of risky behaviors and strengths.

Parent and Self Forms include Specific Risk Content Scales addressing six areas of risky conduct: Aggression/Bullying, Delinquency, Eating/Sleeping problems, Sexual Risk, Substance Abuse, and Suicide/Self Harm. Each scale has a raw-score cutoff that identifies high-risk status. This prompts clinicians to gather more information to determine the exact nature of the risk, and whether immediate intervention is needed. On all forms, a Critical Item set functions as a further check on potentially dangerous behavior and circumstances surrounding the youth being assessed.

Parent and Self Forms also feature two measures of response validity: Inconsistent Responding and Impression Management Scales. The latter scale yields a single score that can identify both positive- and negative-exaggeration response styles.

Standardization and Psychometrics

RISE forms, items, and scores were standardized on nationally representative samples of parents, teachers, students, and young adults. RISE scores meet accepted standards for internal consistency and test–retest reliability. RISE scores were validated by comparing various samples of at-risk and behaviorally challenged youth to demographically matched control groups of typically developing youth. These validity studies were comprised of clinical groups involving critical

areas of risk including: gang membership, substance abuse, and a broad range of internalizing and externalizing mental health disorders. RISE scores discriminated between the groups with clinically significant effect sizes. RISE scores correlated in expected ways with scores from several widely used measures of adaptive behavior, self-concept, and emotional and behavioral problems.

RISE Five-Step Score Interpretation

Step 1: In RISE Interpretation Begins with Examining Response Validity That is, did the respondent provide an accurate and truthful account of the youth's behavior when completing the RISE form? The RISE Parent and Self forms include two measures of response validity: Inconsistent Responding and Impression Management scales. The Inconsistent Responding Scale contains six item pairs. The paired items have similar content, and the expectation is that when a rater is attending to the task and responding in earnest, ratings will be identical or very similar on the paired items. If ratings differ greatly between paired items, the respondent may not be paying sufficient attention to the task, or may even be responding randomly. For example, it would be unexpected for a rater to respond "always" to the item "Felt badly for kids who seem lonely?" and "never" to the item "Cared about kids who don't have friends?" The presence of many unexpected pairs of ratings may indicate a random or inconsistent response pattern. Whether this pattern is due to poor motivation or inattention, it can strongly impact the validity of the RISE results. The Inconsistent Responding Scale was developed to help detect random response patterns.

The Impression Management Scale also consists of the six items. The purpose of this scale is to detect response bias, or the tendency to present the individual being rated in either an exaggerated positive or negative light. The items on this scale contain descriptors like "perfect," "always," and "everything." Raters giving a realistic view of an individual's behavior are unlikely to endorse such extreme descriptors. This score is interpreted by means of raw-score cutoffs. These cutoffs identify raw score ranges that were associated with unusually positive and negative response styles in the RISE standardization sample.

Step 2: Requires an Examination of the RISE Factor Scales The two primary RISE Factor Scales are the Risks and Strengths. A third Factor Scale, the RISE Index, captures the relationship between Risks and Strengths. These measures are called *Factor Scales* because they were constructed using the statistical method of exploratory factor analysis. These scales embody the unique capacity of RISE to assess both risky behaviors and psychological strengths within a single instrument. The Factors Scales are interpreted by means of T-scores. They are the most reliable scores on RISE, with the broadest content coverage. For these reasons, they are examined first and should be emphasized above other scores in reporting of RISE results.

Risks Factor Scale The Risks Scale is a wide-ranging measure of the tendency to engage in risky behaviors. It consists of 40 items on the Parent and Self Forms, and 21 items on the Teacher Form. *Risky behavior*, as construed on RISE, generally encompasses one or both of following elements. First, the behavior includes risk of a negative outcome. Thus, shoplifting is a risky behavior because the thief runs the risk of arrest, conviction, and incarceration. Second, the behavior is often defined by *impulsive action*, as opposed to *planned, deliberate action*. Thus, engaging in sexual activity while intoxicated as a party usually happens because of a lack of impulse control.

The Risks Scale includes all of the item content covered by the Specific Risks Content Scales (described below). In this way, the Risks T-score can be influenced by the presence of risky behaviors in the areas of bullying or aggression, juvenile delinquency, problems with eating and sleeping, sexual activity, substance abuse, and/or

suicidal or self-harming actions. The Risks T-score can be classified into one of three interpretive ranges: Severe, Mild to Moderate, and Low Risk.

Strengths Factor Scale The RISE Strengths Scale measures characteristics related to psychological wellness and resiliency. It consists of 20 items on the Parent and Self Forms, and 15 items on the Teacher Form. The Strengths items reflect a set of constructs that contribute to healthy psychological function: (1) emotional regulation and balance, (2) interpersonal skill and empathy, and (3) positive self-regard. These constructs are the focus of the Specific Strengths Content Scales, whose interpretation is described below.

The Strengths Scale is scored in the opposite direction of the Risks Scale, such that high T-scores on Strengths reflect a strong set of psychological assets. Thus, clinical concern should be directed toward youths who produce unusually low T-scores on Strengths. The Strengths T-score can be classified into one of four interpretive ranges: Very Low, Low, Average, and Above Average. Youth measured in the Very Low range have a severe lack of psychological assets, and are rated as having fewer of these positive characteristics than 98% of the RISE standardization sample. These severe deficits are present across the content areas of Emotional Balance, Interpersonal Skill, and Self-Confidence. These youth may respond poorly to stress and have limited coping skills for dealing with adversity. Psychological symptoms of anxiety and depression are common in youths with Strengths T-scores in the Very Low range. Youths who score in this range often lack social support and the ability to form and maintain relationships with peers.

In contrast, youth measured in the Above Average range are rated as having a higher level of psychological strength and resiliency than his typically developing peers. When the Strengths T-score is in the Above Average range, the youth may display an unusually good capacity to cope effectively with a variety of stressors. Youth who score in this range often have solid friendships and family relationships, and the social skills and self-confidence need to take on and master novel challenges. Youths who score in this range often naturally assume leadership roles with respect to their peers. Of considerable clinical import, youths with Above Average T-scores on Strengths typically possess the self-confidence needed to control their impulses and resist the temptation and peer-pressure to engage in risky behavior.

RISE Index The RISE Index is a unique measure that compares a youth's risk-proneness and psychological strengths in a single score. The RISE Index is scaled as a T-score, with scores of 60T or above indicating a positive state in which the youth's psychological assets are more influential than his or her involvement in risk-taking behavior. By contrast, a RISE Index score of 40T or below refers to a negative state in which the youth's involvement in risk-taking behaviors predominates over his or her psychological strengths. In this circumstance, the engagement in risky behaviors is viewed with greater gravity.

The interpretation of the RISE Index Score invokes the concepts of *vulnerability* and *resiliency*. Lower RISE Index T-scores suggest a state of vulnerability; that is, the youth is involved in or surrounded by risky behavior, and lacks the psychological assets to resist temptation, to control his or her impulses, and to choose not to engage in the risky activities. In contrast, higher RISE Index T-scores indicate a state of resiliency or psychological hardiness, in which the youth possesses a greater array of psychological strengths that allow him or her to turn away from the temptations of risk-taking behavior. The RISE Index T-score can be classified into one of four interpretive *ranges*: Severe Vulnerability, Mild to Moderate Vulnerability, Balanced, and Resilient. A RISE Index T-score in the Resilient Range suggests that the youth's psychological strengths exert a stronger influence on behavior than does proneness to risk-taking behavior. This state is sometimes called hardiness, and it indicates that the youth has resources for coping with daily stressors, and for making good choices when confronted with the temptation and peer-

pressure surrounding risky behaviors even if they are currently engaging in some level of risky behavior.

As noted previously, interpreting RISE results is a hierarchical process that focuses first on the Strengths, Risks, and RISE Index T-scores, which are the most reliable scores, with the broadest content coverage. The next interpretive step narrows the scope to the specific domains covered by the RISE content scales.

Step 3: Interpret Specific Content Scales The RISE Specific Content Scales are subsets of the items on the Risks and Strengths Factor scales. The Specific Risks Content Scales are scored only on the Parent and Self forms, whereas the Specific Strengths Content Scales are scored on all three forms. These scales were constructed on a rational basis by classifying each Risks or Strengths Item into one of the content domains encompassed by its "parent" scale. The six Specific Risks Content Scales formed by this classification process are: Bullying/Aggression, Delinquency, Eating/Sleeping Problems, Sexual Risk, Substance Abuse, and Suicide/Self-Harm. The three Specific Strengths Content Scales are Emotional Balance, Interpersonal Skill, and Self-Confidence.

The Specific Strengths raw scores are scaled to T-scores for interpretation. However, because the Specific Risks Content Scales refer to behaviors that are relatively rare among typically developing youth, it was not possible to use T-scores for interpretation of these scales. Instead, the Specific Risks Content Scales are interpreted by means of raw-score cutoffs, or Risk Thresholds. A high-risk classification in any domain should lead to follow-up investigation, by examining the Critical Item set to determine which items in that domain were rated as occurring most frequently, and by contacting the respondent and concerned others for further information on the actual risk level. This follow-up is especially important for the Suicide/Self Harm domain, and for any item that indicates the possibility of physical danger to the youth being rated or others around him (e.g., "Ever used a weapon in a fight?").

Step 4: Evaluate the Critical Item Set The Critical Item Set consists of 20 Risks items and 10 Strengths items on the Parent and Self Forms, and 14 Risks items and 6 Strengths items on the Teacher Form. The Critical Items were chosen primarily by their capacity to distinguish between a group of youth involved in a range of high-risk behaviors and a demographically matched control group of typically developing youth. From the items that discriminated well between these two samples, the authors chose a subset of Risk items that refer to dangerous behaviors, or situations that might put the youth being rated or others into harm's way. For example, "Had a plan to commit suicide?" and "Used a weapon in a fight?" are in the Critical Item set.

The authors also chose Strengths items that discriminated between the two samples, and that represented central elements of psychological resiliency. For example, "Stuck with it when working on a hard problem?" and "Controlled his/her anger?" are in the Critical Item Set. The Critical Item Set provides descriptive information that can be used to identify potentially harmful behaviors and situations. These items also can provide starting points for clinical intervention. However, clinical decisions should never be based solely on the ratings of isolated Clinical Items, because item scores are not psychometrically reliable measures. Rather, these ratings must be verified by examining the RISE scale scores, and by obtaining more information from the respondent and concerned others.

For instance, consider a teenager whose self-reported Risks Factor T-score is in the Severe Risk Range, and whose raw scores are above the Risk Threshold on the Sexual Risk and Suicide/Self Harm Scales. Examination of the Critical Items associated with these two Specific Risks Scales reveals that the youth gave ratings of "Always" to "Wanted to hurt yourself?", "Had a plan to commit suicide?", and "Had sex with someone much older than you?". These item ratings serve to reinforce the call for immediate intervention that is signaled by the RISE score results. They suggest the need to seek more information, with the goal of enacting an emergency

suicide prevention plan. The ratings also identify another hypothesis that requires follow-up and possible intervention: the youth may be involved in an abusive and unsafe sexual relationship.

Step 5: Consider Different Rater Perspectives Whenever possible, clinicians should administer all three RISE forms: Parent, Self, and Teacher. The age ranges of the three forms overlap in ages 12–18, which coincides with one of the most challenging phases of adolescent development. Because the set of behaviors assessed by RISE can be apparent in one setting but not in another, it is important to have the breadth of perspective available from the Parent Form (home and community settings), Teacher Form (school setting), and Self Form (for the rated individual's own perspective).

The Teacher Form is shorter than the Self and Parent Forms, and includes a narrower range of risk-taking behaviors. Evidence from the RISE development research suggested that teachers have more opportunity to observe the positive, prosocial characteristics covered by the Strengths Scale, than they do to observe low-frequency, risky behaviors.

Sometimes respondents disagree about the severity of risk. It is not unusual for a parent to provide ratings that yield a mild-to-moderate or severe risk classification for the Risks T-score, whereas that same score is in the Low Risk range on Self Form. Such a score discrepancy serves as a prompt for the clinician to seek more information. By following up with the parent and youth, along with other informants, the clinician can clarify which rater perspective may be distorted, and identify the specific settings where the parent is observing risk-taking behavior.

Using RISE to Inform and Evaluate Treatment

The RISE provides important information well beyond diagnosis concerning the individual's functioning in everyday life. Users can employ the RISE to enhance program planning and monitoring, focusing on identification and treatment for risky behaviors as well as efforts to enhance strengths. Information from ratings on specific items, scales and the RISE index can be used to support diagnosis, assist in decision making, serve as a benchmark for treatment, evaluation, and future assessment.

Item-level data can provide a basis for developing intervention. Each item identifies an important behavior, either contributing to risk or strength. Evaluative information from the risk and strength scales can be used for program planning as well as to determine a level of intervention. For example, an individual demonstrating multiple areas of risky behavior absent strengths may be a candidate for inpatient or residential programming. RISE data can also be used to prioritize behaviors requiring immediate attention.

Conclusion

The RISE is a unique tool allowing evaluators to simultaneously assess risky behavior and psychological strengths. The results from the RISE should not be used in isolation to diagnose or plan treatment for an individual. Within a comprehensive assessment, the RISE can serve as a critical source of data, alongside results from other behavior rating scales, direct performance tests, review of school and medical records, clinical interviews, and observation of the individuals in naturalistic settings. Developing an appropriate treatment plan for an individual involved in risk-taking behavior requires careful integration and analysis of a broad range of clinically relevant information.

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Part IV

Resilience in Family and Community Settings

15 Comprehensive Interventions to Foster Resilience in Children with Complex Trauma

Margaret E. Blaustein and Kristine M. Kinniburgh

It is estimated that over one billion children worldwide under the age of 18 will experience violence in any given year (Hillis et al., 2016). Although estimates of exposure to traumatic events over the course of childhood vary across studies and geographic regions, it has been well established that trauma exposure in childhood is common, rather than extraordinary (Magruder et al., 2017). When considering adversities that fail to meet *diagnostic criteria* for trauma, but which are known to carry significant potential for stress impact and response—for instance, poverty, homelessness, and both individually directed and systemic/institutionalized racism—the numbers are far greater. All told, it is not surprising that childhood adversity is considered one of the greatest epidemiological threats to our global youth community, and one of the most salient shapers of adult outcomes. Given the extensive exposure of youth to traumatic stress, any discussion of resilience in the absence of a discussion of such adversities would be missing a critical piece of the puzzle.

The field of resilience is, of course, inextricably linked to the field of adversity and trauma. Resilience has been defined as "the process or outcome of positive adaptation despite challenging or threatening circumstance" (Masten et al., 1990). To truly understand resilience, then, one must first understand the nature of trauma and adversity, and the role it plays in shaping developmental course, diagnostic trajectory, and functional outcomes. In this chapter, we will define and provide a brief overview of complex developmental trauma, its occurrence; and its impact; reframe clinical intervention for childhood trauma as the work of supporting and facilitating resilience; and explore key clinical goals critical to resilient outcomes among stress-exposed youth.

Defining Complex Developmental Trauma

Numerous definitions of trauma exist. Perhaps most frequently used in clinical practice for diagnostic purposes is the definition provided by the Diagnostic and Statistical Manual – Fifth Edition (DSM-5) for Posttraumatic Stress Disorder (PTSD) (American Psychiatric Association, 2013). That definition highlights the occurrence of exposure to "death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence" through direct experience, witnessing, indirect exposure, or exposure of a close friend or relative. However, a long-standing con-

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_15

cern in the clinical world is the extent of childhood adversity that fails to be captured by that definition. For instance, familial adversities such as child neglect or psychological maltreatment; instances of loss and separation, such as through placement in foster care or caregiver incarceration; insufficient caregiving, such as due to caregiver substance abuse or mental health challenges; environmental stressors, such as poverty, homelessness, and neighborhood dysfunction; and societal stressors, such as individual and systemic/institutional experiences of racism and discrimination, have all been well established as significant stressors of childhood which may lead to posttraumatic responses similar to those seen in individuals who experience PTSD Criterion A stressors, and which may carry additional impacts on youth developmental capacities, behavioral and diagnostic presentations, and functional outcomes. Various additional diagnostic rubrics have been proposed that better capture the complex exposures and outcomes associated with chronic interpersonal trauma, including Complex PTSD (Herman, 1992, 2015) and Developmental Trauma Disorder (e.g., van der Kolk, 2005; D'Andrea et al., 2012; Ford et al., 2018), and in the 11th iteration of the International Classification of Diseases (ICD-11) a diagnosis of Complex PTSD was included for the first time (World Health Organization, 2019). This definition expands the outcomes of trauma exposure to include interpersonal challenges, negative self-concept, and emotion dysregulation, and more loosely defines trauma as exposure to "an extremely horrific or threatening event or series of events."

While the evolution of trauma-related diagnoses demonstrates promise in expanding our understanding of both trauma exposures and trauma-related outcome, these diagnoses continue to be in many ways adult-centric and fail to capture the developmental processes inherent in childhood experiences. Any understanding of trauma which relies on "event" diminishes an understanding of the way that intersecting environmental conditions and layers of experience—both of resource and of adversity—inevitably shape both adaptation and developmental course. This limited understanding of trauma experience and impact in turn deeply limits our understanding of the nature of clinical intervention for youth and their surrounding systems who have been exposed to such adversities. Put simply, there is a stark difference between treatment which addresses *response to an event* (or even a series of events), and treatment designed to address *the manner in which layers of experience have shaped developmental processes*. As such, it is critical to begin any discussion of clinical intervention for childhood trauma with a common lens for the nature and impact of the layers of adversity often encompassed within that term.

Relying on the extant research literature which has examined childhood adversities and their impacts, it is clear that there are numerous extraordinarily stressful experiences of childhood which influence both child and adult outcomes. Although a complete listing of such adversities is—sadly—nearly impossible, we can expand our understanding by highlighting clusters of experience which are relevant. In Table 15.1, we list various subtypes of childhood trauma and adversity and examples of experiences.

In the landmark body of work examining ACES (adverse childhood experiences), spearheaded by the foundational work of the Centers for Disease Control in collaboration with Kaiser Permanente (e.g., Felitti et al., 1998; Anda et al., 1999) and subsequently replicated by numerous researchers (Hughes et al., 2017; Bellis et al., 2015), childhood adversity was highlighted as a primary shaper of adult health, mental health, and functional outcomes, with increased exposure to adversity leading, for almost every outcome studied, to increased risk. Outcomes as disparate as obesity, heart disease, teen pregnancy/paternity, depression, and substance use have all been linked to early adverse experiences. Further researchers have added to the original list of nine childhood adversities studied by the Centers for Disease Control, identifying the roles of not just individually experienced traumatic stress, but the epigenetic load of historical and cultural trauma (Cronholm et al., 2015; Karatekin & Hill, 2018; Bernard et al., 2021; Hampton-

Table 15.1 Subtypes of trauma and childhood adversity and examples

Broad category	Examples
Acts of commission within the family setting; may be *chronic* (ongoing) or *acute* (single instance)	Childhood physical abuse, childhood sexual abuse, childhood emotional/psychological abuse
Acts of commission outside the family setting; may be *chronic* (ongoing) or *acute* (single instance)	Physical assault, sexual assault, bullying
Witnessed or indirectly experienced exposure to violence	Acts of violence in which the child is exposed/involved but is not a direct recipient of physical acts of violence; for instance, domestic violence, neighborhood violence, school violence
Acts of omission/failures of care by primary caregivers	Physical, medical, and emotional neglect
Significant environmental or contextual stressors	Homelessness, poverty, neighborhood dysfunction
Inadequate or chaotic caregiving	Caregiver dysfunction due to mental health challenges or substance use
Social-category-based experiences (direct)	Discrimination and targeting due to perceived group membership (race, ethnicity, culture, sexuality, gender expression, etc.)
Systemic injustices	Multi-faceted traumatic exposures due to systemic expressions of racism, experienced as a member of a social category (for instance, repeated experiences of micro- and macro-aggressions, witnessing of racially based/racially motivated trauma through direct or media exposure, cross-generational internalization of exposures)
Refugee/war trauma	Experiences related to exposure to war or violence in the child's community of origin, including persecution and the need to flee to a new country or community
Acute traumatic events (non-interpersonal)	Natural disasters, car accidents
Terrorism and mass violence	Sudden/acute incidents of harm inflicted on a large number of people; for instance, acts of terrorism, school shootings
Traumatic grief	Survivor of homicide/suicide, other sudden loss
Separation from caregivers	Caregiver incarceration, multiple removals/foster care placements

Anderson et al., 2021). Early childhood researchers have demonstrated that the association between increased risk and impact begins early, with ACES taking a toll on child health, peer interactions, academic success and engagement as early as the preschool years (Burke et al., 2011; Flaherty et al., 2013; Clarkson Freeman, 2014; Zeng et al., 2019).

The impact of childhood adversities in shaping development may be understood as we would any developmental process: the unfolding, intersecting nature of biology (what is inherent to the child) and environment (the world with which the child is engaging). In nearly all developmental processes, children's development is shaped by the interactive influence of nature and nurture. This interaction is multi-directional and transactional: biology influences how children respond to environmental experiences; environmental experiences in turn influence and impact neurology and biology, and the cycle continues to reciprocally influence developmental course and outcome as children act upon, and are acted upon by, their world.

These developmental processes may be considered *purposeful*, in that behavior and response to the world is shaped in large part by the world in which we find ourselves: the demands of the environment naturally dictate the skills, resources, strengths, and adaptations that we hone as development progresses, and those which lapse due to lack of demand. The more deeply

rooted these adaptations, the more they may develop into enduring patterns of personality, relationship, regulation, and other functional domains of engaging with self and the world. The field of attachment offers an excellent example of the transactional nature of environment, behavioral adaptation, and outcome: decades of research have demonstrated clear, observable patterns of behavior and relationship which develop by infants and toddlers in response to predictable patterns of caregiving; these patterns persist over time, are linked to numerous outcomes outside of the caregiving context, and predict to future relational patterns across generations (Alhusen et al., 2013; Jacobsen & Hofmann, 1997; Main & Cassidy, 1988; Sroufe, 2005; Waters et al., 2000).

The outcomes associated with childhood trauma have long been viewed through a diagnostic frame—for instance, the linkage between early trauma and such diagnoses as PTSD, Major Depressive Disorder, Oppositional Defiant Disorder, and Generalized Anxiety Disorder; and treatment of childhood trauma has emphasized as a primary goal the reduction of pathological behaviors associated with these diagnoses and their functional impacts. However, if we conceptualize outcomes associated with childhood trauma as *developmental adaptations* rather than as pathology, it shifts the very nature of our treatment approach. Treatment, then, becomes focused on the recognition of developmental and survival strengths, and support for the remaining capacities that may have been put on hold or de-emphasized as the child worked to survive an inherently unsafe world. In other words, treatment of childhood trauma may best be conceptualized as the task of recognizing, harnessing, and supporting the building blocks of resilience.

Role of Adaptation in Trauma-Related Behaviors

Although the ways that childhood adversity impact developmental course is complex and multi-faceted, as with all developmental influences we can assume that (a) children develop purposefully in response to their world; (b) those adaptations which are most relevant/most critical to the child's successful navigation of that world are those which will be most fully honed; and (c) developmental strategies which are less relevant to the child's circumstance will be less cultivated.

Child adaptations to chronic adverse experiences, therefore, may be conceptualized as behavioral, relational, emotional and physiological patterns of functioning which are designed to support the child in surviving experiences of stress, danger, and/or chaos. Adaptations born of stress and trauma may be particularly rigid: when a child develops in the context of safety and security, the child is able to flexibly respond to new signals (people, interactions, environmental cues), as there is a base assumption of safety. However, when children's adaptations are shaped by stress and danger, adaptations are necessarily inflexible: that which has enabled the child's self-protection previously will instinctively be used again, even when those strategies are not warranted.

As an example: imagine a child who has had repeated experiences of negative feedback (a primary caregiver who is emotionally abusive, a series of teachers who are critical and punitive, peers who are rejecting). That child has learned that relationships are inherently stressful and frequently—even if not always—lead to negative internal states and heightened arousal. The child has learned to manage this behaviorally (avoiding interaction, isolating when possible, refusing to participate in group activities); relationally (pre-emptive rejection and dismissal of peers, avoidance of eye contact and interaction with educators, compliance and catering to caregiver needs); and emotionally (through constriction of and disconnection from arousal states). As with any developmental skill, the child's hold on these patterns may be tenuous—so for instance, while the child may work to disconnect from or constrict emotions, sudden or unexpected relational stressors may lead to surges of arousal and lashing out.

Although these patterns are protective for the child, from an external perspective—and particularly in the absence of understanding their

cause—these patterns appear to be pathological. We can imagine that such a child might be labeled with or viewed through the lens of a number of diagnoses; for instance, Oppositional Defiant Disorder (refusal to participate in school activities, sudden lashing out at peers or teachers); Autism Spectrum or Social Communication Disorders (diminished eye contact, avoidance of connections with others, emotional constriction); or a number of other disorders of childhood. For many children whose early lives have been shaped by stress and adversity, their *survival strengths* are viewed through a lens of pathology, rather than one of necessary adaptation.

Complicating this clinical picture are all those facets of development which may receive less attention. The child who is avoiding stressful interactions, for instance, may have less practice with age-appropriate social communication, reading others facial expressions, or navigating intimate relationships. In turn, these areas of developmental challenge may lead to further stress in relationship, solidifying the child's experience of "danger" and "stress" and sustaining the need for more rigid adaptations (survival strengths). It is well established that childhood trauma and adversity impact a number of core developmental competencies, often beginning in early childhood and progressing over time. Such children may struggle, for instance, with self-concept/identity; with social relationships and interpersonal capacities; with executive functions and problem-solving skills, and with age-appropriate emotional and physiological regulation.

Reframing Trauma Treatment in Childhood

For too long, treatment of the impacts of childhood adversity has emphasized reduction in behavioral and emotional pathologies linked to the child's diagnostic presentation. However, when we expand our understanding of those impacts to include developmental processes—namely, the role that trauma, adversity and stress play in shaping a range of developmental competencies, including those most critical to positive, healthy adult outcomes—then the focus of trauma treatment naturally expands and shifts as well. It is our perspective that the primary goal of trauma treatment in childhood is the cultivation of resilience, through attention to the range of developmental capacities and external resources that have been found to predict to positive outcomes in stress-impacted populations.

Ann Masten, one of the foremost researchers in the field of resilience, describes the building of resilience as resting on three pillars: (a) reduction of risk; (b) increasing assets; and (c) mobilizing protective systems and resources (Masten, 2001, 2009). Building off of this framework, trauma-focused intervention can be conceptualized as encompassing not just the individual skill-building inherent in traditional childhood clinical work, but also the purposeful targeting of community and familial resources and assets that, in turn, buffer and support the child and ultimately lead to positive outcomes.

In the remainder of this chapter, we will describe critical targets for intervention with trauma- and stress-impacted children and teens. These targets include the cultivation of *external supports and resources*—for instance, development of caregiver skills, community supports, and school engagement; and building or enhancing the child or adolescent's *internal skills and capacities*, such as self-efficacy, regulation skills, and social skills. Although each core target is identified and briefly discussed separately, these two broad domains are intertwined and often interdependent and will build on each other in practice.

Cultivating Resilience in Trauma-Impacted Youth

Goal One: Build a Resourced Nest

Positive parenting practices, caregiver support, and secure attachment are all strong predictors of resilient outcomes and developmental competency among stress impacted youth (Cicchetti & Rogosch, 2009; Cicchetti et al., 2006; Flores et al., 2005; Godbout et al., 2014; Lowell et al.,

2014). Not surprisingly however, youth who have experienced stress and adversity are often embedded in family systems which themselves have experienced significant stress and adversity, often across generations. Intervention efforts with caregivers, including the building of support networks for caregiving systems, addressing emotional and mental health needs of caregivers, and cultivating sensitive caregiving practices, are therefore a primary target for the cultivation of resilience in youth.

Engagement

Any clinical intervention must first attend to engagement: the willing, active participation of the client. While some caregivers may engage willingly in the treatment process, others may hesitate; it is not uncommon for caregivers to question the need for involvement in the child's treatment process. Engagement is a process and often includes collaborative efforts to identify treatment goals, structure (i.e., parent sessions, dyadic sessions with child/youth, etc.), and values. Research has established that engagement is maximized when providers purposefully and actively attend to the particular needs and concerns of family members; when potential barriers for participation are anticipated and proactively addressed; when treatment approach, philosophy and rationale are perceived as clearly matching those of the caregivers and family system; and when caregiver participation is addressed, assessed, and adjusted as needed at multiple points in time (McKay & Bannon, 2004; Ingoldsby, 2010).

Education about the critical role of the caregiver in youth outcomes may be an important entry point for engaging primary caregivers in the treatment process. From a child treatment perspective, the primary goals of caregiver inclusion include supporting the caregiver in building the skills needed to cultivate or sustain a positive and mutually fulfilling relationship with their child, thus buffering the attachment relationship for all members of the system; and supporting the caregiver in becoming a model for and facilitator of skills that build child resilience and positive outcomes.

Caregiver Support Networks and Caregiver Mental Health Needs

Trauma and stress are often experiences that impact whole family systems, and not just individuals within those systems. It is generally accepted that there is a reciprocal influence between child experience of and response to traumatic stress, and their caregiver's mental health. The influence is bidirectional and transactional: children's distress influences the distress of their primary caregivers; the distress of primary caregivers influences the distress of their children. In parallel, primary caregivers who are well supported and regulated, and who have support for their own mental and behavioral health needs, are in turn better able to support and attend to their children's needs. Therefore, attending to caregiver emotional health—including but also going beyond as it impacts their role as a parent—can play a significant role in buffering youth experience.

Trauma is isolating for caregivers as well as for youth. Families who have experienced adversity may not have adequate community resources or natural supports (Hawthorne, 2008). Many factors may lead to isolation in the trauma-impacted family system. The adult's own traumatic experiences—for instance, intimate partner violence, historical experiences of abuse in childhood, refugee or immigration separations—may have led to separations and disconnections from family and community systems. Socioeconomic adversities, language barriers, and other challenges may lead caregivers to either lack awareness of available resources, or to have few resources available to access. Competing demands, including the challenges of caring for a child with symptomatic responses to stress and trauma—may interfere with the parent's ability to create the time to identify and make use of resources. Negative previous experience with systems of care may make caregivers uneasy or unwilling to seek support. As a result of these and other factors, many caregivers may feel or be isolated.

Buffering caregiving systems through the development of support networks and adult-focused resources is a primary goal for supporting

resilient outcomes in youth (Sippel et al., 2015). Family resource workers, parent partners or mentors, spiritual communities, in-home supports, and community-based networks are all possible routes for increasing access to and engagement in services among primary caregivers who have historically been unable to access in-office services.

Cultivating Sensitive Caregiving Practices

In addition to addressing the individual needs of parents and other caregivers, development of caregiver capacities is a critical route to addressing the child's emotional and behavioral health needs. A secure, attuned attachment relationship is highly predictive of resilient outcomes among children who experience stress; therefore, interventions designed to support a positive parent–child relationship play a key role in building resilience (Blaustein & Kinniburgh, 2007; Stronach et al., 2013; Bernard et al., 2012; Cicchetti et al., 2006; Moss et al., 2011; Lieberman et al., 2006).

Caregiver Regulation

It is the rare parent who does not occasionally struggle with regulation—managing the anxiety, frustration, and even joy of raising a child. There is a reason so many parenting classes and support forums focus on the inherent stress and emotion that is part of caring for a child. These moments of emotional dysregulation, exhaustion, and distress are normative, even in the best of parenting situations.

When parenting children who have experienced chronic stress, trauma, and/or attachment disruptions, however, these challenges are exacerbated; caregivers may be managing moments of intense dysregulation, relational re-enactments, shifting presentation, cycles of desperate need and rejection, and confusing or surprising behaviors. This is further complicated when parents have themselves experienced trauma, impacting both their own regulatory capacities as well as their knowledge of effective parenting skills. Caregivers with experiences of chronic childhood adversity may have lacked the support and opportunity needed to develop key skills for building supportive parenting relationships, as well as those developmental capacities that caregivers are working in turn to model and build in their children.

In working with families who have experienced complex trauma, support for caregiver skills building may be further necessitated by the presence of intergenerational or transgenerational trauma. Decades of literature have described an intergenerational model for the ongoing cycle of adverse childhood experiences (ACEs). Parents who experience abuse in childhood are at higher risk for engaging in abusive parenting practices; in some studies, parents who reported childhood maltreatment were found to be more than two times as likely to have children who also experienced childhood maltreatment (Madigan et al., 2019). As may be expected, those parents who endorsed more chronic and frequent maltreatment or multiple types of maltreatment were even more likely to display abusive behaviors towards their own children (Jaffee et al., 2013; Pears & Capaldi, 2001). However, numerous studies also establish that this risk is not inevitable, and that development of nurturing relationships with their own children can break the cycle of abuse (Jaffee et al., 2013).

Treatment providers who are working with intergenerational trauma often become the model for and facilitator of regulation skills in caregiver sessions. This includes the many skills needed to build caregiver awareness of, tolerance for and the ability to manage a range of internal experiences and in particular, overwhelming and/or stressful experiences. Caregiver distress may be related to daily stressors as well as the traumatic stress response. When caregivers struggle with regulation, observed distress in sessions offers the provider a rich opportunity to provide co-regulation for the caregiver. Co-regulation involves responsive interactions between caregivers and children that support children in understanding, sharing, and regulating their experience (Murray et al., 2015). When this type of experience is shared and felt by the caregiver it may deepen his/her/their understanding of the goals of treatment. When provided consistently

for the caregiver it enhances the likelihood that the skill will be internalized and generalized to other relationships.

Beyond co-regulation, the provider can build skills specific skills such as self-monitoring and stress management strategies to enhance regulatory capacity. Many caregivers will benefit from multiple opportunities to practice various skills, within a therapeutic context. It can be helpful to support skill practice in displacement or removed from the parental role initially to allow space for learning prior to expecting generalization. For instance, allowing a caregiver to engage in self-monitoring as part of a therapy check in or in response to an activity rather than with the child/youth to start. This skill practice in the treatment context provides opportunity for the caregiver to engage in and experience mastery in a series of subtasks, with an ultimate goal of leading to generalization of these skills in daily life. Further, these repeated experiences of mastery have the potential to address the inherent sense of shame often experienced by adults impacted by trauma, through building the critical felt experience of self-efficacy.

Caregiver Skills Development

Curiosity

A primary goal in work with caregivers is to cultivate caregiver curiosity about their child's experiences and the impact of trauma on child presentation. The role of adaptation in child presentation is described earlier in the chapter. The adaptations that children learn and implement in the face of overwhelming experiences are often what precipitates the need for treatment and ultimately, the caregiver's goal for treatment. Adaptations in relationships such as rejection/isolation; or adaptations designed to support coping such as aggressions/self-injury/substance use, etc. often represent the child or adolescent's attempts to communicate need (for instance, connections, safety, or support) but this is not always evident to caregivers. Providers will need to build caregiver awareness about the role of survival or the function of behaviors that are interfering with optimal functioning. This is often a paradigm shift for caregivers who may experience behaviors as either intentional—for instance, disrespect or oppositionality (something that is easy to control); and/or a symptom of a major mental health challenge (something that is challenging to control). Caregivers may not recognize the role that trauma adaptations play in the development of behaviors and ultimately the role that it continues to play in sustaining them. Ongoing support for caregiver regulation may be needed and is often foundational to shifting caregiver perception and experience of child or teen behaviors. The goal is to build caregiver curiosity about experiences that may be driving behaviors and ultimately to support caregivers in responding to the underlying experience rather than reacting to the surface behavior.

In addition, when supporting this goal a balanced approach is necessary. Treatment that aims to build resilience cannot focus exclusively on traumatic experiences. When framing the goals of treatment it is recommended that the provider establish a philosophy and approach that recognizes that the child/teen is a whole person with a range of influential experiences and a range of internal/external resources that influence behaviors, emotions and overall self-concept. There are often adaptations that represent strengths. For instance, consider a child who had to care for his siblings and through that experience has developed relational skills such as helping and caring for others, perspective taking and empathy, or a teen who often escaped violence in the home by playing basketball at a local court. It is essential that providers are open to finding the resilience in every family story and framing it as such for caregivers. This may include awareness and recognition of strengths, interests, values, relational supports, accomplishments and a range of abilities unique to each child/teen and family.

Mirroring Skills

Mirroring is communicating through language, relationship, and emotion that the communicator sees another person and is actively with them in and responsive to their experience. Mirroring enhances a felt sense of connection for both the observer and the observed, and ultimately

supports the relational safety and security needed to foster developmental skills. The treatment provider acts as a mirror for caregiver experience by offering verbal and nonverbal responses that validate caregiver's emotions, perceptions, needs, and goals. In turn, the treatment provider's ability to tune in and mirror the caregiver experience acts as a critical foundation to supporting this skill set in the caregiver.

Learning to observe and respond to the child's underlying needs and communications rather than react to behavior can be very challenging and caregivers may need a significant amount of coaching with specific skills and strategies. It may be even more challenging for caregivers who did not receive and experience responsive caregiving in their primary attachment context. The skills that go into mirroring therefore may need to be broken down into manageable steps when supporting caregivers in learning and subsequently implementing them with children/youth. Consider the following:

Teach and support observational skills Traumatic stress and stress responses may be characterized by sudden, automatic reactions to real or perceived threats. These reactions often happen very quickly and seemingly without warning. When supporting caregivers it is important to validate their experience that the child's behaviors, feelings, and/or reactions may seem to come out of nowhere, and escalate very rapidly. Presenting behaviors may include hyperarousal evidenced by irritability, aggression, and/or high levels of uncontrolled energy; or it may include hypoarousal evidenced by isolating/shutting down in the face of stressors; or some combination of both. An important role for providers is therefore to support caregivers in slowing these reactionary moments down, and to increase the caregiver's sense of control by suggesting that there are "warning signs" that can be difficult to catch without a significant amount of practice in being an active observer. For many caregivers, this requires support in reframing their role: many caregivers believe there is something that must be immediately "done to" the child in response to behaviors (for instance, talking, limit setting, reinforcing), and caregivers may need permission to instead slow down and focus on being an observer of their child's experience. Engaging caregivers in an understanding that behavioral change strategies will be most effective if selected based on a full understanding of the child's experience including communication strategies and the needs may build the adult's willingness to slow down their own responses. This requires time and support for caregivers to learn to "be with" their child.

The idea of "being with" is fostered by helping the caregiver to be curious about their child's communication style and strategies. The majority of communication for all people is nonverbal. People communicate in subtle and nuanced ways. Children who experience trauma often communicate experience through behavior or indirect strategies due to the impact that trauma has on a child's ability to label, manage and communicate internal experiences. Clinical work can support caregivers in becoming observers of the full range of experience (i.e., happy, sad, worried, scared, mad); the degree of experience (happy to excited, worried to scared, scared to distressed or terrified, mad to aggressive, etc.) and the specific verbal and nonverbal cues associated with these including facial expressions, tone of voice, eye contact, body language, behaviors, and approach to relationships. The provider can tailor the pace of the work to the caregiver's specific needs. It can be helpful to practice observational skills in displacement first. For instance, if providers are able to have individual caregiver sessions then caregivers can become observers of the provider cues or characters in media prior to engaging the skill set at home. When supporting caregivers in becoming observers in the home it is recommended that concrete tools (journals, tracking sheets, etc.) be offered to help caregivers track observations. It may be helpful to apply the skill to positive affect or emotions/experiences that are less stressful for caregivers prior to applying to experiences that are distressing to both the child and the caregiver. Ultimately, the goal is for the caregiver to learn early cues of distress and to respond with support strategies.

Fostering caregivers ability to reflect and validate Caregivers who become skilled at observation can utilize those observations to be increasingly responsive to the child's emotional needs, and to foster key developmental skills in their child. Responsive caregiving provides children with the scaffolding they need to develop the capacity for self-regulation. Providers can support caregivers in determining which observations or cues to share with the child and specific strategies for sharing (when, where, how, etc.) For instance, a caregiver may have noticed that her son comes into the home after school, head down, no smile, no engagement and immediately proceeds to his bedroom. The provider can think with the caregiver about how to share these observations with the child and how to be curious about what they mean, if anything. The goal is to build the child's awareness of internal and external cues that give information about patterns of experience.

As the caregiver becomes more skilled at observing child cues providers can begin to support the caregiver in becoming curious about underlying experiences that may be contributing to the surface behaviors that the child is presenting with. For instance, in the example above, the parent might wonder about experiences at school that may be contributing to the transition behavior. The caregiver can be intentionally curious and inquisitive about experiences at school overall and validate the idea that for so many, school can include moments that are overwhelming, tiring, stressful, etc. Caregivers can validate the many types of experiences that can contribute to the behaviors/communications received and inquire about their child's direct experience through that process. The goal is to support the caregivers in sending the message that child experiences are accepted, valid and worthwhile, despite the fact that there may be times when the strategies or behaviors used to communicate those experiences are not acceptable to the caregiver. It can be helpful to provide caregivers with specific examples of situations that emerge that may present an opportunity to practice reflection and validation and to coach/practice the skill set together in session when possible. Additionally, the provider can offer example statements that illustrate validation.

Teaching Behavioral Support Strategies

Responsive parenting approaches that support regulation and meet the child's underlying survival needs (i.e., the need to be in control or to be connected with) are likely to shift many trauma reactive behaviors, particularly in moments of distress or moments when a child is approaching a dysregulated state. It is often helpful to have caregivers think about behavioral support as a sequence of responses rather than a single response. Strategies outlined in the previous section on mirroring may be thought of as the primary "go to" initial response to a child demonstrating stress and/or distress. Caregiver mirroring can be paired with direct approaches to co-regulation, and/or used as a support along with child regulation approaches described below (e.g., relaxation and skills training; sensory and sensorimotor strategies; gross motor approaches; play; and therapeutic applications of various normative and developmentally geared activities). When child strategies are identified, the provider can support the caregiver in learning to effectively implement those strategies within the home as well as in other challenging contexts.

When a child is more regulated, he/she/they will be more likely to benefit from additional coaching and support. Providers are encouraged to teach caregivers about the range of tools available to increase or decrease behaviors. Examples included planned ignoring, limit setting, praise and reinforcement, and problem-solving approaches. Overtime, caregivers will identify target behaviors and work with the provider to determine which approach will likely be effective in meeting goals; and to develop a thoughtful and detailed plan for implementation. Additionally, a strategy for tracking successful/unsuccessful implementation may also be helpful to demonstrate concrete and often small changes despite the often-felt experience of being stuck or of things not moving away from chronic stress and toward healing; to show resilience in action.

External Resources (e.g., Community Members)

Given the role that supportive relationships play in fostering resilience the caregiver should be encouraged to identify and explore relationship resources within the context of their community that may act as a stable figure for the caregiver as well as relationships that are available to the child/youth. Together with the primary caregiver, the treatment provider may engage additional supports in the therapeutic process. Additional supports may be familial or may be members of the community (teachers, workers, etc.) who have a role to play in building resilience. A primary goal within with extended supports is to provide education about the impact of trauma on individuals, families, communities, and society as a whole as well as about resilience and the role that each relationship can play in fostering key skills. When indicated, there may be additional caregivers who can engage more activity in the treatment.

Goal Two: Support Youth Regulation

Trauma has a core impact on the child's ability to regulate internal experience, and trauma-impacted children often lack the capacity to understand, tolerate, and manage internal emotional and physiological experiences and resulting behaviors. Overwhelming experiences may have led children to disconnect from their own internal states, so that they are unable to discriminate among them, and surges of arousal or numbing of experience may lead to chronic alterations in children's natural capacity to manage physiological experience. In the absence of adequate coping skills, these children may vacillate from under- to over-aroused states. This inability to control arousal levels manifests itself in children's behavior and emotional expression. At one end of the behavioral spectrum, these children may appear shut down, inattentive and bored, or listless; at the other, they may present as hyperactive, impulsive, aggressive, and/or silly. Emotionally, these children may struggle with the range of emotion, from constriction to intense expression, appearing alternatively guarded and defensive, angry, exuberant, and depressed.

Conceptualizations of developmental trauma have highlighted dysregulation—of emotion, physiology, cognition, and behavior—as the epicenter of trauma impact. Chronic experiences of stress, and particularly those experiences which occur in the context of stressed relationships, have the potential to deeply impact children's nervous systems, their knowledge about and/or awareness of internal experience, their tolerance for state shifts, and age-appropriate coping strategies. In turn, these experiences of emotional and physiological dysregulation may lead to challenging behaviors, reliance on ineffective or unsafe attempts to self-soothe, and disruptions in relationship. In fact, for many trauma-impacted children and adolescents, the fallout from their dysregulated systems is what ultimately leads to functional impairment and service referral.

Further, the intense dysregulation brought on by an orientation toward survival—and the continuous energy children and adolescents must then put into managing these survival states—in turn takes away from the developing child's ability to cultivate those capacities and resources which will ultimately support positive and healthy experiences. Helping children and adolescents learn to understand, tend to, gain comfort with, and regulate the range of emotions and arousal states they experience is therefore a primary foundation for building resilient outcomes, and a necessary prerequisite for cultivating normative developmental competencies; in the absence of a regulated system, none of the critical capacities described later in this chapter are feasible.

Support for youth regulation involves attention to multiple skills and capacities. Key goals include increasing the child's tolerance for a range of affective and physiological states; calming dysregulated nervous systems through use of a range of approaches; increasing children and their surrounding system's empathic understanding of the underlying experiences and needs driving dysregulated behaviors; and building and scaffolding access to in-the-moment supports.

Numerous treatment models emphasize increased regulation as a core goal of clinical child trauma intervention. Approaches vary widely and include relaxation and skills training; sensory and sensorimotor strategies; gross motor approaches; play; and therapeutic applications of various activities (e.g., sports, equine therapy, yoga, dance, or movement) (Kaiser et al., 2010; LeBel et al., 2010; Warner et al., 2020; Webb, 2007; Naste et al., 2018; Razza et al., 2020). In common across these approaches is an understanding that children's bodies carry at a neurobiological level the dysregulation from their exposures to stress, and therefore treatment must in turn target and support increasingly regulated physiologies. Many treatment approaches reference a "bottom-up" perspective, or the capacity for interventions which build change in the body to impact upward and affect higher-level cognitive processes.

Other intervention approaches incorporate cognitive strategies to target regulation, engaging children and adolescents in understanding and reflecting upon their emotions and physical experiences, and using cognitive approaches to challenge thoughts which may lead to dysregulated or negative affective states. Most cognitive approaches incorporate some body-based strategies—for instance, relaxation, mindfulness, or other physiological approaches to support the child or adolescent's tolerance for engaging in reflection about challenging emotional states.

It is generally accepted that children and adolescents are more easily able to attend to regulation when supported by a regulating caregiving system; therefore, many child- and/or adolescent-focused trauma treatment approaches either directly target caregivers, through psychoeducation, parenting skills development, and dyadic/familial interventions; or indirectly support caregivers through recommendation for and referral to concomitant individual supports (e.g., Blaustein & Kinniburgh, 2018; Cohen et al., 2006, 2013; Ford & Russo, 2006; Kagan, 2004, 2007a, b; Kagan et al., 2014; Kinniburgh et al., 2005; Lieberman et al., 2015). Many of the core skills and strategies targeted for development are addressed in the caregiver skills section, above.

In addition to the role of primary caregivers in supporting youth regulation, increasing attention has been paid to the critical importance of building trauma-informed approaches in the range of settings in which children spend their time—for instance, school systems, after-school programs, religious or spiritual centers, and other community-based settings. We discuss these briefly in the community supports section, below.

Goal Three: Cultivate Critical Developmental Capacities

Beyond the deep impact of trauma, stress, and adversity on children's developing physiological systems, numerous domains of development are impacted by challenging childhood experiences and environments. Developmental studies of children growing up in adverse circumstances highlight alterations in relational skills, growing understanding of self and identity, and executive function capacities beginning in early development; in turn, each of these domains predicts to resilient outcome in stress-impacted youth, and thus becomes an important target for intervention.

Relational Skills

It is not surprising that youth who experience childhood trauma and stress may develop a range of challenges with navigating relationships successfully. Attachment stress, the interpersonal betrayals inherent in relational trauma, feelings of isolation and disconnection from others, and defensive strategies designed to minimize further harm may all lead to a range of both skills deficits in navigating interpersonal relationships, and to adaptations which leave the youth without adequate social support and protections.

Earlier in the chapter, the influence of external resources and social supports (parent, other adults in the community, etc.) on resilient outcomes was described. Positive peer relationships and social competencies such as friendship skills, conflict resolution, resistance and cultural competence are among other important internal resources linked to healthy development

(Collishaw et al., 2007; Oshri et al., 2017). In general, social competence is defined as the set of skills and capacities needed for successful social adaptation. A treatment approach that seeks to foster social competencies in trauma-impacted youth will need to address three areas: (a) acknowledgment and exploration of the barriers to effective engagement in relationships; (b) identification of external supports and relational resources; and (c) social skills enhancement.

Acknowledgement and Exploration of the Barriers to Effective Engagement in Relationships

For many children and adolescents, one of the primary barriers to building and sustaining supportive relationships in the present is the impact that historical relationships have had on the child or adolescent's relational lens: on a core level, many children who have experienced trauma believe that relationships are dangerous, harmful, or intensely anxiety-provoking. Treatment with children and adolescents who have experienced interpersonal trauma should consider direct teaching about the impact of those experiences on present moment interactions with others and the world around them, and exploration of the child's own historical experiences. It may be helpful to normalize the idea that connection to others is inherently vulnerable and to provide direct education about types of adaptations that often emerge in relationships. For instance, when previous relationships have been associated with danger or distress, it is common to experience avoidance, ambivalence or confusion within the context of new relationships. Negative relational experiences may impact children's willingness to enter into relationships; their ability to trust others; their belief in others' ability to meet their needs; and their ability to communicate those needs effectively.

The provider can work to enhance awareness of these dynamics and ultimately to support the child/youth in identifying core needs (emotional support, concrete needs, etc.) as they relate to external supports. Considering the above example, a treatment provider might explore the function of refusal to participate in-group activities, as it relates to previous experiences with critical or rejecting adults or peers and reframe the behavior as a strategy for managing the emotions connected with those experiences such as fear, sadness, anger, and/or shame. When children/youth are able to understand how interpersonal trauma may interfere with relationships and/or interpersonal goals then we can support them in identifying relational resources that will ultimately support need fulfillment.

Identification of External Supports and Relational Resources

It is important to explore and be curious with the child/youth about the different people in their life, and the ways that these people help the child feel safer or less safe; heard or not heard; comfortable or uncomfortable. This may include people who *might* be able to meet needs (like those who are identified as possible resources), but may also include those who have failed to meet their needs, who make their lives feel harder, or who are hurtful. Help the child to identify key people who currently play some role in their life and/or have some influence on them, such as caregivers, relatives, teachers, friends, providers, and others. In the case of relationships that are hurtful or challenging, the provider can support the child in establishing healthy boundaries as this relates to core needs such as connection, safety and trust. When positive resources are available, there are opportunities to empower the child to think, together with the provider and the caregiver about resources that may be able to bridge the therapeutic context to other areas of the child's life. For instance, the child can participate in decisions about inviting other relationships (teacher, mentor, etc.) into the therapeutic process. When indicated, providers may link specific relational goals to identified resources and in some instances; it may be helpful to develop concrete communication plans related to specific needs. An example of this may be working with a child's teacher to understand the need for and develop a strategy for communicating the need for a break from class and/or more support with classwork throughout the day.

Social Skills Enhancement

Trauma-impacted children/youth may have not had the support and opportunity to develop age appropriate or effective social connection skills. Skills that lead to effective social interaction vary greatly by context and relationship and depend on the child's ability to accurately read and respond to the cues they are given by others. Children who experience trauma may have developed a specific lens for relationships (described above) that influences how social cues are processed and interpreted. For instance, children who experience physical abuse may interpret facial cues related to sadness, stress or some other negative affective state as angry or potentially threatening (Pollak & Kistler, 2002). Consider a child who reads and responds to his foster mother's seemingly neutral facial expression by shouting, "Stop staring at me like that, I didn't do anything! Why do you hate me?" While the child's interpretation represents a very real experience, the experience is related to past rather than current contextual cues and therefore, a misread or misinterpretation. Social awareness or the ability to consider the experiences or perspectives of others may also be impacted. Consider a child who verbalizes an opinion (i.e., "I am the best at this game!") while playing with peers without anticipating, understanding, and ultimately recognizing the impact of that statement on her current relationships and/or the development of new relationships.

Skill enhancement will often focus on supporting children in learning to actively observe, accurately interpret, and effectively respond to the range of verbal and nonverbal strategies that people use to communicate and ultimately, to connect. Coaching and direct teaching may be needed around both communication skills as well as contextual factors (who, when, what, where) that are likely to increase/decrease successful implementation of the skills identified.

A primary strategy for managing relational triggers is to avoid or disconnect from relationships. Over time, avoidant strategies decrease opportunities to engage with others and to practice a myriad of pro-social skills such as joining (initiating contact), play skills (turn taking or following rules), conversational skills, active listening, perspective taking, and conflict resolution. The provider can support many of these skill areas within the therapeutic process when opportunities present for "in the moment" teaching and application. In addition, skill development can take place through structured activities that target these areas as well as with existing social skills and/or social emotional learning resources.

Identity

Research has shown that abused and neglected children may demonstrate alterations in sense of self from very early on, including negative self-appraisal, reduced self-confidence and self-esteem, difficulty with identifying personal attributes, and challenges with goal-setting and future orientation (Vondra et al., 1989, 1990; Brock et al., 2006). Self-perception is strongly affected by experience and relationships, and trauma-impacted youth's understanding of who they are is often marked by negativity, confusion, fragmentation, and conflicted ideas. These children have learned to separate out experiences in order to survive them (the "me" who was abused from the "me" who must go to school every day), and as such may lack a coherent understanding of who they are. They may feel damaged, unworthy, and incapable, and may approach new tasks and new relationships with a deep lack of faith in their own ability to accomplish them. Because their experiences have been marked by helplessness, they may internalize a belief in their own lack of power. A common outcome is a loss of future orientation—the ability to perceive the self in the future—along with all of the possibilities that "future" typically holds for youth.

Conversely, research highlights qualities such as autonomy, self-efficacy, self-knowledge, and ability to envision the future self as all predictive of resilient outcomes at various developmental stages in stress-impacted populations (Schwarzer & Warner, 2013). Therefore, clinical work and community-based supports for trauma-impacted youth should incorporate attention to self and identity at multiple levels, including exploring areas of interest across domains, cultivating

self-esteem and self-efficacy, and exploration and envisioning of future self and possibilities.

Self-Concept: Who Am I?

In individual, familial and group clinical settings, interveners can explore with youth numerous aspects of self-concept, including the young person's areas of interest, experiences in their lives that have been influential, important values, cultural and family background, and other aspects of self. Explicitly linking these to the child's exploration and growing definition of self, through concrete capturing of observations (for instance, in self-books, collages, artistic expression, etc.) may help to solidify the child's observations. Older children and adolescents may be able to directly explore these ideas through guided reflections, either in conversation or writing exercises, or may work best through expressive arts exercises and creative expression. Younger children may be best able to explore self through dramatic or symbolic play, but it is important to find opportunities to support even young children in identifying and naming opinions ("I like to do ___"/"I don't like ____"), areas of interest, and ideas. Offering choices, a range of expressive medium, and multiple options are ways to invite children to identify and elaborate on preferences, wants, and needs.

Although clinical intervention offers a rich opportunity to begin to explore the question "Who am I?" with youth, the visceral exploration that will allow children and teens to actually step into and out of various roles may be best held within community-based settings. A child may *think* they like sports, for instance, but without the opportunity to enter into game play, try out different activities, or follow the structure and expectations of a team, it is hard for the child to *know*—for instance—if they prefer team sports or individual; indoor or outdoor; competitive activities or cooperative; or other options. One of the significant challenges for many children and adolescents in developing an expansive understanding of their current and potential areas of interest, talent, and possibility is a lack of access to the resources that will allow them to explore those. Put simply, it is hard for a child to envision themselves in a role if they are never presented with that role as a possibility—nor able to witness others who reflect some aspect of self-represented in similar roles. To the degree possible, partnering with a range of community-based organizations who offer activities ranging from STEM to arts to athletics; increasing access to numerous activities and areas of interest within school settings, religious programs, and community centers; pairing youth with mentors who can support them in exploring and accessing areas of interest; and ensuring that youth have access to multimedia with diverse representations of individuals who have entered into numerous activities and fields—will all support children and youth in exploring and building curiosity about their own desires and interests.

Self-Esteem and Self-Efficacy

Support for the child's positive sense of self can—and ideally should—be addressed in the full range of settings in which the child is embedded, including family systems, clinical settings, and daily activities. Children who have experienced trauma and stress are at risk for internalizing numerous negative filters: for instance, self as powerless, self as ineffective, self as not good enough, and self as to blame. A primary goal of work addressing the child and adolescent's positive sense of self is to counter these internalized negative self-labels. Building positive sense of self requires both visceral and lived experiences of accomplishment ("*I did that!*") as well as experiences of positive regard from others.

Sense of self for children grows from the reflected lens of the significant others around them; because of this, caregivers and the larger adult world surrounding the child may play a significant role in supporting youth self-esteem. Adults engaging with trauma-impacted youth can purposefully tune in to moments of accomplishment and pride. Observing, noticing, and naming the youth's positive actions, tracking these concretely (for instance, hanging a favorite picture, or writing down one moment of pride each day), re-framing and attending to moments of success, and offering praise and positive reinforcement for even small accomplishments or moments of

effort can all cultivate the youth's positive self-concept.

Beyond the observations and statements of adults, the growth of feelings of self-efficacy depends on the youth experiencing those moments of accomplishment that come from trying, acting, and doing. For youth who are particularly hesitant or who struggle with confidence, this may require attention to regulation strategies (how to manage the anxiety associated with trying hard or new things); re-framing of success (success may be about effort, managing anxiety, and/or being open to engaging, rather than about outcomes); and scaffolded support for navigating challenging situations. Concretely, linking youth to resources that allow them to explore areas of interest is critical to supporting the youths' positive sense of self and mastery.

Envisioning a Future

One of the notable features of post-traumatic stress disorders is a sense of foreshortened future. Not surprisingly, many children and adolescents with complex trauma exposures struggle to envision themselves in the future (Rialon, 2011; Lavi & Solomon, 2005). It is hard for a child whose energy is going toward managing the day to day to put substantial energy into imagining what might be. Lack of exploration of potential selves through engagement in empowered action, lack of representation of possibility in their surrounding world, and lack of access to concrete resources all have potential to limit the child's ability to project forward.

Supporting children and adolescents in imagining future possibilities is a critical point of intervention. Future self can be imaginal and creative for very young children, and often centers around highly influential roles observed in the child's own life (for instance, "Doctor," "Teacher," "Judge") or perceived heroes, both real and imagined ("Batman," "Basketball player"). Helping children step into these roles through imaginary and creative play helps them to tap into the qualities they resonate with, and to begin to imagine themselves as—for instance—the one who helps, the one who knows many different things, or the one who makes important choices. Exploring these roles in books, in media, and in observed others helps children to picture real people doing the things they might imagine themselves to do. For this reason, it is particularly important to tune in to the importance of representation—of exposing children to individuals who share some aspect of the child's own perceived self—in a range of roles, to support children's ability to envision that those roles are a possibility for the child themselves.

For older children and adolescents, future self may continue to be imaginative and creative, but may also take on real-world connotations and actions. For instance, the child who imagines the possibility of being a "helper" might have interest in stepping into and trying out that role in the classroom, in an after-school program, or on a sports team. An adolescent who loves sports might be supported in seeking out a volunteer or paid role as an assistant in a youth sports league or community center, or in exploring the range of jobs involved in professional sports. Linking the child and adolescent's areas of interest and ability to the many future possible venues for those interests, as well as the current actions that connect to that future self, can support the bridging from "now" to "what might be."

Executive Functioning and Reflective Capacities

Cognitive capacities may be impacted in numerous ways for youth who have experienced complex trauma and childhood adversity. Broadly, trauma influences reflective capacities: the child's ability to take in, make meaning about, and act on internal and external information in a goal-oriented way. Children who have experienced chronic trauma struggle with executive functions, including difficulties with attention and concentration, delaying responses, and goal-oriented problem-solving (Mezzacappa et al., 2001; de Bellis, 2001; Beers & de Bellis, 2002; op den Kelder et al., 2018, 2021). They may have difficulty with the range of factors which support cognitive capacities—for instance, frustration tolerance, self-sufficiency, and the ability to seek and tolerate support in problem-solving. They may struggle with efficient processing of

information, given the interference from heightened danger systems, and may be distracted by environmental stimuli.

It is well established that the ability to be autonomous, to identify and solve problems and to make decisions are all predictive of resilient outcomes (Werner, 1989). Adults play a key role for all developing children in externally scaffolding these reflective capacities. This role is particularly important for youth who struggle with goal setting, frustration tolerance, and decision-making, and/or whose ability to do so is frequently derailed by experiences of overwhelming emotion and arousal. Building and supporting these capacities is therefore an important goal for supporting resilient outcome.

The ability to make decisions rests on a felt sense of agency and empowerment: it is impossible to *make a choice* when the felt experience is *I don't have a choice*. A necessary foundation, therefore, for building and supporting executive functions and decision-making, is to provide the child with numerous opportunities to be powerful in their world. Choices can be offered in both large and small moments: what clothes to wear, which homework to do first, what color crayon the child wants to use; but also whether they want to attend a visit, which therapist they resonate with most, whether they want to share their thoughts and feelings—or not. It is true, of course, that children often do not have choices around many different experiences, which makes it particularly important to notice, name, and provide opportunities for real decision-making when possible.

Even when a child or adolescent has a felt understanding of choices, moments of overwhelming arousal or distress can derail the cognitive capacities required for decision-making. Clinical work should actively pair these two skills: namely, the importance of tending to our bodies first, before trying to reflect or make decisions. Building the child's understanding of the negative reciprocal influence of arousal and cognition can help to cultivate an engagement in the process: "If I want my brain to work well, I need to regulate my body." Linking this work with key domains the child is invested in may be helpful; for instance, a child motivated to get along with a friend, be successful on a school project, or do well in a preferred activity may be more motivated to attend to and practice those regulation skills that will support their brain in being effective. Adult scaffolding and transparent modeling in moments of distress is critical to supporting this capacity; both clinical interveners and primary caregivers can name, model, and support regulation as a step toward helping the child solve a problem.

Active support for reflective capacities—whether working to understand a situation, find a solution, set a goal, or other area of reflection—often relies on engaging and supporting the child or adolescent's curiosity. In moments of calm or regulation, providers and caregivers can support youth in being curious about self, others, goals, possible actions, possible outcomes, and many other facets of situations. Through approaching this process with a belief in and respect for the child's own expertise and ability to reflect, the adult helps to cultivate the child's growing ability to explore and examine a situation and both internal and external experience. Particularly for younger children and/or for children who struggle with this developmental capacity, the adult may need to offer potential solutions ("I wonder if ___ or ___ might work; what do you think?"). Notice how even in these offerings, there is room for the child to engage in active reflection and choice.

Goal Four: Expand the Capacity of Community-Based Organizations to Provide Trauma-Informed Supports

Trauma is in many ways an experience of disconnection and isolation. Individuals may feel disconnected and isolated from their families and peers; families may feel different from and isolated within their communities; and systems themselves may feel burdened and isolated by the stresses and demands of their work.

The reality is, though, that community-based organizations and systems are the front line for

youth and families who have experienced trauma: a child is far more likely to be embedded in a school classroom, an after-school childcare program, and a church community, for instance, than to receive services from a highly trained trauma-focused therapist within a mental health setting. Furthermore, given many individual's and family's unease with classic mental health service systems, engagement with and connection to more "normative" settings may be higher or feel more tolerable to children and caregivers who feel particularly uneasy about mental health supports, or who need or wish for greater connection in their community.

Because of this role, it is critical in conceptualizing resilience-building interventions for youth and families to include in this lens the vital role of the range of people and settings who have the potential to be resilience-builders and child- and family-champions. Earlier in this chapter, we detail three key goals for building resilience in youth: Cultivating caregiver skills and supports; developing youth regulation skills; and cultivating key developmental capacities. Every one of these goals can be targeted in a classroom, on a sports team, in an early childhood center, within a mentoring relationship, in a spiritual center, or in a teen drop-in program.

Although expansive description of the process of developing trauma-informed systems is beyond the scope of the current chapter, there are a range of programs which directly address development of trauma-informed capacities in both clinical and nonclinical systems (i.e., Blaustein & Kinniburgh, 2018; Saxe et al., 2015; Rivard et al., 2004; Giller et al., 2006). Furthermore, clinical interveners should consider ways to partner with local organizations who serve youth with a goal of providing continuity of supports for the children and families who enter into their systems. The more that community-based systems can develop cross-system communication, a deepened understanding of trauma as relevant to their particular system of care, a common language and lens for important points of intervention, and a vision of resilience as a shared goal, the better served children and families will be.

In Conclusion: Actively Cultivate Resilience

In the field of traumatic stress, and particularly in the field of childhood trauma, it is far too easy to engage around hurt and harm, around stress and overwhelm, and around pathology and behavior. It is without question that trauma harms: it is deeply meaningful and impactful, shapes developmental course, and impacts the lives of far too many individuals, families, and communities.

And yet, the potential for resilience is profound. Decades of research attest to the fact that—despite the almost unbearable levels of stress that some children are exposed to—a remarkable number of young people go on to live rich, joyful, resilient lives.

Importantly, this resilience is not random. A full body of literature indicates that there are identifiable factors—internal resources and developmental capacities, external supports, and scaffolds—that set apart those young people who are remarkably able to metabolize, survive, and move beyond the harsh beginnings of their lives. Those identifiable factors, then, should become the interveners call to arms: the action items, goals, and targets for our work with children, adolescents, and their caregiving systems. Decreasing pathology is certainly critical, but it is not the final goal. Intervention with youth impacted by trauma requires the cultivation of those building blocks of joy, health, connection, and growth—the cultivation of resilience.

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Building Resilience in Juvenile Offenders

16

Christopher A. Mallett

Introduction

Resiliency

Young people react to individual, family, peer, school, and community difficulties in various ways. Some are resilient to the challenges and can avoid harmful short-term or long-term outcomes, while others have no such internal resources or external supports and experience a variety of undesired problems—trauma related, school and academic troubles, mental health issues, and involvement with delinquency and the juvenile courts (Glowacz & Born, 2015). When adolescents become involved with offending behaviors and the juvenile justice system, they are often referred to as "youthful offenders" or "*juvenile offenders*."

Young people who are resilient are seen in a number of ways—the ability to thrive in spite of difficulties and the ability to adapt despite difficulties. In other words, some young people do not let trauma, negative peers, school problems, difficult family situations, or other challenges impact their lives in a consequential way. While other young people are harmed by the difficulties but find ways to cope and move past these problems, often with assistance, toward positive young adult lives (Fougere & Daffern, 2011). Yet, there are still quite a few young people who have little to no such resiliency or supports and end up in trouble with the juvenile courts, detained, and/or incarcerated. However, with earlier identification of those young people most at risk and using proven approaches and interventions, individual resiliency can be built, and these outcomes thwarted or minimized.

Delinquency

Nationally, the juvenile courts handled over 818,000 delinquency cases in 2017, a decrease of 51% since 1997 across all offense categories—person, property, drug, and public order (status offenses for those under the age of 18). A majority (83%) of cases involved high school-aged adolescents (14 years of age and older), with 16- and 17-year-olds accounting for nearly half of all cases (48%) (Hockenberry, 2020). Youthful offenders of color are over-represented at each juvenile justice decision-making point, from arrest to charges to dispositions, with the greatest racial and ethnic disparities found the further a young person penetrates the system. Reviews over the past few decades and across a majority of states have found that black youthful offenders, who have typically comprised only 15–16% of the adolescent population nationally, make up 26% of juvenile arrests, 31% of referrals to juve-

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_16

nile court, 44% of the detained population, 34% of those formally processed by the juvenile court, and 32% of those adjudicated delinquent (Armstrong & Rodriguez, 2005; Cohen et al., 2014). These disparities are more present in the locked detention and incarceration facilities.

Detention and Incarceration

Over 43,000 adolescents remain confined each day in the United States by order of a juvenile court, either in a detention center (15,600) or incarcerated in a youthful offender prison (26,900) (Hockenberry, 2020). Race is a significant predictor of detention placement and incarceration, though it is not fully understood why. A black youthful offender is six times more likely to be detained, and a Hispanic youthful offender three times more likely, than a white youthful offender, even when accounting for many of the important legal factors that influence these decisions such as number of offenses and offense type (National Council on Crime and Delinquency, 2007; Piquero, 2008; The Sentencing Project, 2016). Black youthful offenders are also five times more likely to be incarcerated in state juvenile facilities as white youthful offenders; American Indian youthful offenders more than three times as likely; and Hispanic youthful offenders more than twice as likely, though there are distinct differences across the states (The Sentencing Project, 2017).

When youthful offenders reach this far into the juvenile justice system, most incarceration outcomes are poor. Incarceration does not decrease future adolescent crime, while the experience of incarceration itself is part of the problem. More specifically, placement into these facilities has either no correlation with offender re-arrest or recidivism rates or is associated with an increased risk for offender re-arrest (Loughran et al., 2009; Winokur et al., 2008). This increased risk is particularly acute for low-level offenders, which is the profile of a plurality of incarcerated youthful offenders in many states (Hockenberry, 2020; Petrosino et al., 2010). While incarcerated, many of these adolescents do not receive services that may assist in mitigating the prior offending behavior. Most incarceration facilities are not equipped to meet the rehabilitative needs of the adolescents placed within the institution, let alone youthful offenders with serious trauma, mental health problems, and educational deficits (The Council of State Governments Justice Center, 2015).

Chapter Format

This chapter is focused on how to avoid delinquency, detention, and incarceration for young people by using early prevention and effective programs to help divert from the juvenile courts and build individual and family strengths and resiliency. Using this approach, first reviewed are the risk and protective factors that impact delinquency and incarceration pathways. These life experiences and factors are across a wide range of events because there are a multitude of possible reasons young people get into trouble. As will be discussed, it is often a combination of events over time that lead to youthful offending and delinquency. Accordingly, this chapter is organized next to look at how adolescents are uniquely different from young adults and how this makes rehabilitation and resiliency building much more possible for young people. This is followed by specific assessments of how traumatic events and mental health problems increase the risk for offending behaviors and delinquency, along with ways to intervene and build resiliency through effective prevention and programming efforts. In addition, the impact and efforts schools can take in helping young people have positive academic outcomes is examined because school approaches can have a uniquely protective impact on vulnerable students. Finally, is an overview of how police, the juvenile courts, and incarceration facilities can use rehabilitative alternatives, as opposed to control and punishment, to divert young people from the system, avoid delinquency outcomes, and provide a second chance for youthful offenders to minimize recidivism.

Delinquency Risk and Protective Factors

Risk factors are experiences or traits that make an outcome (offending behaviors or delinquency, for example) more likely. Some risk factors are associative (correlated) with these outcomes while others are causative (related directly) to outcomes. The more risk factors experienced by a young person, or his or her family, the greater the chance of delinquency and juvenile court involvement. Risk factors are considered either static or dynamic. **Static risk factors** cannot or are difficult to change and include things like demographic variables—age, race/ethnicity, and gender, among others—and socioeconomic status. **Dynamic risk factors** can be modified and include things such as substance use, peer choices, academic effort, school connectedness, and some mental health problems, among others. These are areas where resilience skills can be learned and incorporated in young people's lives (Thornberry, 2005; Mallett, 2016).

Protective factors are experiences that decrease the likelihood of harmful outcomes. As with risk factors, the more protective factors are present in a young person's life, the less likely he or she is to experience these outcomes. Protective factors are more difficult to both identify and measure (DeMatteo & Marczyk, 2005; Fergus & Zimmerman, 2004). Protective factors may just be the absence of risk factors, may reduce the likelihood of harmful outcomes, may decrease the impact of risk factors, or may promote positive outcomes (e.g., academic success). Protective factors may reduce the likelihood of experiencing harmful outcomes by either moderating the impact of risk factors or exerting an independent influence on the negative outcome, whether the risk factors are present or not (Grisso & Schwartz, 2000; Loeber et al., 2008).

Individual Risks

Young people typically experience increased risk of involvement with delinquent behaviors and the juvenile courts as a result of a combination of risk factors, rather than any single experience. Individual risk factors rarely act alone but interact with the individual's environment in influencing young people toward delinquency (Howell, 2009; Lipsey & Derzon, 1998). Delinquency risk factors during early childhood include a difficult temperament, impulsive behavior, aggressiveness, and an inattentive personality. Physical aggression in childhood and violence in adolescence are strongly linked, and part of the explanation is that aggressive children are often unsuccessful in having prosocial and positive peer relationships. In other words, aggressive children attract other aggressive children as friends and companions. The earlier the onset of these behavior difficulties, the greater chance there is for adolescent delinquency. Other factors for children include indicators of psychological difficulties or mental health problems (hyperactivity and behavior disorders, among others), limited social relationships or ties to peers, exposure to or victimization of violence, and substance use (Cuevas et al., 2013; Howell, 2009).

Adolescents who are less connected to their peers or schools (more on that later) are at greater risk for delinquency, exacerbated by poorly functioning families and any early onset of offending behaviors. Being a perpetrator or victim of violence predicts ongoing delinquent activities, other life stressors (living conditions and poverty), and mental health problems (Center for American Progress, 2014). The mental health concerns include a history of early oppositional or conduct problems, hyperactivity, and substance use or dependence. Other individual factors include risk-taking, high impulsivity, and poor behavioral controls (Chassin, 2008; Grisso, 2008; Hawkins et al., 2000).

Juvenile justice involvement across numerous metrics is also predictive or influential of ongoing delinquency. These include an earlier onset of delinquency adjudication that predicts ongoing offending behaviors; the greater number of prior arrests that increases later arrest risk; and out-of-home placement that greatly increases the chance for formal and ongoing juvenile court involvement (Petrosino et al., 2010). In a related matter, substance abuse or use, itself an illicit activity, is

a risk for ongoing delinquency, though the direction of the influence with delinquency is unclear (DeMatteo & Marczyk, 2005; Hawkins et al., 2000).

Maltreatment

Between 26% and 60% of adolescents involved with the juvenile courts, detained, or incarcerated have maltreatment (abuse or neglect) histories—over 90% of the perpetrators are family members (Maschi et al., 2008; Yun et al., 2011). The earlier the abuse occurs the greater the risk for being arrested as adolescents for violent, nonviolent, and status offenses. Additionally, these maltreated adolescents are more likely to be formally supervised by the juvenile courts for more serious offending behaviors than were their nonmaltreated offending peers. All three maltreatment types (physical abuse, sexual abuse, and neglect) are linked to later antisocial behavior, violent crimes, and court involvement, even in the presence of other risk factors (Lemmon, 2009; Wilkinson et al., 2019). Repeated maltreatment victimization predicts the initiation, continuation, and severity of delinquent acts and is associated with serious, chronic, and violent offending behaviors as an adolescent and into adulthood (Currie & Tekin, 2010; Verrechia et al., 2010).

Delinquency pathways and trauma victimization experiences differ via gender. Girls' delinquency starts earlier than boys and certain risk factors have a greater impact on girls—earlier maturation, maltreatment victimization, and anxiety, depression, and post-traumatic stress disorder symptoms (Chesney-Lind & Irwin, 2008). Juvenile justice-involved girls are also significantly more often victimized than boys by crimes, traumas, and repeated victimizations. Acts such as running away from home and other truancy offenses are related to abuse and trauma being experienced in the home (Huizinga et al., 2013; Zahn et al., 2010). The cumulative impact of maltreatment, in addition to other risks associated with this maltreatment such as substance abuse and school difficulties, may affect girls more negatively than boys. It is clear, though, that family conflict as well as exposure to community violence, both risk factors for delinquent activities, have a heightened impact on girls (Sherman & Black, 2015; Zahn et al., 2008).

Family Risks

Family exerts significant influence during children's early years. Families with the following traits or characteristics increase the chance for their children to commit delinquent acts, as well as some school-related problems: lower parental education levels; families that move often or provide different caregivers for the child (e.g., early loss of a parent); families with parents who have poor parenting skills; families who experience domestic violence; families with members who are involved in criminal activities, including substance abuse; younger mother families; and families with the history of abuse or neglect (Pogarsky et al., 2003; U.S. Department of Health and Human Services, 2001).

Poverty has a powerful impact and is a risk factor for many family difficulties. Families living in poverty often remain in poverty; they have little upward socioeconomic mobility (Chetty et al., 2020). Growing up in poverty, or experiencing it as an older child or adolescent, makes school achievement more difficult, increases exposure to more unstable neighborhoods, and causes interfamilial stress. Family dysfunction and instability, often resulting from poverty, are risk factors for delinquency (Felitti et al., 2008).

There are specific age-related risks that have been identified, including poor parent–child relationships, parent–child separation (family disruption, foster care, and kincare placement, among others), poor living conditions, a family history of crime or problematic behavior, poor parenting skills, and maltreatment (Hawkins et al., 2000). Of these, one of the strongest risks for adolescent delinquency is intrafamilial violence—domestic violence and spousal/partner abuse. These experiences have been linked to individual adolescent aggressive behaviors; whereby adolescents learn this behavior from family members (Dembo et al., 2000; Valido et al., 2020).

Peer Risks

As children become adolescents, their relationship focus shifts from parents or guardians to peers. Because adolescents are still developing in so many different ways, they are quite vulnerable to negative and traumatic experiences (MacArthur Foundation, 2015; Steinberg, 2014). Proper adolescent development is important for young people to manage this challenging transition, and a number of factors have been identified that impede this transition and increase the risk for delinquency. Peer rejection during early school years increases susceptibility to the influence of negative and more deviant peers. Aggressive and more antisocial peers tend to associate with each other during primary school and may continue into middle and high school years. Associations with delinquent peers, as well as associations with delinquent siblings, increase the chances for offending behaviors and violence. In particular, deviant peers and the use of drugs are risks for ongoing and more serious and chronic youthful offending, including gang involvement (Howell, 2009; Mallett & Fukushima-Tedor, 2019).

School Risks

There are clear links from school difficulties, academic failure, truancy, and bullying victimization to school exclusion policies that lead to formal juvenile court involvement (Ahmad & Miller, 2015). These include low academic achievement (particularly in elementary school), failure to complete school, failing an academic grade, low commitment to school (academics and attendance), changing schools (particularly at important developmental stages), and having delinquent peers (Hawkins et al., 2000; Howell, 2009). In addition, schools that are poorly organized, function below minimal safety standards, and do not promote safe learning environments are additional risk factors for students to be involved with the juvenile courts (Mallett, 2016).

Community/Neighborhood Risks

In addition to the impact of poverty and growing up in a lower socioeconomic neighborhood, there are other influences communities have on the risk for youthful offending and delinquency. The more unstable the greater the risk for poor outcomes and adolescents, including juvenile court involvement. The high prevalence of crime, including drug selling, and low-income housing are linked to a high rate of delinquency in a community, as is the high exposure to violence. Witnessing violence is associated with aggressive behavior and trauma, which also are linked to adolescent delinquent activities. These more violent communities are often disproportionately poor communities of color (Finkelhor et al., 2009b; Kracke & Hahn, 2008).

Protective Factors

Protective factors for delinquent activities and formal juvenile court involvement have been less widely researched than risk factors. Though as noted earlier, the absence of some or all risk factors may act as protection for many young people as they move through different developmental stages. Research identified some important protective factors for this age group, including a positive parent/caregiver–child relationship; strong child self-efficacy; and social support from peers, teachers, and family members (Howell, 2009). Research on delinquency prevention also found a number of additional protective factors for children and adolescents, including strong educational curriculum, such as positive reinforcement from school teachers and administrators; involvement in extracurricular school- and nonschool-structured activities (sports and academic clubs, for example); an attitude of intolerance toward deviant behavior; strong acceptance of social norms and peers; individuals with more flexible coping styles; improved problem solving, anger management, and critical thinking skills; families that provide nonaggressive role models as well as clear and

consistent norms; the establishment of at least one close relationship with a supportive adult (parent, family member, teacher, volunteer, or other); and a community with strong cohesion and structure (DeMatteo & Marczyk, 2005; Mallett, 2016). Many of these approaches are used in empirically supported interventions reviewed later in the chapter.

Adolescent Development (They Are Not Adults)

There is much hope and possibility in working with young people and changing life trajectories through building resiliency for those at risk of involvement with the juvenile justice system. This is because adolescents are not young adults and are constantly changing, finding who they are or want to be. This difference is key. While older adolescents have adult cognitive capacities, their ability to use decision-making steps is not fully employable due to lack of life experiences. In addition to the limited experiences, another inhibiting factor is adolescents' focus on the present and a diminished ability to delay gratification or have a future orientation, which explains why most adolescents have a lower appreciation of long-term consequences or outcomes in their decision-making. Adolescents don't put facts together and draw conclusions in the same way as adults and are less likely to recognize the risks in the choices they make (Scott & Steinberg, 2008a; Somerville & Casey, 2010).

In addition to these developmental issues, adolescents are vulnerable to external peer pressure (and coercion), particularly during the middle school years, due to their *unformed character development*. These peer influences typically peak at age fourteen and decline into young adulthood and are particularly influential in group situations. A significant percentage of youthful offending happens in groups, while most adults commit crime alone. This peer influence, along with adolescents' increased preference for risk taking, based on the minimizing of the risk and the over-inflation of rewards, leads many to make poor decisions in schools and communities. The young person is often in a quandary, for resisting peer pressure can have negative and ostracizing outcomes including being shunned, bullied, or isolated (Fagan, 2000; Moffitt, 1993).

Recognizing Adolescent Differences

Juvenile justice and school policies that are focused on strict punishment and discipline procedures, including, for example, school suspension for truancy problems and the detention of low-level youthful offenders, may have little to no deterrent effect of these behavior on adolescents. Of note, most adolescents involved in delinquent activities eventually grow out of these antisocial tendencies as their learning continues, experiences accumulate, and the brain develops. These adolescent activities are part of identify formation, a process that includes experimentation and, many times, risk-taking decisions and behaviors. This experimental phase ends when identify formation completes itself (Scott & Steinberg, 2008b).

For these reasons, by age 16, most adolescents discontinue criminal activity (referred to as "*adolescence-limited offenders*"), with fewer than 5% of adjudicated delinquent young people continuing offending into young adulthood (referred to as "*life-course-persistent offenders*") (Moffitt, 1993). A significant difference between these two adolescent groups is that those who do not continue committing adult offending behaviors have developed **psychosocial maturity**. Such maturity requires three important components: the involvement of at least one caring and committed adult in the adolescent's life; a peer group that values academics and pro-social behavior; and the development of independent and critical thinking skills (Mulvey, 2011; Piquero et al., 2003).

Recognizing how adolescents are significantly different at varying development stages allows for many interventions that focus on building resistance to delinquency pathways and resilience of choices and character. Many of the programs that are effective at preventing

delinquency are based on this concept and focus on either the increasing of protective factors or the elimination of risk factors to build resiliency in children and adolescents (Mallett & Fukushima-Tedor, 2019).

Trauma

Poly-victimization is the exposure to, and experience of, multiple forms of trauma and/or victimization. Multiple trauma experiences are common for some child and adolescent populations, with up to 20% of those ages 13–18—disproportionately male, black, and older—having experienced more than one type of trauma and over 41% of physical abuse, assault, or sexual abuse victims had also reported additional trauma experiences. More broadly, for all children and adolescents who experienced any direct victimization, more than two-thirds reported more than one type. Of concern is that there are a small number (between 6% and 8%) of adolescents reporting exposure from 6 to over 15 different traumatic experiences over their lifetime (Finkelhor et al., 2009a, 2013; McCart et al., 2011).

Having certain traumatic experiences exposes the young person to much greater risk for another trauma. A child who was physically assaulted would be five times as likely to have been sexually victimized and more than four times as likely to have been maltreated during a 1-year period. And a child who was physically assaulted during his or her lifetime would be more than six times as likely to have been sexually victimized and more than five times as likely to have been maltreated (any type) during his or her lifetime. The greater the number and severity of the trauma experiences, often the greater the impairment for adolescents, including mental health, academic, and behavioral (delinquency) problems. Specifically, poly-victimizations are clearly linked to delinquency and involvement with the juvenile justice system (Finkelhor et al., 2009a; Ford et al., 2010; Ford et al., 2013). In addition, repeated trauma experiences have been found to double the risk for psychiatric disorders (anxiety, post-traumatic stress disorder, and depression, among others) and this impact lasts for up to 3 years after the traumas (Copeland et al., 2007).

Resiliency to Trauma Experiences

When identifying childhood resiliency factors that protect from family dysfunction, poverty, and related difficulties, there is a significant interplay among heritable factors, individual characteristics, and experiences over time. These may include individual cognitive factors such as self-regulation abilities and intelligence, biological factors such as stress and reactivity, interpersonal factors such as peer affiliations, and family-related factors including parenting abilities (Caspi et al., 2002; Collishaw et al., 2007).

A number of specific protective factors have been identified that may minimize certain childhood and adolescent trauma risks and harm. A strong relationship with a positive parent or parental figure may be protection enough for a child to overcome maltreatment experiences. In addition, other factors have been found to protect from maltreatment victimizations: above-average cognitive abilities and learning styles, an internal locus of control, the presence of spirituality, external attributions of blame from traumatic events, and emotional support from others (Buffington et al., 2010). The school may provide enough of a support system that the dysfunctional and victimizing family system does not gravely impact child development (Mallett, 2016). In some cases, the family environment may provide a stable enough home that even a poor and violent neighborhood will not significantly impede the child's development or school success (Fraser, 2004; Hawkins et al., 2000).

The presence of these protections, or other factors yet to be identified, may be the reason for growing evidence that the mental health of a substantial (though still a minority) percentage of maltreated children are relatively unaffected by their adversity (American Bar Association, 2014). Also, children and adolescents who are not maltreated but who are exposed to other trauma experiences (domestic violence and poverty, among others) are still at risk for the devel-

opment of mental health difficulties, substance abuse problems, learning/academic problems, and subsequent delinquency. Nonetheless, many of these children are also resilient and adapt and develop well into adolescence without significant trouble (Mallett & Fukushima-Tedor, 2019).

Interventions for Maltreatment Victims

Elements of effective programs for children and adolescents with maltreatment victimization who are also at risk for delinquency involvement have been identified. These include a thorough individualized assessment; addressing the context of the child and family functioning as a whole; provision of parental supports and parenting education; a focus on improving the parent–child interaction; involving a multimodal intervention approach; utilization of community resources; emphasis on behavior skills development; and a focus on long-term outcomes, including follow-up and relapse prevention (Thornberry, 2005). More specifically, when focused on protective factors for maltreatment victims, effective treatment for recovery has been identified across numerous areas. For the individual, for instance, this includes having a sense of purpose, a positive self-control of emotions and cognitions, increased problem-solving skills, positive peer relationships, and involvement in positive pro-social activities. For parents, on the other hand, effective treatment is focused on improving parenting competencies and well-being. Finally, for the family, effective treatment includes positive and stable living and school environments (Child Welfare Information Center, 2015; Wiig et al., 2003).

Trauma-Informed Care

Over the past decade, a proliferation of program development has occurred on what is commonly called "**trauma-informed care**." Significant advances in treatment for childhood trauma have been made, including some programs and interventions with strong or growing empirical support. Most of these programs range in treatment time from four to 36 sessions or weeks and take place in the community family setting. Table 16.1 includes a number of these trauma treatment programs (Duke University School of Medicine, 2015; The National Child Traumatic Stress Network, 2015).

Table 16.1 Trauma-informed care

Alternatives for families: A cognitive–behavioral therapy—ages 5–17; 20 sessions; most appropriate for physical abuse or excessive physical punishment victims
Trauma-focused cognitive–behavioral therapy—ages 3–21; for sexual abuse, domestic violence, traumatic grief, and complex traumas experiences
Parent–child integrative therapy—ages 2–12; for physical, sexual, or emotional abuse victims
Child and family traumatic stress intervention—ages 7–18; 4 sessions; for a wide range of trauma victims including poly-victimizations typically in early or acute stage
Integrative treatment of complex trauma for adolescents—ages 12–21; for a wide range of traumas
Trauma affect regulation: Guide for education and therapy—ages 10 and older; for complex and poly-victimization traumas
Trauma and grief component therapy for adolescents—ages 12–20; for interpersonal violence and traumatic loss
Attachment, self-regulation, and competence: A comprehensive framework for intervention with complexly traumatized youth—ages 2–21, for complex traumas
Trauma-focused coping in schools (MMTT)—ages 6–18; used in a classroom setting; a skills-based approach to address single incident trauma and PTSD symptoms; group setting with six to eight participants
Cognitive–behavioral intervention for trauma in schools—ages 10–15; addresses community and other violence, most appropriate with ethnic minority students; uses a skills-based group setting with six to eight participants

Mental Health

Children

Programs and interventions for dealing with *behaviorally based disorders* target both parents and children. Parent management training, also

called parent training and family training, is effective in working with children who have behaviorally based and/or aggression problems, and particularly demonstrates short-term improvements in the development of pro-social behaviors and in minimizing maladaptive behaviors (Piquero et al., 2012). Parent management training involves teaching parents how to respond consistently and more positively to their children while changing maladaptive interaction habits within the relationship that lead to continued aggressive or antisocial behaviors. In doing so, this training, based on social learning theory, utilizes operant conditioning procedures to reduce these problem areas. It is important to provide interventions as early as possible because of the increased chance of additional behavioral disorders while the decreased chance of later adverse behaviors (Bernazzani & Tremblay, 2006; Farrington & Welsh, 2003).

A related parent management training program type, sometimes called behavioral parent training, is also based in social learning theory but has a stronger focus on behavioral management. In this, the emphasis is on the importance of observing and modeling the behaviors and attitudes of others to help the child with behavior problems. The programs teach broad behavioral principles for producing and reinforcing positive child behaviors which can be adapted in the home environment through the use of rehearsing and coaching (Dretzke et al., 2004). Reviews of these programs have found that they are high quality and effective in decreasing children's behavior problems and a number of meta-analyses further supported these findings, with results showing effectiveness of behavioral parent training programs in a number of specific areas: working with children with conduct disorders (Gould & Richardson, 2006); improving overall child and parent functioning levels, in particular with older children, ages nine to eleven; in decreasing classroom disruptions (Wilson et al., 2003); and modifying behavior problems (Maughan et al., 2005).

Because children with behaviorally based disorders and problems often struggle in the home, school environments, and community, programs or interventions addressing multiple locations/environments may be necessary. Interventions that focus on behavioral and cognitive–behavioral orientation treatment when working with children with behavioral problems and emotional disturbances have been found to have positive impacts (The Annie E. Casey Foundation, 2017a). Interventions include behavioral therapy, individualized therapy, social skills training, medication, and art/play therapy, with the social skills training and a behavioral approach to daily living (token economy model) being two of the more common (Reddy et al., 2008).

Adolescents

Cognitive-based parent training focused on teaching practical skills to caregivers to address conflict and interpersonal problems and improve communication has been found effective. Cognitive–behavioral treatment interventions more broadly utilized with both adolescents and their families have demonstrated effectiveness in reducing aggressive and antisocial behaviors (Little, 2005). Additionally, these interventions improve positive behavioral and other psychological outcomes. Cognitive–behavioral interventions are designed to identify cognitions—thoughts, expressions, perceptions—and to then alter cognitions that are negative or detrimental in order to reduce maladaptive or dysfunctional thinking, attitudes, or behaviors. Such approaches may include teaching social skills, parenting skills, problem-solving skills, anger management, and related efforts (Andreassen et al., 2006; Kinscherff, 2012; Lipsey & Landenberger, 2006; Turner et al., 2007).

Other programs and interventions that also utilize some cognitive–behavioral components have demonstrated positive effects on adolescent conduct disorder symptoms, including *Functional Family Therapy (FFT)* and *Multisystemic Therapy (MST)*. Both of these therapies use a framework of modifying individual behaviors and cognitions (family is focused on in FFT and multiple systems is focused on in MST), with an emphasis on the larger family or system groups as the focal area requiring change rather than

only on the adolescent. MST is designed for adolescents to deal with severe psychological and behavioral problems through short-term (4–6 months), multifaceted (using techniques from structural family therapy and cognitive–behavioral therapy), and home- and community-based interventions. Research has shown that MST reduces offending and delinquency recidivism significantly, with an almost 4-to-1 return on investment (Aos et al., 2011; Henggeler et al., 2002). However, a thorough review of the available research on MST found it to be only as effective as other comparable interventions for adolescents with emotional or behavioral problems, requiring further research to determine if MST outperforms less expensive alternatives (Little et al., 2005).

FFT, a short-term program that targets the family, is designed to motivate the adolescent and family members to change adolescent behaviors and family member's reactions to these behaviors. Interventions with 11- to 18-year-old adolescents with behavioral disorders last from 8 to 30 hours through various engagement and treatment phases, depending upon the level of problem severity. FFT has been found to significantly decrease delinquency offending as well as out-of-home placement due to family instability or delinquency involvement (Alexander et al., 2007; Howell, 2009).

Substance Abuse Prevention

Substance abuse prevention programs should target the enhancement of protective factors and the reduction of risk factors and focus on all types of drug abuse. These programs should also be designed to be appropriate and effective for the intended adolescent population. Risk factors correlated with adolescent substance abuse include early aggressive behavior, lack of parental supervision, substance use by a caregiver, drug availability, the association with deviant peers, the lack of caring adult relationships, the experience with traumatic life events, mental health difficulties, academic failure, poor social skills, and poverty (Hawkins et al., 2000; National Institute on Drug Abuse, 2003).

Families play a key part in reducing the risk of substance abuse, which can be further strengthened through improving parent's skills in handling these problems, education, and increased involvement among family members. Parental skills training can improve rule-setting, monitoring, and consistent disciplinary actions. Drug education and information can improve family discussions about substance abuse, and specific family-focused interventions can improve parenting behaviors. Schools can also play an important preventative role by improving academic skills, such as study habits, self-efficacy, as well as social skills, such as peer relationships and drug resistance skills. School programs should focus on key transition periods during adolescence from middle to high school when alcohol and drug experimentation is common (National Institute on Drug Abuse, 2014, 2015).

Additional effective (outcome and cost) programs include the Midwestern Prevention Project (MPP); the Strengthening Families Program: For Parents and Youth 10–14; Guiding Good Choices; and the Skills, Opportunity, and Recognition (SOAR) Program (Aos et al., 2011; Koball et al., 2011; National Institute on Drug Abuse, 2015). More explicitly, the Midwestern Prevention Project (MPP) is a comprehensive, community-based program intended to prevent or reduce early substance use (alcohol, tobacco, and marijuana) during adolescence. The program focuses on how peer and social pressures influence drug use and teaches assertiveness skills to help minimize these influences. The focus of the program is during middle school, when young people are most often subject to peer influence and delinquency. The program itself is offered in sixth and seventh grade classrooms, though also is a multipronged effort. These efforts are able to be pursued by school (modeling, role-playing, and group discussion), family (parent education and organization), community (organization and training), and mass media (antidrug messaging) (National Institute of Justice, 2012).

Substance Abuse Treatment

No more than 5% of adolescents ages 12–17 have been estimated to be in need of substance abuse

treatment; however, only 1 in 10 of these young people in need of treatment actually access services. Reasons identified for this chasm between identification and treatment services include concerns that interventions do not work for this population because of the high drop-out rates and substance abuse recidivism, among others (Austin et al., 2005; Substance Abuse and Mental Health Services Administration, 2019). Yet, in recent years, a number of programs have been found effective in treating adolescents. For instance, family-based therapies have shown promise, with recommendations for additional investigations to identify the specific techniques that are most successful (Kowalski et al., 2011; National Institute on Drug Abuse, 2015). Components of family-based therapies found to be effective include comprehensive interventions, parent support, and individualized adolescent and family care (Hogue & Liddle, 2009; Waldron & Turner, 2008).

School and Student Engagement

Effective school programming prioritizes student and family engagement. Feeling connected to school is one of the most important protective factors for students at risk for academic failure, behavior problems, and dropping out. Interventions that increase school connectedness are often more successful at preventing these harmful outcomes than those that target specific problem areas—truancy or acting out in the classroom, for example (Mallett, 2016). Students who are more connected and engaged with their schools generally believe and experience that their parents and teachers support them; they themselves have a larger commitment to school (e.g., participating in extracurricular activities); and have a supportive and positive peer network. Such students also believe in the importance of a positive school environment, which includes rehabilitative discipline policies, classroom management practices focused on maintaining students in the classroom, and school programming options (National Council of Juvenile and Family Court Judges, 2016).

Recognizing and then integrating students' perspectives, understanding students' difficulties or challenges, and understanding what other mitigating impacts may be responsible for the problems they are facing can provide more informed and effective decision-making by school personnel. When students have input and involvement and are provided autonomy, overall engagement with the school is typically increased (Gregory et al., 2014; Hafen et al., 2010). When students and families are more connected and engaged with the school, discipline problems decrease and, correspondingly, safety improves (American Psychological Association, 2006; Steinberg et al., 2013). A number of effective approaches are being in doing so are being used in many school districts.

Social–emotional learning is primarily a classroom focused paradigm, though can be a standalone program component or a school-wide curriculum. This management approach includes not only the quality instruction planning, but a focus on the behavioral needs of the students, monitoring of student engagement, and developing skills to avoid escalating conflicts. These programming efforts focus on emotional development interventions aimed at aiding students' acquisition of knowledge, attitude improvement, and skill building to recognize and manage their emotions, establish positive relationships, and make responsible decisions (Durlak & Weissberg, 2007; Osher et al. 2010). These programs have had significant impact on building social and emotional skills, reducing aggression and behavior problems, improving academic performance for all grade levels and ethnic groups, and in many cases, improving student tolerance and decreasing out-of-school suspensions. Components of many of these programs found to be effective include, mentoring, role-playing, group discussion, and family involvement through extracurricular activities or parent training (Losen et al., 2014; Skiba et al., 2014; Payton et al., 2008).

Positive behavioral programs are utilized as targeted interventions for students with behavioral or related difficulties within the classroom or school. Typically, these programs use student

(or other) leaders to engage students in daily or weekly social skill-building exercises, including interactive activities designed for improving anger management, conflict resolution, and social skills. Alternative formats include small-group and one-on-one intervention sessions, and family members are often involved for education and learning purposes because the young person may have similar or related difficulties at home (Child Trends, 2007a).

Two of the effective behavioral programs are Reconnecting Youth and Cognitive–Behavioral Training Program for Behaviorally Disordered Adolescents. Reconnecting Youth is for high school students dealing with aggression, depression, or substance abuse problems and is a daily, semester-long class that promotes school connectedness, involves parents in planning if necessary, and helps with crisis management. Cognitive–Behavioral Training Program is for young people with self-control problems that lead to aggression or violence and consists of 12 individual sessions that help students develop problem-solving strategies to minimize harmful outcomes (Child Trends, 2007b).

Restorative practices are student-focused interventions that attempt to change the perspective of students who have caused problems, are disruptive, or have violated school rules or policies. These practices with a focus on accountability are appropriate for those situations when the student is primarily responsible for the disruptions or unsafe school behaviors. This approach uses a constructive collaborative approach involving all willing stakeholders with a focus on repairing the harm to victims, while also helping the young person decrease future problems. These practices help to build and improve school climate by increasing student understanding of the rules and trust in the rule enforcement, thus requiring a school philosophy to shift and embrace this foundation at all implementation levels (Anyon, 2016; Bazemore, 2001). In other words, restorative practice is not just the utilization of behavior modification techniques or a focus on conflict resolution but is a school community-wide effort. Recent assessments of restorative justice practices found reduced suspension and expulsion rates, decreased referrals for discipline measures, improved academic achievement, and stronger relationship building across the school, with particular improvements, in some reviews, for black students (Gonzalez, 2015; Losen et al., 2014; Skiba et al., 2014).

Police and Juvenile Courts

Diversion

Diversion from the juvenile courts is an option for many first-time or *low-level youthful offenders*, particularly for those involved with school-based arrests or those who commit status offenses, because a majority of this population does not pose any serious threat of reoffending. Beyond this, many of these young people may be effectively assisted through the identification and treatment of related problems, such as trauma, mental health issues, or school failure (Coalition for Juvenile Justice, 2013). The goal of diversion programs focus on minimizing young people's involvement with the juvenile justice system and revolve around reducing contact and offending recidivism, providing rehabilitative services, and reducing costs to the juvenile justice system (Models for Change Juvenile Diversion Workgroup, 2011; Wilson & Hoge, 2012).

Police and Youthful Offenders

Options for police when making a decision on a youthful offense include the following: questioning, warning, and community release; taking the adolescent to the police station and recording the offense; a referral to a diversion program; issuing a citation and making a formal referral to the juvenile court; or taking the adolescent to a detention center or group home (Lawrence & Hemmens, 2008). If the officer determines that questioning and community release is not appropriate, then two diversion alternatives are available—caution or warning programs and formal juvenile justice system diversion programs. Referrals to either diversion type can occur before or after a formal charge is brought against the young person for their offending act.

Caution or warning programs are the least restrictive of diversion program options and divert the young person away from the juvenile justice system with no further action taken by the police. Beyond this formal caution or warning to refrain or discontinue the activities, police involvement typically ends at this point and the young person is free to go. The target population for warning programs are normally first-time misdemeanor and status offenders—curfew violations, alcohol use, and similar type concerns.

Formal diversion programs usually involve the young person to take certain corrective steps, typically an admission of guilt and an agreement to participate in programming that is suitable. Services may be provided within the program or through a community-based provider for therapeutic or treatment needs or could be just oversight and surveillance of the adolescent. The target population is first-time or low-level offenders, as well as higher risk juvenile offenders with mental health or substance abuse problems, and/or trauma backgrounds. Successful completion of the formal diversion agreement will normally discontinue the juvenile justice system's involvement, with no further requirements or actions taken. Diversion interventions can include a broad array of options, for example, community service, restorative justice programs, individual or family treatment or counseling, skill and resiliency building programs (anger management, peer relations, among others), or drug courts. In one recent meta-analytic review of 73 diversion programs, it was found that both caution and intervention alternatives, in particular, those that focused on assessing the risk and needs level of those entering the programs, were significantly more effective at reducing recidivism than traditional formal juvenile court processing (Wilson & Hoge, 2012). A number of program examples may be instructive.

Diversion Programs

The Multidisciplinary Team (MDT) Home Run Program of San Bernardino County, California, is a case management intervention designed to identify the youthful offender's difficulties and provide intense family and individual treatment. The treatment planning process includes the family, school personnel, and other relevant individuals in the adolescent's life. This strengths-based and goal-oriented program targets first-time youthful offenders who are 17 or younger and at risk for more serious criminal activity. The case management team includes the probation officer (when formally involved with the juvenile court), public health nurse, licensed therapist, social service practitioner, school personnel, and volunteers who coordinate, as necessary, interventions such as restitution, restorative justice, community service, counseling, and group therapy (Office of Juvenile Justice and Delinquency Prevention, 2020).

The Lancaster County, Pennsylvania, Youth Aid Panels were established to prevent young people from becoming more involved in delinquency and poor decision-making, and to make the youthful offender accountable for their actions through services to the victim and/or their community. The program is overseen by local law enforcement and the Lancaster County District Attorney's Office. To be eligible, the young person must be between the ages of 10 and 18, charged with committing a nonviolent offense, and admit to the charge; then, diversion occurs at the young person's initial contact with law enforcement. The Youth Aid Panel is comprised of citizens of varying ages, professions, ethnicities, and socioeconomic groups who review the young person's case and determine a resolution for both the victim and the offender, utilizing the input of the offender and his/her family and resulting in some form of restitution to the victim. Diversion contracts may require writing of an essay, performing community service, attending an educational class, or providing a verbal or written apology letter to the victim, among other alternatives. Not completing the contract might result in sanctions ranging from a warning to unsuccessful program discharge and the filing of a formal petition with the juvenile court (Models for Change Diversion Workgroup, 2011).

The Project Back-on-Track is an after-school diversion program designed for low- and mid-level youthful offenders - domestic violence,

assault, drug, and property offenses, among others—to divert from further juvenile court involvement. This multifaceted program curriculum involves the youthful offender and family for 4 weeks, with the provision of individual and group therapy, parent support groups, community service projects, psychoeducational sessions, and adolescent empathy-building sessions. The adolescents participate in 32 hours of programming (2 hours per day, 4 days per week), while parents participate for 15 hours (Office of Juvenile Justice and Delinquency Prevention, 2020).

The TeamChild Program has operated since 1995 across seven counties in Washington State. TeamChild attorneys provide free legal advocacy and community education, along with other staff members including, at times, social workers, to help justice system-involved young people (ages 12–18, at any stage of the juvenile justice process) secure education, housing, vocational, healthcare, mental health, and other identified needs. The team works closely with the school districts and educates court personnel on nonjustice-related areas that affect the young person's decision-making, academic limitations, and related problem areas. Over time, TeamChild participants have been almost four times less likely than comparable youthful offenders without TeamChild Program assistance to come into contact with the juvenile justice system 6 months postdischarge (Models for Change Diversion Workgroup, 2011; Washington State Institute for Public Policy, 2007).

With an increased rate of girls entering the juvenile justice system over the past 15 years, diversion and prevention are increasingly important. The Girls Circle Program is a strengths-based group that works with girls, ages 9–18, through the integration of cultural differences, resiliency practices, and skills training to assist in reducing offending behaviors. The program consists of an 8–12-session curriculum, normally held weekly, led by a facilitator who follows a six-step format of gender-specific themes, motivational interviewing techniques, and identified improvement areas—coping with stress, sexuality, drugs or alcohol, decision-making, relationships, and trust, among other topics Long-term follow-up reviews of program participants found significant improvements in alcohol abuse and use, attachment to school, self-harming behavior, social support, and self-efficacy (Irvine, 2005; Office of Juvenile Justice and Delinquency Prevention, 2020).

A broad, state-wide approach to using alternatives to school removal and juvenile justice involvement for disruptive or troubled young people has been ongoing in Florida. The Florida Civil Citation Alternative Program encourages the use of alternatives to student school removal through the use of civil citations, teen court, restorative justice, and other rehabilitative options. A civil citation is an alternative to arrest that allows first-time misdemeanants in the state of Florida to participate in intervention services in lieu of formal processing through the juvenile justice system. Florida state law requires the establishment of civil citation opportunities for all nonserious, first-time misdemeanors. The local chief circuit judge, state attorney, public defender, and head of each law enforcement agency determine how civil citation will operate in the community, including which offenses are eligible for civil citation. When a youth receives a civil citation he or she undergoes a needs assessment to inform the development of an intervention plan. Typically, youth participate in community service and may receive some sort of intervention programming. Youth who successfully complete mandated programming will not have a criminal history record. Those who do not complete the programming are referred to the state attorney for processing on the original charge (Morgan et al., 2014).

Delinquency Prevention

The Office of Juvenile Justice and Delinquency Prevention supports and highlights additional delinquency prevention programs in their Model Programs Guide, with these programs focused on building individual and family resiliency and using these skills to avoid offending behaviors, school problems, and delinquency. The programs with the strongest

Table 16.2 Effective delinquency prevention programs

Effective delinquency prevention programs	
Adolescent Diversion Project	Midwestern Prevention Project
Aggression Replacement Training	Multi-dimensional Family Therapy
Big Brothers/Big Sisters of America	Multisystemic Therapy (MST)
Cognitive–Behavioral Intervention for Trauma in schools	Parent–Child Interaction Therapy (PCIT)
Families and Schools Together (FAST)	Positive Action
Functional Family Therapy (FFT)	Promoting Alterative Thinking Strategies (PATHS)
Homebuilders Program	School-wide Positive Behavioral Interventions and Supports (SWPBIS)
LifeSkills Training	Trauma-Focused Cognitive–Behavioral Therapy (TF-CBT)

preventative impact can be found in Table 16.2 (Office of Juvenile Justice and Delinquency Prevention, 2020).

Functional Family Therapy and MST were discussed earlier; reviewing a few other program approaches is also instructive. Promoting Alternative Thinking Strategies (PATHS) is a comprehensive program for promoting emotional and social competencies and reducing aggression and behavior problems of elementary school-aged children, while also supporting the educational process in the classroom. The curriculum is used by educators and counselors in a multi-year, universal prevention model, and developed for use in the elementary school-aged classroom with a number of special needs student groups. The program plan is to initiate the curriculum at the entrance to schooling and continue through the fifth grade, being taught three times per week for a minimum of 20–30 minutes per day. The curriculum provides teachers with systematic, developmentally based lessons, materials, and instructions for teaching their students emotional literacy, self-control, social competence, positive peer relations, and interpersonal problem-solving skills (Office of Juvenile Justice and Delinquency Prevention, 2020).

The Homebuilders Program provides in-home crisis intervention, counseling, and life skills education for families who have children at imminent risk of placement to state-funded care. This family preservation program's goal is to prevent the unnecessary out-of-home placement of children through home-based efforts, teaching families new problem-solving skills to divert future crises. Referrals to Homebuilders are normally through public agencies—child protective agencies (CPS) and juvenile courts—for children and adolescents (birth to 17 years) who are in imminent risk of being placed into foster, group, or institutional care. The program's goal is to remove the risk of harm to the child, instead of removing the child, and is accomplished through the use of small caseloads, high program intensity, and 24-hour a day service. For juvenile court-involved adolescents, the program keeps the young person in the community while helping with court compliance, school-related issues, and rehabilitative-focused activities and counseling (Office of Juvenile Justice and Delinquency Prevention, 2020).

Mentoring Programs

Mentoring programs are one of the most common interventions utilized in working with at-risk adolescents across many areas: delinquency, antisocial behavior, substance abuse, aggression, and school failure, among others. The programs usually have a narrow focus on the outcomes at which the efforts are being directed. Nonetheless, the general format of this program involves a nonfamily member adult taking on a mentoring role that is designed to grow into a long-term relationship between the young person and the mentor. The mentoring programs' goal are focused on minimizing risk factors that lead to problems by utilizing the mentor's skills, abilities, experiences, and knowledge that may assist the mentee, providing guidance and advocacy, and sometimes taking on a quasi-parental or guardian role (Jekielek et al., 2002). Research has shown that there is significant comorbidity across the problem areas that mentoring programs try to address. For example, adolescents with aggression or delinquency problems are

often involved with substance use or abuse. Hence, it is possible that mentoring programs may directly or indirectly have positive influences on adolescent substance abuse problems (Tolan et al., 2008).

Many reviews of mentoring programs have been completed, with generally positive outcomes, though the impact is moderate at best. These studies have found decreases in adolescent delinquent activities, improved school performance, lower levels of aggression, and other related improvements (DuBois et al., 2002; Lipsey & Wilson, 1998; Raposa et al., 2019). The most effective mentoring programs are those that provide the following: training and ongoing mentor supervision, expectations of more time involved with the mentee, program-sponsored activities, parental support and involvement, and supplemental services (Herrera et al., 2007; Jolliffe & Farrington, 2007). Moving forward, it is important that mentoring programs thoroughly document their protocols and design and conduct rigorous evaluations to justify the number of programs that are already in place (Raposa et al., 2019).

Detention and Incarceration Facilities

Adolescents who become mired in offending behaviors and with the juvenile courts over time are the most difficult to divert from ongoing troubles. The youthful offenders who are involved with the juvenile justice system at earlier ages and are adjudicated delinquent in their early adolescence, and those placed outside of their home into detention and incarceration facilities, are at greatest risk for ongoing felony convictions and recidivism. These more chronic youthful offenders are most likely to continue offending behaviors into young adulthood and be involved with the adult criminal justice system (Hockenberry, 2020).

The Annie E. Casey Foundation has taken a leadership role through advocacy and training efforts with the *Juvenile Detention Alternatives Initiative (JDAI)*. JDAI works to decrease the use of detention through collaboration across child welfare, mental health, schools, and social service agencies, builds community-based rehabilitative alternatives, utilizes standardized assessment instruments to identify those most likely to reoffend, and uses data collection within juvenile courts to direct decision-making. JDAI has also focused on identifying specific strategies to address and reduce the disproportionate detention of youthful offenders of color. Results, depending on length of implementation, have been significant in the over 300 jurisdictions across 39 states in which the Initiative has been involved. These include: the lowering of detention populations and reoffending rates, sometimes by over 40% and state incarceration placements by more than 34%; reducing the number of youthful offenders of color in detention; and in some communities evening the odds that youthful offenders of color are detained following arrest (McCarthy et al., 2016; The Annie E. Casey Foundation, 2017b).

These efforts have freed up limited juvenile justice system resources to be used for more productive and cost-effective programming. For example, in Albuquerque, New Mexico, JDAI reduced the detention center population by 44% through reorganization of the juvenile court's resources, and expanding innovated, community-based treatment alternatives. Ultimately, juvenile court staff members in this jurisdiction were reassigned from the two closed secure detention facilities that were no longer needed to front-end delinquency diversion and treatment services (diversion, mental health/trauma, and school-based, to name a few), shifting the emphasis to prevention (The Annie E. Casey Foundation, 2017b).

Facility Programming

There are numerous types of programming designs that shift from a punitive to a rehabilitative paradigm inside incarceration facilities. These include behavior management, individual counseling, skill building (improving anger management skills, for example), group counseling,

education, and vocational training. In addition, though, when such rehabilitative interventions are utilized, they must be well designed, of high quality, and of sufficient duration in order to have an impact (Lipsey, 2009). Incorporating treatment and rehabilitation for incarcerated youthful offenders is important because the trauma, mental health, and education-related problems of this population are pervasive. A majority of those incarcerated suffer from at least one serious or significant problem—mental health, substance abuse, school and learning problems, maltreatment histories; though many deal with comorbid difficulties while incarcerated (Mallett, 2014). Of the serious youthful offenders in these facilities, few receive necessary behavioral health services and even fewer access coordinated care upon release (Schubert & Mulvey, 2014).

However, a number of specific programs and interventions have been found effective and are used in some more progressive facilities: Aggression Replacement Training (ART), cognitive–behavioral therapy, sex offender programming, Functional Family Therapy, and the Family Integrated Transitions Program. Aggression Replacement Training uses certain cognitive–behavioral techniques to identify anger triggers, improve behavioral skills, and increase adolescent pro-social skills; cognitive–behavioral therapy focuses on a step-by-step curriculum to affect change; and the Family Integrated Transitions Program uses a combination of interventions (Multisystemic Therapy, relapse prevention, etc.) to address adolescent mental health, trauma, and substance abuse problems and to ease transitions back to the community after facility release (Greenberg, 2008; Lipsey & Landenberger, 2006; Schubert & Mulvey, 2014; Washington State Institute for Public Policy, 2007).

Missouri is a state that has taken the lead for over two decades in moving away from serious youthful offender incarceration through the use of rehabilitative facilities. The lead state agency, Missouri Division of Youth Services, first closed the larger state incarceration institutions, divided the state into five regions, and developed a continuum of programs—day treatment, nonsecure group homes, medium-secure facilities, and secure care facilities—within each region. The facilities house only 40–50 young people and are further grouped into family-size units. The facilities' philosophy revolves around strong, supportive peer and adult relationships using the positive youth development approach that become the focus of compliance and security and not coercive approaches. Each young person has an individualized treatment planning including restorative justice practices. Families are involved at the inception of placement for therapy, case management, and re-entry planning. Recidivism reoffending rates for youthful offenders across the state is 31% annually (a 50% decrease), and only 12% of all serious and chronic youthful offenders are returned to the facilities or committed to an adult prison within 3 years (a nearly 60% decrease) (Bonnie et al., 2013; Mendel, 2011).

California has also made a significant turnaround since 2007 when they had some of the highest youthful offender incarceration rates in the country (10,000 youthful offenders in 11 facilities) due to a tough on crime juvenile justice approach. In 2018, there were only 700 youthful offenders in three facilities with two reasons for this drastic decrease (Becerra, 2020). One, a 1996 law that required counties to pay part of the correctional facility cost for certain low-level offenders, incentivizing local judges to divert from incarceration; and, a 2007 "Juvenile Justice Realignment" law that limits the types of offenders who can be committed to the facilities—only those that are serious threats to public safety—and provides community-based funding with the state incarceration cost savings (Little Hoover Commission, 2008).

Effective Education

Contact with the juvenile justice system, from arrest to lock-up, has been clearly established to harm student education progress and school outcomes, with only three in ten incarceration facility-released youthful offenders engaged in school or work 12 months after re-entry (Mallett, 2016). Educational programming within the

institutions is most effective when educational plans are coordinated with home schools, when higher quality teachers are employed, and when correctional and educational staff work together in their efforts throughout the classroom. In addition, schools within these facilities can improve their learning environment and education outcomes by moving away from harsh discipline protocols and incorporating appropriate restorative practices, focusing on social–emotional learning and development, offering flexible and individualized curriculum, incorporating positive behavior protocols to engage students, building social skills, and promoting positive relationship building across students and staff (Karger et al., 2012; Osher et al., 2012).

Without continued education and a quick and seamless re-entry to their school, the chances for reoffending and school dropout significantly increase. To avoid these outcomes, it is important to designate a transition coordinator in the school to work with the juvenile courts, families, and school staff; develop re-enrollment guidelines within the school system; and have returning students re-enroll as soon as possible from institutional release (The Sentencing Project, 2012). The U.S. Departments of Education and Justice strongly recommend that formal procedures be established through state legislative statutes. This includes memoranda of understanding and/or practices that ensure successful navigation across youth-caring systems as well as meaningful planning that is focused on re-entry of youthful offenders back into their communities and home school (U.S. Department of Education & U.S. Department of Justice, 2014).

Re-entry and Return Home

Almost every one of the 43,000 youthful offenders confined each year will return to their homes or communities upon release (Hockenberry, 2020). Challenges posed include re-enrolling in school, continuing or accessing mental health or substance abuse treatment, avoiding negative or harmful peers, and finding job-ready training and employment, among others. This process, called re-entry, is about how to make a successful transition back home from confinement. Families (immediate family members, extended family, and other important adults) should be involved as extensively as is possible, including early engagement, treatment, and planning for return home. It is important to collaborate with youth-caring systems and providers to determine the best level of supervision in the community, what services are available, and, as discussed earlier, strong coordination with the school district and home school. Probation departments are more effective when they use a developmental approach with the adolescents and promote and expand pro-social behaviors and job skills training. In so doing, it is important to take into account the young person's gender, age, and social and functioning abilities (Federal Interagency Reentry Council, 2015; Seigle et al., 2014).

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Cultivating Resilience in LGBTQ+ Youth

17

Lee-Anne Gray

…children's lives are imbedded within family, school, peer, and neighborhood systems (Bronfenbrenner, 1986). Thus, it is important to understand how resiliency is built within family systems and larger communities. (Reivich, Gillham, Chaplin, and Seligman in Goldstein & Brooks (eds.), 2013).

Introduction

Resilience is sometimes called "ordinary magic" (Asakura, 2016). LGBTQ+ youth resilience lies in their extraordinary ability to "show-up" and face adversity (Asakura, 2016). According to CASEL (2020), resilience lies in:

- Self-management
- Self-awareness
- Social awareness
- Relationship skills
- Responsible decision-making

Considering LGBTQ+ youth are bullied at higher rates, there is a strong need for the development of resilience, in order to thrive. Some statistics for the issue of LGBTQ+ youth bullying are drawn from the most recent Gay Lesbian Straight Education Network (GLSEN, 2020) study, and include the following:

- 59% of LGBTQ students feel unsafe at school
- Almost all (98.8%) heard anti-LGBTQ slurs
- 86.3% of LGBTQ students experienced harassment at school
- 59% of LGBTQ students missed school due to victimization around sexuality and/or gender
- GPAs of LGBTQ+ students tend to be significantly lower than cisgender–heterosexual/nonharassed students
- LGBTQ+ youth are not likely not to pursue higher education, have lower self-esteem, and higher rates of depression compared to cisgender–heterosexual students (GLSEN, 2020)

With school being a place where students spend most of their time, it is disheartening to see how dangerous these spaces can be for LGBTQ+ students. And yet, this isn't even the worst of it.[1] With that said, it is therefore understandable why LGBTQ+ youth use substances, self-harm, and experience suicidal ideation and attempts at higher rates than cisgender–heterosexual peers. While there had been a steady decline in homophobic statements by educators between 2007 and 2013, a plateau appeared between 2013 and 2017. Later, another steady decline was identified in 2019. This suggests that the changes school staff continue to make in affirming LGBTQ+ students can potentially mitigate some of the effects of adversity. This statistic returns our attention to

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[1]Later on in this chapter, the school-to-prison pipeline will be explored as the most significant source of danger to LGBTQ+ youth of color.

S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_17

the work of Bronfenbrenner (quoted at the beginning) as adapted to resilience in children by Reivich, Gillham, Chaplin, and Seligman (in Goldstein & Brooks, 2013). The authors connected the role of families and larger systems (such as schools) to the resilience that children can develop. For LGBTQ+ youth, the systems, sadly often including families, are perpetrating harm rather than promoting resilience. For this reason, it's important to note the levels of adversity faced by LGBTQ+ youth, to acknowledge the trauma this involves, and how to then facilitate resilience.

Intersectionality

Intersectionality is a term coined by Kimberle Williams Crenshaw (2010) and refers to the social, cultural, and biological identities that intersect within a person and lead to increased discrimination, oppression, and marginalization. Intersectional identities include:

- Race
- Ethnicity
- Gender
- Sexuality
- Religion
- Ability
- Socioeconomic status

For example, trans youth who are also black, disabled, traumatized, and poor are far more likely to be bullied in school and suffer from harassment, assault, and abuse. Resilience develops in diverse LGBTQ+ youth when they experience freedom to express themselves, along with safety, validation, witnessing, and support from those around them.

One way to mitigate the negative effects on LGBTQ+ youth is by cultivating resilience. Resilience is a protective factor for LGBTQ+ youth in that it offers a shield around them should they face rejection and/or abuse. Resilience contributes to healthy identity development and happiness in adulthood.

Resilience in LGBTQ+ Youth

Resilience develops when a person experiences inclusion, empathy, opportunities to develop coping skills, supportive role models, and ideally when harm is eliminated. There are many examples of resilience building programs; a few principal areas are highlighted below.

Validation

One way for LGBTQ+ youth to build resilience is through receiving validation. Because the world is centered on cisgender-heteronormative standards, many LGBTQ+ youth grow up without the validation needed to develop healthy identities. AMAZE (https://www.amazeworks.org/) is an antibias education program promoting respect and equity. It includes social justice and equity building programs for schools to enhance the lives of LGBTQ+ students. Moreover, it addresses intersectional and LGBTQ+ identity needs to create a well-rounded program for building community resilience at the school level. According to Johns et al. (2019) and GLSEN's Nationwide School Climate Survey (2020), LGBTQ+ resources on campus, such as Gay-Straight Alliances (GSAs), lead to greater well-being for these students.

Witnessing

Being witnessed is essentially a powerful experience of mirroring and being seen. It's a way for people to connect and interact with depth. It offers both parties a sense of being alive and thriving. Taking the time to see people as they wish to be seen is the height of empathy and humanity. For LGBTQ+ youth, this is like an elixir of life during lower times, and represents an opportunity to build resilience in individual relationships. When external people see the struggle of being LGBTQ+, it mitigates the negative effects (Johns et al., 2019). For these reasons, educators, parents, and other caring adults hold

the power to cultivate resilience in LGBTQ+ youth simply by seeing them, as they are.

Support

When school staff, advocates, and/or parents show their allyship, it is a significant contributor to future resilience, even more so than for cisgender–heterosexual students (GLSEN, 2020). It contributes to safety, protection, and well-being so that LGBTQ+ youth can emulate it later in life and create it for themselves. Remember: Support comes in different forms for different people, at different times in their lives depending on circumstances. Support can be an accommodation or adaptation depending on varying circumstances.

Affirmation

Supportive adults in schools and families promote communities LGBTQ+ students can feel included in (Johns et al., 2019). Inclusion combined with affirmation is deeper than welcoming. It represents an acknowledgment of humanity that LGBTQ+ youth seem to need. Affirmation from supportive adults can look different in schools compared to families. In schools, for example, affirmation could include lessons on LGBTQ+ history and politics. In the elementary years, lessons could include stories, picture books, and age-appropriate history of notable figures in the LGBTQ+ community (Haefele-Thomas, 2019). In families, it looks like love and acceptance.

Belonging

According to GLSEN (2020), GSAs on-campus lead to less verbal harassment and anti-LGBTQ remarks. School personnel on campuses with GSAs are more likely to intervene on behalf of LGBTQ+ students. Furthermore, GSAs led to LGBTQ+ students being more likely to feel safe at school and were truant less, as well. GSAs increase LGBTQ+ students' sense of belonging at school (GLSEN, 2020). They can be a source of imperfect alliance between the LGBTQ+ youth and others at schools where straight students convene, rather than being a space for queer students. Despite this, they still lead to more belonging than schools without GSAs. Essentially, belonging is tied to representation, visibility, and acknowledgment in schools.

Coping Skill Development

The methods of coping available to a person at any given moment are equivalent to having a toolkit for facing adversity. The tools and techniques one uses in times of hardship are essentially their coping skills. Resilience is the felt-sense of being capable of coping with difficulties. Here are a few basic coping skills that directly contribute to resilience:

- Mindful awareness, yoga, and meditation practices all promote the cultivation of coping skills and will be described in more detail below. For now, three Deep Body Breaths, in through the nose and out through the mouth, is one very effective technique for decreasing emotional intensity and re-regulating. Taking three Deep Body Breaths and feeling the chest and belly inflate, then exhaling through the mouth is a mindfulness activity that promotes resilience. Remembering to exhale all that no longer serves on the out-breath to achieve maximum benefit.
- Essential oils, scented lotions, scented candles, and incense are all tools for grounding. Grounding refers to re-centering oneself and returning to a baseline of calm and peaceful neutrality. Activating the senses of smell and sight can remind a person to connect the mind and body leading to balance and equanimity.[2]

[2]Equanimity refers to the ability to remain calm, composed, and mentally alert during stressful moments.

This tool is one of many in the universe of resilience building coping skills.

- Jumping hard and fast a few times, preferably on grass or ground, can activate the muscles and sensory receptors that remind a person what grounding feels like. It de-escalates anger and leads to re-regulation, which facilitates opportunities for collaboration, cooperation, and problem solving, which are resilience building activities.
- The Butterfly Hug (Artigas & Jarero, 2010) is a coping technique utilized by EMDR therapists in treating trauma. It's a resourcing technique; meaning trauma survivors can access comfort and cope with trauma whenever needed by reaching their arms around themselves for a self-hug. It creates the illusion of warmth and connection, promoting inner balance and containment when remembering a traumatic memory. It may not be adequate to cope with trauma, all on its own; however, there may be a cumulative benefit to using several coping skills to manage severe situations and reactions.

Role Models

Positive media representations mediate negative experiences and increase resilience (Craig et al., 2015). One concern LGBTQ+ youth often cite is a sense that they can never be happy, that the world of happiness is not open to them. It's a devastating state of learned hopelessness and chronic despair, borne out of living in a world centered for cisgender–heterosexual people. Role models, stories, legacies, history about and from the LGBTQ+ community create a sense of possibility and hope for youth. This little bit of optimism is necessary for the cultivation of resilience, because of the unique position faced by LGBTQ+ people in our culture.

Eradication of Sources of Harm

Schools can be protective places when implicit bias around sexual orientation and gender identity are buffered by policies and resources (Johns et al., 2019). Conversely, they can also be sources of great harm. *Educational Trauma* is one way that LGBTQ+ youth are disproportionately affected by "poisonous pedagogy"[3] (Gray, 2019), with the school-to-prison pipeline being the most dangerous element of schools harming LGBTQ+ youth. Eradicating these sources of harm and/or removing LGBTQ+ students from schools with police on campus can lead to resiliency; however, resilience is less likely to develop in situations of chronic stress, such as: schools with police on campus.

Reframe & Re-Story

Challenging life-experiences can be embedded in memory with positive or negative beliefs about oneself. To cope effectively, it's imperative that LGBTQ+ youth retain favorable self-concepts in the context of trauma. It is possible to reframe adversity, hardship, and trauma in ways that are meaningful and build fortitude (Schmitz & Tyler, 2018). For example, if one feels ashamed of being LGBTQ+, they may benefit from reframing their shame in ways that invite pride. It's much easier said than done; however, there are more effective techniques that therapists use to cultivate resilience in LGBTQ+ youth if the adversity faced is too great for reframing and re-storying on their own.

Trauma Recovery

Given the level of abuse, harassment, and bullying faced by LGBTQ+ youth, trauma is inevitable. The questions are: "How much?"; "When?"; and "How might it be resolved?" There are a few different types of trauma treatments LGBTQ+ youth can pursue as part of their healing journey and in service of cultivating resilience. Two

[3] "Poisonous pedagogy" is a term coined by Alice Miller (cited in Gray, 2019) that refers to educators and parents doing harm to students, in the name of education, while thinking they are doing good.

trauma treatments will be explored here, as critical to building resilience. They are: EMDR and Somatic Experiencing.

EMDR

EMDR is a trauma treatment originated by Francine Shapiro, with over 35 years of evidence to support claims of effectiveness. It involves bilateral stimulation of one of three senses (visual, auditory, or tactile) that activates the right and left hemispheres of the brain to elicit natural healing processes. For LGBTQ+ youth, EMDR has the potential to address little t traumas,[4] as well as Big T traumas.[5] By desensitizing, or neutralizing, traumatic memories and replacing negative self-concepts with positive ones, LGBTQ+ youth can heal from trauma, while creating resilience around self-image and identity.

Somatic Experiencing

Along the lines of trauma, somatic experiencing refers to a specific kind of therapy for releasing the shock of trauma and healing post-traumatic stress disorder (PTSD). Based on biology, neuroscience, stress physiology, medical biophysics, and indigenous healing practices, it is the result of decades of research and practice by Peter Levine. The key components include:

- Support
- Compassion
- Excellence
- Community
- Vitality

While it provides mental health therapists with a framework and set of tools to treat trauma survivors, it is formally grounded in the body and its natural response to trauma. For our purposes, it's important to know this is one kind of trauma treatment available to LGBTQ+ youth, and could be accessed in tandem with other tools, techniques, and practices to support balance and well-being. In the sections below, more information is discussed about the need for connection to the body and how to promote it for LGBTQ+ youth to further develop resilience.

Mindful Awareness

According to Davis and Hayes (2011), meditation and mindful awareness practices have many benefits, including evidence-based interpersonal, affective, and intrapersonal gains. These gains are also components of resilience, and therefore make mindfulness practices (both informal and formal) advantageous for strengthening resilience. For LGBTQ+ youth, the prevalence of trauma associated with bullying, homo/transphobia, abuse, and rejection is high. For these reasons, LGBTQ+ youth also need to approach mindfulness and meditation with care (Gray, 2017, 2018; Trelaven, 2018). A trauma training protocol for safely introducing teens to self-compassion can be found in *Self-Compassion for Teens* (Gray, 2017) and *LGBTQ+ Youth* (Gray, 2018). The trauma training protocol shows adult caregivers, educators, and mental health professionals how to gently introduce small parts of self-compassion and mindful awareness practices and prepare for abreaction.[6]

Essentially, meditation and mindful awareness practices have great potential to develop both *inter*personal and *intra*personal resilience. *Interpersonal resilience* refers to balance and equanimity that benefit healthy relationships and/

[4]Little t traumas include slights, humiliation, embarrassment, failures, and for trans/nonbinary youth—being misgendered.

[5]Big T traumas involve major traumas, such as: assault abuse, kidnapping, natural disasters, and even some medical events/procedures. For trans/nonbinary youth, misgendering happens so often that it can accumulate into a Big T trauma.

[6]Abreaction is the "re-experiencing of the stimulated memory at a high level of disturbance" (Shapiro in Gray, 2017). It arises when a traumatic memory is triggered by stimuli in the present moment. The trigger evokes the same sensations and experiences as the traumatic event, even though the event has passed.

or the resilience developed in relationship with another person. *Intrapersonal resilience* arises within self, with balance and equanimity developing in relation to thoughts, feelings, sensations, and memories. For these traits of resilience to develop in LGBTQ+ youth, their safety and trauma must be components of their resilience building efforts.

Self-Compassion

Among the many benefits of mediation and mindful awareness practices, self-compassion stands out for the potential resilience building properties. According to Neff (2011), self-compassion is associated with increased sense of well-being and decreased symptoms of anxiety and depression. Given that mental health symptoms, especially anxiety and depression, are so common among LGBTQ+ youth, self-compassion practice is a distinctly beneficial way of building resilience in LGBTQ+ youth. It has four components:

- Mindful awareness
- Self-kindness
- Shared humanity (interconnection)
- The willingness to act to relieve suffering (Gray, 2017)

Mindful awareness is gained through formal and informal practices, and sustains a critical aspect of self-compassion—the ability to identify suffering. Next, the act of being kind to oneself; having gentle and tender inner dialogues; being one's own best friend are all important aspects of cultivating LGBTQ+ identities in an internally affirming way. Third, shared humanity or interconnection is the practice of remembering that others are/were/will be in a similar position, at some point in time. Remembering this helps LGBTQ+ youth feel connected to broader community, even if they face rejection in other communities. Last, self-compassion includes the willingness to act to relieve one's own suffering. This aspect is drawn from the working definition of compassion[7] from Stanford University's Center for Compassion Altruism Research and Education. Resilient coping ability includes the willingness to act to relieve one's own suffering. For LGBTQ+ youth, this could be a key aspect of long-term thriving.

Among the many insights drawn from self-compassion practice are radical acceptance, kindness, and loving acceptance. These are the net gains of active and consistent self-compassion practice. They include the ability to experience self-love, self-acceptance, and be kind to oneself. In 2003, Brach wrote about radical acceptance, and how to transform fear and shame into love. This was radical at the time, still somewhat controversial; however, the literature shows that epic resilience is available to LGBTQ+ youth when they embrace self-compassion, as a way of life. Next, let's see how LGBTQ+ youth can practice radical self-compassion:

A. *Loving Kindness Meditation*
   Silently repeat-
   May I be healthy.
   May I be happy.
   May I be safe.
   May I be peaceful.
   May I live easily.
B. *Affirmations:*
   Silently repeat or write down-
   With infinite love and gratitude, I affirm _____.
   Affirmations can be anything a person wants to be, achieve, or feel.
   Examples include:

- I am loveable.
- I am worthy.
- I am beautiful.
- I take good care of myself.

For LGBTQ+ youth, these are immediately available and actionable resilience building tools (Gray, 2017, 2018). They've been applied in a

[7]Stanford University's CCARE working definition of compassion is the ability to identify suffering and the willingness to act to relieve it.

wide variety of settings with success for diverse LGBTQ+ youth (Gray, 2018).

Social–Emotional Learning (SEL)

Students who develop social–emotional skills tend to perform well in school and later in life too (USAID, 2019). This suggests that emotional intelligence may be correlated with resilience and influence long-term outcomes for youth exposed to SEL programs in school. For LGBTQ+ youth, this means that SEL programs in schools have the potential to increase safety via concern of others, and decreased bullying. Subsequently, trauma and harm could also be reduced. The conditions created through SEL programming are ripe for LGBTQ+ youth to further develop resiliency in the face of adversity, simply because they were exposed to healthy environments that set them up for success.

According to *CASEL's Definition of SEL* (2020)

> Social and emotional learning (SEL) is an integral part of education and human development. SEL is the process through which all young people and adults acquire and apply the knowledge, skills and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions. SEL advances educational equity and excellence through authentic school-family-community partnerships to establish learning environments and experiences that feature trusting and collaborative relationships, rigorous and meaningful curriculum and instruction, and ongoing evaluation. SEL can help address various forms of inequity and empower young people and adults to co-create thriving schools and contribute to safe, healthy, and just communities (Niemi, 2020)

Essentially, it creates an atmosphere in schools that is conducive to building resilience. With a focus on equity, empathy, and responsible-caring decisions, it facilitates less bullying for LGBTQ+ youth. Furthermore, the following areas of development are supported:

- Self-awareness
- Self-management
- Social awareness
- Relationship skills
- Responsible decision-making

When trauma is resolved through therapeutic healing modalities as described above, the likelihood increases that LGBTQ+ youth can avail themselves of school wide SEL programs and strengthen resilience. It is important to note, however, that methods for staff, educators, and parents to promote resilience in LGBTQ+ youth begin within themselves. Meaning, adult caregivers of LGBTQ+ youth benefit from examining any implicit bias or unresolved issues they have around gender identity and/or sexual orientation, and in turn positively affect the LGBTQ+ youth.

Yoga

According to Oren Ergas (2014), yoga offers a set of educational lessons within the body that is unique to each person. He views the body as a vehicle of learning moments that emerge in individualized ways, for the benefit of the practitioner. Furthermore, Ergas suggests that the body creates an experience of being in the moment, where instead the mind can easily get carried away with reverie. This juxtaposition radically alters the concept of education, and re-centers it within the student. For LGBTQ+ youth, embodied pedagogy through yoga is a known mechanism for healing trauma (van der Kolk et al., 2014), while also increasing focus, attention, concentration, self-regulation, body-mind connection, and so much more.

Pedagogy of Place

Place offers a potentially profound way for LGBTQ+ youth to heal from trauma and build resilience. It creates connection to the land, purpose, meaning, and a broader link to the "all that is." For LGBTQ+ youth, this link is even more critical to the development of resilience because for so many their "place" in families, schools, communities, even in legislation is questioned regularly. Time out in nature is underrated and

reduced in the schedules of youth, to the demise of all. For LGBTQ+ youth, access to nature offers a fountain of resilience building opportunities, including mitigating the effects of the "nature-deficit disorder.[8]" The "nature-deficit disorder" arises when students are deprived of contact with the outdoors, and results in inattention, as well as symptoms of physical and emotional disorders. For LGBTQ+ youth, the symptoms of the "nature-deficit disorder" resemble the symptoms of trauma, abuse, exclusion, harassment, and bullying. Therefore, regardless of the etiology, LGBTQ+ youth benefit from the healing effects of nature-based programming in order to build resilience in the face of adversity.

According to Lyle (2015), place-based education seeks to remedy through decolonization and reinhabitation. In other words, LGBTQ+ youth who are displaced, feeling disenfranchised from their families and communities may benefit from programs in nature that remind people of their connection to the land. It has the added benefit of creating opportunities for LGBTQ+ youth to reclaim their identities and their "place" in the world.

Empathic Education for a Compassionate Nation (EECN)

Empathic Education for a Compassionate Nation (EECN) is a pedagogy that centers social emotional learning based on Jeremy Rifkin's urgent call to increase empathy for the sake of humanity surviving the climate crisis (Rifkin, 2016). In the time since 2016, the crises facing humanity include the global pandemic COVID-19, as well as increased awareness of police brutality. It's a VUCA world—volatile, uncertain, chaotic, and ambiguous. For better and for worse, a different kind of education is required for this moment, and the future. Resilience and emotional intelligence are even more important that writing, reading, and arithmetic. EECN bridges the gap between academic focus and the need for resilience and emotional intelligence. Unfortunately for LGBTQ+ youth, police brutality and school harassment have long been real problems in schools- as long as the school-to-prison pipeline[9] has been in existence. According to my research, *Educational Trauma* is the inadvertent and unintentional harm perpetrated and perpetuated in schools (Gray, 2019). It includes the school-to-prison pipeline as the most severe example of *Educational Trauma*, because it exposes students (particularly queer students of color) to a parallel universe of social death. Police on school campuses are more likely to arrest queer youth of color, leading them straight to the prison industrial complex, instead of offering the care, dignity, and respect all students deserve (Snapp et al., 2015). Based on the level of danger in schools and the need to heal from trauma, EECN is a practical way of creating resilience building opportunities for LGBTQ+ youth.

With respect for the trauma that befalls LGBTQ+ youth in the name of education, EECN is designed to mitigate these effects and create optimal conditions for healing and learning to arise organically. It's a method of education that exists along a spectrum, with social emotional learning programs as milder versions of EECN and democratic schools on the more intensive end of the spectrum (Gray, 2019). For LGBTQ+ youth, especially BIPOC queer youth, the need for EECN has never been greater. From traumas experienced in school, communities, and homes to greater likelihood of entering the school-to-prison pipeline (Snapp et al., 2015), these students need freedom and empathy in order to heal and begin thriving. They need to be seen and affirmed in order to cultivate resilience, and one pedagogy that supports this at every level is EECN.

[8]Richard Louv coined the term "nature-deficit disorder" in 2005 to describe the impact of alienation from nature on humans. For LGBTQ+ youth, the experience of being in nature and/or receiving outdoor education needs to be considered as important to well-being as all other modalities of education.

[9]The school-to-prison pipeline (STPP) is the social, educational, legal, and systems that move students out of public schools and in to juvenile and criminal justice systems. Most of the students targeted and brought into the STPP come from low-income areas, are queer, black, brown, and may have neglected learning problems.

Families Are Critical to LGBTQ+ Youth Cultivating Resilience

Resilience can be built through consistent individual practice and determination, as well as through mindful awareness, meditation, yoga, and outdoor education practices. Moreover, entire educational programs can be designed to build resilience. And yet, for LGBTQ+ youth, parental support is significantly tied to long-term outcomes. Family acceptance and protection are keys to success for LGBTQ+ youth, and overshadow all other approaches to cultivating resilience presented thus far. The cost of family rejection is so high for LGBTQ+ youth.

There are a few obstacles some families face when their kids come out. These include concerns about safety and acceptance, religious objections, and other rigidities/discomfort around sexuality and gender identity. One way for families of LGBTQ+ youth to overcome these obstacles is to recognize that the social ecology within which LGBTQ+ youth are developing directly contributes to their resilience, or lack thereof. Families generally want members to thrive. Remembering that we are all interconnected implies respect for how other people are faring, as it can influence any or all of us. Being kind to LGBTQ+ youth then becomes an act of self-compassion, since we are all interconnected, and acts that benefit LGBTQ+ youth benefit many more people. For families, self-compassion practiced by one member can have favorable effects on the other members of the family too. For LGBTQ+ youth, this could mean the difference between thriving and struggling.

Social ecology refers to the layers of society and culture that interact and surround individuals (Bronfenbrenner in Gray, 2018; 2019). For example, one LGBTQ+ youngster can be impacted by several institutions and groups of people ranging from proximal (family, classroom, religious setting, etc.) to distal (parental workplace, government, culture, socio-historical events). Most specifically, parents can be a source of attunement and affirmation when they support their LGBTQ+ youth in coming out. Conversely, distant relatives and family friends may be rejecting with and/or without the knowledge of the LGBTQ+ youth in question. The reverse is also possible where aunts, uncles, and cousins could be trustworthy others, while LGBTQ+ youth are coming out, even if their parents are not. Relationships that provide mirroring and attunement contribute to favorable brain wiring and subsequent resilience. In other words, LGBTQ+ youth cultivate resilience in the brain by having supportive relationships.

Conclusion

Families, place, systems, and caregivers are all influential in the way LGBTQ+ youth develop resilience. For queer youth with intersectional identities, the opportunities to develop resilience are lower, while levels of adversity remain higher. As such, the development of resilience in queer BIPOC youth is ever more urgent.

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18 Resilience and Positive Youth Development: A Dynamic, Relational Developmental Systems-Based Perspective

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Adolescents are not resilient. Resilience is also not a functional feature of the ecology of adolescent development (e.g., as may be represented by the concepts of "protective factors" or "ecological assets"; e.g., Benson, 2006). Rather, resilience is a concept associated with a dynamic understanding of the relations within the human developmental system (Overton, 2015; see too Mascolo & Fischer, 2015), a concept denoting that the relations between adolescents and their ecologies have adaptive significance.

The preparation of this chapter was supported in part by grants from the Chan Zuckerberg Initiative, the Templeton Religion Trust, the Templeton Word Charity Foundation, Compassion International, and National 4-H Council.

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Masten (2014b) defined resilience as "the capacity of a dynamic system to adapt successively to disturbances that threaten system function, viability, or development" (p. 1012). She explained that this definition was intended to be "scalable across systems and disciplines, from the level of micro-organisms and systems operating within the human organism to the systems of family, school, community, culture, economy, society, or climate" (p. 1012). In addition, given that the present authors wrote this article in the context of the COVID-19 pandemic and the continuing US epidemic of systemic and interpersonal racism, white supremacy, and brutalities against and murders of individuals of color, Masten (2014b) was prescient in noting that a key reason for using this broad, systems-based definition of resilience was the increasing international concern with integrating scientific fields to address problems of interdependent systems of function and recovery, such as preparing for disasters or promoting resilience in specific cities or countries.

Accordingly, to understand the dynamic, developmental systems approach to resilience that both Masten (2014b) and the present authors adopt (e.g., Lerner, 2018; Lerner et al., 2019), it is important to briefly review the concepts associated with

S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_18

such systems and, as well, the relational developmental systems metatheory within which our approach to resilience is embedded. This discussion will also enable us to explain the connections between the concepts of resilience and positive youth development (PYD), or thriving, that are used by both Masten (2014b) and the present authors (e.g., Lerner et al., 2019).

Relational Developmental Systems-Based Concepts, Resilience, and PYD

A metatheory is a philosophy or a theory of theories. It is a set of ideas that prescribe and proscribe the attributes that are involved in lower-order theoretical models. Simply, metatheory is a set of ideas about how theories should be constructed and/or about the ideas that should be included in (or omitted from) a theory (Lerner & Chase, 2019).

In the contemporary study of human development, models that are derived from relational developmental systems (RDS) metatheory (Overton, 2015) are at the cutting-edge of scholarship about human life and development (Lerner, 2018). Within RDS metatheory, human development involves universal functions of a living, open, self-constructing (autopoietic), self-organizing, and integrated/holistic system. RDS metatheory is derived from a process-relational paradigm, wherein the organism is seen as inherently active, self-creating (autopoietic), self-organizing, self-regulating (agentic), nonlinear/complex, and adaptive (Overton, 2015).

In addition, RDS metatheory includes ideas emphasizing that the integration of different levels of organization within the dynamic, developmental system frames understanding of human development across the life course of individuals and families (Lerner, 2018; Overton, 2015). The conceptual emphasis in RDS-based theories is placed on mutually influential relations between levels of organization within the dynamic (coacting) developmental system. Individual and context coactions (mutually influential relations) may be represented as individual–context relations.

The individual–context relations envisioned within all instances of RDS-based theories (e.g., Bronfenbrenner & Morris, 2006; Fischer & Bidell, 2006; Immordino-Yang, 2010; Immordino-Yang et al., 2019; Immordino-Yang & Yang, 2017; Mascolo & Fischer, 2010) vary across place (e.g., community, country, or culture) and across time (Elder, Shanahan, & Jennings, 2015). The "arrow of time," or temporality, is history, which is the broadest level within the ecology of human development. History imbues all other levels with change. Such change may be stochastic (e.g., non-normative life or non-normative historical events; Baltes, Lindenberger, & Staudinger, 2006) or systematic (e.g., history- or age-graded changes). The potential for systematic change constitutes a potential for relative *plasticity* (i.e., the potential for systematic change in structure or function; Lerner, 2018) across the life course for individuals, families, and the broader ecology of human development.

Such plasticity is regarded as a fundamental strength of human development; it provides a basis for optimism that the course of development for all individuals may be enhanced (Lerner, 1984, 2018). As well, this optimism may promote an emphasis on social justice (Lerner & Overton, 2008). If there is plasticity in every individual's developmental pathway, then policies and programs can be aimed at capitalizing on this plasticity to decrease social, educational, economic, and health disparities and to enhance the quality of life of all youth. This implication of dynamic, relational developmental systems-based ideas both enables developmental scientists to view with optimism the possibility of promoting individual–context relations that reflect resilience and PYD and, as well, enables the connections between these two constructs to be understood.

Links Between Resilience and PYD

Masten (2014b) explained that dynamic, relational developmental systems-based concepts can be used to understand connections between the constructs of resilience and PYD. She pointed

out that scholars studying PYD (e.g., see Lerner et al., 2015 for a review) conceptualize resilience and thriving as both involving a dynamic, that is, mutually influential, relation between specific youth and their specific contexts (Bornstein, 2017, 2019). In addition, both resilience and thriving involve "positive aspects of development, function, resources, and strengths, *both in the individual and in the context*" (Masten, 2014b, p. 1013, italics added). However, Masten (2014b) sees resilience as a subset of youth–context relations located at the high end of a *continuum of risk or adversity*. Figure 18.1 is an illustration of this continuum.

Therefore, in agreement with the present authors, Masten (2014b) indicates that resilience is not in the adolescent or the context. Resilience resides in the specific individual–context relation. In addition, Masten (2014b) explains that studying either the concept of thriving or the concept of resilience requires attention to understanding a specific young person's positive adaptation to the specific features of their specific context. Whereas thriving involves a focus on optimal functioning, Masten explains that the literature of resilience has tended to focus on adequate or "okay" functioning at the high end of the continuum of risk and adversity, due in large part to the fact that the study of resilience has understandably involved a focus on youth and families facing enormous challenges, adversity, or trauma (e.g., see Masten, 2007, 2014a; Masten et al., 2015; see also Lerner et al., 2019, in press).

In sum, the relations involved in the concept of resilience involves a dynamic (i.e., a mutually influential) coaction among components of the attributes within an integrated, holistic developmental system (Fischer & Bidell, 2006; Lerner, 2018; Lerner & Overton, 2020; Mascolo & Fischer, 2015). As emphasized by Masten (2014b), this coaction integrates characteristics of an individual youth (e.g., positive racial identity, agentic skills) and features of their ecology (e.g., high-quality mentoring; Rhodes, 2020) that reflect either adjustment (i.e., a change) in the face of altered or new environmental threats or challenges (e.g., the COVID-19 pandemic or increases in racism, white supremacy, and brutalities toward members of one's race), or constancy or maintenance of appropriate or healthy functioning in the face of environmental variations in the resources needed for appropriate or healthy functioning (e.g., access to tests for, or access to masks needed for protection against, the COVID-19 virus).

As such, to Masten (2014a), the individual–context relation summarized by the term "resilience" reflects an adequate degree of individual well-being at a given point in time, in the face of features within the ecological context that challenge this degree of adaptation. In turn, this relationship also implies that, within a specific ecological setting (e.g., low-income communities in the United States or development in low- or middle-income countries [LMICs] around the world) at a specific time in history (e.g., during

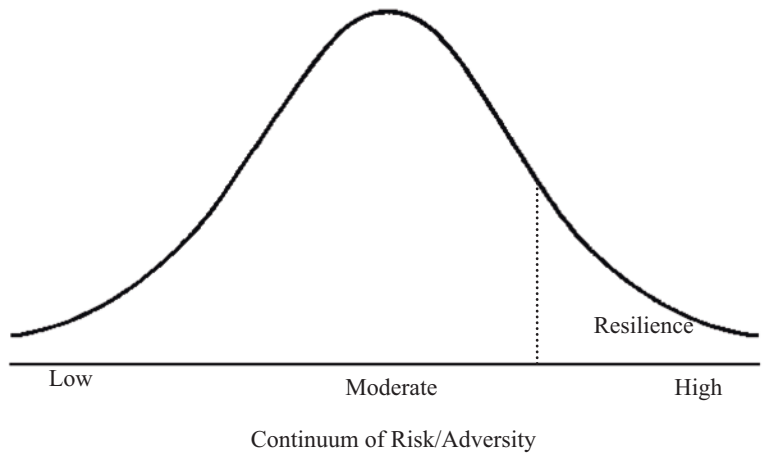

Fig. 18.1 Theoretical probability distribution of instances of adaptive individual–context relations in the face of differing levels of risk and adversity

the COVID-19 pandemic), there are actions of the individual (e.g., creating protective masks from cloth available in the home or community; sheltering at home while also using available technological resources, such as a smart phone, to maintain contact with teachers) *and* actions within the context (e.g., involving the use by family members, educators, or leaders of community-based youth programs of innovative platforms to deliver educational, recreational, and health-promoting programs for youth development; e.g., Cantor et al., 2019, in preparation; Immordino-Yang et al., 2019; Lerner et al., 2015; Osher et al., 2020). Of course, these same individual and contextual attributes can be involved in programs or policies intended to locate the adolescent–context relationship at a point along the continuum illustrated in Fig. 18.1 wherein PYD is possible. We discuss this possibility by focusing on the study of resilience and PYD among, in particular, youth of color in the United States.

Changing Adolescent Pathways from Resilience to Thriving

Research on the development of youth of color in the United States is all too often framed in a deficit approach, focusing on problematic behaviors and outcomes (e.g., Lerner et al., in press). PYD research on youth of color (and on all youth) illustrates the relative plasticity of development, and focuses on the individual–context relations that reflect resilience and thriving that are possible to evidence (in regard to the location of youth along the continuum shown in Fig. 18.1).

In regard to this continuum, youth of color living in the U.S. face specific challenges, such as structural and interpersonal racism, inequities and inequalities in education, health care, and employment, and safety, given the historically ongoing brutalities toward, and murders of, individual of color in the United States. Thus, youth skills and contextual resources need to be aligned to address the specific interpersonal and structural challenges to both survival per se and to thriving that are encountered in the everyday lives of these young people.

The theoretical and theory-predicated research contributions of Margaret Beale Spencer are particularly relevant here (e.g., Hope & Spencer, 2017; Spencer, 2006; Spencer et al., 2015). Spencer's (2006) Phenomenological Variant of Ecological System Theory (PVEST) explains how youth of color often use self-appraisal and social support from meaningful relationships to achieve positive identity and adaptive adjustment outcomes (Rivas-Drake et al., 2014a, b; Spencer et al., 2002, 2003). The scholarship of Velma M. Murry and colleagues (e.g., 2019; Murry et al., 2014, 2015) and Emilie P. Smith and colleagues (e.g., 2007; Smith et al., 2017) exemplifies this work (Lerner et al., in press).

Murry and colleagues have conducted longitudinal studies of PYD among African American boys and young men within the context of their families and life within rural settings (e.g., Murry et al., 2009, 2011). For instance, in a sample of 378 rural African American males, Murry et al. (2014) found evidence for the power of positive relationships between youth and adults in the development of thriving (see, too, Rhodes, 2020). Confidence in one's ability to self-regulate and a sense of competence to be successful in the future were associated with having caring, involved, vigilant parents. Confident, competent males were likely to connect with prosocial peers, which in turn provided opportunities to reinforce norms and values to avoid engaging in risky behaviors (Murry et al., 2014).

The research of Murry and colleagues indicates that, despite the marginalization of African American boys and young men, as well as the marked adversity produced by the combination of racism, economic disadvantage, oppression, segregation, and other trauma-inducing experiences, they are in large proportion able to overcome these challenges and show prosocial development. Their PYD occurs through their use of resources that focus on their capabilities and strengths and involve adaptive calibration to contextual challenges (Barbarin et al., 2019; Gaylord-Harden et al., 2018). The Adaptive Calibration Model proposed by Murry and colleagues specifies that chronic adversity influences the development of overlooked

competencies that, when identified, may facilitate successful adaptation in toxic environments. Coupled with the influence of familial relationships and community assets, youth can exhibit resilience and prosocial development despite experiencing chronic adversity. Murry and colleagues emphasize that research documenting this process can advance a social justice agenda for developmental science (Barbarin et al., 2019; Murry, 2019; Murry et al., 2016, 2018).

Smith and colleagues (e.g., Smith et al., 2003, 2013, 2016, 2017, 2019) also focus on youth of color and study the role of contextual settings such as the family, the peer group, and community-based out-of-school time (OST) programs as settings within which individual–context relations can promote PYD. Evidence in support of this idea was reported by Smith et al. (2016). They found that positive social relationships with family members, peers, and community members were linked to indicators of PYD among both African American and White, male and female, adolescent offenders.

Whereas much prior research assessed the deficits of development in disadvantaged neighborhoods (e.g., see Sampson, 2016), Smith et al. (2016) assessed the role of community assets linked to important institutional resources and people in those settings. Consistent with the findings of Murry et al. (2014), Smith et al. (2016) also found that positive personal relationships and linkages to important community resources, including recreational, school, faith-based, extended-family, and work related sources, were related to better family functioning, positive peer relations, and youth self-reliance. Smith and colleagues emphasize that a strengths-based approach to youth offenders that involves positive community networks and supportive social relationships can put these youth on thriving pathways.

Building upon the important role of community contexts, Smith et al. (2017) studied more than 500 elementary school children in Grades 2–5, composed of White (49%), African American (27%), Latino (7%), and mixed race (17%) youth; almost half (45%) of the youth were eligible for free/reduced lunch. Participation in quality OST programs (marked by supportive relationships, appropriate structure, and engaging interactions) positively impacted competence, connection, and caring for all youth. Moreover, these settings were also linked to the enhancement of cultural values for racial–ethnic minority youth.

PYD may also have more nuanced meanings among youth of color due to their uniquely challenging circumstance. In a study identifying sociocultural factors of PYD, Williams et al. (2014) found that PYD in urban African American and Latino adolescents could be understood by use of a bifactorial model, including both positive racial–ethnic identity and a more general PYD component (i.e., the Five C's of PYD discussed by Lerner et al., 2015: Competence, Confidence, Character, Connection, and Caring). Similarly, using latent profile analysis, Yu et al. (2019) studied a group of over 200 youth of color in late childhood/early adolescence (77% African American and 23% Latino). The researchers found that youth in a profile marked by high PYD, racial–ethnic pride, and low levels of perceived racial–ethnic barriers had fewer overall adjustment problems and higher standardized achievement test scores than youth in other profiles. Yu et al. (2019) concluded that relationships that help youth to feel competent, caring, and connected, as well as relationships that support racial–ethnic pride, may be associated with adaptive adjustment among youth of color.

In sum, resilience and PYD (thriving) are, then, dynamic attributes of a relationship between individual adolescents and their multilevel and integrated (relational) developmental systems. The fundamental process of dynamic individual–context relations involved in resilience is not distinct from the relations involved in PYD or, even more, in healthy and positive human development in general (Lerner, 2018). What is distinct, however, is that individual–context coactions involving resilience are located at a portion of a theoretical probability distribution of these relations that may be described as involving nonnormative levels of risk or high levels of adversity (Fig. 18.1). In short, the process we study in seeking to understand resilience differs from the

other instances of individual–context relations only in regard to the location in this distribution.

Clearly, the translation of this theoretical probability distribution into empirical reality will vary in relation to individuals across the course of adolescence, as well as in relation to group differences and diverse contexts. Because there is intraindividual variability, and between-group differences in intraindividual changes, in the empirical probability distribution of adversity pertinent to resilience, there are specific implications for research about resilience and PYD.

Research Implications of the Adversity Continuum

Because resilience is not a characteristic of either component of the individual–context relationship (i.e., as we have emphasized in this chapter, resilience is not an attribute of the adolescent or of the context), it should be studied within a nonreductionist theoretical frame and through the use of measures that are sensitive to change in both the individual and the context. Moreover, Spencer (2006) has explained that the adverse experiences and ecological disadvantages that confront youth of color vary among youth and, as well, that what one adolescent experiences as stress may not affect their neighbor or sibling in the same way. Specific perceptions of racial and economic inequality may shape the nature of adversity for youth of color. Thus, to understand the impact of adverse experiences on youth requires attention to *specific* youth–context relations *and* the phenomenology of these relations associated with specific youth.

The specificity principle proposed by Bornstein (2006, 2017, 2019) emphasizes that the study of development should focus on the specific relations between attributes of a specific individual and specific facets of the context, as they co-acted at specific times in ontogeny and history within youth from specific families, communities, and cultures. Both Spencer (2006), Spencer and Spencer (2014) and Bornstein (2017, 2019) called for greater theory-predicated attention to the measurement of specific attributes of development of specific groups and, even more so, of the specific individuals within them. These arguments create a foundation for measures of resilience and PYD to not only be sensitive to intraindividual change but, as well, to such changes within specific youth developing in specific settings.

In addition to psychometric concerns of validity and reliability, a focus on measurement invariance across age, gender, race, ethnicity, and community and cultural contexts and history, is also necessary (e.g., Card, 2017). Establishing measurement invariance, both across facets of the individual *and* facets of the context, is required. Quantitative and qualitative data should be triangulated in the service of developing measures that are not only change-sensitive but that, as well, pertain to the specific pathways of development (both actual and perceived) of specific youth developing in specific settings at specific times in ontogeny and history (Lerner, 2018; Rose, 2016). Simply, then, reliable, valid, and invariant measurement is needed to not only assess the development of youth varying in the specifics of age, gender, race, ethnicity, socioeconomic status, and culture, etc., but as well for depicting the specific youth–context relations of each specific young person (Rose, 2016). Therefore, idiographic measurement, as well as group and nomothetic measurement, is needed and, in fact, has been a focus of considerable methodological interest among developmental scientists (e.g., Molenaar & Nesselroade, 2012, 2014; Ram & Grimm, 2015; von Eye et al., 2015).

The goal of developmental science is to describe, explain, and optimize individual development (i.e., intraindividual change) and interindividual differences in intraindividual change (Baltes et al., 1977; Lerner, 2012), and these issues of theory and theory-predicated measurement pertain to applications aimed at optimizing resilience and PYD as well as to describing and explaining it.

Issues in the Optimization of Resilience and PYD

Our dynamic, relational approach to resilience means that resilience involves individual–context relations reflecting the maintenance or enhancement of links that are mutually beneficial to individual youth and contexts that involve adversity or trauma. Individual actions that are not supportive of the institutions and agents of the ecology (that are acting to support the individual) are ultimately not reflective of resilience and, as well, are not sustainable (Lerner, 2004).

In order to understand the bases of and, in turn, to promote individual–context relations that promote resilience among diverse youth, individuals engaged in the design or enactment of programs or policies aimed at enhancing either resilience or PYD must ask an admittedly complex, multipart question predicated on the Bornstein (2017, 2019) specificity principle. They must ascertain: what fundamental attributes of individual youth (e.g., what features of cognition, motivation, emotion, ability, physiology, or temperament); among adolescents of what status attributes (e.g., youth at what portions of the adolescent period, and of what sex, race, ethnic, religious, geographic location, etc.); in relation to what characteristics of the context (e.g., under what conditions of the family, the neighborhood, social policy, the economy, or history); are likely to be associated with what facets of resilience or PYD (e.g., maintenance of health and of active, positive contributions to family, community, and civil society)?

Addressing such a set of interrelated questions requires, at the least, a systematic program of research and/or of program or policy evaluation. Nevertheless, the linkage between the relational development systems-based ideas of relative plasticity, malleability, and dynamic relations that give rise to this set of specificity principle-based questions provides a rationale for an optimistic view of the potential to apply developmental science to promote individual–context exchanges that may reflect and/or promote health and positive, successful development in youth.

However, integrating actions between youth and their ecologies through program or policy interventions should be enacted in relation to understanding the developmental character of individual–context relations and the fact that, although ubiquitous across the adolescent period, these relations, by definition, undergo the transitions and transformations that compose developmental change. Moreover, as recognized by both Spencer (2006) and Bornstein (2017, 2019), the substance of these changes shows marked inter-individual differences in intraindividual change. Rose (2016) described this between-person variation as jaggedness and, because of such variation, he explains that, whereas all people walk "a road" from childhood, through adolescence, and into adulthood, jaggedness means that each of us walks a, at least, somewhat different pathway. Such idiographic, youth-specific diversity means that program and policy interventions need to be designed to expect and assess quantitative and/or qualitative variability among the different individuals and contexts involved in the intervention.

Moreover, the diversity of individual pathways across adolescence means that the interpretation of the effect sizes found in program or policy interventions needs to be made in light of the specificity of the diversity of individual–context relations within any group of intervention participants (e.g., Tirrell et al., 2019b). That is, the specificity principle points to the unique and specific features of individuals and contexts that interrelate to moderate the processes involved in human development interventions. Bornstein (2017) noted that, "Different individuals approach and understand the world in ways that reflect their unique interactions and experiences" (p. 31). We have explained that applying the specificity principle to program or policy interventions involves addressing a multipart question such as the one noted above. However, in practice to date, such questions have not been used frequently.

All too often, youth development programs or policies are treated as a "black box" by evaluators (Shonkoff et al., 2017; Tirrell et al., 2019b). Data

may be collected from multiple sites or contexts and then pooled into intervention and comparison groups because, ignoring specificity, an assumption enabling aggregation is implicitly used: the intervention is assumed to work in similar ways across contexts and individuals. As a consequence, researchers ask whether a particular measured outcome demonstrates a statistically significant difference, on average, between an intervention group and a comparison group. If such an average difference is found, the intervention may be deemed "evidence-based."

However, from the dynamic, relational approach to resilience and PYD that we are presenting in this chapter, such analyses may obscure important contextual differences within treatment and comparison groups. As Shonkoff and colleagues at the Center on the Developing Child (2017) noted, "We believe that assessing program effects on average misses what may work exceptionally well for some and poorly (or not at all) for others. Moreover, attempting to create a single 'did it work?' test for a multi-faceted intervention obscures its active ingredients, leaving only a 'black box' that must be adopted in its entirety" (p. 4). The research agenda of Shonkoff and colleagues (2017) poses a set of questions that reflect the necessary disaggregation and specification described by Bornstein (2017)—what about the program works; how does it work; for whom does it work or not work; and where does it work?

To demonstrate such use of the specificity principle, Tirrell et al. (2019b) presented a sample case of the PYD programs of Compassion International (CI) (Sim & Peters, 2014). CI is a faith-based child-sponsorship organization that aims to promote thriving and alleviate child poverty using a holistic, PYD-based approach to its programs. CI partners with over 8000 local churches and projects across 25 countries in Central and South America, the Caribbean, Africa, and Asia, and serves more than 2.2 million youth living in poverty. As such, the mission and programs of CI relate both directly and indirectly to many of the Sustainable Development Goals outlined in the UN 2030 Agenda (Hackett, 2015). To meet these goals and promote youth thriving, CI programs seek to align youth strengths (e.g., intentional self-regulation, hope for the future, and spirituality) with ecological resources (e.g., the "Big Three" of effective youth programs: providing mentoring, life-skill development curricula, and opportunities for participation in and leadership of valued family, school, or community activities; Lerner, 2004; Tirrell et al., 2020).

Consistent with the specificity principle, the SDGs call for disaggregating results of program effectiveness across subgroups. Accordingly, Tirrell et al. (2019b) analyzed data from 888 Salvadoran youth (50% female), aged 9–15 years, participating in the CI Study of PYD (Tirrell et al., 2019a). The researchers compared CI-supported youth with non-CI-supported youth on nine variables related to PYD, intentional self-regulation, hopeful future expectations, and spirituality. Whereas tests of group averages indicated no meaningful differences, disaggregated results across 20 exemplary-performing program sites indicated that two sites showed no group differences, seven sites showed better CI-supported youth performance, three sites showed better non-CI-supported youth performance, and eight sites showed a mixed pattern of results across the nine variables.

The comments of Shonkoff and colleagues (2017) and the findings reported by Tirrell et al. (2019b) bring us back to issues of measurement, but in regard to the design and enactment of evaluations. In well-designed interventions aimed at optimizing resilience or PYD, reliable, valid, and invariant measures of the individual participant, of the context and, in particular, of the individual–context relation must be used for both treatment and comparison group members. Moreover, measurement in normative settings may not be the same as measurement in the face of non-normative situations such as wars, natural disasters, or either the COVID-19 pandemic and/or the continuing epidemic of racism and white supremacy afflicting the United States and other nations at this writing.

Non-normative settings may transform the requirements that exist for instantiating adaptive individual–context relations reflecting resilience

or PYD among specific groups of diverse youth. For instance, across geographical locations and socioeconomic strata in the United States, all Black and Brown youth grow up in a society rooted in systemic and interpersonal racism, white supremacy and privilege, educational, health care, housing, socioeconomic, and employment inequalities and inequities, and concerns for their safety, as brutalities toward, and murders of, individuals of color continue (Franklin & Higginbotham, 2010; Goff & Kahn, 2012; Spencer et al., 2015). As a result, they experience repeated and multiple instances of adversity and trauma. Yet, relatively little is known about the simultaneous impact of multiple instances of trauma on either resilience or PYD, and relatively few instances exist of few interventions addressing such complex histories of trauma among these young people (e.g., Cantor et al., in preparation; Masten et al., 2015).

Obviously, addressing the issues of conceptualization and methodology in conducting and evaluating program and policy interventions aimed at promoting resilience or PYD is complex. Perhaps equally as obvious, however, is that such efforts are integral to the formulation and enactment of programs of research and intervention aimed at enhancing the lives of diverse youth, both in the United States and around the world. This observation leads to some final comments about basic and applied scholarship pertinent to resilience and PYD.

Conclusions and Potential Next Steps

The promotion of resilience and PYD, and learning how to move diverse youth along the continuum of adversity from resilience (and "just okay" development; Masten, 2014b) to thriving, is of fundamental concern to developmental science, both as a theory-predicated and methodologically rigorous research field and as an instance of science aimed at optimizing the lives of all people, at all points across the life span (Lerner, 2018, 2021; Lerner et al., in press). As such, a focus in research and application on resilience and PYD may elucidate the ways in which relations between active youth and active facets of their ecologies can be constituted to be mutually beneficial to specific youth and to their specific families, communities, culture, and world.

The dynamic, relational developmental systems-based approach to the study of resilience and PYD that we have described (Lerner et al., 2019; Masten, 2014b; Masten et al., 2015) provides a vision for a program of research and application that aims to promote resilience, thriving, and to help youth in all settings, and with diverse starting points in life, to move across the continuum of adversity to maximize their opportunities for PYD. This vision involves the alignment of specific youth and their multi-level contexts within and across time in the service of creating mutually beneficial individual–context relations across time and place.

An ongoing program of research and evaluation predicated on such a dynamic, relational developmental systems-based approach to understanding and optimizing resilience and PYD—and positive development of specific youth across to the continuum of adversity—*may* create knowledge sufficient to enable developmental science to become an effective contributor to multisectorial efforts to promote social justice and equitable opportunities for healthy and positive development for all youth. Fisher et al. (2013) provided a vision for such social justice-relevant research in developmental science.

Some of the research foci they discuss include addressing the pervasive systemic disparities in opportunities for development; investigating the origins, structures, and consequences of social inequities in human development; identifying societal barriers to health and well-being; identifying barriers to fair allocation and access to resources essential to positive development; identifying how racist and other prejudicial ideologies and behaviors develop in majority groups; studying how racism, heterosexism, classism, and other forms of chronic and acute systemic inequities and political marginalization may have a "weathering" effect on physical and mental health across the life span; enacting evidence-based prevention and policy research aimed at

demonstrating if systemic oppression can be diminished and psychological and political liberation can be promoted; taking a systems-level approach to reducing unjust institutional practices and to promoting individual and collective political empowerment within organizations, communities, and local and national governments; evaluating programs and policies that alleviate developmental harms caused by structural injustices; and, creating and evaluating empirically based interventions that promote a just society that nurtures life-long healthy development in all of its members (Fisher et al., 2013).

Such social justice-relevant research may be one of the best tools developmental scientists have for contributing to the creation of a more just society. However, at this writing, such scholarship remains relatively rare, certainly underfunded, and perhaps especially challenging during the historical moment within which this chapter was written.

Designing and enacting scholarship aimed at enhancing the individual and ecological resources to promote resilience and PYD within an historical period involving both the COVID-19 pandemic and the US epidemic of racism and white supremacy involve complexity of yet-unknown parameters. That is, undertaking such scholarship within an historical period that will involve the emergence of an unknown "new normal" for society is a challenge of presently undefinable parameters. However, one path forward is to use our individual and collective agency and autopoietic capacities to help shape a new normal that involves full collaboration in both basic and applied facets of developmental science with the youth and families that are experiencing the greatest degrees of adversity and, as well, trauma in the current historical moment. Clearly, communities of color are the experts about what is needed for equality and thriving among their individuals and families and about what constraints and challenges they are facing.

The dynamic, relational developmental systems-based theoretical ideas that frame our work emphasize that youth have agency and, because of their coactions with their context, that is, their individual–context relations, they are active producers of their own development (Lerner, 2021). Youth should then not be viewed as people with whom we do interventions. Rather, they should be seen as experts about their lives, as people to learn from, and as people we have as our collaborators in research and applications aimed at promoting PYD. If developmental scientists function with intellectual humility and a commitment to collaboration, there is a chance that the challenges they face in contributing to the new normal can be transformed into an opportunity for the field to become a productive part of inclusive, multisectorial strategies for enacting and evaluating solutions promoting thriving among the diverse youth of the world.

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A Resilience Framework for Treating Child Trauma

19

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After more than 51 years of direct clinical work with trauma in children, what amazes the first author the most is the courage, awesome spirit, and the resilience of children. We have been face to face with children who in their brief lives have suffered more than most human beings experience in a lifetime. We have treated children who have seen things that no child's eyes should ever see, children who have heard things that no child should ever hear. Nevertheless, we have also witnessed something else that is quite striking. In the face of atrocities that some adults in their worst moments commit toward children, emerges a child who often in spite of all justification refuses to give up. These children reveal a vital spark that is not easily extinguished—what James Garbarino (1999) called the "divine spark." We have observed repeatedly in children the determination to surmount even the most formidable odds. These children display courage and strength in the face of obstacles that would demolish the spirit of many less hardy individuals.

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Resilience in the Face of Child Trauma

The American Psychiatric Association (2000) defined a stressor as traumatic when an individual encounters a life-threatening experience or a threat to physical integrity accompanied by a subjective response of fear and helplessness. Terr (1991) distinguished between Type I trauma that results from exposure to a single event, as contrasted with Type II trauma that is a result of repeated or prolonged exposure to trauma. Resilience in the face of severe trauma in childhood that is the focus of this chapter is best thought of as Type II trauma as described by Terr. Type II traumas have also been termed *complex trauma* (Herman, 1992) and *developmental trauma disorder* (van der Kolk, 2005; van der Kolk, 2007). The terms complex trauma and developmental trauma disorder call attention to the fact that the PTSD diagnosis does not capture the disruptive developmental effects of trauma in childhood when development is still in process.

Trauma in childhood can disrupt emotional regulation, attachment patterns, and interfere with the achievement of core competencies. Thus, the impact of Type II traumas in childhood can have a pervasive disruptive effect on

S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_19

development. These Type II traumas often take the form of sexual and/or physical abuse or torture and thus deliberately inflicted on children by other human beings, often by adults who they would ordinarily turn to for protection and safety, namely their parents or caregivers. While it is important not to overreach with the concept of resilience and thereby expect youth to rise above their circumstances regardless of the conditions they face, we must also embrace a healthy appreciation of the amazing capacity of the human spirit to adapt and overcome formidable odds.

A Resilience Framework for Treatment of Trauma in Children

In this section, we delineate some of the key tenets of the conceptual approach to a resilience framework in treating trauma followed by a detailed case example of the treatment of a family that suffered unusually severe and prolonged trauma. The case example will illustrate how recent research in child trauma can guide and inform the treatment process.

The Crucial Role of Mind-Sets

Mind-sets influence what we see and hear when meeting with a child, as described eloquently by Brooks (2010). Minuchin and Colapinto (1994) explained that even the way the clinician gathers information, such as asking certain questions, reflects the mind-set of the therapist and communicates to the child and family what is of greater interest: pathology or resilience. Mental health professionals are well trained, if not overtrained, to identify pathology. Nevertheless, recognizing and honoring resilience in children offers far more advantage for change. Minuchin and Colapinto (1994) stated that if you wish to be a diagnostic center then you focus on pathology. However, if you wish to be a change center, then you focus on strengths. As Goldstein and Brooks (2005) pointed out, "Symptom relief has simply not been found to be robustly synonymous with changing long-term outcome" (p. xiv). Resilience research widens the lens to include a view of the intrapersonal and interpersonal dimensions of children adapting to challenges, and more importantly can provide a new lens of understanding for therapists from many theoretical backgrounds to incorporate a strengths-based approach to child and family therapy (Seymour & Erdman, 1996).

The Remarkable Self-Reparative Forces in Children

While Robert White (1959) wrote about competence and striving for mastery from infancy forward more than 60 years ago, these concepts suffer relative neglect in child treatment relative to the focus on pathology and trauma. A refreshing exception is the recent book edited by Eliana Gil (2010a) containing chapters focused on the powerful innate healing forces in children (Crenshaw, 2010b; Drewes, 2010; Gil, 2010b, 2010c, 2010d; Goldin, 2010; Green, 2010; Jalazo, 2010; Ludy-Dobson & Perry, 2010;, Shaw, 2010; & Sobol, 2010). In the face of trauma, the deleterious impact cannot be ignored but the innate and powerful drive to adapt, to grow, and to heal should likewise never be minimized. The case studies in Gil's edited book provide ample testament to this self-reparative drive in children.

The Resilience and Healing Powers of Families

Waters and Lawrence (1993) significantly contributed to this shift in the "pathology mindset" in work with families by emphasizing competence, courage, love, hope, and vision in families. Waters and Lawrence did not ignore pathology but rather found the seeds of strength within the family often embedded in their pathology. This refreshing approach to work with families brought into the therapy room a focus not just on dysfunction and illness, but health and competence, strength, and important qualities rarely talked about before in family therapy, including

the family's vision, hope, their love and compassion. Robert White's (1959) work on the concept of competence inspired Waters and Lawrence. White emphasized the innate desire of human beings to master their surroundings and environment, which he referred to as an underlying *competence motivation.* If one closely observes young children, it is fascinating to watch their persistent attempts to master their world.

Salvador Minuchin, considered one of the pioneers of family therapy, in a presentation at the Psychotherapy Networker Symposium in 2009 reflected on nearly 50 years of doing family therapy. Minuchin (2009) shared with the audience that his thinking changed considerably since he started working with families. He explained that in the beginning of his career, he considered that families were simply wrong in the way they viewed the problems they were facing. Now, he still believes that families are wrong but they are wrong because they "are richer than they think." Minuchin elaborated by saying that families possess rich resources for resolving problems of which they are often unaware. Minuchin shifted his mindset from one that was originally problem-focused to emphasize strengths and resilience in the family.

In the case of trauma, healing entails enlisting the support and resources of the available family so the child does not undertake the journey isolated and alone. In the cases of deliberate trauma, including domestic violence, physical, or sexual abuse, the family may not be available or it may not be feasible to enlist the family to assist the child's healing but clinicians should make this decision carefully. It is easy to dismiss such families, as not being helpful resources in the healing process, but the opposite may be true.

Pipher (2005) observed, "Families for all their flaws are one of our remaining ancient and true shelters. Families, not therapists, will be there for our clients if they lose their jobs, go to the hospital, or need someone to show up at their bowling tournaments" (p. 31).

In the heartbreaking stories of the Uganda child soldiers when they were rescued or able to escape the LRA, many confronted the harsh reality that their parents had been killed. In that case, they would seek out an uncle or a brother or sister, or anyone left in their family. Sadly, the returning soldiers were often rejected by their surviving family members because of the atrocities the child soldiers were forced to commit (Eichstaedt, 2009). In addition to the theft of their childhoods, many also had to face either the disappearance of their families or rejection by their surviving family upon their return.

The Strengths That Reside in Communities

The community is an extension of the family and helps to support, guide, and reinforce the values of the dominant culture. Silverstein (1995) suggested that contemporary culture has deprived many of what makes life endurable, a sense of community, a connection to a larger context that gives life meaning and purpose. Beginning with the Industrial Revolution and the migration of agricultural families to the cities to work in factories, there has been a splintering of family ties and the more frequent relocations in modern society often due to work weakens ties to home communities. If it takes a whole village to raise a child, children exposed to severe trauma need the acceptance, backing, and support of their communities in order to heal. In a study of child soldiers in the Sierra Leone war, Betancourt et al. (2010) found that community acceptance was a key protective factor for the recovery of the children after they returned from the conflict.

Another important feature of the community that plays an important role in recovery is the return to schools. Prompt reestablishment of schooling was one of the best practices endorsed by a wide range of studies (Ager et al., 2010; Betancourt et al., 2010; Kronenberg et al., 2010; Masten & Osofsky, 2010).

Hope as a Healing Ingredient

Hope is a cornerstone of all successful therapy but occupies a central role in the treatment of a child or family with severe trauma. Hopelessness

due to the devastating impact particularly of deliberate trauma and Type II traumas (Terr, 1991) that gradually erode the spirit of even the most courageous children can represent a formidable obstacle to the treatment process. Jerome Frank (1968) highlighted the critical role of hope in psychotherapy in combating demoralization. One of the features of children and families in treatment of Type II or repeated traumas is what Garbarino (1999) has called "terminal thinking" and Hardy refers to as a "survival orientation" (Crenshaw & Hardy, 2005). The repeated assaults on one's dignities and threats to one's very survival lead to an adaptation that embodies keeping hopes at low levels. Survival depends on keeping expectations low because when your dreams are crushed over and over again you don't want to risk further disappointment.

As understandable and as functional as this coping mechanism may be it makes it hard for such children and families to envision new possibilities and to be receptive to risking themselves in new relationships or in the wider world because their assumptions of safety and trust in the world have long ago been shattered sometimes in cruel ways. Hope is the fuel people draw on to keep going when the going gets tough, when the road is treacherous or lonely. Yet hope can also be dangerous for people who chronically are exposed to trauma. The loss of hope, the loss of vision, and the loss of dreams are harrowing losses and can decimate the spirit. Children may be extremely reluctant to be put in that vulnerable position of embracing hope and risk exposure to still another crushing blow because it might be more than they can bear.

Sometimes hope is a conscious decision. It is a decision even though your world has been blown apart, to get up the next morning, put your best clothes on and go out the door to meet the world even if it means quite intentionally simply putting one foot in front of the other, one step at a time. I frequently challenge hopelessness in children and families by stating with conviction, "It is only hopeless, if you decide it is hopeless."

Facilitating hope in therapy particularly in families that have been battered by a series of tragedies requires sensitivity to a delicate balance that I Crenshaw (2010a) described in the title of an edited book: *Reverence in Healing: Honoring Strengths without Trivializing Suffering.* If a family is stuck in a survival orientation no matter how warranted, they may feel that the clinician is trying to move them to a more hopeful place to meet the validation needs of the therapist rather than their own needs. The family may also feel that the therapist is insensitive to the depth of their suffering and hasn't taken adequate time to truly hear their story and honor their suffering. Survival in some cases for these families may have been partly the result of pride in being able to survive their struggles and bear their suffering. For example, families may feel in keeping with their spiritual faith that they are being tested as to how much they can bear and that their tragedies in life are a way of testing their faith. Unless therapists take time to hear the stories of suffering and the meaning the families attach to their suffering, the families may feel their suffering is being trivialized and that the therapist simply does not understand or respect how difficult their journey has been or they may feel their religious beliefs or faith is disrespected. Creating hope requires the healers to be sensitive to the delicate balance and the necessity of pacing the therapy according to what the family can handle.

Child-Centered Play Therapy: A Treatment Modality to Bolster Resilience in Children

Now in its 3rd edition (2012), Garry Landreth wrote *Play Therapy: Art of the Relationship,* a seminal textbook for the advancement of child-centered play therapy as a developmentally responsive treatment modality for young children. Landreth (2012) proposed ten essential tenets for relating to children from a child-centered frame of reference; the fourth tenet is, "Children are resilient. Children possess a tremendous capacity to overcome obstacles and circumstances in their lives" (p. 46). Child-centered play therapy (CCPT) is a treatment modality grounded in the therapist's unwavering belief in the innate capacity of children to strive toward

growth and healing. Child-centered play therapists believe that children inherently possess inner strengths, offering the consistency of the therapeutic relationship and play therapy room and materials as an optimal environment in which children can most freely communicate and express their inner worlds.

Child-centered play therapists witness children's resiliency in the uniqueness of children's self-directed healing, expression, and growth in the play therapy process. The play therapy relationship is one in which children can feel unconditionally accepted and understood. In child-centered play therapy, children can exercise their inner strengths, practice problem solving, regulate their emotions, and direct their healing process; factors that bolster children's resiliency and capacity to cope with past, current, and future adversities and challenges. In this section, we will explore how components of child-centered play therapy resonate with factors that strengthen children's resiliency.

A fundamental component of child-centered play therapy is the play therapist's trust in the child. From a child-centered framework, children possess an innate tendency to move toward self-enhancement and development. Child-centered play therapists believe that children do not need to be taught to grow and heal; children naturally possess a drive to play and make sense of their worlds. Asset building interventions, such as CCPT, help to offset the burden of risk factors children often endure during hardships and adverse experiences (Masten, 2011). Children possess resiliency and CCPT provides children a safe and consistent therapeutic environment in which to exercise, expand, and develop this resilient nature.

Another fundamental component of child-centered play therapy is the therapeutic relationship. Amidst the unpredictability and chaos that children may experience outside of play therapy, the play therapy relationship offers a relief in being consistent and predictable for children. Bell et al. (2013) studied factors that contributed to resiliency among individuals who experienced childhood maltreatment and noted stability in children's environments as helpful in reducing problematic behaviors. When children know what to expect, children can organize their self-concept more fluidly, compared to the anxiety and rigidity children might express when they are exhausting their energy to figure out how they need to act or be in environments that are unsafe and unpredictable. In play therapy relationships, children receive unconditional positive regard and acceptance in relationship with play therapists which can translate to children viewing themselves as worthy of acceptance, attention, and voice. May (2009) contextualized resilience in play therapy as being demonstrated in children's self-esteem, self-efficacy, and problem solving. Child-centered play therapists offer children an interpersonal relationship that is safe, authentic, predictable, nonjudgmental, and warm (Landreth, 2012). Children can learn to rely on play therapists to be consistent figures of attachment and security (Ray, 2019). Luthar (2005) described a relationship with at least one caring adult, such as a play therapist, as a resiliency factor that improves children's long-term psychosocial development.

In child-centered play therapy, children direct their play and, therefore, their expression, process, and communication through play. Child-centered play therapists maintain self-awareness and intentionality in allowing children to lead the content and direction of their sessions, grounded in the belief that children will navigate the play therapy session and create play content how they most need. Geddes Hall (2019) credited CCPT as a developmentally appropriate avenue for healing for children exposed to domestic violence, noting that in CCPT, children are able to experience a sense of mastery over their trauma, control how and when they confront their trauma experiences through play, and experience the safety and consistency of the play therapy relationship. As you will experience in the case example below, the play therapy relationship allowed Rebecca a safe, natural avenue of play to express her concerns, process her trauma experiences, and communicate her feelings related to attachment disruption from her mother. In 2013, Schaefer and Drewes provided detailed descriptions of the therapeutic powers of play, situating resiliency as a key

therapeutic power of play to increase personal strengths of children. As Seymour (2013) described, play therapy provides context for children to "expand their personal repertoire of coping skills" (p. 227), an extraordinary power of play. What an honor for play therapists to witness children immerse themselves in play scenarios that are inherently satisfying and naturally healing.

The Evidence Base of Child-Centered Play Therapy in Relation to Resilience

Trust in children's healing processes, invitation for children to direct their play, belief in the power of the therapeutic relationship, opportunity for children's self-expression, and engagement with parents/caregivers are important components of child-centered play therapy. As described above, these components of child-centered play therapy resonate with factors observed to strengthen children's resiliency: children's own strengths, stable environment, supportive relationships, emotional regulation, and caregiver support. Child-centered play therapy is a well-researched treatment modality (Lin & Bratton, 2015; Bratton & Swan, 2017) and outcomes of child-centered play therapy research connect to these resiliency factors as well (as depicted in Fig. 19.1).

Masten and Obradovic (2006) identified self-efficacy as one of the top three attributes to operationally define resilience. CCPT researchers found positive impacts of CCPT intervention for children on improved related constructs, including self-worth (Yousef, 2016), self-efficacy (Cochran & Cochran, 2017; Ray et al., 2015; Fall et al., 1999) and self-esteem (Baggerly, 2004; Post, 1999; Shen & Armstrong, 2008; Smith & Landreth, 2003). Aligned with resiliency factors and consistent with goals of CCPT, play therapy has been shown to improve children's perceived competence (Baggerly, 2004; Scott et al., 2003; Yuen et al., 2002), adaptability (Jones & Landreth, 2002), academic achievement (Blanco et al., 2012, 2015, 2017), and social emotional functioning (Balch & Ray, 2015; Cheng & Ray, 2016; Cheng & Tsai, 2014; Smith & Landreth, 2004). Emotional regulation and moderation of physiological reactivity are cited as protective factors that bolster children's resiliency to traverse adverse experiences (Luthar, 2005; McLaughlin & Lambert, 2017). A recent study by Wilson and Ray (2018) demonstrated the positive impact of CCPT on children's emotional regulation.

Related to the resiliency described in the case example below, Kot et al. (1998) investigated the outcomes of CCPT intervention with children who witnessed domestic violence. They reported improvements in self-concept of children who received CCPT intervention. Positive impacts of CCPT also have been noted for children with parents in prison (Harris & Landreth, 1997; Landreth & Lobaugh, 1998). The case example below describes play therapy delivered in a prison setting, adapted to the unique needs of the family and with restrictions placed on the therapist by the prison setting (i.e., limited materials, space, etc.).

CCPT researchers have demonstrated that adapted formats of CCPT can be effective, such as Ritzi et al. (2017) and Schottelkorb et al. (2020) studies of CCPT delivered in a time-intensive format. A delivery modality of CCPT, child-parent relationship therapy (CPRT; Landreth & Bratton, 2019) is an alternative play therapy modality in which trained play therapists train parents in CCPT attitudes and skills for parents to facilitate play times with their children. Perceived parental care and support is an integral factor of children's resiliency (Bell et al., 2013; Collishaw et al., 2007; McLaughlin & Lambert, 2017). As depicted in the case example, play therapists are wise to involve parents through family play therapy, CCPT, CPRT, and/or parent consultations to enhance parent–child relationships. Depending on timing and needs of children, CCPT can be employed as prevention (Perryman & Bowers, 2018) to bolster resiliency prior to adverse experiences and/or intervention (Ray et al., 2015) to strengthen resiliency in the midst or after adverse experiences. In the case described below, Rebecca had not been referred

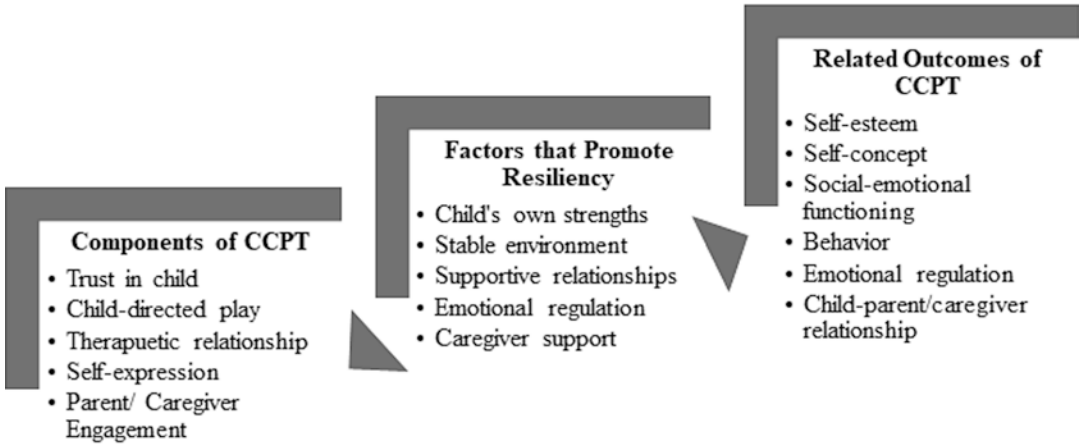

Fig. 19.1 Factors that promote resilience in children are connected to components and outcomes of child-centered play therapy (CCPT)

to play therapy for externally observed defiant behavior or anxious presentation. Rebecca began play therapy as a preventative measure, with caring adults recognizing the importance of bolstering Rebecca's resiliency as early as possible through play therapy.

Play Therapy to Enhance the Native Capacity for Resilience in a 3-Year-Old Girl

Many background details are omitted in this case example to protect the privacy of this little girl, Rebecca (not her real name), and her family. The key facts are that she was closely attached to both her parents until a tragedy occurred when she was 2 years, 7 months of age that resulted in the shooting death of her father and the incarceration of her mother. In addition, there were many indications that Rebecca had witnessed some part of the domestic abuse of her mother by her father that culminated in the tragedy. In the first 9 months after the tragic incident, she did not see her mother at all, although she knew her mother was alive because she had frequent phone calls with her. Ever since the incident that resulted in the sudden removal of both of her parents from her life, Rebecca has lived with her maternal aunt who is a loving and devoted caregiver. I (DC) became involved at the urging of two close colleagues who knew the family well. After conferring with the family and my colleagues, I offered to do pro bono family play therapy sessions with Rebecca and her mother at the county jail. The sessions continued for 1 year and 7 months and totaled more than 40 sessions on a biweekly basis. In all the play scenarios described below, the reader will note that the scenarios were initiated and crafted by the child, not the therapist, even though she was only 3 years and 5 months old when we began. This is a compelling testament to the resilience of this young child and speaks volumes about the healing potential of child-centered play therapy (CCPT) in the larger context of family therapy (Gil, 2016). Family play therapy combines the healing powers of play and family therapy by having family members participate actively in the play sessions. CCPT honors the self-reparative capabilities of the child and strongly facilitates resilience by its core beliefs that a child can direct their own healing path. The focus on strengths in play therapy is transtheoretical (Baron, 2016) and builds on the pioneering work of Brooks and

Goldstein (2015), but CCPT is inherently a strengths-based approach.

Child (Ages 3–4) Initiated Family Play Therapy Scenarios of Witnessing Traumatic Scenes

In early sessions, an important theme was creating a safe home. Rebecca would often initiate play with her mother and pretend dad (the therapist) with the theme of building a strong and secure home that "bad people" or "bad animals" could not threaten. Rebecca was not easily convinced that we would be able to accomplish this and while pretending to enjoy our new, safe home, she would suddenly get scared and say that "a bad guy" was trying to get in and the adults would chase the "bad guy" away. During the course of family play therapy, Rebecca enacted play scenes in which her parents thought she was asleep in her bed but instead she was sneaking around the house and spying on her parents and sometimes witnessed her dad hurting her mother. There were times when she saw her mother crying and even times when she saw blood and cuts on her mother. Her "spying" was a result of her anxiety and worry about her mom getting hurt, as evidenced by checking her mother for bruises and cuts in all the places her mother had tried to cover up in order to protect Rebecca from knowing of the domestic violence. Checking her mother for bruises and cuts around the face, neck, back of the head, legs, and even chest and stomach areas occurred immediately on seeing her mother and continued during the first 5 months of our sessions at the jail. As mentioned previously, the toys and materials of a play therapy room provide an optimal environment in which children can share their inner world. The conditions at the jail were hardly optimal. The child and play therapist had to go through a search by a guard with an electronic wand for security purposes before entering through two sets of noisy steel doors to the visiting area. The sessions were held in room 311, which we were only able to use by petitioning with the help of a public defender the Jail Administrator for permission. The room is larger than the tiny cubicles that most inmates had their visits but it was hardly private. This room facing the hall had a large window, with guards frequently passing by and peering into the room. The room itself was large enough to hold a conference room table with six large chairs surrounding it. The floor and the walls were concrete and the floor almost without exception was filthy dirty. There were no toys, no puppets, and no sand tray. The play therapist was allowed to bring in a sketch pad, some crayons and markers. The materials were sparse, the setting harsh, but the resilience of this little girl and her mother trumped all the challenges.

Child (Age 3) Initiated Family Play Therapy Scenarios to Master the Separation Trauma

Rebecca loved the time to reconnect with her mother and both the greeting and the parting at the end of the session was highly emotional for both the child and her mother. Beginning with the first family play therapy session, Rebecca initiated a play scenario out of her own good intuition of what she needed to heal; the play drama was focused on the separation trauma. Rebecca initiated a play drama in which she pretended to leave her mother, Sandra (not her real name) and instructed her mother to be sad and cry. Rebecca ran around to the other side of the table for a brief time and then came back around to Sandra's outstretched arms. They were both so glad to see each other and expressed how much they missed each other. This was repeated several times in the session and was viewed as mastery play, utilizing a key feature of play therapy enactments in which the passively experienced event is turned into an active mastery attempt to assimilate an experience that was too overwhelming at the time it occurred.

In session two, Rebecca used symbolism to provide a safe distance for continuing to work on the separation trauma, by casting the drama in the form of a bear family whose cave was under the table. Either mama bear or baby bear would disappear from the cave. When one would disappear,

the other would feel enormous sadness when they were missing, and then great joy and happiness on finding one another, expressed with lots of hugs and kisses and expressions of "I love you." These joyous reunions (the very thing that both she and her mom longed for) were heartwarming to witness by the therapist because it allowed each of them to reaffirm their loving bonds and attachment. In the bear cave (under the table) during the second session, Rebecca whispered to the therapist, "I really miss my mommy, I get sad and cry."

During session four, Rebecca pretended to be the one leaving as Mama Bear, and Baby Bear (Sandra) would be the one sad and inconsolable. The baby bear would cry and call out for its mother repeatedly, but Mama Bear was nowhere to be found. When momma bear did come back, there was a joyous, loving reunion with lots of cuddling. The power of the affect in the reunion scenarios speaks to the corrective emotional experience this child needed in light of the 9 months of complete separation after the tragedy occurred and the prolonged separation, except for the therapeutic visits when she was able to see her mother again. It should be noted that the reversal of roles in the fourth session confirmed for Rebecca that her mother understood the depth of her pain surrounding the separation but it also protected her from having to continue in the role of the baby bear who was left by its mother, an emotional place that simply left her too vulnerable to embrace at that point even in pretend play. The separation play continued until the twelfth session when it abruptly stopped because her mother was released on bail and remanded to house arrest awaiting trial.

In session 26, Rebecca, now 4 years old, once again called on her rich resilient resources and created a variation of the drama that helped her cope with the trauma of her dramatically and suddenly altered life. Please note that during Sandra's house arrest of 5 months, Rebecca did not live with her mother, but she saw her frequently, and on weekends she was often able to stay overnight in her maternal grandfather's apartment where Sandra lived while on house arrest.

Child (Ages 3–4) Initiated Family Play Therapy Scenarios to Turn the Clock Back before Before the Trauma Happened

With the help of her mother, Rebecca re-enacted her birth. She asked her mother to lay flat on the floor and put a pink blanket over her mother. Rebecca then crawled under the blanket and asked me to assist with the birth by pulling on her arms. As I lifted Rebecca up, she fell into the outreached arms of her mother who held and cuddled her new baby tenderly and lovingly. This dynamic posttraumatic play (Gil, 2017) initiated by Rebecca when she was 3, but continued for a number of months past her 4th birthday, could be thought of as an attempt "to turn the clock back" before the trauma occurred, before she effectively lost both of her parents, all the way back to her birth (Crenshaw & Lee, 2014). Rebecca was pretending to hit a reset button and longing for a do over to correct the pain of traumatic loss. Not only did this play drama afford her a "do over" but it offered solace and comfort by reaffirming the loving bond of attachment with her mother. In each of these enactments, her mother, without fail, expressed joy and delight in the birth of her new baby. Attachment researchers often cite the importance of parents taking delight and joy in their babies (Sullivan et al., 2011), and Sandra was able to express her joy, her love, and delight in her "newborn" in such a genuine way that Rebecca found it convincing and affirmative at a time when she needed to be reminded. The re-enactment of Rebecca's birth was repeated until Sandra was abruptly returned to county jail.

Child (Age 4) Initiated Family Play Therapy Scenarios to Strengthen Memories of Early Attachment

Just prior to the session 40, Sandra was abruptly returned to the county jail to await sentencing due to the jury verdict of guilty of second-degree murder. After 5 months of house arrest and seeing her mother out of jail clothes in a relaxed natural context in her grandfather's apartment,

both Sandra and Rebecca had to acclimate to seeing her mother again only in bright orange jail clothes in the unnatural context of the county jail. The verdict both shocked and deeply saddened Sandra and Rebecca, and they were demoralized to find themselves back in the place where the sessions had begun nearly 10 months ago. In session 42, Rebecca began a shift in her previous play dramas that seemed to be built on the hope of a quick and joyous reunion. The emphasis in the new play scenarios initiated by Rebecca focused on strengthening the attachment bond that would keep them connected even during a prolonged separation. I was awestruck that this child, now 4 years of age, could enlist internal resources, including amazing creativity, to develop imaginative pretend play and orchestrate it to address the psychic wounds she was suffering. As the legal setbacks mounted, and the time of her mother's incarceration lengthened in duration, there were plenty of times when she was overtly sad during sessions and times when the sadness and grief were reflected in her symbolic play, but more typically she was ebullient, spreading her positive mood throughout the jail beginning in the waiting area and then among the correction officers supervising the visiting rooms. Positive mood is often a quality associated with resilience, and Rebecca, like her mother, is well known among the many friends of her family for this trait, often despite the harsh circumstances the family endures.

Rebecca's new play drama took the form of her mom and her pretend dad (the therapist) symbolically driving to a Pet Store. In the Pet Store, the parents looked over and assessed the animals available and picked one to bring home with them to cherish and love and to protect with a safe home. Rebecca's gifts of creativity and imagination were at their best during this phase of the work, as we went repeatedly to the Pet Store and picked out a pet (played by Rebecca) to be loved and cherished and driven to a safe home. The pets ranged from a dog, cat, snake, polar bear, rainbow-colored hippo, giraffe, baby tiger, baby lion, baby elephant, baby leopard, and panther. On the way home with our "new pet" in the pretend back seat (chairs were arranged in a front and back seat configuration), if we turned on the "radio" in the "car," the new pet would sing to us in a lovely 4-year-old voice. If we changed the station on the "radio," we would be treated to another beautiful song, but her favorite was "Hallelujah." Rebecca was not always able to sing. During her sad times, she would simply tell us, "I don't want to sing." Resilience demonstrated by a 4-year-old endearing child that was awe inspiring.

Child Initiated Expression of Fear of Abandonment (Age 4)

In one of the most poignant moments of all the sessions, Rebecca in Session 41, cupped her mother's face in her hands and said in a sweet voice, "Mommy, during the time that I don't see you, I forget what your face looks like." Clearly, this young child, now older, did not need to rely on play dramas to express all of her fears and feelings. Rebecca was able to explicitly state that she experienced the intervals between the sessions as so unbearably long that she has trouble remembering her mother's face. My intuition was that she was also expressing a fear of abandonment, an unbearable loss of connection with her mother and consequently later in the session, I turned to Rebecca and said, "Rebecca are you worried that in the time when you don't see your mother, that she will forget what your face looks like?" Her face instantly validated the fear and Sandra, who was so attuned to her daughter, immediately said, "Rebecca, I will never, ever forget what your face looks like." Prior to Rebecca's remarkable ability to put this fear into words, she modified the Pet Store play drama so that when we came to pick out our new pet, we could hear it, we could feel it rub up against our legs but we could not see it. In those instances, the baby tiger or polar bear was "invisible." Expressing her fear of becoming invisible initially through play enabled her to address it explicitly in language in the later session. Kevin O'Connor (personal communication, 6/10/2020), a well-known play therapist for many years, has stressed that symbolic play needs to be paired

with language. He explains that while the experience of symbolic play can be powerful, language makes the experiences accessible for later, cognitive processing. Language also enables integration and generalization, so the ability of Rebecca to use language to express her fear of abandonment furthered the healing beyond symbolically playing out the invisible pet at the Pet Store. Another example of the groundwork laid by the symbolic play for the emergence of language, is prior to the emergence of overt grief about the prolonged separation from her mother expressed in verbal conversations with her aunt at bedtime and then crying herself to sleep, in one of the play therapy scenarios focused on the Pet Store, when Rebecca put the baby polar bear in the backseat of the car, she told us that the baby's mother had died, and she was very sad. Rebecca clutched in the backseat her own stuffed animal (Sky from Paw Patrol) as we pretended to drive home. Even though we turned on the "radio" in the car, she told us that she was too sad to sing on that occasion.

Child (Age 4) Initiated Play Therapy Scenarios to Prepare for Prolonged Separation

As the time approached for Sandra to be transferred to state prison for her lengthy prison sentence, Sandra, heartbroken, tried to prepare Rebecca for the devastating reality that her mother was going to be moved to a different place and she would be there for a much longer time than she had hoped. Remarkably, even before these heart wrenching conversations with her mother, Rebecca, for some time, had been preparing herself for growing up without her mother. She had pushed her aunt, her loving caretaker and guardian, to tell her more about why mom was in jail and couldn't come home. Her aunt, in the same sensitive and empathic manner typical of her loving mother, explained it to her in an age appropriate manner to her 4-year-old precocious niece. Rebecca during this period was grieving, as evidenced by crying herself to sleep every night, as was reported by her aunt. What was more astonishing was the variation that this remarkably resilient child introduced into her favorite play scenario in the later stages of the play therapy. When the mother and dad picked out a pet to love and cherish and to make a safe home for her, the baby tiger (or other pet) would wake up the next morning, and to the amazement of the parents be fully grown. The baby was no longer a baby, no more dependency needs; the full-grown tiger was ready to go out on its own. It was a magical solution, not at all realistic, but understandable: "If I am fully grown, I don't need anything, I can take care of myself, and I don't need my mother."

Summary

Stories of children triumphing over seemingly impossible odds date back to Biblical times. It is not reasonable to expect that any child, regardless of circumstances, will simply be able to arise above their circumstances because there are conditions that can overwhelm the best of resilience and some children by virtue of their biological, genetic endowment and exposure to cumulative severe trauma will simply be more vulnerable than others. Repeated severe trauma can undermine the resilience that is part of the normal adaptation processes of children. But neither should we underestimate the resilient, innate healing forces in children and their awe-inspiring spirit. Recent research has shown that some children can emerge from even the most severe trauma exposure and resume their developmental stride when intervention is comprehensive and recognizes the strengths and resources of the child, family, and community and the treatment program addresses in depth the wounds to the soul of the child inflicted by a wide variety of deliberate trauma.

The remarkable resilience of Rebecca is due to her own innate resources, the loving bond she enjoys with both her mother and her maternal aunt, who is her legal guardian and with whom she lives. While no one would deny that Rebecca has faced extreme adversity in early life, it can be argued that she is also fortunate. Her mother has

a bachelor's degree in Early Childhood Education and was known in the community for her attunement to babies and young children and led many young mothers to turn to her for advice with their own young children. Sandra's sensitive and empathic attunement to her child was seen throughout the course of play therapy. Her aunt (mother's sister) writes a blog on parenting young children and in addition to being a gifted writer, is also unusually sensitive and attuned to her own son, and Sandra's two young children. In addition, she was able and willing to take Sandra's children into her home immediately after the tragedy. The continuity of loving care was unbroken. The play therapy took place under harsh conditions but her relationship with her mother and play therapist enabled her to do the necessary work to gain mastery of the severe challenges she faces. There is no more challenging, nor rewarding work that a clinician could undertake, inspired by the courage of the children and the families we work with and the enlistment of the healing powers of play.

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Promoting Family Resilience

20

Froma Walsh

This chapter focuses on the importance of fostering family resilience in situations of adversity for children's well-being and positive growth. The concept of family resilience refers to the capacity of the family as a functional system in overcoming significant life crises and challenges. Highly stressful events, transitions, multistress conditions, and adverse social contexts impact the whole family, and in turn, family processes facilitate the adaptation of all members, their relationships, and the family unit. A research-informed map of key family processes for resilience can guide assessment, intervention, and prevention efforts. Practice principles and applications of a family resilience approach in clinical and community-based practice are discussed and illustrated. Research recommendations emphasize the value in mixed-method, multidisciplinary, and multilevel approaches to further our knowledge and practice.

A Family Systems Orientation

A relational view of resilience recognizes the vital importance of supportive bonds for children's positive adaptation in adversity. Early theory and research on resilience focused on personal traits and abilities in resilient youth who overcame serious life challenges. Notably, the significant influence of a strong, positive bond, as with a caregiver, model, or mentor, stood out across many studies (e.g., Werner & Smith, 2001). Relational processes nurture children's resilience: by conveying belief in their worth and potential and by supporting their best efforts to overcome challenges and make the most of their lives.

A family systems orientation expands the lens from the primary dyadic relationship between the mother/caregiver and child to the broad relational network, attending to the ongoing mutuality of influences. A resilience-oriented relational approach identifies potential resources throughout the immediate and extended family and involves members who are, or could become, helpful in fostering the positive development of at-risk youth. Even in troubled families, positive contributions might be made by grandparents and godparents, aunts and uncles, siblings, and informal kin.

The Concept of Family Resilience

Beyond the influence of individual family members, a systemic perspective focuses on risk and resilience in the family as a functional unit. The concept of *family resilience* refers to the capacity

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_20

of the family, as a functional unit, to withstand and rebound from adversity (Walsh, 1996, 2002, 2003, 2016b). A basic premise in family systems theory is that serious crises and persistent life challenges impact family functioning, and in turn, key family processes mediate adaptation (or maladaptation) for all members, their relationships, and the family unit.

The concept of family resilience extended early family developmental theory and research on family stress, coping, and adaptation by McCubbin and colleagues (Patterson, 2002). In the clinical field, a family resilience conceptual framework was developed by this author, informed by three decades of family systems research on transactional processes in well-functioning families (Walsh, 1996, 2003; Lebow & Stroud, 2012).

Family resilience is distinct in focus on family processes in dealing with situations of adversity. A serious crisis or pile-up of stressors over time can derail family functioning, with reverberations throughout the relational network. The family's approach and response over time are crucial for the resilience of all members, especially for young children and adolescents. Key transactional processes enable the family to rally in highly stressful times: to take proactive steps, to buffer disruptions, to reduce the risk of dysfunction, and to support positive adaptation and resourcefulness in meeting challenges.

Resilience entails more than coping, managing stressful conditions, shouldering a burden, or surviving an ordeal. Personal and relational transformation and positive growth can be forged in efforts to overcome adversity. Many studies have found that couples and families, through suffering and struggle, often emerge stronger, more loving, and more resourceful through collaboration and mutual support (see e.g., McCubbin et al., 2002, on family resilience with childhood cancer). While some families are more vulnerable or face more hardships than others, a family resilience approach holds a conviction in the potential of nearly all families to build resilience in dealing with their challenges. Even in cases of parental mental health or substance use challenges, or in families that have experienced severe trauma or troubled relationships, recovery, repair, and growth can be forged over the life course and across the generations (Walsh, 2016b).

A resilience-based practice approach addresses each family's challenges, identifies and builds their strengths and resources, and strengthens their bonds and resourcefulness to overcome adversity and thrive. The concept of resilience is inherently contextual: Because diverse families have varied life challenges, resources, and adaptive strategies, there are many viable pathways in resilience, fitting their needs and their preferred life vision.

Ecosystemic and Developmental Perspectives

Current resilience science views resilience as involving dynamic, multilevel (biopsychosocial) systemic processes fostering positive adaptation in the context of significant adversity. Regardless of the origin of problems, the family is the most crucial influence in children's development. A family resilience framework integrates ecosystemic and developmental dimensions of experience. Effective functioning is contingent on the type, severity, and chronicity of adverse challenges faced and the resources, constraints, and aims of the family in its social context and life passage.

Ecosystemic View

From a *biopsychosocial systems orientation,* risk and resilience are viewed in light of multiple, recursive influences. Human functioning and dysfunction involve an interplay of individual, family, community, larger system, and cultural variables. Genetic and neurobiological influences may be enhanced or countered by family processes and by sociocultural resources. Child and family distress may result from unsuccessful attempts to deal with an overwhelming crisis, such as traumatic loss of a parent, or cumulative stresses with disability, unemployment, or the wider impact of a major disaster (Walsh, 2016b, 2019, in press). The family, peer group, community resources, school or work settings, and other

social systems are seen as nested contexts in promoting resilience. Cultural and spiritual resources also support resilience, especially for those facing discrimination and socio-economic barriers (Boyd-Franklin & Karger, 2012; Falicov, 2012; 2015; Kirmayer et al., 2011; McCubbin & McCubbin, 2013; Walsh, 2009c).

Developmental View

A developmental perspective is essential in promoting resilience. The impact of adversity varies over time, with evolving conditions and in relation to individual and family life-cycle passage.

Emerging Challenges and Resilient Pathways Over Time Most major stressors are not simply a short-term single event, but rather a complex set of changing conditions with a past history and a future course (Rutter, 1987). For instance, risk and resilience for children with divorce involve family processes over time: from an escalation of predivorce tensions to separation, legal divorce and custody agreements, reorganization of households, and realignment of parent–child relationships (Greene et al., 2012). Most children and their families undergo subsequent disruptive transitions, with financial strains, residential changes, parental remarriage/repartnering, and stepfamily formation (Coleman et al., 2013) Longitudinal studies find that children's resilience depends largely on supportive family processes over time: how both parents, and their extended families, buffer stresses as they navigate these challenges and establish cooperative parenting networks across households. Such research can inform practice with families through these transitions over time.

The psychosocial demands of a serious child or parental illness or disability vary over its evolving course (Rolland, 2018; Rolland & Walsh, 2006). A crisis may be followed by a full recovery and return to normal life; persisting disability; a roller coaster of remissions and recurrences; or a deteriorating course. Varied family approaches may be more or less effective depending on emerging challenges and need to be flexible, shifting to meet other priorities and sidelined needs of siblings.

Cumulative Stressors Some families do well with a short-term crisis but buckle under the cumulative strains of multiple, persistent challenges, as with chronic illness, conditions of poverty, or ongoing, complex trauma in war and conflict zones or repercussions of the prolonged pandemic (Walsh, 2016b, 2020). A pile-up of internal and external stressors can overwhelm family functioning, heightening vulnerability and risk for subsequent problems and for children's distress (Patterson, 2002).

For instance, in a cascade effect, the closing of a factory and job loss for wage-earners can bring loss of essential family income; prolonged unemployment; and risks for housing insecurity, relational conflict, children's distress, and family breakup. In one community-based program, biweekly, multifamily workshops were conducted for displaced workers and their families to reduce stresses and strengthen worker and family resilience (Walsh, 2016b). The large group sessions focused on overcoming stressful transitional challenges: sharing effective strategies, reducing relational strains, realigning functional family roles, attending to children's anxieties, mobilizing extended kin, social, and financial resources and increasing family support for reemployment efforts.

Multigenerational Family Life Cycle Child and family functioning are assessed in the context of the family system as it moves forward over the life course and across the generations (McGoldrick et al., 2015). Family cultures, structures, and gender relations are increasingly diverse, complex, and fluid over an extended life trajectory (Walsh, 2012). Amid global social, economic, political, and climate disruptions, families are also navigating unprecedented challenges and facing many uncertainties about their future. Abundant research has found that children and families can thrive in varied family structures that are stable, nurturing, and protective (Biblarz & Savci, 2010; Lansford et al., 2001). Yet, when

children experience stressful transitions with relocations or changes in household and relational configurations, as with parents' divorce, and repartnering/remarriage, family efforts to ease their adaptation are crucial, attending to their multiple losses and disruptions in relationships, neighborhoods, schools, and peers.

The timing of children's distress is often concurrent with highly stressful family events or transitions. In a family system, one child may externalize distress in school or behavioral problems, while another child withdraws, or another acts cheerful to cover upset or support a beleaguered parent. The impact for children can vary with salient issues at different developmental phases. A systemic assessment identifies key relationships in the family system, including all household members, nonresidential parents and steprelations, the extended kin network, and other significant relationships (e.g., intimate partner, informal kin, caregivers). Companion animals can also be comforting supports for children through highly stressful times (Walsh, 2009a, b).

Frequently, child emotional or behavior problems coincide with anxiety-provoking disruptions and parental/caregiver separation, incarceration, or military deployment, which also involve family boundary shifts and role redefinition.

> Terrell, age 8, was seen in therapy for anxiety and poor concentration in school soon after he and three siblings were returned to their mother's custody following her recovery from drug addiction. They had been living with their maternal grandmother for 2 years. In regaining their mother, the children had now lost their grandmother. The mother cut off their contact, still angry that the grandmother had initiated the court-ordered transfer of the children. Now becoming overwhelmed by job and childcare demands, the mother risked losing custody again.
>
> A systemic approach was needed to guide intervention efforts. Sessions with the mother and grandmother were held to calm the transitional upheaval, repair their strained relationship, and negotiate their changing role relations. The therapist facilitated their collaboration across households, with the mother in charge as primary parent. It was crucial to reframe the grandmother's role function—not rescuing the children from a deficient mother but supporting her daughter's best efforts to succeed with her children and her job. The children's vital bond with their grandmother was renewed in her after-school childcare.

With the death of a significant family member, losses are multifaceted (Walsh, 2019, 2020, in press), involving not only particular persons and relationships, but also crucial role functioning, such as primary breadwinner or caregiver; a special position, such as the only child, son, or daughter; loss of homes, social networks, and communities with relocation; and loss of future hopes and dreams, as with the death of a child. Helping professionals can facilitate family processes in immediate and long-term adaptation to loss through (1) shared acknowledgment and rituals of remembrance, (2) shared meaning making and grief processes, facilitated by open communication, (3) family reorganization and relational realignment, and (4) continuing bonds with lost loved one and reinvestment in relationships and life pursuits.

The convergence of developmental and multigenerational strains increases risk for complications when facing adversity (McGoldrick et al., 2015; Walsh, 2016b). Experiences of past adversity influence expectations: Catastrophic fears can heighten risk of dysfunction, whereas models and stories of resilience can inspire positive adaptation. Distress is heightened when current stressors reactivate painful memories and emotions from past family experiences, especially those involving trauma and loss.

> One family sought family therapy for their 12-year-old son's troubling behavior. In the first session, the parents presented a tirade of complaints, including failing grades and stealing money from his mother's savings, stashed under the parents' mattress. The therapist explored their futile attempts to deal with the situation and the father's furious response, acknowledging their frustration and concern for their son. When asked what they most hoped to gain in therapy, the father replied, his voice choked up, "I'd like to learn how to show love to my kids." Moved by his response, the therapist asked to hear more. He replied, "My dad had a temper—he only knew how to yell." In exploring what that had been like for him as a youth, the son was attentive, realizing that his father had never felt loved by *his* father. Asked what that experience had taught the father, he replied, "I don't know any other way, but I'd like to do better by my kids."

It was also crucial to explore contextual stresses in the recent problems. The father, a mechanic, had recently lost his job; they were late on paying the rent and other bills. This precarious financial situation tapped into the mother's catastrophic fears from her childhood experience: Her unemployed father took to drinking and abandoned the family, and her mother had to go on public aid. She became tearful in recalling how tough all those years had been. Manny softened and took her hand, saying, "That's why she took it so hard when her small savings were missing—she lost her security." As she nodded through tears, he hugged her. The therapeutic work broadened to meet their goals: ways to regain their security, share more love in the family, and support their son's positive aspirations.

In linking past painful experience with present distress, current aspirations and future vision can become positive forces to break destructive patterns and achieve healthier relationships.

Mapping Key Processes in Family Resilience

When families face adversity, their problem-saturated life situation and the deficit focus in the mental health field can skew attention to problems and dysfunction, making it difficult to identify and build on their strengths and resources. Diagnostic categories that reduce the richness of family life or typologies that propose a "one-size-fits-all" model of "the resilient family" do not fit the many varied ways that families live today and the challenges they face. Caution is needed not to assume dysfunction or harm to children in families that differ from an idealized cultural standard, such as families headed by a single parent or by gender-variant parents (Green, 2012).

Resilience-oriented maps can be useful to guide practice, with practitioners mindful of their own subjectivity in all assessment. The Walsh Family Resilience Framework, informed by three decades of research, identified nine transactional processes that facilitate family resilience (Walsh, 2003, 2016b; see Table 20.1). These core processes were organized in three domains (dimensions) of family functioning to serve as a useful map to guide inquiry and strengthen key beliefs and practices that can facilitate family resilience.

Table 20.1 Key processes in Walsh Family Resilience Framework

Belief systems.
1. **Making meaning of adversity**
Relational view of resilience
Normalize, contextualize distress
Sense of coherence: View crisis as meaningful, comprehensible, manageable challenge
Facilitative appraisal: Explanatory attributions; future expectations;
2. **Positive outlook**
Hope, optimistic bias; confidence in overcoming challenges
Encouragement; affirm strengths, focus on potential
Active initiative and perseverance (can-do spirit)
Master the possible; accept what can't be changed; tolerate uncertainty
3. **Transcendence and spirituality**
Larger values, purpose
Spirituality: Faith, contemplative practices, community; connection with nature
Inspiration: Envision possibilities, aspirations; creative expression; social action
Transformation: Learning, change, and positive growth from adversity
Organizational processes
4. **Flexibility**
Rebound, adaptive change to meet new challenges
Reorganize, restabilize: Continuity, dependability, predictability
Strong authoritative leadership: Nurture, guide, protect
Varied family forms: Cooperative parenting/ caregiving teams
Couple/co-parent relationship: Mutual respect; equal partners
5. **Connectedness**
Mutual support, teamwork, and commitment
Respect individual needs, differences
Seek reconnection and repair grievances
6. **Mobilize social and economic resources**
Recruit extended kin, social, and community supports; models and mentors
Build financial security; navigate stressful work/ family challenges
Transactions with larger systems: Access institutional, structural supports
Communication/problem-solving processes
7. **Clarity**
Clear, consistent messages, information
Clarify ambiguous situation; truth seeking

(continued)

Table 20.1 (continued)

8. **Open emotional sharing**
Painful feelings: (sadness, suffering, anger, fear, disappointment, remorse)
Positive interactions: (love, appreciation, gratitude. humor, fun, respite)
9. **Collaborative problem solving**
Creative brainstorming; resourcefulness
Share decision-making; negotiation & conflict repair
Focus on goals; concrete steps; build on success; learn from setbacks
Proactive stance: Preparedness, planning, prevention

In Walsh (2016b)

Family belief systems support resilience by facilitating (1) meaning making of challenges; (2) a hopeful, positive outlook for active agency, initiative, and perseverance; and (3) transcendent or spiritual values, practices, and purpose. *Family organizational processes* support resilience through (4) flexible yet stable structure, with strong leadership for nurturing, guidance, and protection; (5) connectedness for mutual support and teamwork; and (6) extended kin, social, community, and socio-economic resources. *Communication processes* facilitate resilience through (7) clear information, (8) empathic emotional sharing of painful struggles and positive interactions revitalizing spirits and bonds, and (9) collaborative problem-solving, with a proactive approach for resourcefulness with future challenges.

These relational processes are mutually interactive and synergistic. For example, shared meaning making facilitates communication clarity, emotional sharing, and problem-solving; in turn, effective communication processes facilitate shared meaning-making. Spiritual nourishment may be found in varied ways: through shared religious or humanistic values and practices in family life, by involvement in a faith community, in communion with nature, through expressive arts, or in social activism to help others or improve conditions (Walsh, 2009c). Some processes, such as good communication, tend to promote resilience across contexts, while others may be situation specific. Deficit-focused approaches tend to neglect the need for positive interactions—sharing fun times, humor, and appreciation—that provide respite under stress and revitalize bonds and spirits.

Rather than a typology of traits, these dynamic processes involve strengths, skills, and resources that family members can build and mobilize within their family and in transactions with their social environment (Ungar, 2004, 2010). Core processes may be expressed in varied ways, related to cultural norms and family preferences, and they may be more (or less) relevant and useful in different situations of adversity and evolving challenges over time. Families forge varying pathways in resilience depending on their resources, values, and aims. Interventions are attuned to each family's cultural values, their social location and economic situation, and their developmental priorities. A systemic lens enables clinicians to keep mindful of the broad and interdependent family, social-cultural, and larger systems influences.

Practice Principles and Applications

A family resilience orientation is finding useful application in clinical practice and community-based services (Walsh, 2002, 2016b). A resilience-oriented approach utilizes principles and techniques common among strength-based family systems practice approaches. It attends more centrally to the impact of significant stressors and aims to increase family capacities for positive adaptation.

A resilience-oriented genogram (diagram of immediate and extended family relationships) and a family timeline (noting major events and stressors) are useful to organize information, track patterns, explore connections, and guide intervention (McGoldrick et al., 2021). Too often, assessment is skewed in focus on problem behaviors, family members, or relationships (e.g., substance abuse, relational conflicts, and cutoffs). In a resilience-oriented assessment (Walsh, 2003, 2016b), the clinician searches for strengths and potential resources alongside problematic patterns.

Family resilience-oriented interventions are collaborative and respectful of families, seeking to understand their lived experience, their social contexts, and the challenges they face. Therapeutic goals support their future life vision and preferred pathways forward. Practitioners align as compassionate witnesses and facilitators, helping clients to share painful experiences of suffering and hardship; to overcome silence, stigma, shame, blame, or despair; to recognize hidden strengths; and to build mutual support and teamwork in their efforts to overcome challenges. Appreciative inquiry, attending to both struggles and strengths, readily engages families, who are often reluctant to seek mental health services, concerned that they will be judged as disturbed or deficient. Where they have faltered, they are viewed with compassion, in light of their daunting challenges, and their best intentions and efforts are affirmed.

It should be noted that a family systems approach is a conceptual orientation—*not* necessarily a conjoint modality requiring the whole family to be seen together. A systems assessment lays the groundwork for therapist–family collaboration by prioritizing areas of concern and identifying potential resources in kin and community networks. It may lead to individual and/or family sessions with a child or adolescent, parents, siblings, and significant extended family members. Brief family intervention can be useful when the chief complaint concerns a focal problem, such as a family transition that is highly stressful for children. A preventive early intervention or consultation with a family can avert a major crisis or spiraling of distress. More intensive family therapy may be needed if there are multiple, chronic stressors or complications of past trauma and losses. Family involvement may include (1) those affected by the problematic situation and (2) those who can contribute to positive adaptation and resilience. Putting an ecological view into practice, interventions may involve collaboration with school, workplace, social service, justice, or health care systems. Resilience-oriented family interventions can be adapted to many formats:

- Family consultations, brief intervention, or more intensive family therapy may combine individual and conjoint sessions, including members affected by stressors and those who can contribute to positive child and family adaptation.
- Psycho-educational multifamily groups and workshops provide social support and practical information, offering concrete guidelines for stress reduction, crisis management, problem-solving, and optimal functioning as families navigate through stressful periods and face future challenges.
- Brief, cost-effective "check-ups" can be timed around stressful transitions, milestones, or emerging challenges in long-term adaptation.

Over the past three decades, the Chicago Center for Family Health, which I co-direct, developed clinical training, services, and community partnerships based on our family resilience orientation (Walsh, 2016a, b). Programs are shown in Table 20.2 to suggest the range of practice applications of this approach.

In our Family–Schools Partnership Program, monthly consultation groups brought together teachers, counselors, and other professionals in schools serving low-income, largely racial/ethnic minority neighborhoods to address their challenges and foster resilience-oriented family–school collaboration for the success of at-risk youth.

The benefits of multilevel interventions were also seen in our community-based partnership in Los Angeles to develop and implement a resilience-oriented family component for a gang reduction/youth development (GRYD) program (Walsh, 2016a, b). The approach—including individual, peer group, family, and community interventions—aimed to support the positive development of 1000 youth (age 10–14) identified at high risk of gang involvement in neighborhoods with high gang activity. CCFH provided family intervention training for 150 counselors, broadening the focus from youths' risk factors and problem behaviors to identify and build strengths and resources in their relational network toward positive life aims.

Table 20.2 CCFH resilience-oriented, community-based program applications

Chicago Center for Family Health (1991–2015): Family Resilience-Oriented Training, Services, Partnerships
Recover from crisis, trauma, and loss
Family adaptation to complicated, traumatic loss (Walsh)
Mass trauma events; major disasters (Walsh)
Relational trauma (Barrett, Center for Contextual Change)
Refugee families (Rolland, Walsh, Weine)
War and conflict-related recovery (Rolland, Weine, Walsh)
Navigate disruptive family transitions
Divorce, single-parent, stepfamily adaptation (Jacob, Lebow, Graham)
Foster care (Engstrom)
Job loss, transition, and re-employment strains (Walsh, Brand)
Overcome challenges of chronic multi-stress conditions
Serious illness, disabilities, end-of-life challenges (Rolland, Walsh, R. Sholtes, Zuckerman)
Poverty; ongoing complex trauma (Faculty)
LGBT issues, stigma (Koff)
Overcome obstacles to success: at-risk youth
Child and adolescent developmental challenges (Lerner, Schwartz, Gutmann, Martin)
Family–school partnership program (Fuerst & Team)
Gang reduction/youth development (GRYD) (Rolland, Walsh & Team)

In Walsh (2016b)

> In one case, 11-year-old Miguel's family was initially assessed only as a negative influence: the (nonresidential) father and older brother were active gang members and the mother was not at home after school to keep Miguel off the streets and invested in his schoolwork. An interview with the mother revealed her loving concern for Miguel, her limited resources, and her distress that her job and long commute constrained her ability to monitor his activities or support his studies. We learned that the maternal uncle—the boy's godfather—a former gang member, who had been incarcerated, had turned his life around productively. Invited to a family session, he readily agreed to take a mentoring role with Miguel and to bolster the mother's parenting efforts, strengthening family supports and reducing obstacles toward a positive future vision for Miguel.

In this multilevel program, many protective/preventive and promotive influences in resilience were synergistic. An outcome study found that youths involved in the program over 1year scored significantly lower on problems and risk factors than at their entry and compared to 500 youths in a matched control group. In program evaluation, separate interviews with youths and their parents found that they experienced prevention services as a whole-family intervention, with positive family impacts such as improved relationships, greater connection across generations, and improved family functioning, communication, and problem-solving.

A resilience orientation is most urgent in working with multistressed families and at-risk youth. Family vulnerability and risks for children are heightened by a pileup of stressors and chronic disruptions. Multiple traumas, losses, and dislocations can overwhelm coping efforts. Recurrent crises and persistent demands drain resources, especially for single parents. Family organization, patterns of interaction, and relationships can become fragmented and chaotic, contributing to physical and sexual abuse or neglect, youth substance abuse, and conduct disorder. Constant stress and frustration can spark intense conflict. With inconsistent limit setting and discipline, frustration can trigger violence or threat of abandonment.

Families in under-resourced communities, disproportionately racial/ethnic minorities, are most likely to be destabilized by frequent crises, traumatic losses, abrupt transitions, and chronic stresses of unemployment, food and housing insecurity, discrimination, and lack of access to health care. With neighborhood crime, violence, and drugs, parents worry constantly for their children's safety. Bleak life prospects make it hard to break the cycle of poverty and despair, leaving parents defeated by repeated frustration and failure. High instability in their lives and relationships increases youth adjustment problems. Intertwined family and environmental stresses contribute to school dropout, gang activity, and teen pregnancy.

When therapy is overly problem focused, it grimly replicates the family's problem-saturated experience. A resilience-oriented perspective seeks to empower struggling families to master

the challenges in their stress-laden lives. Interventions that enhance positive interactions, support coping efforts, and build resources are more effective in reducing stress and enhancing pride and more effective functioning. A compassionate understanding of internal and external stressors can engage parents in efforts to break dysfunctional cycles and raise their children well. Almost all parents, at heart, want a better life for their children, even when a myriad of difficulties block their ability to act consistently on these intentions. They often know what they need to change in their lives and will take active steps if clinicians value their potential and support their best efforts.

By strengthening the family unit, the home becomes a more solid foundation for at-risk youth. For gender-nonconforming youths confronting social stigma, family acceptance is the most significant influence in decreasing risk and supporting positive strivings. If parents are unable to provide this structure and support, it is important to recruit caregivers and positive models and mentoring relationships in the extended kin network to nurture youth resilience. Grandfathers and godparents are often overlooked resources, who each have a special bond with a child. Seeing the whole family together may not be feasible in overstressed or fragmented families, although telehealth services are offering new possibilities. Maintaining a family-centered approach involves a systemic view that addresses family members' problems in context, repairs and strengthens bonds, and supports the family's efforts to thrive. By shifting focus from problems to possibilities toward a preferred future vision, risk factors are addressed as obstacles to overcome, and family members are engaged to support their child's positive aims (Madsen, 2011). A strengths-oriented assessment lays the groundwork for therapist–family collaboration by prioritizing areas of concern and identifying potential resources in kin and community networks. Resilience-oriented services foster family empowerment as they bring forth shared hope, develop new and renewed competencies, and strengthen family bonds. Interventions to strengthen family resilience also have preventive value, building capacities in meeting future challenges.

Advances and Challenges in Family Resilience Research

Systems-oriented family process research over recent decades has provided empirical grounding for assessment of effective family functioning (Lebow & Stroud, 2012). However, family instruments and typologies tend to be static and acontextual, often not considering a family's stressors, resources, and challenges or their social and developmental contexts. The context-relevance of the concept of resilience complicates research efforts (Card & Barnett, 2015; Walsh, 2016b). The diversity and complexity of kinship bonds within and across households require expanded definitions of "the family."

There has been growing interest in family resilience research utilizing qualitative and mixed methods. Most studies focus on family processes in response to a particular type of adversity, such as serious illness, disability, or death of a child or parent; divorce, foster care, and stepfamily adaptation. Increasing attention is being directed to family resilience in conditions of extreme poverty, community disasters, terror attacks, war-related trauma, populations in war-torn regions, and refugee and forced migration experiences (e.g., MacDermid, 2010; see Walsh, 2016b, in press). Such research can advance family-focused mental health prevention and intervention, refocusing from how families fail to how families under stress can succeed.

With interest in use of a questionnaire to assess family resilience, the Walsh Family Resilience Questionnaire, (Walsh, 2016b), operationalizing the nine keys in resilience in the framework above, is finding wide application internationally. Questionnaires can be useful to rate within-family changes over time, as in immediate and long-term adaptation to the death of a parent or child, or in changes over the course of a serious health condition. They can also be used for pre- and postassessment in practice effectiveness research. Questionnaire can be useful in

mapping a particular family profile to identify their strengths, with caution neither to "profile" or stereotype families, nor to sum up and label families as either resilient or not. Similar to scaling questions in systemic practice, questionnaire responses are most useful when explored more fully in interviews. For instance, in several studies, many families who were not religious in faith observance or affiliation described the value of spiritual resources for resilience in prayer or meditation and through connection with nature, art, or music, or in social activism (Lietz, 2013; Walsh, 2009c).

More collaborative, multidisciplinary and multilevel approaches in research and practice are needed. Individual and community approaches are commonly linked but leave out the family impact of adversity, the crucial importance of family functioning and relational bonds in positive adaptation. Masten and Monn (2015) strongly urge efforts to integrate youth and family resilience approaches. As studies confirm, having a relationship with a caring parent or family member is far and away the most powerful protective factor for children. Children's ability to engage with challenges and overcome obstacles can be nurtured and developed in children from a young age. Practitioners can support family efforts to provide a stable home foundation and bedrock of support through challenging times and to strengthen key relational processes in the family resilience framework described above.

Caution is advised that assessment of family resilience not be misapplied to judge families as "not resilient" if they are unable to rise above serious life challenges. Family processes can strengthen a family's capacities, yet may not be sufficient to overcome devastating biological, social, or environmental conditions. Moreover, the notion of resilience should not be misused in public policy to withhold social supports or to maintain inequities, rationalizing that success or failure is determined by individual or family strengths or deficits—i.e., the presumption that those who are resilient will flourish and those who falter simply weren't resilient. It is not enough to bolster the resilience of vulnerable families to "beat the odds" they face; a multilevel approach requires larger systems supports to change their odds.

Conclusion

In our rapidly changing societies and turbulent times, *family resilience* is more crucial than ever. Families are buffeted by economic, social, environmental, and global upheaval. Some must rebuild their lives after pandemic-related losses or a major disaster; at-risk youth and vulnerable families struggle to rise above prolonged multistress conditions.

A family resilience approach, by definition, focuses on strengths under stress, in dealing with a crisis or prolonged adversity. Functioning is assessed in context: relative to each family's values, structural and relational resources, and life challenges. Processes for optimal functioning and the well-being of members may vary over time as challenges emerge and children and families grow and change.

This research-informed family resilience framework can guide clinical practice and community-based services by (1) assessing family functioning on key system variables as they fit each family's values, structure, resources, and challenges and then (2) targeting interventions to strengthen family functioning in overcoming the adverse challenges faced. This collaborative approach strengthens relational, community, cultural and spiritual resources, grounded in a deep conviction in the human potential for recovery and positive growth forged from adversity.

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The Power of Parenting

21

Robert B. Brooks

I have focused for many years on examining the impact that parents have in nurturing hope, resilience, and an optimistic outlook in their children (Brooks, 1998, 2019; Brooks & Goldstein, 2001, 2003, 2011). More recently, my colleague Sam Goldstein and I have elaborated upon our work in the area of resilience by introducing the concept of *tenacity* (Goldstein & Brooks, 2021). My goal in this chapter is to briefly identify the seven instincts subsumed within tenacity and to describe specific steps that parents can initiate on a daily basis to nurture these instincts and a resilient mindset and behaviors in their children. I believe that while instilling resilience and tenacity is an important parenting task at any time, it has assumed even greater urgency in light of the unprecedented disruptions and stress occasioned by the pandemic.

Before embarking on this stated goal for this chapter, I believe it is necessary to address the following three questions:

1. What does the concept of resilience encompass?
2. What are the seven instincts of tenacity?
3. Do parents *really* have a major influence on the development of resilience and tenacity in their children?

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What Is Resilience?

Resilience may be understood as the capacity of a child to deal effectively with stress and pressure, to cope with everyday challenges, to rebound from disappointments, mistakes, trauma, and adversity, to develop clear and realistic goals, to solve problems, to interact comfortably with others, and to treat oneself and others with respect and dignity (Brooks & Goldstein, 2001).

In scientific circles, research related to resilience has primarily studied youngsters who have overcome trauma and hardship (Beardslee & Podorefsky, 1988; Brooks, 1994; Crenshaw, 2010; Hechtman, 1991; Herrenkohl et al., 1994; Masten, 2015; Masten et al., 1990; Rutter, 1985; Werner & Smith, 1992). However, several researchers and clinicians have raised important issues, such as: "Does a child have to face adversity in order to be considered resilient?" or "Is resilience reflected in the ability to bounce back from adversity or is it caused by adversity?" (Kaplan, 2005).

Brooks and Goldstein (2001, 2003) have proposed that the concept of resilience be broadened to apply to every child and not restricted to those who have experienced adversity. All children face challenge and stress in the course of their development and even those who at one point would not be classified as "at-risk" may suddenly find themselves placed in such a category. This abrupt shift to an at-risk classification was evident

S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_21

on a dramatic scale for the hundreds of children who lost a parent or loved one as a consequence of the terrorist attacks on 9/11. Nurturing resilience should be understood as a vital ingredient in the process of parenting every child whether that child has been burdened by adversity or not.

Other mental health specialists have also expanded the definition or scope of resilience to go beyond bouncing back from adversity. Reivich and Shatte (2002) contend that "everyone needs resilience," and they write:

> … resilience is the capacity to respond in healthy and productive ways when faced with adversity and trauma; it is essential for managing the daily stress of life. But we have come to realize that the same skills of resilience are important to broadening and enriching one's life as they are to recovering from setbacks. (p. 20)

A more inclusive definition of resilience that embraces all youngsters encourages us to consider and adopt parenting practices that are essential for preparing children for success and satisfaction in their future lives. A guiding principle in each interaction parents have with children should be to strengthen their ability to meet life's challenges with thoughtfulness, confidence, purpose, responsibility, empathy, and hope—all qualities of resilience. The development of a resilient mindset, which will be described in detail later in this chapter, is not rooted in the number of adversities experienced by a child, but rather in particular skills and a positive attitude that caregivers reinforce in a child.

This perspective of developing the mindset and skills associated with resilience in all youngsters is found in an increasing number of parenting books that identify strategies to nurture resilience in one's child (Ginsburg, 2014; Lythcott-Haims, 2015; Siegel & Bryson, 2019).

What Is Tenacity and Its Seven Instincts?

After coauthoring several books about resilience, Brooks and Goldstein (2001, 2003) recognized that one of the components of resilience—self-discipline—deserved special consideration since it served as the inner control required to achieve resilience. This viewpoint prompted them to write *Raising a Self-Disciplined Child* (2007). Their ongoing thoughts and insights about resilience and self-discipline led them to introduce a third major concept in their work, *tenacity*. They propose that tenacity is composed of seven instincts that provide the fuel and self-determination to help us to be resilient and achieve self-discipline (Goldstein & Brooks, 2021).

As the name implies, instincts are understood to be inborn attributes. In many species, instincts are manifested as fixed patterns of behavior that lead to a very specific outcome such as a bird building a nest for the first time or a salmon returning upriver to its birthplace. In contrast, in complex species such as humans, instincts play a critical role in shaping the course of development from birth through adulthood. During tens of thousands of years and generations of children, instincts underwent many genetic mutations, some of which were adaptive and increased the likelihood that babies would survive and thrive. A key question for parents and other caregivers about the seven instincts of tenacity is how to nurture what already exists in nascent form so that children are more likely to experience successful, fulfilling lives.

The following is a brief overview of each of the seven instincts. While each is distinct, they frequently work in concert and overlap with each other. For a more in-depth description, please refer to our book *Tenacity in Children* and the chapter about this concept in this volume (Goldstein & Brooks, 2021).

Intuitive Optimism. From birth children "know" that success on a task is attainable and they are willing to try again and again to master developmental challenges even when previous attempts have not proven effective. This instinct serves as the engine that fuels the quest of children to understand and master the world around them.

Intrinsic Motivation. This instinct is rooted in the joy derived when engaging in a task that generates excitement and pleasure. Unlike extrinsic motivation that is driven by rewards or punitive

consequences, when intrinsic motivation is operating the reward is built into doing the task. This view parallels the view of Harvard psychologist Robert White more than 60 years ago when he proposed that there is an inborn need or motivation in children to master the developmental challenges they face in their environment (White, 1959).

Compassionate Empathy. Empathy is the ability to understand the world of others on both a cognitive and affective level. Compassion is perceived of as calling upon that understanding to initiate actions that convey caring toward others. Early forms of empathy have been observed in infants, in primates, and in dogs, suggesting that babies "are born hardwired to map the experiences of others in their brains and bodies" (Walsh & Walsh, 2019).

Simultaneous Intelligence. This instinct represents our understanding of how elements of a problem fit together into a solution. It involves the process of reasoning and critical thinking in solving problems. While most tests of intelligence basically measure acquired knowledge and thus, favor children who have access to greater educational opportunities, simultaneous intelligence provides a lens through which to view skills related to reasoning and solving problems.

Genuine Altruism. This is the giving of oneself to support others with no expectation of a reciprocal action by the recipients of this kindness. In essence, we are motivated to help others even when we receive no immediate benefit and even when the recipient is a stranger to us. Similar to the other instincts, researchers have demonstrated that children as young as 18 months of age will readily assist others to achieve their goals (Warneken & Tomasello, 2009).

Virtuous Responsibility. Virtue is predicated on the principles and ethics that guide what we do while responsibility involves being accountable for our actions. However, Virtuous Responsibility is more than just accepting culpability or blame, which would deprive this instinct of its powerful positive meaning. This instinct involves meeting responsibilities that protect and enrich one's society. This broader view of Virtuous Responsibility captures its close relationship to Compassionate Empathy.

Measured Fairness. This instinct is instrumental in the survival of our species and is closely allied with such prosocial behaviors as effective communication, empathy, cooperation, and forgiveness. Issues of fairness and unfairness are constantly present in a child's development. Capturing the instinctual basis of fairness, Jing Li and her colleagues (2016) observed, "Fairness is one of the most important foundations of morality and may have played a key role in the evolution of cooperation in human beings."

A major goal of parents and other caregivers is to nurture resilience and the seven instincts of tenacity in their children if the latter are to lead lives filled with hope, compassion, generosity, and success. Before detailing strategies to meet this goal, it is important to address the third question listed earlier in this chapter.

Do Parents Have a Major Influence on the Development of Resilience in Their Children?

Many people, convinced of the profound influence that parents exert on a child's development and resilience, might wonder why it is necessary to pose this question. However, the answer is not as clear-cut as many may believe (Goldstein & Brooks, 2003). Sophisticated scientific instruments have highlighted the significant impact of genetics on adult personality, adaptation, and cognitive and behavioral patterns (Feder et al., 2009). As a consequence, the degree to which parents influence their child's development has been questioned by several researchers (Harris, 1998; Pinker, 2003).

In her book *The Nurture Assumption,* Harris (1998) presented evidence to suggest that the extended environment outside of the home, particularly the impact of peers, explained much of the nongenetic differences in human behavioral traits. Though some have lauded Harris for her contribution to the field of child development, she has also been widely criticized by profession-

als who have interpreted her conclusions as suggesting that parents are inconsequential players in their children's lives (Pinker, 2003).

However, Harris' position may be interpreted not as a dismissal of the influence of parents, but rather as a call to be more precise in understanding the impact of parents on the present and ultimately, future lives of their children. Pinker (2003), citing a number of studies of fraternal and identical twins reared together or apart, contends that it is not that parents don't matter; they in fact matter a great deal. It's that over the long term, parent behavior does not appear to significantly influence a child's intelligence or personality. In contrast, Siegel (2015) has posited that a child's attachment and relationship with caregivers is a major determinant of mental health and adaptation.

The position taken in this chapter is that even if those personality qualities in a child attributed to parental influence are in a statistical equation much smaller than previously assumed, they may in the daily lives of children be the difference in determining whether or not a child succeeds in school, develops satisfying peer relationships, or overcomes a developmental or behavioral impairment. Parents possess enormous influence in the lives of their children.

Data suggesting that a particular parenting style may play a minimal role in intelligence or personality development does not absolve parents of their responsibility to raise their children in moral, ethical, and humane ways. The quality of daily parent-child relationships makes a vital difference in the behavior and adjustment of children. As Sheridan et al. (2004) note, "The development of resiliency and healthy adjustment among children is enhanced through empathetic family involvement practices" (p. 168). Others have also called attention to the impact that parenting and close family relationships have on the well-being of children across the lifespan, including as a buffer against adverse events (Chen et al., 2017; Kritzas & Grobler, 2005).

Not surprisingly, the impact of parental behavior on children is less debatable when the behavior in question is inappropriate, humiliating, or abusive compared with that which is positive or benign. For example, Jaffee (2005) has highlighted the devastating effects on a child's emotional well-being and resilience when confronted with parents who have a history of mental disorder and also engage in violent and abusive behavior. Kumpfer and Alavarado (2003), emphasizing the significance of parental behavior, write:

> The probability of a youth acquiring developmental problems increases rapidly as risk factors such as family conflict, lack of parent-child bonding, disorganization, ineffective parenting, stressors, parental depression, and others increase in comparison with protective or resilience factors. Hence, family protective mechanisms and individual resiliency processes should be addressed in addition to reducing risk factors. . . . Resiliency research suggests that parental support in helping children develop dreams, goals, and purpose in life is a major protective factor. (p. 458)

Pinker (2003) notes, "Childrearing is above all an ethical responsibility. It is not okay for parents to beat, humiliate, deprive, or neglect their children because those are awful things for a big strong person to do to a small helpless one" (p. 398). Similarly, Harris writes, "If you don't think the moral imperative is a good enough reason to be nice to your kid, try this one: Be nice to your kid when he's young so that he will be nice to you when you're old" (p. 342).

Pinker (2003) poignantly captures the moral dimension of parenting practices in the following statement:

> There are well-functioning adults who still shake with rage when recounting the cruelties their parents inflicted on them as children. There are others who moisten up in private moments when recalling a kindness or sacrifice made for their happiness, perhaps one that the mother or father has long forgotten. If for no other reason, parents should treat their children well to allow them to grow up with such memories. (p. 399)

Given the complexity of a child's development, it is unlikely that a specific number will ever be assigned as a "parent's share" or percentage of that development. As Deater-Deckard et al. (2005) wisely observe, "The question is no longer whether and to what degree genes or environments matter, but how genes and environ-

ments work together to produce resilient children and adults" (p. 49).

They conclude:

> . . . resilience is a developmental process that involves individual differences in children's attributes (e.g., temperament, cognitive abilities) and environments (e.g., supportive parenting, learning enriched classrooms). The genetic and environmental influences underlying these individual differences are correlated, and they interact with each other to produce the variation that we see between children, and over time within children. . . . It is imperative that scientists and practitioners recognize that these gene-environment transactions are probabilistic in their effects, and the transactions and their effects can change with shifts in genes or environments. (p. 60)

Although researchers and clinicians may debate the extent to which particular parenting practices impact on children in specified areas, it seems that all agree that parents make a significant difference either in the day-to-day and/or future lives of their children. We concur with this position and believe that an essential task is to identify both those parental practices that nurture the skills, positive outlook, and stress hardiness necessary for children to manage an increasingly complex and demanding world as well as those that do harm to children. We must search for consistent ways of raising children that will increase the likelihood of their experiencing happiness, success in school, contentment and purpose in their lives, and satisfying relationships. To achieve these goals children must develop the inner strength to deal competently and successfully, day after day, with the challenges and pressures they encounter (Brooks & Goldstein, 2001).

The Characteristics of a Resilient Mindset

If parents are to nurture resilience in their children in a consistent way, it is important that they understand the different components of resilience, which overlap with the seven instincts of tenacity. Resilient children possess certain qualities and/or ways of viewing themselves and others and their environment that are not apparent in youngsters who have not been successful in meeting challenges. The assumptions that children have about themselves influence the behaviors and skills they develop. In turn, these behaviors and skills influence this set of assumptions so that a dynamic process is constantly operating. This set of assumptions may be classified as a *mindset* (Brooks & Goldstein, 2001, 2015).

An understanding of the features of a resilient mindset and the instincts involved with tenacity that were highlighted above can provide parents with guideposts for nurturing inner strength and optimism in their children. Parents adhering to these guideposts can use each interaction with their children to reinforce a resilient mindset and tenacity. While the outcome of a specific situation may be important, even more essential are the lessons learned from the process of dealing with each issue or problem. The knowledge gained supplies the nutrients from which the seeds of resilience will flourish.

The mindset of resilient children contains a number of noteworthy characteristics that are associated with specific skills. These include:

They feel appreciated and unconditional love.

They have learned to set realistic goals and expectations for themselves.

They possess the ability to solve problems and make thoughtful decisions and thus, are more likely to view mistakes, setbacks, and obstacles as challenges to confront rather than as stressors to avoid.

They rely on effective coping strategies that promote growth and are not self-defeating.

They are aware of and do not deny their weaknesses and vulnerabilities but view them as areas for improvement rather than as unchangeable flaws.

They recognize and appreciate their strong points and talents or what we call their "islands of competence" (Brooks & Goldstein, 2001).

They believe that their actions can enrich the lives of others, providing them with a sense of purpose.

They feel comfortable with others and have developed effective interpersonal skills with

peers and adults alike. This enables them to seek out assistance and nurturance in a comfortable, appropriate manner from adults who can provide the support they need.

They are able to define the aspects of their lives over which they have control and to focus their energy and attention on those rather than on factors over which they have little, or any, influence.

The process of nurturing this mindset and associated skills in children requires parents to examine their own mindset, beliefs, and actions. We will now examine guideposts that can facilitate this process together with case examples.

Parenting Practices That Nurture Resilience and the Instincts of Tenacity in Children

Following is a list of ten guideposts proposed by Brooks and Goldstein (2001, 2003) that form the scaffolding for reinforcing a resilient mindset and lifestyle in children. These guideposts, which are also relevant for nurturing the seven instincts of tenacity, are relevant for all interactions parents and other caregivers have with children, whether coaching them in a sport, helping them with homework, engaging them in an art project, asking them to assume certain responsibilities, assisting them when they make mistakes, teaching them to share, or disciplining them. While the specific avenues through which these guideposts can be applied will differ from one child and one situation to the next, the guideposts themselves remain constant.

1. Being Empathic. A basic foundation of any relationship is empathy. Simply defined, in the parenting relationship empathy is the capacity of parents to place themselves inside the shoes of their children and to see the world through their eyes. Empathy does not imply that you agree with what your children do, but rather you attempt to appreciate and validate their point of view. Also, it is easier for the instinct of Compassionate Empathy to develop in children when they interact with adults who consistently model these qualities—when children not only sense that adults are attempting to understand them but that they use this understanding to engage in caring behaviors toward them.

It is not unusual for parents to believe they are empathic, but the reality is that empathy is more fragile or elusive than many realize. Experience shows that it is easier to be empathic when our children do what we ask them to do, meet our expectations, and are warm and loving. Being empathic is tested when we are upset, angry, or disappointed with our children. When parents feel this way, many will say or do things that actually work against a child developing resilience.

To strengthen Compassionate Empathy, we suggest that parents consider several key questions, questions that I frequently pose in my clinical practice and workshops. They include:

"How would I feel if someone said or did to me what I just said or did to my child?"

"When I say or do things with my children, am I behaving in a way that will make them most responsive to listening to me?"

"What words do I hope my children would use to describe me?"

"What do I intentionally say and do on a regular basis so that they are likely to describe me in the way I hope they would?"

"How do I think my children would actually describe me and how close is that to how I hope they would describe me?"

Reflecting upon these questions is an essential task of effective parenting, but it is often neglected when parents are confronted with frustration and anger. This is evident in the following two case examples.

Mr. and Mrs. Kahn were perplexed why their son John, a seventh grader, experienced so much difficulty completing his homework. John was an excellent athlete but had a long history of struggling to learn to read. His parents, noticing John's lack of interest in school activities, believed he was "lazy" and he could do the work if he "put his mind to it." They often exhorted him to "try harder" and they angrily reminded him on a regu-

lar basis how awful he would feel as a senior in high school when he was not accepted into the college of his choice.

Although perhaps well-intentioned, when Mr. and Mrs. Kahn told John to "try harder" they failed to consider how these words were experienced by their son. Many youngsters who are repeatedly told to "try harder" interpret this statement not as helpful or encouraging but rather as judgmental and accusatory, intensifying their frustration rather than their motivation to improve. Thus, the words the Kahns used worked against their goal for John to become more motivated. If they had reflected upon how they would feel if they were having difficulty at work and their boss yelled, "Try harder," they may have refrained from using these words.

Mr. and Mrs. Kahn learned that by placing themselves in John's shoes, they could communicate with him in more caring ways that lessened his defensiveness and increased his willingness to cooperate. They told him that they realized they came across as "nagging" but did not wish to do so. They said that they knew he possessed many strengths, but there were areas that were more challenging for him such as reading. In displaying empathy, they transformed an accusatory attitude into a problem-solving framework by asking John what he thought would help. This more positive approach made it easier for John to acknowledge his difficulties in school and prompted his acceptance of being tutored.

Sally, a shy 8-year-old, was frequently reminded by her parents, Mr. and Mrs. Carter, to say hello when encountering family or friends. Yet, from a young age Sally's temperament left her feeling anxious, fearful, and easily overwhelmed in new situations. It was not unusual for Sally to seek refuge behind her mother when people she did not know visited the Carter home. Both of the Carters were outgoing and were perplexed by Sally's cautiousness and fearfulness, especially since they viewed themselves as supportive and loving parents. They felt that Sally could be less shy "if she just put her mind to it."

The Carters frustration and embarrassment with Sally's behavior became more intense, prompting them to advise her that if she failed to say hello to others she would be lonely and have no friends. They frequently asked her after school if she had taken the initiative to speak with any of the children in her class. These kinds of comments backfired as they were experienced as judgmental by Sally and intensified her anxiety.

Mr. and Mrs. Carter, desiring their daughter to be more outgoing, failed to appreciate that Sally's cautious demeanor was an inborn temperamental trait and could not be overcome by simply telling her to "say hello" to others. They were to discover that each reminder on their part not only intensified Sally's discomfort and worry but also compromised the development of a warm, supportive relationship with their daughter.

In parent counseling sessions the Carters learned that they could assist Sally to be less shy, but they first had to reflect upon how their current actions and words impacted on their daughter. They had to ask, "If I were shy would I want anyone to say to me what I say to Sally?" or "Am I saying things to Sally that are helping or hindering the process of her becoming more comfortable with others?" In essence, these kinds of questions helped them to assume a more empathic stance. Both parents learned that telling a shy person to try to become less shy is often experienced as accusatory and not as a source of encouragement.

Mr. and Mrs. Carter informed Sally that they knew that it was not easy for her to say hello to people she did not know and added that it was not easy for many other children as well. They said that maybe working together with Sally they could all figure out steps she could take to make it less difficult to greet others. These comments served to empathize and validate what Sally was experiencing and also to convey a feeling of "we're here to help, not criticize." Finally, they communicated to Sally, "Many kids who have trouble saying hello when they're young, find it easier as they get older." This last statement conveyed realistic hope. And hope is a basic characteristic of Intuitive Optimism and a resilient mindset.

Being empathic permitted the Carters to communicate with Sally in a nonjudgmental way and

in the process they nurtured their daughter's resilience and tenacity.

2. Communicating Effectively and Listening Actively. Empathy is closely associated with the ways in which parents communicate with their children. Communication is not simply how we speak with another person. Effective communication involves actively listening to our children, understanding and validating what they are attempting to say, and responding in ways that avoid power struggles by not interrupting them, by not telling them how they should be feeling, by not demeaning them, and by not using absolute words such as *always* and *never* in an overly critical, demeaning fashion (e.g., "You never help out"; "You always act disrespectful").

Resilient children demonstrate a capacity to communicate their feelings and thoughts effectively and their parents serve as important models in the process. When 10-year-old Michael insisted on completing a radio kit by himself and then was not able to do so, his father, Mr. Burton, angrily retorted, "I told you it wouldn't work. You don't have enough patience to read the directions carefully." Mr. Burton's message worked against the development of a resilient mindset in his son since it contained an accusatory tone, a tone focusing on Michael's shortcomings rather than on his strengths. His communications failed to offer assistance or the possibility of a positive outcome. In addition, what Mr. Burton expressed lessened the reinforcement of Intuitive Optimism and Simultaneous Intelligence by weakening Michael's sense of hope and robbing him of an opportunity to engage in problem-solving skills by completing the radio kit.

Covey (1989), describing the characteristics of effective people, advocates that we first attempt to understand before being understood. What he is suggesting is that prior to expressing our views, we would be well advised to practice empathy by listening actively and considering what messages the other person is delivering. Effective communication is implicated in many behaviors associated with resilience and tenacity, including interpersonal skills, empathy, and problem-solving and decision-making abilities.

Given the significance of effective communication skills in our lives, during my therapeutic activities and my workshops I frequently pose the following questions for parents to consider when they interact with their children:

"Do my messages convey and teach respect?"
"Am I fostering realistic expectations in my children?"
"Am I helping my children learn how to solve problems?"
"Am I nurturing empathy and compassion?"
"Am I promoting self-discipline and self-control?"
"Am I setting limits and consequences in ways that permit my children to learn from me rather than resent me?"
"Am I truly listening to and validating what my children are saying?"
"Do my children know that I value their opinion and input?"
"Do my children know how special they are to me?"
"Am I assisting my children to appreciate that mistakes and obstacles are part of the process of learning and growing?"
"Am I comfortable in acknowledging my own mistakes and apologizing to my children when indicated?"

If parents keep these questions in mind, they can communicate in ways that reinforce a resilient mindset and the instincts of tenacity. However, this task is not always easy to accomplish as was evident at a family session with Mr. and Mrs. Berlin and their 13-year-old daughter Jennifer. The Berlins sought a consultation given Jennifer's sadness and what they called "her pessimistic attitude towards everything."

At the first session, Jennifer said, "I feel very sad and unhappy."

Mrs. Berlin instantly countered, "But there's no reason for you to feel this way. We're a loving family and have always given you what you need."

Jennifer's expression suggested both sadness and anger at her mother's remark. While Mrs. Berlin may have intended to reassure her daugh-

ter, her comment served to derail communication. People do not want to be told how they should or should not feel. If someone says she feels depressed, she does not want to hear that there is no reason to feel this way.

What might Mrs. Berlin have said? A good place to start is validation. A first step is for parents to validate what their child is saying. Validation does not mean you agree with the other person's statement, but that you are listening closely so that you can "hear" what is being said. Consider the following response that Mrs. Berlin might have offered when Jennifer described she was feeling sad and unhappy:

"I know you've been feeling depressed. I'm not certain why, but I'm glad you could tell us. That's why we're seeing Dr. Brooks to try and figure out what will help you to feel better and also, how dad and I can help."

If the messages of parents are filled with empathy, validation, and support, a climate is established for ongoing constructive dialogue that will help to nurture tenacity and resilience.

3. Changing Negative Scripts. Even well-meaning parents have been known to apply the same approach with their children for weeks, months, or years despite the fact that the approach has proven ineffective. For instance, a set of parents reminded (nagged) their children for years to clean their rooms, but the children failed to comply. When I asked why they resorted to the same unsuccessful message for years, they responded, "We thought they would finally remember to clean their rooms if we told them often enough."

Similar to the reasoning offered by these parents, many parents believe that children should be the ones to change, not them. Others believe if they change their approach, it represents their "giving in to a child" and they are concerned that their children will take advantage of them. One mother said, "My son forgets to do his chores and I keep reminding him and we keep getting into battles. But I can't back off. If I do my son will never learn to be responsible. He will become a spoiled brat like too many other kids are these days." Without realizing it, the mother's constant reminders backfired. They not only contributed to tension in the household, but in addition, they reinforced a lack of responsibility in her son by always being there to remind him of what he was expected to do rather than having him learn to remember his responsibilities on his own. The mother's actions also limited the development of the instincts of tenacity, especially Intrinsic Motivation, Compassionate Empathy, Simultaneous Intelligence, and Virtuous Responsibility.

Parents with a resilient mindset of their own recognize that if something they have said or done for a reasonable amount of time does not work, they must change their "script" if their children are to change theirs. This position should not be interpreted to imply that one is giving in to the child or failing to hold the child accountable. It suggests that we must have the insight and courage to consider what we can do differently, lest we become entangled in useless, counterproductive power struggles. If anything, the flexibility displayed by a parent can serve as a model for children to encourage them to consider alternative ways of solving problems and becoming more accountable in handling challenging situations.

Mr. Lowell was imprisoned by a negative script, especially toward his 12-year-old son Jimmy. The moment Mr. Lowell arrived home, the first question he asked Jimmy each and every day was, "Did you do your homework? Did you do your chores?" Even if Jimmy had not done his homework or chores, he quickly responded "yes" just to "get my father off my back." Over several years their relationship deteriorated. Jimmy felt all his father cared about were grades and chores. Mr. Lowell felt his son was "lazy" and needed daily "prodding" to become more responsible.

In counseling sessions, Mr. Lowell became aware of how his words echoed those of his father when Mr. Lowell was Jimmy's age. With impressive insight he said, "Jimmy must see me just like I saw my father, an overbearing man who rarely complimented me and was quick to tell me what I did wrong."

Mr. Lowell ruefully asked, "Why do we do the same things toward our kids that we didn't like our parents doing to us?"

It is a question frequently raised. While the answer may differ to some extent from one person to the next, the basic issue is how easily we become creatures of habit, incorporating the script of our own parents even if we were not happy with that script. We practice what we have learned.

Yet, parents are not destined to follow these ineffective, counterproductive scripts. An essential first step is to recognize the existence of any negative scripts that are operating in our lives so that we can begin to consider alternative scripts to follow. As Goleman (1995) has observed, self-awareness is a significant feature of emotional intelligence.

Mr. Lowell, equipped with new insight, no longer greeted Jimmy with questions about his homework or chores, but instead showed interest in his son's various activities, including drawing and basketball. He and Jimmy signed up for an art class together, and they "practiced hoops" on a regular basis. Similar to the Kahn's approach with John and the Carter's with Sally, Mr. Lowell recognized that if Jimmy were to change, he, as the adult, would have to make the initial changes.

4. Loving Our Children in Ways That Help Them to Feel Appreciated with Unconditional Love. It is well established that a basic foundation of resilience is the presence of at least one adult (hopefully several) who believes in the worth and goodness of the child and displays unconditional love (Brooks & Goldstein, 2001). The late psychologist Julius Segal referred to that person as a "charismatic adult," an adult from whom a child "gathers strength" (Segal, 1988). One must never underestimate the power of one person to redirect a child toward a more productive, successful, satisfying life.

Parents, keeping in mind the notion of a charismatic adult, might consider the following question each evening: "Are my children stronger because of the things I said or did today or are they less strong?" Certainly, Mr. Burton yelling at his son Michael when the latter had difficulty completing a radio kit or Mr. and Mrs. Carter questioning Sally each day if she had initiated conversations with classmates were actions that diminished their children's emotional well-being. Neither Michael nor Sally was likely to gather strength when confronted with their parents' statements and questions.

Unconditional love, which we will discuss in greater detail in the next guidepost, is an essential feature that charismatic adults bestow on children. If children are to develop a sense of security, self-worth, and self-dignity, they must have people in their lives who demonstrate love not as a result of something they accomplish but because of their very existence. When such love is absent, it is difficult to develop and fortify a resilient mindset.

When I have asked adults to recall a favorite occasion from their childhood when their parents served as a charismatic adult for them, one of the most common memories involved doing something pleasant and alone with the parent. One man described having his father's "undivided attention." He said, "My father really listened to me when no one else was around and we could talk about anything. It was tougher to do when my older sister and younger brother were also there."

Similarly, a woman said, "I loved bedtime when my mother or father read me a story. If my mother was reading to me, my father was reading to my brother. If my father was reading to me, my mother was reading to my brother." With a smile, this woman added, "Don't get me wrong, I loved my brother and I enjoyed when we did things as a family, but I think I felt closest to my parents when I did something alone with each. My husband and I do the same things with our kids today."

The impact of "special times," poignantly captured in the memories of this man and woman, is recalled by many adults. It is recommended that parents create these kinds of moments in the lives of their children. Parents of young children might say, "When I read to you or play with you, it is so special that even if the phone rings I won't answer it." One young child said, "I know my parents love me. They let the answering machine answer calls when they're playing with me."

When children know that they will have a time alone with each parent, it helps to lessen sibling rivalry and vying for the parent's undivided atten-

tion. A parent of six children asked at a workshop, "Is it possible to create special moments with each child when you have six?" The answer is that it is more difficult with six than with two children in the household, but it is still possible. It requires more juggling, but if these times result in children feeling appreciated in the eyes of their parents, the quest to juggle one's schedule is worth the effort. As Pinker (2003) advised, "If for no other reason, parents should treat their children well to allow them to grow up with such memories" (p. 399).

Children are very sensitive if a parent is not present at their birthday, at a holiday, at their first Little League game, or at a talent show. In today's fast-paced world, many parents work long hours and thus, it is likely they may miss some of their children's special events, but these absences should be kept to a minimum. One adult patient recalled that his father missed all but a couple of his birthdays between the ages of 5 and 12. "I know he had to travel for his business, but he knew when my birthday was. I think he could have scheduled his business trips to be there for my birthday." Tears came to his eyes as he added, "You certainly don't feel loved when your father misses your birthday. And to make matters worse, most of the time he forgot to call."

Time alone with each child does not preclude family activities that also create a sense of belonging and love. Sharing evening meals and holidays, playing games, attending a community event as a family, or taking a walk together are all opportunities to convey love and help children feel special in the eyes and hearts of their parents.

5. Accepting Our Children for Who They Are and Helping Them to Establish Realistic Expectations and Goals. One of the most difficult but challenging parenting tasks is to accept our children for who they are and not what we want them to be. Before children are born parents have expectations for them that may be unrealistic given the unique temperament of each child. Chess and Thomas (1987), two of the pioneers in measuring temperamental differences in newborns, observed that some youngsters enter the world with so-called *easy* temperaments, others with *cautious* or *shy* temperaments, while still others with *difficult* temperaments.

When parents lack knowledge about these inborn temperaments, which are a powerful determinant of personality and behavior (Harris, 1998; Kurcinka, 2015), they may say or do things that compromise satisfying relationships and interfere with the emergence of a resilient mindset and tenacity. This dynamic certainly occurred in Mr. and Mrs. Carter's initial approach to their daughter Sally's shy demeanor. Basically, they exhorted her to make friends, feeling that her cautious, reserved nature could easily be overcome. They did not appreciate how desperately Sally wished to be more outgoing and have more friends, but it was difficult to do so given her temperament. It was only when her parents demonstrated compassion and empathy and communicated their wish to help, that Sally felt accepted.

Another example concerned 10-year-old Carl. He dawdled in the morning, often missing the school bus. His parents, Mr. and Mrs. Thomas, found themselves obligated to drive him to school. A friend suggested they not drive Carl to school, that by doing so they were just "reinforcing his lateness." They took this friend's advice and told Carl if he was not ready when the school bus arrived, they would not drive him and he would miss school. Carl missed school, which upset him. However, much to the dismay of his parents, his upset did not prepare him to be ready for school the next day. They were confused about what to do next and became increasingly angry with their son for his irresponsibility. As a further motivation to be ready on time, they decided to restrict many of his pleasurable activities if he were late. Unfortunately, that failed to bring about the desired results.

Carl's parents were unaware that his difficulty with lateness was not because he was irresponsible, but rather because he moved at a slow pace and was distractible, frequently becoming drawn into other activities. Instead of yelling and punishing, it would have been more effective to accept that this is their son's style and to engage him in a discussion of what he thinks would help to get ready on time. As we shall see under the

guidepost for developing responsibility discussed below, when given the opportunity even young children are capable of suggesting sound solutions to problems they encounter.

In addition, collaborating with Carl's school to have a motivating "job" or responsibility waiting for him might have provided a positive incentive to assist him to consider ways to be ready on time even with his slower temperament. I frequently use such a strategy, which also reinforces such instincts of tenacity as Compassionate Empathy and Genuine Altruism. A child with whom I worked who was tardy on a regular basis was given the job of "helper" in the assistant principal's office each day before school began. The child loved the responsibility, developed strategies to get up earlier than he had, and arrived at school on time with renewed purpose. He also received very positive feedback from the assistant principal's secretary.

Accepting children for who they are and appreciating their different temperaments does not imply that we excuse inappropriate, unacceptable behavior but rather that we understand this behavior and help to modify it in a manner that does not assault a child's self-esteem and sense of dignity. It means developing realistic goals and expectations for our children. Fortunately, in the past 25 years, there have been an increasing number of publications to help parents and teachers appreciate, accept, and respond effectively to a child's temperament and learning style (Carey, 1997; Keogh, 2003; Kurcinka, 2015; Levine, 2001, 2003; Sachs, 2001).

6. Helping Our Children Experience Success by Identifying and Nurturing Their "Islands of Competence." Resilient children do not deny problems that they may face. Such denial runs counter to mastering challenges. However, in addition to acknowledging and confronting problems, youngsters who are resilient are able to identify and utilize their strengths. Unfortunately, many children who feel poorly about themselves and their abilities experience a diminished sense of hope. Parents sometimes report that the positive comments they offer their children fall on "deaf ears," resulting in parents' becoming frustrated and reducing positive feedback.

It is important for parents to be aware that when children lack self-worth they are less receptive to accepting positive feedback, a situation rooted, in part, by the compromise of such instincts as Intuitive Optimism, Intrinsic Motivation, and Simultaneous Intelligence. Parents should continue to offer positive feedback, but must recognize that genuine self-esteem, hope, and resilience are based on children experiencing success in areas of their lives that they and significant others deem to be important. This requires parents to identify and reinforce a child's "islands of competence." Every child possesses these islands of competence or areas of strength and we must nurture these rather than overemphasize the child's weaknesses or vulnerabilities.

During an evaluation of a child, I regularly request that parents describe their child's islands of competence. I ask the child to do the same, often via the question, "What do you think you do well?" or "What do you see as your strengths?" For children who respond, "I don't know," I reply, "That's okay, it can take time to figure out what we're good at, but it's important to figure out." If we are to reinforce a more optimistic attitude in children, it is imperative that we place the spotlight on strengths and assist children to articulate and apply the strengths that they possess.

One problem related to the issue of acceptance discussed in the previous guidepost, is when parents minimize the importance of their child's island of competence. For example, 13-year-old George struggled with learning problems. Unlike his parents, Mr. and Mrs. White, or his 16-year-old sister, Linda, he was not gifted academically or athletically. When his parents were asked during an evaluation to identify George's islands of competence, they responded with an intriguing, "We're somewhat embarrassed to tell you. We just don't think it's the kind of activity that a 13-year-old boy should be spending much of his time doing."

Eventually, Mr. White revealed, "George likes to garden and take care of plants. That would be okay if he did well in school and was involved in other activities. How can a 13-year-old boy be so interested in plants?"

Rather than my finding fault with the Whites' reactions to George's interests, it was vital to help them understand the importance of identifying and building on his strengths even if those strengths were not initially deemed of value by them. To be resilient children need to feel that they are skilled in at least one or two areas that are esteemed by others.

Clinicians and educators should ensure that treatment and educational plans begin with a list of the child's strengths and include strategies that can be used to reinforce and display these strengths for others to see and commend. Of what use are a child's strengths if they are not observed and supported by others?

Laurie, a teenager, had difficulty getting along with her peers, but young children gravitated toward her. Her parents described her as the "pied piper" of the neighborhood. Given this strength, she began to baby-sit. As the responsibilities involved with baby-sitting helped her to develop confidence, she was more willing to examine and change her approach with her peers, which led to greater acceptance. Similarly, 10-year-old Brian, a boy with reading difficulties, had a knack for artwork, especially drawing cartoons. His parents and teachers displayed his cartoons at home and school, an action that boosted his self-esteem and in a concrete way communicated that his reading problems did not define him as a person, that he also possessed strengths.

When children discover and receive positive feedback for their islands of competence, they are more willing to confront those areas that have been problematic for them. Adults must be sensitive to recognizing and bolstering these islands.

7. Helping Children Realize that Mistakes Are Experiences from Which to Learn. There is a significant difference in the way in which resilient children perceive mistakes compared with nonresilient children. Resilient children tend to experience mistakes as opportunities for learning. In contrast, children who are not very hopeful often regard mistakes as an indication that they are failures. In response to this pessimistic view, they are likely to flee from challenges, feeling inadequate and often blaming others for their problems. If parents are to raise resilient children who display the seven instincts of tenacity, they must help them develop a healthy attitude about mistakes from an early age.

The manner in which children respond to mistakes provides a significant window through which to assess their self-worth and resilience. For example, in a Little League game, two children struck out every time they came to bat. One child approached the coach after the game and said, "Coach, I keep striking out. Can you help me figure out what I'm doing wrong?" This response suggests a child with a resilient mindset, a child who entertains the belief that there are adults who can help him to lessen mistakes (strikeouts).

The second child, who unfortunately was not resilient, reacted to striking out by flinging his bat to the ground and screaming at the umpire, "You are blind, blind, blind! I wouldn't strike out if you weren't blind!" Much to the embarrassment of his parents he then ran off the field in tears, continuing to blame the umpire for striking out. Since this child did not believe he could improve, he coped with his sense of hopelessness by casting fault on others.

Parents can assist their children to develop a more constructive attitude about mistakes and setbacks—an attitude that is a cornerstone of becoming more resilient (Brooks & Goldstein, 2001; Lahey, 2016; Mogel, 2008). Two questions that can facilitate this task are to ask parents to consider what their children's answers would be to the following questions:

"When your parents make a mistake, when something doesn't go right, what do they do?"
"When you make a mistake, what do your parents say or do to you?"

In terms of the first question, parents serve as significant models for handling mistakes. It is easier for children to learn to deal more effectively with setbacks if they see their parents doing so. However, if they observe their parents blaming others or becoming very angry and frustrated when mistakes occur or offering excuses to avoid a task, they are more likely to develop a self-defeating attitude toward mistakes. In contrast, if

they witness their parents respond to mistakes as opportunities for learning, they are more likely to do the same, bolstered by a sense of Intuitive Optimism and Intrinsic Motivation.

The second question also deserves serious consideration by parents. Many well-meaning parents become anxious and frustrated with their children's mistakes. Given these feelings they may say or do things that contribute to their children fearing rather than learning from setbacks. For instance, parental frustration may lead to such comments as: "Were you using your brains?" or "You never think before you act!" or "I told you it wouldn't work!" These and similar remarks serve to erode a child's sense of dignity and self-esteem.

No one likes to make mistakes or fail, but parents can use their children's mistakes as teachable moments. They can engage their children in a discussion of what they can do differently next time to maximize chances for success. With empathy they can refrain from saying things that they would not want said to them (e.g., how many parents would find it helpful if their spouse or friends said to them, "Were you using your brains?").

Parents must also have realistic expectations for their children and not set the bar too high or too low. If the bar is set too high, children will continually experience failure and are likely to feel they are a disappointment to their parents. Setting the bar too low may rob children of experiences that test their abilities and their capacity to learn to manage setbacks. Very low expectations also convey the message, "We don't think you are capable."

If parents are to reinforce a resilient mindset and tenacity in their children, their words and actions must convey a belief that we all can learn from mistakes. The fear of making mistakes and being humiliated is one of the most potent obstacles to learning, one that is incompatible with a resilient lifestyle.

8. Developing Responsibility, Compassion, and a Social Conscience by Providing Children with Opportunities to Contribute. Parents often ask what they can do to foster an attitude of responsibility, caring, and compassion in their children. One of the most effective ways is to offer children opportunities to help others. When children are invited to engage in responsible behaviors that involve helping others, parents communicate trust in them and faith in their ability to handle a variety of tasks. In turn, involvement in these "contributory" or "charitable" activities reinforces several key characteristics of a resilient mindset including empathy, a sense of purpose in knowing one is making a positive difference in the lives of others, a more confident outlook as one's islands of competence are displayed, and the application of problem-solving skills. Compassionate Empathy, Genuine Altruism, and Virtuous Responsibility are instincts that are directly nurtured via "contributory" or "charitable" activities.

Too often parents label the first responsibilities they give children "chores." Most children and adults are not thrilled about doing chores, whereas almost every child from an early age appears motivated to help others. The presence of this "helping drive" is supported by research in which adults were asked to reflect on their school experiences and to write about one of their most positive moments in school that boosted their self-esteem and motivation (Brooks, 1991). The most frequently cited memory was being asked to assist others (e.g., tutoring a younger child, painting murals in the school, running the film projector, passing out the milk and straws).

To highlight the importance of teaching responsibility and compassion, I typically ask parents how their children would answer the following questions:

"What are the ways in which your parents show responsibility?"
"What behaviors have you observed in your parents that were not responsible?"
"What charitable activities have your parents been involved with in the past few months?"
"What charitable activities have they and you have been involved with together in the past few months?"

Parents would be well-advised to say as often as possible to their children, "We need your help"

rather than "Remember to do your chores." In addition, parents who involve their children in charitable endeavors, such as walks for hunger or AIDS or food drives, appreciate the value of such activities in fostering self-worth and resilience. Responsibility and compassion are not promoted by parental "lectures" but rather by opportunities for children to assume a helping role and to become part of a "charitable family," a family that is engaged in acts of compassion and giving.

During the intense stresses and disruptions produced by the ramifications of COVID-19, what has been very heartening and encouraging is to hear accounts of the number of children and families doing various charitable acts. This has proven to be therapeutic for all concerned parties.

9. Teaching Our Children to Solve Problems and Make Decisions. Children with high self-esteem and resilience believe that they are masters of their own fate and that they can define what they have control over and what is beyond their control. A vital ingredient of this feeling of "personal control" is the belief that when problems arise, they have the ability to solve problems and make decisions. Resilient children are able to articulate problems, consider different solutions, attempt what they judge to be the most appropriate solution, and learn from the outcome (Shure, 1996; Shure & Aberson, 2005).

If parents are to reinforce critical thinking and a problem-solving attitude in their children, they must refrain from constantly telling their children what to do. Instead, it is more beneficial to encourage children to consider different possible solutions. To facilitate this process, parents might wish to establish a "family meeting time" every week or every other week during which problems facing family members can be discussed and solutions considered.

Jane, a 9-year-old girl, came home from school in tears and sobbed to her mother, Mrs. Jones, that some of her friends refused to sit with her at lunch, telling her they did not want her around. Jane felt confused and distressed and asked her mother what to do. Mrs. Jones immediately replied that Jane should tell the other girls that if they did not want to play with her, she did not want to play with them. While one may question the specifics of the advice expressed by Mrs. Jones, what was more problematic was her quickly telling Jane what to do and not involving her daughter in a discussion of possible solutions. In essence, her response served as an obstacle for Jane to strengthen her own problem-solving skills.

As another example, Barry and his older brother, Len, constantly bickered. According to their parents, Mr. and Mrs. Stern, they fought about everything, including who would sit in the front seat of the car when either of the parents had to drive them together. Len was frequently reminded by his parents to be more tolerant since he was the older of the two. They warned him that his failure to comply with their request would result in punishment. Len's response was to become angry and distant, feeling he was being treated unfairly. Eventually, the parents sat down with Barry and Len, shared with them the negative impact that their arguing was having on the family, and asked them to come up with a possible solution to the problem and to select what they considered to be the best solution.

Much to the surprise of Mr. and Mrs. Stern, their sons came forth with a solution that was noteworthy for being grounded in a simple practice. The boys decided that they would take turns sitting in the front seat. They even kept a "chart" in the car that documented when each sat in front. Similar solutions were found by Barry and Len to other problems they were facing.

It is not unusual for children of any age to "forget" the agreements they have made. This typically elicits reminders from parents that children experience as "nagging." One safety net that I frequently use to address this issue is to recommend to parents that they say to their children that even as parents they may, at times, forget what has been agreed upon and then to tell their children how they would like to be reminded if this occurs.

Once parents have introduced how they would like to be reminded, they can ask, "How would you like me to remind you if you forget something?" perhaps adding, "Because I don't want to

come across as nagging you." Inviting children to express how they would like to be reminded lessens the possibility of their perceiving parental reminders as nagging.

As Shure (1996) has found in her research, even preschool children can be assisted to develop effective and realistic ways of making choices and solving problems. When children initiate their own plans of action with the guidance of parents, their sense of ownership and control is reinforced, as is their resilience.

10. Disciplining in Ways That Promote Self-Discipline and Self-Worth. To be a disciplinarian is one of their most important roles that parents assume in nurturing resilience in their children (Brooks & Goldstein, 2007). In this role, parents must remember that the word *discipline* relates to the word *disciple* and thus is a teaching process. The ways in which children are disciplined can either reinforce or diminish self-esteem, self-control, and resilience.

Two of the major goals of effective discipline are: (a) to ensure a safe and secure environment in which children understand and can define rules, limits, and consequences, and (b) to reinforce self-discipline and self-control so that children incorporate these rules and apply them even when parents are not present. A lack of consistent, clear rules and consequences often contributes to chaos and to children feeling that their parents do not care about them. On the other hand, if parents are harsh and arbitrary, if they resort to yelling and spanking, children are likely to learn resentment rather than self-discipline.

There are several key principles that parents can follow to employ discipline techniques that are positive and effective. Given the significant role that discipline plays in parenting practices and in nurturing resilience, they are described in detail:

Practice Prevention It is vital for parents to become proactive rather than reactive in their interactions with their children, especially in regard to discipline. For example, discipline problems were minimized in one household when a young, hyperactive boy was permitted to get up from the dinner table when he could no longer remain seated. This approach proved far more effective than the previous one used by the parents, namely, to yell and punish him; when the previously punitive atmosphere was diminished, this boy also learned greater self-control. In another home, a boy's tantrums at bedtime ended when he was allowed to have a nightlight in his room and keep a photo of his parents by his bedside (both were his ideas to deal with nightmares he was experiencing).

Work as a Parental Team In homes with two parents, it is important that parents set aside time for themselves to examine the expectations they have for their children as well as the discipline they use. This dialogue can also occur between divorced parents. While parents cannot and should not be clones of each other, they should strive to arrive at common goals and disciplinary practices, which most likely will involve negotiation and compromise. This negotiation should take place in private and not in front of their children.

Be Consistent, Not Rigid The behavior of children sometimes renders consistency a Herculean task. Some children, based on past experience, believe that they can outlast their parents and that eventually their parents will succumb to their whining, crying, or tantrums. If guidelines and consequences have been established for acceptable behavior, it is important that parents adhere to them. However, parents must remember that consistency is not synonymous with rigidity or inflexibility. A consistent approach to discipline invites thoughtful modification of rules and consequences such as when a child reaches adolescence and is permitted to stay out later on the weekend. When modifications are necessary, they should be discussed with children so that they understand the reasons for the changes and can offer input.

Select One's Battlegrounds Carefully Parents can find themselves reminding and disciplining

their children all day long. It is important for parents to ask what behaviors merit discipline and which are not really relevant in terms of nurturing responsibility and resilience. Obviously, behaviors concerning safety deserve immediate attention. Other behaviors will be based on the particular values and expectations in the house. If children are punished for countless behaviors, if parents are constantly telling them what to do in an arbitrary manner, then the positive effects of discipline will be lost.

Rely When Possible on Natural and Logical Consequences Children must learn that there are consequences for their behavior. It is best if these consequences are not harsh or arbitrary and are based on discussions that parents have had with their children. Discipline rooted in natural and logical consequences can be very effective. *Natural* consequences are those that result from a child's actions without parents having to enforce them such as a child having a bicycle stolen because it was not placed in the garage. While *logical* consequences sometimes overlap with natural consequences, logical consequences involve some action taken on the part of parents in response to their child's behavior. Thus, if the child whose bicycle was stolen asked parents for money to purchase a new bicycle, a logical consequence would be for the parents to help the child figure out how to earn the money needed to pay for the new bicycle.

Positive Feedback and Encouragement Are Often the Most Powerful Forms of Discipline Although most of the questions I am asked about discipline focus on negative consequences or punishment, it is important to appreciate the impact of positive feedback and encouragement as disciplinary approaches. Parents should "catch their children doing things right" and let them know when they do. Children crave the attention of their parents. It makes more sense to provide this attention for positive rather than negative behaviors. Well-timed positive feedback and expressions of encouragement and love are more valuable to children's self-esteem and resilience than stars or stickers. When children feel loved and appreciated, when they receive encouragement and support, they are less likely to engage in negative behaviors.

Concluding Remark

Research may never be able to assign a precise percentage to capture the impact of a parent on a child's development. However, as noted earlier, whatever the percentage, we know that the day-to-day interactions parents have with their children are influential in determining the quality of lives that their children will lead. Parents can serve as charismatic adults to their children. They can assume this role by understanding and fortifying in their children the seven instincts of tenacity and the related characteristics of a resilient mindset, by believing and encouraging their children, by conveying unconditional love, and by providing them with opportunities that reinforce their sense of purpose, their islands of competence, and their feelings of self-worth and dignity. Nurturing tenacity and resilience is an immeasurable, lifelong gift parents can offer their children. It represents a significant feature of a parent's legacy to the next generation.

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Building Resilience in All Children: A Public Health Equity Approach

22

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In this chapter, we present a conceptual framework for the promotion of resilience in children that integrates concepts from the study of resilience with a public health and health equity approaches to improve behavioral health at the population level. This chapter begins with a review of resilience, public health, and health equity concepts and describes how these perspectives can be integrated within a broad framework for the promotion of health and prevention of dysfunction that is equitable for all children. We then present examples of evidence-based preventive interventions and policies that have successfully implemented components of this framework. Given our focus on promoting resilience, we limit discussion and examples of interventions to those designed to create resources for children not diagnosed with behavioral health disorder, although the framework could readily be extended to interventions for children with clinical levels of dysfunction. Finally, we provide an overview of how the framework might be used by stakeholder to create resources in their communities that will promote resilience, as well as examples of tools currently available to assist planners in this process.

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Resilience Concepts

We define resilience as "a child's achievement of positive developmental outcomes and avoidance of maladaptive outcomes under significantly adverse conditions" (Wyman et al., 2000). Three concepts are central to this definition: adversity, resources that are responsible for achieving positive outcomes under conditions of adversity, and equity, which is relevant to both exposure to adversity and distribution of resources.

Adversity

Adversity is conceptualized as a relationship between children and their environment in which satisfaction of basic needs and goals is threatened or in which accomplishment of age-appropriate

S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_22

developmental tasks is impeded (Sandler, 2001). Adversities can be conceptualized as occurring in individual, family, or community/organizational domains. In the individual child domain, adversities include experiences such as illnesses, injuries, abuse, or victimization, which compromise children's relations with their environments. Adversities in the family domain include changes in family structure (e.g., divorce, death) or functioning (e.g., conflict) that threaten children's well-being. Lastly, adversities in the community/organizational domain include characteristics of communities (e.g., racism, poverty) or social institutions (e.g., school violence) that diminish children's satisfaction of basic needs and accomplishment of developmental tasks.

Relations between exposure to adversities in childhood and the development of a wide range of behavioral health and social adaptation difficulties in childhood and adulthood are well-established (Grant et al., 2003; Sandler et al., 2004). Illustratively, in the seminal Adverse Childhood Experiences (ACEs) study, which included 9508 members of a large HMO, Felitti et al. (1998) observed that exposure to four or more adversities in childhood was associated with a four- to twelve-fold increase in risk for alcoholism, drug abuse, depression and suicide attempts in adulthood. Similarly, Furstenberg and colleagues found that the odds of negative behavioral health outcomes for children exposed to eight or more adversities was 5.7 times greater than for children exposed to three or fewer adversities (Furstenberg et al., 1999). Studies have also demonstrated consistent relations between behavioral health and social adaptation problems and exposure to specific adversities in childhood such as family and neighborhood poverty (Edin & Kissane, 2010; Winslow & Shaw, 2007), discrimination (Berkel et al., 2009, 2010), parental mental illness (Goodman & Brand, 2008), child maltreatment (Cicchetti & Toth, 2005), exposure to domestic or community violence (Evans et al., 2008; Fowler et al., 2009), parental divorce (Lansford, 2009), and bereavement (Melhem et al., 2008).

Resources

Studies of resilience focus on identifying resources that facilitate the occurrence of positive outcomes and the avoidance of negative outcomes for children in the face of adversity (Luthar, 2015). Positive and negative outcomes are conceptualized as interrelated and include successful accomplishment of developmental tasks and avoidance of emotional and behavioral health symptoms and mental disorders. Resources in the individual, family, and community/organizational domains facilitate positive outcomes by either promoting effective adaptation processes or by reducing the child's exposure to adversities (Sandler, 2001). Individual resources include cognitive, emotional, and behavioral skills, such as cognitive ability, emotion regulation, and adaptive coping skills, as well as a positive sense of self (e.g., self-esteem) and member of a group (e.g., racial/ethnic identity). Family-level resources primarily focus on positive parenting, characterized by warmth, responsivity, communication, effective monitoring and discipline, and support for effective coping, which for some groups may include strategies like racial/ethnic socialization to cope with the adverse consequences of discrimination. For example, among African American adolescents exposed to multiple ACEs, the strongest indicator of resilience was the presence of family connectedness (Boch & Ford, 2021). Community/organizational resources include access to high-quality schools, prosocial neighborhoods, and opportunities for involvement in other formal or informal systems, such as leadership programs, religious or secular youth groups, organized sports, community volunteer groups, groups that develop specific talents (e.g., music, art, drama), and relationships with supportive adults.

Equity

As a society, it is important to address the fact that we place more demands for resilience on

some groups of our children than others. For example, children from African American, Latino, and Native American families and sexual and gender minority group members are more likely to experience Adverse Childhood Events, and the multitude of negative consequences that follow (Blosnich & Andersen, 2015; Giano et al., 2020). Moreover, resources, particularly those at the community/organizational level, are also unequally distributed. For example, children in lower income communities have fewer opportunities high-quality daycare, schools, and extracurricular programs (Dearing et al., 2009). The combination of more adversity and fewer community/organizational resources creates a perfect storm for behavioral health disparities; however, this can be mitigated through the promotion of resources at the family and individual level.

Public Health Equity Approach

The public health approach complements the resilience perspective in its focus on interventions to have a population level impact on health and disorder. The public health approach to prevention focuses on how to change population-level behaviors, environmental factors, or processes to reduce incidence rates of disorders (i.e., number of new cases) and to increase healthy outcomes in a population (Rose, 1992). To effectively impact population-level outcomes while addressing individual differences (i.e., varying levels of adversities, resources, and negative outcomes), the public health model incorporates multiple intervention levels: behavioral health *promotion* interventions to enhance well-being of the general public or a whole population, *universal* prevention programs to prevent disorders in the general population or in a whole population that has not been identified based on individual risk, *selective* interventions for those at-risk due to exposure to specific adversities, and *indicated* programs for individuals experiencing subdiagnostic symptomatology (O'Connell et al., 2009). Over the past several decades, the field of public health has become increasingly aware that health at the population level cannot be achieved without health equity. The public health equity approach emphasizes striving for the highest degree of health for *all people*, which involves addressing social determinants of health in all developmental contexts (Liburd et al., 2016). Consequently, any discussion of a public health approach to promoting resilience must include a focus on evidence-based approaches to promoting equity. Moreover, it is essential to test programs with diverse populations and evaluate both the implementation and effectiveness by group to avoid the potential for reinforcing disparities (Glasgow et al., 2013).

Promotion Programs

Behavioral health promotion programs are typically offered to the general public or a whole population to enhance individuals' life skills (e.g., social competence) and promote well-being, as well as to strengthen individuals' ability to cope with adversity (O'Connell et al., 2009). Although such programs typically help prevent disorders as well, their primary purpose is to promote healthy outcomes (e.g., self-esteem, morality, friendships). Promotion programs may be less stigmatizing than prevention programs, particularly compared to prevention programs that target specific subgroups; because the emphasis is placed on maximizing individuals' potential rather than avoiding the development of disorder (O'Connell et al., 2009).

Universal Prevention Programs

Universal prevention programs are given to the general public or a whole population group not identified on the basis of individual risk and aim to reduce the incidence of behavioral health disorders (O'Connell et al., 2009). Although conceptually distinct, universal prevention and promotion interventions typically overlap considerably in practice because effective behavioral health promotion programs also prevent maladjustment, and universal preventive interventions often promote well-being in addition to prevent-

ing disorders (Catalano et al., 2016; Payton et al., 2008). Given the substantial overlap, we discuss universal prevention and promotion programs interchangeably in the rest of this chapter.

To justify inclusion of all individuals in a population and to maximize the benefit-cost ratio, universal programs should be able to be delivered to everyone, low in costs per individual, effective for and acceptable to the population and have little potential for harm (O'Connell et al., 2009). Universal promotion and prevention programs can provide several benefits, particularly when incorporated within a multilevel system of strategies, such as increasing population awareness, providing support and recruitment for more intensive prevention efforts, reducing stigmatization for those participating in targeted programs, and reinforcing common messages provided via different outlets (Offord, 2000; Stormshak et al., 2002). For example, parents who participate in an intensive parenting skills intervention may feel supported by their community, rather than stigmatized, if universal efforts have been successful at promoting the importance of positive parenting and value of actively improving one's parenting skills (Sanderson & Thompson, 2002). Universal programs may also be integrated into community structures or organizations that serve the full population (e.g., schools, health systems), and thus may promote policies or cultural practices (e.g., parental involvement in schools) that can benefit the entire population. Further, because a great number of people are involved, universal programs have the potential for producing large effects at the population level, although the benefits received by each individual may be relatively small (Rose, 1992; Shamblen & Derzon, 2009).

Selective Programs

Selective preventive interventions target specific individuals or subgroups of the population whose risk for mental disorder significantly exceeds that of the general population due to exposure to one or more adversities (e.g., parental mental illness), and who can be identified based on some marker variable rather than individual assessment of problematic functioning (O'Connell et al., 2009). Although selective programs are not delivered to all members of the general population, these interventions could involve a large number of individuals, particularly if selected adversities are highly prevalent (e.g., parental divorce). Therefore, selective programs should not exceed moderate costs per individual and should be characterized by low risk for potential iatrogenic intervention effects (O'Connell et al., 2009).

Selective prevention programs can provide important services that supplement universal efforts. Selective programming provides a potentially efficient way to direct additional resources to individuals with higher need for services (Offord, 2000). In addition, targeting specific subgroups allows provision of services tailored to the unique needs of these subgroups (i.e., needs not shared by other subgroups of the population). For example, children who experience ACEs, such as abuse, discrimination, or parental divorce, death, or incarceration, may benefit from specialized preventive services provided to caregivers and/or children that are designed to facilitate positive adjustment to that specific adversity.

Indicated Programs

Indicated preventive interventions target children manifesting subdiagnostic levels of behavioral health symptoms or families experiencing problems adapting to adversity (e.g., high conflict divorces) based on individual assessment of child or family functioning (O'Connell et al., 2009). For example, children may be selected to participate in a behavioral management program on the basis of parent or teacher report of high levels of disruptive behavior. The primary goal of indicated programs is to reduce the occurrence of new cases of mental disorder or other serious outcomes (i.e., incidence) by decreasing symptomatology and reversing the progression of severity. Indicated prevention programs are often moderately to highly intensive interventions that may include multiple components (e.g., parent education plus school-based behavior management)

and/or may involve individualized approaches, such as one-on-one sessions with a behavioral health counselor. Similar to selective prevention programs, indicated interventions provide additional resources (i.e., beyond universal level) to prevent the development of serious problems in families and children who are most at risk.

Framework for Building Resilience in All Children

As illustrated in the previous sections, the public equity health approach incorporates multiple intervention levels that can fulfill distinct and mutually reinforcing roles when implemented simultaneously in a community. In such cases, all children or families in a population would have access to universal promotion and prevention programs. Subgroups identified on the basis of exposure to adversity would receive these services as well as more specialized selective programs. Those experiencing subdiagnostic levels of symptomatology would have access to universal promotion and prevention programs as well as indicated programs, which may include multiple intervention components designed to reduce symptoms and reverse the progression of severity. A minority of families may qualify for both selective and indicated services and would have access to all levels of intervention.

From a resilience perspective, this multilevel framework takes into account the varying levels of exposure to adversity and availability of protective resources among members of a population. Table 22.1 shows how multiple domains of interventions to promote resilience processes can be subsumed within the classification of universal promotion/prevention, selective, and indicated interventions. Interventions at each level build individual, family, and/or community/organizational resources associated with resilient outcomes among children facing adversity. We refer to these as "constructed resilience resources" given they are promoted by interventions designed for that purpose. By looking across columns within each row of the matrix, one can see the range of interventions that might be used to construct resources in a given domain. For example, mutually reinforcing programs to enhance parenting might be developed for the general population, as well as for those experiencing specific adversities or early levels of symptoms. By looking across the rows within each column, one can see how resources could be constructed in multiple domains to promote resilience in a defined population. For example, complementary child, family, and organizational programs might be developed for the entire community to build resources that promote well-being and developmental competencies and prevent disorder.

Universal promotion and prevention programs construct resources that promote resilience by reducing the occurrence of adversities for the full population or facilitating skills that promote healthy adaptation when adversities occur. These interventions may be designed to enhance *child* capacities (e.g., coping skills, academic competence, racial/ethnic identity), *family* competencies (e.g., parental warmth, effective discipline, communication, racial/ethnic socialization), or *community/organizational* resources (e.g., neighborhood collective socialization, policies and supports in routine public and private systems). Selective programs build resources to promote effective adaptation to specific adversities, such as *child* coping skills for parental death, parenting skills for *families* experiencing discrimination, or *community/organizational* policies like joint-custody following divorce. Indicated interventions construct resources to improve adaptation processes for those exhibiting behavioral health symptoms, such as cognitive behavioral skills for *adolescents* experiencing subdiagnostic depressive symptoms, parent behavior management skills for *families* with oppositional children, or court *organizational* procedures for diverting delinquents to interventions rather than detention. In the following sections, we provide examples of programs with demonstrated efficacy in promoting child well-being through universal promotion/prevention, selective, or indicated intervention strategies that construct resources in child, family, or community/organizational domains.

Table 22.1 Strategies to construct resilience resources across multiple domains and levels

	Intervention level		
Resource domain	Universal promotion/ prevention	Selective	Indicated
Child	Promote child strengths to cope with stressors, problem solve, regulate affect, and deal with potential problem situations (e.g., peer conflict)	Teach coping skills and provide information to children experiencing a specific stressor (e.g., parental divorce)	Teach skills (e.g., cognitive appraisals of stress) to children with elevated problems or skill deficits
Family	Promote parenting practices that enhance child adaptive outcomes and help avoid future adversities or strengthen the child's ability to cope effectively	Promote effective parenting for children exposed to a specific adversity (e.g., discrimination)	Teach parenting skills to counteract ongoing behavioral health symptoms (e.g., child externalizing behavior)
Community/ Organizational	Promote community or organizational changes that reduce the occurrence of adversities; Provide support for all children to adapt effectively to normative events (e.g., transition to junior high school)	Change ecologies of existing organizations (e.g., courts) to promote healthy adjustment for at-risk subgroups (e.g., divorced families). Develop new organizations to provide services for children exposed to a specific adversity (e.g., parental death)	Develop community structures (e.g., routine screening and referral) to deal more effectively with youth experiencing subdiagnostic levels of problems to strengthen their ability to cope effectively or prevent exposure to future adversities

Resources Constructed in the Child Domain

Universal Promotion and Prevention Programs

Promotion programs in the child domain focus on enhancing children's development in one or more areas, such as building skill competencies, fostering self-efficacy, and promoting prosocial relationships (Catalano et al., 2002; Payton et al., 2008). Similarly, universal preventive interventions are designed to build child resources based on the theory that promoting skills and strengths will help children effectively adapt to conditions of adversity (current and future) and decrease the likelihood of future adversities, thereby preventing the development of disorders and facilitating successful attainment of developmental tasks (Sandler, 2001). A variety of universal promotion and prevention programs designed for general populations have impacted child well-being outcomes by constructing resources in the child domain, including programs that teach skills such as problem-solving, social skills, conflict resolution, affect regulation, cognitive restructuring, empathy, impulse control, and leadership qualities (see Durlak et al., 2010; Hahn et al., 2007; Neil & Christensen, 2009; Payton et al., 2008; Soole et al., 2008 for reviews).

For example, the Promoting Alternative Thinking Strategies (PATHS) elementary-school, multiyear curriculum is designed to build children's social and emotional competence through more than 50 lessons on knowledge about emotional states, skills for regulating affect, problem solving, and social skills (Conduct Problems Prevention Research Group, 1999; Greenberg et al., 1995). Several randomized controlled trials have indicated that when PATHS is supported by schools and well-implemented by teachers, the curriculum is successful in promoting academic engagement and social, emotional, and behavioral competence in a variety of populations (Conduct Problems Prevention Research Group, 1999, 2010; Curtis & Norgate, 2007; Domitrovich et al., 2007; Kam et al., 2003). Researchers have also found that PATHS helps prevent problem outcomes, including socially withdrawn behavior, conduct problems, and peer difficulties

(Conduct Problems Prevention Research Group, 2010; Crean & Johnson, 2013; Curtis & Norgate, 2007; Domitrovich et al., 2007). The program has since been tested in England and found small, but significant effects on child well-being (Panayiotou et al., 2020). Medium to large program effects were found when program dosage was taken into account.

Selective Programs

In contrast to universal interventions, which are designed for all individuals in a population, selective prevention programs build resources for subgroups confronting specific adversities. Selective interventions in the child domain typically focus on bolstering coping skills needed to effectively handle the challenges posed by adversities such as parental divorce (Pedro-Carroll, 1997; Stolberg & Mahler, 1994), parental death (Sandler et al., 2010a) or trauma (Enright & Carr, 2002); or to counteract the deleterious effects of adversities such as social disadvantage (Lange & Carr, 2002) or discrimination (Brody et al., 2008). In some cases, these programs are stand alone, and in others, they are combined with a parenting component within a family-based program.

For example, the Children of Divorce Intervention Project (CODIP) is a 12-session, group intervention for school-age children whose parents have divorced and is designed to help children identify and appropriately express emotions, cope effectively, restructure divorce-related misconceptions, and create positive perceptions of themselves and their families (Pedro-Carroll, 1997; Pedro-Carroll & Cowen, 1985). Pedro-Carroll and colleagues found that participation in CODIP improved children's coping, problem-solving skills and classroom competence (e.g., social skills, task orientation) and resulted in decreases in anxiety and classroom adjustment problems (e.g., acting out, learning problems) compared to a no-intervention control group at posttest and 2 years following the intervention (Pedro-Carroll et al., 1999). Similarly, an online program promoting effective coping for children following parental divorce (CoD-CoD; Boring et al., 2015) significantly reduced child behavioral health problems and increased their coping efficacy in comparison to children who used other popular websites for children about parental divorce.

Indicated Programs

Indicated prevention programs are designed to meet the needs of individuals within a population who are experiencing behavioral health problems, but do not meet criteria for a behavioral health diagnosis. Indicated prevention programs in the child domain typically teach youths skills such as how to identify feelings, manage anger, or challenge distorted cognitions. This approach has been beneficial in reducing dysfunction among youths experiencing internalizing and/or externalizing symptoms (Bienvenu & Ginsburg, 2007; Payton et al., 2008; Stice et al., 2009; Wilson & Lipsey, 2007).

For example, the Coping with Depression (CWD) course is a cognitive-behavioral intervention that has been adapted for many different target populations, including as an indicated prevention program for adolescents with subdiagnostic levels of depressive symptomatology (Cuijpers et al., 2009). This intervention teaches adolescents how to identify and challenge negative thoughts using cartoons, role-plays, and group discussions. A meta-analysis of 25 randomized controlled trials of CWD found that for the 6 trials that used CWD as an indicated prevention program, adolescents who participated in the intervention had a 38% lower chance of developing a depressive disorder than adolescents in the control group (Cuijpers et al., 2009). Garber et al. (2009) conducted a multicenter, randomized control trial of this preventive intervention with adolescents who had current or past depressive symptomatology and at least one parent with a current or past depressive disorder. They found significant preventive effects on both diagnosis of depression and self-reported depressive symptoms through a 9-month follow-up period, but only for adolescents whose parents

were not currently depressed. The cognitive-behavioral prevention (CBP) program, an adaptation of CWD, found effects on depression extended 6 years after the program (Brent et al., 2015).

Challenges related to access to prevention programs have resulted in the development and testing of brief online interventions (Schleider et al., 2022). The Growth Mindset Single Session Intervention (GM-SSI) is a 45-min online intervention for adolescents with behavioral health symptoms focusing on the potential malleability of personality traits. Small, but significant effects of the program have been found on depression, hopelessness, agency, and restrictive eating among adolescents with depressive symptoms (Schleider et al., 2019, 2020).

Resources Constructed in the Family Domain

Universal Promotion and Prevention Programs

Promotion programs in the family domain target aspects of the home environment that could be optimized to enhance child development. For example, Whitehurst et al. (1988) developed and evaluated a shared reading program, called *dialogic reading*, to promote language development in toddlers and preschoolers. The 6-week program, which has been tested in both group- and video-based formats (Arnold et al., 1994), encourages parents to make book reading interactive by asking the child open-ended questions about the story, praising and elaborating on children's verbalizations, and prompting the child to relate aspects of the story to his/her own life. A meta-analysis of 16 experimental studies found significant positive effects of the dialogic reading program on language development compared to reading-as-usual control groups, with stronger effects on expressive than receptive language skills, for younger (i.e., toddler and preschool age) than older (i.e., kindergarten age) children, and for higher income than lower income families (Mol et al., 2008), although several studies have demonstrated positive effects of dialogic reading for children experiencing socioeconomic adversity (see Zevenbergen & Whitehurst, 2003 for a review).

Universal prevention programs in the family domain typically focus on improving parenting practices and communication patterns to help children learn skills such as effective coping and self-regulation skills to foster competence and prevent dysfunction. Several universal family-based programs have been shown to build family resources, increase child competence, and reduce the likelihood of substance abuse and other behavioral health problems (Lochman & van den Steenhoven, 2002; O'Connell et al., 2009; Sandler et al., 2011, 2015).

For example, Spoth and colleagues have evaluated the effects of two universal family-based prevention programs, the 5-session Preparing for the Drug Free Years (PDFY) (now called Guiding Good Choices) and the 7-session Iowa Strengthening Families Program (ISFP) (now called the Strengthening Family Program for Parents and Youth: 10–14) (Spoth et al., 1998, 2009, 2001). Both programs were designed to construct family resources, such as positive parent-child involvement and communication and effective parent management; however, PDFY intervenes primarily with parents alone, whereas ISFP brings parents and adolescents together. Results of randomized trials with rural families of sixth grade children have shown that both ISFP and PDFY improved parent-child warmth and effective discipline at posttest (Spoth et al., 1998), with lower rates of alcohol and polydrug use 10-year postintervention (Spoth et al., 2009). Although both programs have empirical support, findings have been more robust for the ISFP (Spoth et al., 2009), and initial benefit-cost analyses suggest that ISFP may be more cost-effective than PDFY: the benefit-cost ratio for ISFP was $9.60 per $1 invested versus $5.85 per $1 for PDFY (Spoth et al., 2002). The program has since been adapted for multiple cultural contexts and countries. This work has demonstrated similar effects, to the extent that program core components and dosage were maintained (Kumpfer et al., 2002, 2012, 2018).

Selective Programs

Family-based selective interventions build resources to counteract conditions of adversity, such as premature birth, parental divorce, death, abuse, or poverty, by providing parent or family skills training. Several family-based selective prevention programs have been shown to positively impact child and adolescent well-being (Lochman & van den Steenhoven, 2002; O'Connell et al., 2009; Sandler et al., 2011; Webster-Stratton & Taylor, 2001).

For example, the Family Bereavement Program was found to reduce behavioral health problems of both bereaved children and their spousally bereaved parents 6 years and 15 years following their participation in the program, thus showing a "double prevention effect" (Sandler et al., 2010a, 2016a, 2018a). This program was designed to change multiple risk and protective factors that had previously been found to be related to problem outcomes among bereaved children. The intervention focuses on changing the family environment (e.g., positive parenting, surviving parent's behavioral health, stressful events following the death) as well as promoting youth's adaptive coping (Sandler et al., 2008). At the 6-year follow-up, the program was found to strengthen family protective factors (e.g., positive parenting), to reduce externalizing problems, suicide ideation/attempts and grief in youths (Sandler et al., 2010a, 2010b, 2016b), and to reduce depression, alcohol abuse and complicated grief disorder in spousally bereaved parents (Sandler et al., 2010a, 2016b). At the 15-year follow-up the program was found to reduce youths' internalizing problems and use of mental health services and psychiatric medication and to reduce bereaved parents' alcohol misuse (Sandler et al., 2018a).

The New Beginnings Program (NBP) was designed to support child behavioral health in the context of parental divorce by improving mother-child relationships, effective discipline, and father-child contact, and decreasing children's exposure to interparental conflict and negative divorce events (Wolchik et al., 1993). It has since been adapted to be appropriate for fathers and culturally appropriate for the diversity of families who access family court services. Three randomized controlled trials involving over 1800 children found positive effects on parent-child relationship quality, effective discipline, and children's behavioral health problems (Sandler et al., 2018b, 2020; Tein et al., 2018; Wolchik et al., 2000, 1993). Six years after implementation, the NBP reduced alcohol use, marijuana use, other drug use and polydrug use; number of sexual partners; prevalence of diagnosis of mental disorder in the past year; externalizing problems and internalizing problems and improved grades, self-esteem, and adaptive coping (Wolchik et al., 2007). The public health significance of these effects is illustrated by the program-induced decreases in serious problems: the NBP led to a 34% decrease in the prevalence of diagnosed mental disorder in the last year and a 61% decrease in the number of sexual partners in the past year. Fifteen years after the program, when offspring were young adults, the NBP reduced the incidence of internalizing disorders (e.g., major depression) and, for males, the number of substance use disorders and frequency of substance use problems (Wolchik et al., 2013). The public health significance of the benefits at this follow-up is illustrated by large effects to decrease number of days in jail and use of behavioral health services in the past year, which translated to a discounted cost-benefit of $1077/family in a single year (Herman et al., 2015).

The Strong African American Families program (SAAF) is a family-based preventive intervention culturally tailored for African American communities in rural Georgia (Brody et al., 2004; Murry & Brody, 2004). Input from stakeholders was combined a decade of longitudinal research from those same communities (e.g., Murry & Brody, 1999, 2004), as well as general and culturally informed theories of adolescent development (e.g., Bandura, 1997; Gibbons & Gerrard, 1997; McAdoo, 1997) to develop a heuristic model of risk and protective mechanisms that guided the program content and delivery. In addition to common prevention targets included in other preventive interventions (e.g., warm and supportive parenting, communication, positive discipline,

and youth attitudes toward risk behavior), stakeholders emphasized the need to focus promoting parent use of adaptive racial socialization strategies to protect children from the negative impact of discrimination. In 2001, a two-arm preventive intervention trial tested SAAF with rural African American families with early adolescents. Results demonstrated program-driven effects on racial socialization and other universal parenting strategies, which translated to prevention of adolescent sexual risk behavior, substance use, and conduct problems (Brody et al., 2010, 2008; Murry et al., 2007, 2011). Program effects were also found on parent depression (Beach et al., 2008). To combat implementation challenges, the program was adapted to an eHealth program, Pathways for African American Success (Murry et al., 2018). Results of a three-arm trial demonstrated that the eHealth version surpassed the traditional in-person group format for program attendance and resulted in greater enhancement of parenting and adolescent substance use and sexual risk behavior (Murry et al., 2019a, b).

Indicated Programs

Indicated programs for externalizing problems often include an individual- or group-based parent behavior management training approach (see Lochman & van den Steenhoven, 2002 for reviews; O'Connell et al., 2009; Sandler et al., 2011; Webster-Stratton & Taylor, 2001). For example, the Incredible Years BASIC program (Webster-Stratton, 2001) is a 14-session, group, parent training intervention that employs videotaped parent-child interactions and group discussion to teach effective parenting practices, such as child-directed play time, effective commands, praise for prosocial behavior, and nonviolent consequences for misbehavior (i.e., time out, natural and logical consequences). The program's ability to reduce externalizing problems has been demonstrated in several randomized controlled trials as an indicated prevention program for children exhibiting subdiagnostic conduct problems (Jones et al., 2007; Reid et al., 2007). Recent studies have demonstrated effects are consistent across racial/ethnic minority and low-income families (Leijten et al., 2017; Weeland et al., 2017).

Resources Constructed in the Community/Organizational Domain

Universal Promotion and Prevention Programs

Promotion programs in the community/organizational domain focus on creating system-level changes to enhance children's social, emotional, and cognitive competencies. In a meta-analysis of positive youth development programs that targeted system-level changes, Durlak and colleagues (Durlak et al., 2007, 2010) found promotion programs in the school domain successfully changed school-wide and classroom-level processes, with overall effect sizes in the moderate to large range. For example, the School Development Program (SDP; Comer & Emmons, 2006) is a whole-school intervention that focuses on changing school culture to support positive youth development. The SDP is a process model of school reform that involves three teams—the School Planning and Management Team, the Student and Staff Support Team, and the Parent Team. The teams develop, implement, and monitor a comprehensive school reform plan to improve school climate and student achievement. Periodic assessments are conducted, and modifications are made as needed. The SDP specifies three guidelines for facilitating positive working relationships among team members: (1) a focus on problem-solving, not blaming; (2) the use of consensus decision-making rather than majority rule; and (3) members working collaboratively rather than alone. Multiple studies, including randomized controlled trials (e.g., Cook et al., 2000), have shown that the SDP has short-term effects on improving school climate and long-term effects on student achievement. In a meta-analysis of 29 school reform programs, the SDP emerged as one of three programs with the strongest evidence of program effects based on the

quantity and quality of research conducted to date (Borman et al., 2003).

Universal prevention programs that focus on building resources in the community or organizational domain are based on the theory that changing aspects of children's macrolevel environments will reduce the likelihood of future adversities and provide support to help all children effectively manage stressors that occur in these settings (Sandler, 2001).

Organizationally based universal programs have been developed to change school ecologies to prevent behavioral and academic problems (Felner et al., 2001; Flannery et al., 2003) and improve classroom management strategies to decrease undesirable student behaviors. For example, the Good Behavior Game (GBG) is a classroom-based, behavior management intervention, which is based on the theory that disruptive behaviors by students in the classroom occur because peers reinforce misbehavior through reactions such as smiles, giggles, laughs, and pointing; therefore, reinforcement for negative behaviors can be diminished by providing group-based rewards for inhibiting them (Embry, 2002). The GBG intervention is presented as a game in which teachers positively reinforce student *teams* who do not exceed negative behavior standards set by the teacher. GBG is played periodically over the school year, beginning with highly predictable procedures and immediate rewards and evolving into less predictable times and locations with deferred rewards (Kellam et al., 1998). A review of 16 GBG studies concluded that the program can have moderate-to-large immediate effects on challenging classroom behaviors in diverse school settings (Flower et al., 2014). Long-term follow-up with young adults aged 19 to 21 who had participated in GBG in their first and second grade classrooms found intervention effects on drug and alcohol disorders, regular smoking, sexual risk behavior, and antisocial personality disorder for participants who had been more aggressive and disruptive at baseline (Kellam et al., 2008, 2014). The GBG intervention appears to improve behaviors of the more aggressive males by changing the ecology of the classroom to be less aggressive overall (Kellam et al., 1998) and to be more conducive to developing pro-social affiliations with nondeviant peers (van Lier et al., 2005).

School restructuring is another example of universal prevention in the organizational domain. Restructuring programs have been developed to reduce the adjustment problems of youths making the transition to junior high or high school. These school transitions are associated with increased risk for multiple negative outcomes including decreased grades, lower self-esteem, and higher distress, which place youths at increased risk for later problems such as depression and further academic difficulties (Seidman et al., 2004). Developmental theorists have proposed that these negative effects are due to a mismatch between the school environment and adolescent needs for autonomy, identity formation and close affiliation with peers and adults (Eccles et al., 1996). The School Transitional Environment Project (STEP) was designed to restructure the school context to better meet the needs of students during these high-risk transitions by creating a small group of students who move through all primary classes together and by assigning a single adult to serve as counselor, advisor and liaison for their families (Feiner et al., 1994; Felner et al., 2001). Thus, the program restructures the high school experience to increase social support from peers and adults. Evaluations demonstrated that students who experienced the STEP program had better emotional adjustment, grades, and attendance levels, and were less likely to drop out of school by 12th grade, as compared to a random sample of students who experienced the usual high school transition (Feiner et al., 1994; Felner et al., 2001).

Selective Programs

Society develops institutions, policies, and practices to deal with children and families experiencing certain stressful life situations such as poverty, parental divorce, bereavement, or physical illness. For example, the domestic relations court provides an institutional structure within which families obtain a divorce and resolve legal

issues (e.g., parental rights and responsibilities), as well as decide how financial assets will be divided. Alternative policies and practices may have significant impact on children's exposure to postdivorce stressors, such as interparental conflict, loss of contact with a parent or economic hardship, as well as on the quality of children's adjustment following divorce. Consequently, the courts have been proactive in developing alternative practices to reduce conflict (e.g., mediation of disputes), increase children's involvement with both parents (e.g., joint custody), and strengthen parental functioning following divorce (e.g., mandatory parenting programs) (Braver et al., 2004). Illustratively, the Collaborative Divorce Project (Pruett et al., 2005) provides divorcing parents with an alternative to the adversarial system which can encourage conflict between the parents to a system which provides parent education to reduce children's risk following divorce and methods to reach divorce agreements that minimize likelihood of ongoing conflict between parents.

Postdivorce child custody is an example of policy in the organizational domain that has been shown through empirical research to be related to children's adjustment. Specifically, Bauserman (2002) conducted a meta-analysis of 33 studies comparing children's adjustment in joint- versus sole-custody arrangements. Although the magnitude of effects tended to be small, Bauserman found that when families were awarded joint-custody rather than sole-custody, family relationships were better and children showed better adjustment across a variety of outcomes, including higher self-esteem and better emotional, behavioral, and divorce-specific adjustment. A subsequent meta-analysis (Bauserman, 2012) focused on parent adjustment showed that joint-custody was associated with less parenting burden and stress, less conflict, and more emotional support.

In one prospective, longitudinal study, custody arrangement predicted children's later adjustment, even after controlling for a large number of predivorce selection factors, including interparental relationships, maternal and paternal parenting, parental adjustment, child adjustment, and demographic variables (Gunnoe & Braver, 2001). Causality cannot be inferred from these static-group investigations because families are not randomly assigned to different custody arrangements. However, the findings suggest that a judicial presumption in favor of joint-custody for most families (i.e., those without parental fitness concerns) may help promote resilience among children who have experienced parental divorce.

Indicated Programs

Organizational interventions to improve adaptation for children already manifesting problem behaviors target policies or social structures designed to deal with these problems. The theory underlying these interventions is that policies or organizational structures can decrease or prevent the worsening of problems either by reducing future occurrence of adversities or by marshaling resources to promote resilience. Examples of such interventions include school policies for dealing with pregnant adolescents (Schellenbach et al., 2004), court approaches to dealing with juvenile delinquents (Sturza & DavidsonIi, 2006), and a service system for children in foster care (Leve et al., 2009).

Although policies and organizational structures to deal with problem behaviors are ubiquitous, their effects on adversities, resilience resources, and problem outcomes have rarely been examined empirically. One well-evaluated program in the organizational domain to promote resilience in children experiencing behavior problems is the Adolescent Diversion Project (Sturza & DavidsonIi, 2006). This program is based on theoretical propositions concerning the harmful effects of social labeling on the future course of delinquency and on the value of mobilizing community resources to support the competencies of juvenile offenders in adapting to prosocial roles in the community. The program targeted youths identified by law enforcement as involved in delinquent behaviors, but not yet officially adjudicated in the juvenile justice system. One study randomly assigned adolescents to one

of three conditions: diversion with services (the Adolescent Diversion Project), diversion without services, and treatment-as-usual (e.g., court-processed) (Smith et al., 2004). Each individual in the diversion with services condition was assigned a family worker from a local service agency who assisted the youth and family in developing behavioral goals and a reward system for the youth and in assessing community resources available to support the youth's educational advancement and civic involvement. Results indicated that participants assigned to the diversion with services condition showed decreased recidivism rates compared to the diversion without services and control conditions at 1-year follow-up. Multiple randomized controlled trials have demonstrated the efficacy of the diversion program model. A meta-analysis conducted by Schwalbe et al. (2012) suggests that only those that include a family-focused intervention are associated with statistically significant prevention of recidivism.

Constructing Resources Across Domains and Levels

As the previous sections illustrate, a variety of interventions have been empirically shown to promote resilience and prevent dysfunction by constructing resources in child, family, or organizational domains using universal promotion/prevention programs, selective prevention approaches, and indicated interventions. Efficacious interventions have been identified for all nine cells in the matrix presented in Table 22.1. While single efforts to build resilience can be described within each of the matrix cells, building resilience in all children requires coordinated efforts that combine interventions across domains (rows) and levels (columns) to address individual differences in adversities, resources, and needs among children in a community. Several evidence-based prevention programs have combined interventions across domains and/or levels to promote resilience and prevent dysfunction (Bierman et al., 2002; Conduct Problems Prevention Research Group, 2007, 2010; Eron et al., 2002; Hawkins et al., 2001; Reid et al., 2007; Sanders et al., 2002; Vitaro et al., 2001).

For example, the Seattle Social Development Project (SSDP) is an evaluation of The Raising Healthy Children program, a universal, multicomponent intervention provided to teachers and parents of students exposed to community-school adversity (i.e., children attending public elementary schools in high-crime areas of Seattle) (Hawkins et al., 1999). In this nonrandomized controlled trial, three conditions were compared: full intervention, late intervention, and no intervention. In the full intervention condition, services were provided in Grades 1 through 6 and included interventions in child, family, and organizational domains: social competence training for children, parenting classes, and annual teacher training. The late intervention included the same services provided only in Grades 5 and 6. Long-term follow-up studies of the SSDP into adolescence and young adulthood have indicated that those who received the full intervention (but not the late intervention) had higher levels of educational and occupational attainment; engaged in significantly less violent behavior, criminal activity, and risky sexual behavior; had fewer anxiety symptoms and diagnosis of a sexually transmitted infection (STI); and females were less likely to become pregnant, as compared to those in the control group (Catalano et al., 2021; Hawkins et al., 2007; Hill et al., 2013). The reduction in STI risk was greater for African American and Asian American than White participants (Hill et al., 2013). The Intergenerational Project (SSDP-TIP) was conducted a follow-up study with the children of the original participants in the SSDP (Catalano et al., 2021). Results demonstrated second generation effects of the full intervention on developmental delays, externalizing symptoms, socioemotional skills, and substance use.

In contrast to interventions such as SSDP that build resources across multiple domains, the Triple P--Positive Parenting Program (Sanders et al., 2002) is an example of a program that promotes a specific resource (i.e., effective parenting) across multiple intervention levels. The Triple P model is based on the principle that

individual families within a community differ with respect to the amount of support and assistance needed to promote positive parenting. Rather than being a single program, Triple P is a system of five intervention levels that vary in intensity from a media-based, universal parenting program to a brief, video-based selective program to more intensive, group-based indicated interventions. Multiple randomized controlled trials have been conducted on most of Triple P's intervention levels and have provided evidence for their efficacy in promoting effective parenting and children's prosocial behavior (de Graaf et al., 2008a, b; Nowak & Heinrichs, 2008). Recently, Prinz et al. (2009, 2016) conducted a population-level dissemination trial on the full Triple P system. In this experimental trial, 18 counties were randomly assigned to either a services-as-usual control condition or to a county-wide Triple P dissemination condition, in which the existing child service provider workforce was trained to implement the Triple P system. The researchers found that dissemination of the multilevel, Triple P system led to a significant reduction in child maltreatment cases at the population level. An evaluation of an online version of Triple P found improvement was moderated by parent education, with better outcomes for more educated parents (Day et al., 2021).

Another approach is the use of individually tailored interventions that assess individual family needs and provide tailored support to address those needs. For example, the Family Check-Up (FCU; Dishion & Stormshak, 2007) is a parenting EBP that uses an individually tailored approach to prevent child/adolescent mental illness, behavior problems, substance use, and suicide (Connell et al., 2016). The FCU begins with an assessment of family strengths and needs and provides tailored support via a menu of parent training modules and referrals to community resources for more elevated behavioral health needs. The efficacy of the FCU has been tested in multiple randomized trials, including the Early Steps trial with young children enrolled at age 2 and followed until age 18 (Dishion et al., 2014) and Project Alliance 1 and 2 with youth enrolled in middle school (ages 12–14 years) and followed into early adulthood (Stormshak et al., 2005). FCU has demonstrated intervention effects on multiple behavioral health outcomes in early childhood, adolescence, and adulthood, including self-regulation, externalizing behaviors, substance use, internalizing symptoms, and suicidality (Connell et al., 2016; Fosco et al., 2013; Hentges et al., 2020; Pelham et al., 2021). The FCU has been to shown to be effective across racial/ethnic groups, including Latino, African American, and non-Latino White families (Smith et al., 2014). Spillover effects have also been found on physical health behaviors and pediatric obesity prevalence (Smith et al., 2015; Van Ryzin & Nowicka, 2013), which has led to the adaptation for delivery in primary care (Berkel et al., 2020; Smith et al., 2018b). A trial of the adapted program, the Family Check-Up 4 Health (FCU4Health), conducted in multiple primary care settings serving primarily Latino families demonstrated that the adaptation was able to maintain the effects of the FCU on behavioral and physical health outcomes (Berkel et al., 2021a; Smith et al., 2021a). Moreover, baseline targeted moderation analyses demonstrated that the program was equally effective irrespective of baseline risk (Smith et al., 2021b).

Putting Science Into Practice

A growing number of efficacious prevention programs have been identified that promote resilience for children who experience adversities. These programs share two key characteristics. First, they build individual, family, and/or community/organizational resources associated with resilient outcomes for children facing adversities. Second, these programs have been shown to be efficacious in bolstering resources, preventing negative behavioral health outcomes, and promoting resilience through well-controlled evaluation studies. Without evidence from well-controlled evaluations, programs can offer only promissory notes, not proven benefits. Unfortunately, many communities have not adopted evidence-based programming, relying instead on interventions that have been

well-packaged, but not adequately evaluated (Backer, 2000; Ennett et al., 2003; Redmond et al., 2009). In the following sections, we examine some of the main issues and challenges communities must tackle to make effective use of evidence-based, resource-building interventions, as well as tools and systems that have been developed to help communities successfully navigate the process of putting science into practice.

Needs Assessment

An important challenge a community initially faces involves conducting a needs and resources assessment of the population (Hawkins et al., 2002; Wandersman et al., 2000). This process is critical for defining the problems and generating specific goals the community hopes to achieve. The process involves collecting epidemiologic data on adversities, resources, and problems prevalent in the community, which are used to guide goal setting and the selection of intervention strategies. Identification of adversities, resources and problems is facilitated by the use of multiple sources of data, including community member perceptions (i.e., youth and adult reports) and archival data (e.g., census, court, school records) (Wandersman et al., 2000). In addition, needs assessments should identify the demographic characteristics of a community, in order to select evidence-based interventions that have been validated with similar populations. However, care should be taken to ensure that this process does not result in stigmatization of community subgroups with higher rates of adversity or prevalence of poor behavioral health outcomes.

Given that community leaders are likely to be unfamiliar with needs assessment methodology, a variety of tools and systems have been devised to guide leaders through this process (Chinman et al., 2009; Glaser et al., 2005). For example, the Search Institute[1] has developed surveys to assist community leaders in identifying whether "developmental assets"(i.e., research-based protective resources) are present or absent in their communities (Scales & Leffert, 2004). The "Attitudes and Behaviors (A&B)" survey is a 160-item questionnaire administered in a 30-min period to students in Grades 6 through 12. This survey assesses the availability of 20 external assets in students' families and communities (e.g., nurturing relationships with adults, supportive institutions, enrichment opportunities, collective youth monitoring) and 20 internal assets (e.g., student commitment to learning, prosocial values, social skills, positive self-identity). This survey also obtains information on student demographics, high-risk behaviors (e.g., substance use), resilience indicators (e.g., school success), and developmental deficits (e.g., abuse history). Research supports the reliability and validity of this assessment tool (Leffert et al., 1998; Reininger et al., 2003; Zullig et al., 2009). Moreover, recent work has established measurement invariance of a revised measure across grade, race/ethnicity, gender identity, sexual orientation, and parent education (Syvertsen et al., 2019). The institute's fee-based service includes telephone consultation on administration issues, an administration manual, student survey forms, computerized scanning of forms and analysis by the institute, a summary report of survey results, and resources to aid community mobilization efforts to develop asset-building strategies for promoting positive youth outcomes.

Communities That Care (CTC)[2] is a similar service developed to help communities formulate strategies for promoting healthy behaviors and preventing negative behavioral health outcomes among youths (Hawkins et al., 2002). CTC is a comprehensive, manualized system for guiding community leaders through the entire process of planning and implementing science-based prevention strategies including: (a) assessing community readiness to use CTC; (b) introducing prevention science and CTC principles to key stakeholders and community members; (c) establishing a community prevention board to carry out CTC activities; (d) collecting

[1]Search Institute surveys: https://www.search-institute.org/surveys/

[2]Communities That Care (CTC): https://www.communitiesthatcare.net/programs/ctc-plus/

community-specific data on risk and protective factors, adolescent substance use, and other behavioral health and behavior problems; (e) using assessment data to develop an action plan; (f) selecting science-based prevention strategies shown to be effective in reducing community-specific risk factors and enhancing protective processes; (g) implementing the selected prevention strategies; and (h) monitoring and evaluating implementation.

During the needs assessment phase, the CTC community board develops a profile of community strengths and challenges based on results of student surveys and archival data (e.g., census) that measure risk behaviors (i.e., substance use, delinquency), adversities, and resources across four domains: community, school, family, and peer-individual (Glaser et al., 2005; Hawkins et al., 2002, 2009). A community map is created detailing the distribution of adversities and resources across different neighborhoods in the community, allowing the board to focus efforts on high-risk neighborhoods.

Whitlock and Hamilton (2003) conducted an informal study based on interviews with representatives of New York communities that used one or more youth survey approaches including those described here. They concluded that successful implementation of these approaches depended on widespread community buy-in and participation, combined with flexibility regarding the roles and actions of community coalition boards.

Intervention Strategy Selection

After the needs assessment and goal setting phase, communities face the challenge of selecting intervention strategies to meet the community's goals (Chinman et al., 2009; Hawkins et al., 2002). A multilevel approach that includes a mix of evidence-based universal promotion/prevention, selective, and indicated programs that counteract adversities and construct resources across multiple domains has the potential to provide an efficient way of meeting the diverse needs of individuals within the community, while building resilience at the population level (Hawkins et al., 2002; Sanders et al., 2002; Sheeber et al., 2002). The conceptual framework presented in this chapter could help guide the process of selecting appropriate intervention strategies. Community leaders could use data collected on adversities, resources, and behavioral health problems prevalent in their area to choose a combination of (1) universal promotion and prevention strategies within a domain to bolster resources identified as lacking, (2) selective interventions to counteract specific adversities, and (3) indicated programs to address specific problems that are highly prevalent in their community.

However, to effectively choose programs that meet a community's needs, community leaders need to have access to concise information regarding programs that have been shown to promote specific resources, counteract specific adversities, and reduce specific behavioral health problems. Recognizing the necessity of providing this type of information to communities and practitioners, a variety of federal and nonprofit organizations have developed principles of effectiveness to guide the identification of promotion and prevention programs that work, as well as registries listing effective programs and details regarding the conditions under which these programs have been shown to be effective. The Results First Clearinghouse[3] from the PEW Charitable Trust compiled ratings of over 3000 programs by nine clearinghouses in a wide range of areas including education, behavioral health, and justice. For example, using Blueprints for Healthy Youth Development[4] users can search for universal, selective, or indicated programs that fit their needs based on type of program, risk and protective factors, target population or outcomes to be prevented or promoted. Blueprints has identified 28 parent training programs as being either "model plus," "model," or "promising," based on

[3]Results First Clearinghouse: https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2014/09/results-first-clearinghouse-database

[4]Blueprints for Healthy Youth Development: https://www.blueprintsprograms.org/

standards of one or more RCTs with positive impact and demonstrated readiness. Moreover, users can search for programs that have been explicitly validated with specific target populations, including race/ethnicity, gender, and age, which allows communities to choose programs that are more likely to be effective in their local context.

Implementation and Evaluation

Selecting evidence-based programs does not guarantee that programs will be successfully implemented in a community. Even when evidence-based programs are selected, often they are not well-implemented in natural service delivery systems (Gottfredson et al., 2006; Greenberg et al., 2003). Multiple dimensions of implementation (e.g., fidelity, dosage, participant responsiveness) have been identified as important factors in determining whether or not evidence-based programs delivered in community settings produce the same effects as the original intervention models (Berkel et al., 2011; Durlak & DuPre, 2008). Further, it is becoming widely recognized that adaptation is ubiquitous and potentially beneficial for improving program outcomes, particularly when programs are delivered with a group who is culturally distinct from samples included in efficacy trials (Barrera et al., 2017; Castro et al., 2004). Adaptation may enhance outcomes by enhancing participant responsiveness to the program or by addressing culturally relevant risk and protective mechanisms (Barrera & Castro, 2006; Berkel et al., 2011; Kumpfer et al., 2012). However, the potential benefit of an adaptation depends on a nuanced understanding of the programs' theoretical underpinnings, and consequently, should be done through a partnership between program developers and implementers. Program packages need to include training programs, ongoing technical assistance, and procedures for monitoring delivery as ways to promote high-quality implementation (Berkel et al., 2019; Durlak & DuPre, 2008; Redmond et al., 2009).

In addition to intervention packaging features, client, provider, and organizational characteristics have been identified as factors that influence the quality of implementation and the sustainability of interventions (Backer, 2000; Durlak & DuPre, 2008; Mayer & Davidson, 2000; Ramos et al., 2020). It is important to ensure that organizations implementing prevention programming possess or develop characteristics associated with successful implementation, such as a shared vision about the value and purpose of the program, staff with appropriate skills and cultural competence, adequate resources to support the program, strong organizational leadership, and a shared decision-making process (Durlak & DuPre, 2008; Wandersman, 2009; Wandersman et al., 2000). Further, to improve the effectiveness of evidence-based prevention programming delivered in community settings, implementation steps must be clearly defined and planned out (e.g., timeline, responsibility assignments), and continuous quality improvement strategies need to be used to systematically assess and feedback information about intervention planning, implementation, and program outcomes (Wandersman, 2009; Wandersman et al., 2000).

Experimental trials evaluating the effectiveness of systems that guide community leaders through the process of putting science into practice have produced promising results (Chinman et al., 2018; Hawkins et al., 2009; Oesterle et al., 2015; Redmond et al., 2009). For example, Hawkins et al. (2009) conducted a population-level evaluation of the CTC system in which 24 towns were randomly assigned to CTC or a control condition. Risk and protective factors and youth outcomes were assessed using annual student surveys conducted longitudinally for 4 years with 4407 middle-school students. The investigators found that the CTC system was generally implemented with fidelity (Fagan et al., 2009). Significant effects of the CTC system were found for reducing the incidence and prevalence of substance use (i.e., tobacco and alcohol) and delinquency compared to control communities, controlling for baseline prevalence (for substance use outcomes) and demographic variables (Hawkins et al., 2009). For the most part, findings held equally for both boys and girls and by risk status, although stronger effects were found

for reducing substance use among boys in Grade 8 and for reducing delinquency among students who were nondelinquent at baseline (Oesterle et al., 2010). Racial/ethnic minority group status was included as a covariate, but analyses were not presented results by race/ethnicity. A follow-up study conducted 9 years after baseline found that results were sustained for delinquency for the total sample, and lifetime behavioral health outcomes for males only. Effects on current substance use were not significant, suggesting the need to extend implementation through the high school years (Oesterle et al., 2015).

Although these results are encouraging, the potential public health impact of CTC and systems like it could be improved by integrating more effective methods of engaging parents into family-based prevention programs. For example, in the CTC trial, communities rarely met their goal of providing parenting services to at least 20% of families (Fagan et al., 2009). In fact, initiation rates ranged from 4% to 7% across 4 years. In a large-scale trial of the multilevel Triple P Positive Parenting Program, family engagement rates were also low (1% engaged in the 8-session parenting program; <10% engaged in any Triple P level) (Prinz et al., 2009). Even in a study that obtained a relatively higher participation rate, Redmond and colleagues' (Redmond et al., 2009) trial of PROSPER (PROmoting School-university-community Partnerships to Enhance Resilience), only a small minority of families participated in the family-focused intervention (17%).

Given the well-established effectiveness of evidence-based, preventive parenting interventions (Lochman & van den Steenhoven, 2002; Sandler et al., 2015, 2011; Webster-Stratton & Taylor, 2001), it is critical to develop more effective strategies for engaging parents into these programs to maximize their public health impact (Spoth et al., 2007). Several factors have been shown to predict participation, such as high parent education, income, stress and mental health, perceived need for and benefits of participating in the intervention, and lower perceived barriers to participation (Dumas et al., 2007; Smith et al., 2018a; Spoth et al., 2000; Winslow et al., 2009). Further, multiple studies have found that associations between demographic and cultural characteristics and program participation. For example, families who speak Spanish and are more strongly connected to Latino cultural values are more likely to participate in family-centered prevention compared to more acculturated Latino families or non-Latino families (Berkel et al., 2021b, 2018; Dillman Carpentier et al., 2007; St George et al., 2018). This may reflect the concordance of family-based prevention with Latino cultural values which center the role of the family in everyday life. Alternatively, it may reflect the fact that in many communities, there are limited programs available in Spanish to support family needs. Targeting potentially modifiable predictors of participation, such as perceived benefits and barriers, and adapting strategies that have worked in other fields such as child treatment (McKay et al., 1998; Nock & Kazdin, 2005), may help researchers develop more effective engagement strategies, which would increase the population-level impact of effective family-based prevention programs. Further, addressing disparities through prevention strategies will depend on increasing understanding of cultural factors associated with participation in evidence-based programs to ensure equitable reach to populations facing adversity (Glasgow et al., 2013; Shelton et al., 2020).

Conclusion

In this chapter, we have presented a conceptual framework that integrates concepts from resilience with a public health equity approach to building resilience and preventing behavioral health problems for all children. Individuals within a population are characterized by varying levels of adversities, resources, and behavioral health problems. Moreover, we recognize that specific subgroups face higher levels of adversities and lower levels of resources, and these disparities must be addressed to achieve health equity. A multidomain, multilevel approach that includes a combination of universal promotion/prevention, selective, and indicated

programs holds promise as an efficient and effective way to address the diversity of needs at the community level and simultaneously impact population-level behavioral health problems and developmental competencies. A variety of universal promotion/prevention, selective, and indicated interventions have been rigorously tested and shown to construct resources across multiple domains to promote resilience and prevent behavioral health problems. Evidence for effectiveness for subgroups experiencing health disparities is growing. Unfortunately, most communities have not implemented evidence-based programming, highlighting the importance of refining, evaluating, and disseminating methods for assisting community leaders to conduct needs assessments, select effective programs to address the unique needs of their communities and implement them well, engage individuals and families, and evaluate the impact of programs on youth outcomes. Building resilience in all children will require communities to identify specific goals regarding child competencies to promote and problems to prevent, assess the adversities that threaten those goals and the resources that promote them, and implement a coordinated combination of evidence-based interventions that construct resources across multiple domains and levels.

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23 Enhancing the Process of Resilience Through Effective Thinking

Myrna B. Shure and Bonnie Aberson

In the first edition of this book, a problem-solving approach to resiliency was illustrated to show how early high-risk behaviors as physical and verbal aggression could be reduced and prevented, and how clinical applications of the problem-solving approach could enhance the resiliency of children exhibiting emotional disturbance and ADHD. We have now learned that a different form of aggression, called relational aggression, popularized by the "mean girls syndrome" (e.g., Simmons, 2002; Wiseman, 2002) can stifle resilience, and how the problem-solving approach can help both the perpetrator and the victim of such behaviors. We have also learned how a feeling of bonding to school can increase resilience, and how the problem-solving approach can promote that feeling. Finally, we have discovered that in addition to emotional disturbance and ADHD, children with other diagnoses can be helped with the problem-solving approach, and how this can transpire with Asperger's syndrome will be illustrated.

No one doubts that clinicians, parents, teachers, and other caregivers are in a unique position to affect social adjustment and interpersonal competence in children. There is, however, a reason to wonder whether we have a thorough grasp of the subtleties of this process. We know that some families, for instance, can adjust in reasonably adaptive ways to what appear to be circumstances very similar to those in families who cannot. Even among the very poor, many of whom experience insurmountable pressures of daily living, some can cope better than others and can have children who emerge as stellar examples of healthy human functioning.

This chapter will describe an interpersonal cognitive problem-solving (ICPS) approach that George Spivack developed with the first author (Shure), an approach that can provide a protection against stress—protection that can provide a significant mediator of resilience that helps people cope with insurmountable pressures, frustration, and even failures in life. First, socially adjusted and interpersonally competent children and those in regular classrooms displaying varying degrees of high-risk behaviors such as impulsivity and inhibition will be discussed. Examples of how the problem-solving approach has helped both adjusted and high-risk children develop resilience in typical, everyday conflict situations will be illustrated. How school bonding can promote resilience, and how interpersonal problem-solving can help children bond to their school environment will also be discussed. Examples of how clinicians can put into practice the efforts of controlled, empirical research of the first author and others will then be described through

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_23

vignettes reported by the second author (Aberson) in her work with children diagnosed with clinical and neurological disorders.

Traditionally, educators and clinicians believed that if emotional tension could be relieved, it would be easier for children to think "straight." It seemed to George Spivack and Shure just as reasonable to believe that if one could think "straight," it would be easier to relieve emotional tension. Let us look at Zachary (all names are pseudonyms), a 4-year-old who wanted a wagon that Richard was playing with. When Richard refused his request, Zachary did not create a new problem by becoming disorganized in the face of stress. His ability to think of other options created the opportunity for him to demonstrate flexibility, and this led him to another tactic "If you let me have the wagon, I'll give it right back." Richard did not answer. Zachary then asked him, "Why can't I have it?" Richard replied, "Because I *need* it. I'm pulling the rocks." Zachary paused, then quietly offered, "I'll pull them with you." "Okay," said Richard. And the two children played with the wagon together.

Zachary's teacher may not have agreed with the way this problem was solved.

She might have thought Richard should have let Zachary have the wagon when he first asked for it because Richard already had his turn. But Zachary was satisfied with pulling together. Instead of ending up in dissatisfaction and frustration, both children responded warmly toward each other and felt good about their own decision. Zachary was able to think about his original desire, the wagon, and when faced with resistance could then think of alternative ways to solve the problem (ask for it; promise a quick return; suggest playing together). He was able to understand the other child's feelings and incorporate them into a solution that ended up successful. Like other good problem solvers, Zachary may have *thought* about hitting or pushing Richard or just pulling the wagon away, and he may also have been able to anticipate the consequences of such acts. But most importantly, his ability to think of other options prevented Zachary from experiencing frustration and failure. He could bounce back. He did not have to give up too soon. Perhaps this was possible because Zachary had available to him more than one way to solve his problem.

Let us look at Sara, who asked her sister to let her play with her doll, and like Zachary, was told she could not have it. Could she think of other ways to get her sister to let her play with her doll? If not, she might become frustrated with her sister and react aggressively, or perhaps avoid the problem entirely by withdrawing. Sara might have hit her sister, not as an impulsive reaction to frustration, but after *deciding* that hitting is one way to get it. If this were the case, the new question is whether she also thought about the potential consequences of her hitting and whether that might have influenced her decision to hit. She might have foreseen that her sister could hit her back and not let it concern her. She might go ahead and hit her anyway. Perhaps she could not think of anything else to do. When Sara's sister told her she could play with her doll after she was finished with it, Sara thought of something different to do while she waited, an important coping strategy in itself. Sara was able to wait without getting impatient, flying off the handle, hitting her sister, or giving up.

What do Zachary and Sara have that children who are not so successful in negotiating for what they want but do not have? These two children have the ability to think of more than one way to solve a typical interpersonal problem, to mesh their needs with the needs of the other child, and to consider what might happen next if they were able to carry out a particular solution.

Problem-Solving and Resilience

Arend et al. (1979) found that 5-year-olds who can think of more options to interpersonal problems are more likely to display ego resiliency, defined as "the ability to respond flexibly, persistently, and resourcefully, especially in problem situations" (p. 951). The authors continue: "Individuals presumably have a typical or preferred level or threshold of control. Being ego-resilient implies the ability to modulate this

preferred level of control in situational appropriate ways." The ego-brittle individual, on the other hand, "implies inflexibility—an inability to respond to changing requirements of the situation—and a tendency to become disorganized in the face of novelty or stress." This individual will be "impulsive (or constrained) even in situations when such behavior is clearly inappropriate." Perhaps having more than one way to solve problems that involve other people available in one's repertoire of thought provides the very flexibility and resourcefulness that creates an ego-resilient individual. In addition to being flexible and able to bounce back in the face of failure, Brooks and Goldstein (2001) observe that resilient children "have learned to set realistic goals and expectations for themselves. They have developed the ability to solve problems and make decisions and thus are more likely to view mistakes, hardships, and obstacles as challenges to confront rather than as stressors to avoid. They have developed effective interpersonal skills with peers and adults alike" (p. 5).

Children who are empathic and good problem solvers have developed effective interpersonal skills, as they have more friends and are less frustrated when things do not go their way. And, as Brooks and Goldstein note, parents can help by being empathic, communicating effectively, teaching our children to solve problems and make decisions, and disciplining in a way that promotes self-discipline and self-worth. Children who can plan their own actions that have positive, not negative, consequences are better able to take control of their lives, instead of letting life take control of them.

Problem-Solving Skills that That Foster Resiliency

In youngsters as young as 4 and 5 years of age, Spivack and Shure measured the ability to think of *alternative solutions* to two types of problems: (a) wanting a toy another child has and (b) how to keep mother from being angry after having broken something of value to her. Using the Preschool Interpersonal Problem-Solving (PIPS) test (Shure & Spivack, 1972), it was possible to distinguish good from poor problem solvers as early as preschool. To obtain a chance to play with a toy another child has, poor problem solvers thought of "Ask," "Grab it," "Hit him," or "Tell the teacher." Good problem solvers could think of those solutions too, but added solutions as, "Take turns," "Say, 'I'll give it right back,'" "Tell him he'll be his friend," and more creative ones as, "Put her name on it and she'll think it's hers," and "Say, 'you'll have more fun if you play with me than if just play by yourself.'" Although good problem solvers could, like poor ones, think of "Take it," they were also more likely to offer, "Wait 'till he's finished," and surprisingly, "Wait 'til he's not looking and then take it." Poor problem solvers might have thought of "Say 'I'm sorry'" for breaking the flower pot, "I won't do it again," and perhaps some form of "fix it," while good problem solvers could add, "Paint it her favorite color," "Put her favorite flower in it," "Pretend he's asleep and mommy can't spank him," and "Bring her mommy a drink and she'll feel better."

Shure et al. (1971) found that good problem solvers were, compared to poor ones, less physically and emotionally aggressive, less likely to fly off the handle when things do not go their way, better able to wait their turn and share things, more aware of, if not genuinely concerned for, peers in distress, and more sought after by their classmates. They were also less likely to display inhibited behaviors in the classroom, such as timidity, fear of jumping into play with others, and ability to stand up for their rights. The efficacy of ICPS for adjustment in youngsters from preschool through adolescence has been confirmed by others who have found poor ICPS skills to be associated naturally with high-risk impulsive and inhibited behaviors as well as display of fewer positive prosocial behaviors in both lower- and middle-income groups (for a thorough review of these studies, see Spivack & Shure, 1982). Importantly, the very behaviors with which poor ICPS skills are associated are also, as longitudinal research has found, early predictors of later, more serious outcomes as violence, substance abuse, unsafe sex, and some forms of

psychopathology, including depression, perhaps even suicide (Bender & Lösel, 2011; Loeber & Hay, 1997; Moffitt & Caspi, 2001; Nagin & Tremblay, 1999; Parker & Asher, 1987; Roff, 1984; Rubin, 1985; Rubin et al., 2002; Valois et al., 2002).

Shure and Spivack learned something interesting from the solutions given by socially adjusted and behaviorally competent children as well as those who were not. It might, at first, appear that the solution "Wait 'til he's not looking and then take it," is an aggressive one, based on the content, "take it." Or, it might appear to be a solution that an inhibited child would give because, as one might conjecture, "The child doesn't have to confront anyone, and there's no conflict." It turned out that neither was the case; that it was the socially *adjusted* children (those displaying neither aggressive nor inhibited behaviors) who were most likely to give that solution. After having thought about why this was the case, Shure and Spivack came upon two possibilities. First, socially adjusted youngsters were likely to give more, different, relevant solutions to the presented interpersonal problems, and "Wait 'til he's not looking and then take it" was only one of several solutions offered. Therefore, a child who gave this solution was not stuck on one or two ways to solve a problem. Second, the cognitive components of this solution include a nonimpulsive thought, "Wait…" and thinking of the best time to do something—"when he's not looking." However rudimentary, this could be the precursor to a more sophisticated problem-solving skill found related to behavioral adjustment in the preteen years, a skill called *means–ends thinking*—planning sequenced steps toward a goal (e.g., making friends), anticipating potential obstacles that could interfere with carrying out that plan (the kids do not like him), and recognizing that time and timing, that is, recognizing a good time to act and/or appreciating that goals are not always reached immediately (Spivack & Shure, 1982). Another solution that made Spivack and Shure recognize that it may be *how*, not what children think that guides behavior is "Say 'I'm sorry'" for having broken mommy's flower pot or other act of property damage. While one may think that it would have been the adjusted children who gave that solution, a socially appropriate one, it turned out that while those youngsters could offer that one, inhibited children got stuck on that solution for nearly every stimulus presented (broke a flower pot, scratched a table, tore a hole in a book, etc.).

Given that perhaps the *process* of solving a problem, rather than the content per se, can guide behavior, Shure et al. (1971) tested children for other skills that could both distinguish good from poor problem solvers and skills that would relate to measures of social adjustment and interpersonal competence. As measured by the What Happens Next Game (WHNG) (Shure & Spivack, 1990), the ability to anticipate what might happen next if an act were carried out or *consequential thinking* emerged as a significant mediator of behavior as well. For example, when asked, "What might happen next" if a child grabbed a toy from another (Shure, 2003), poor problem solvers more likely gave responses such as, "He'll grab it back," "He'll hit him," or, "He'll tell the teacher." Good problem solvers could also think of these, but added responses such as, "It might break," "He'll lose a friend," or, as one very creative boy said, "He'll eat marshmallows in front of him and then when he wants one, he'll say no 'cause you took my truck.'" When asked what might happen next if, for example, a child takes something from an adult without first asking, poor problem solvers were not only more likely to think of fewer consequences, but much less empathic ones. Over and over, impulsive and inhibited youngsters were more likely to give consequences directed toward themselves, such as "He'll get whooped," "He'll have to go to his room," or "Mom will take away his toys." Adjusted youngsters who could also think of those possibilities were also more likely to think of empathic possibilities. Responding to a fictitious child having taken an umbrella without her mom knowing it, one adjusted child said, "When it rains, she won't have an umbrella, and she'll get wet, and she'll catch a cold."

Having identified alternative solution and consequential thinking skills as associated with social adjustment and interpersonal competence

in 4–6-year-olds, and sequenced planning, or means–ends thinking as an additional, more complex skill beginning about age 8, Spivack and Shure then asked why better problem solvers are more socially adjusted and interpersonally competent than their peers and with adults as rated by teachers as well as peers and independent observers (Shure, 1993). Do ICPS skills precede healthy adjustment or vice versa? Are children who are socially adjusted and interpersonally competent because they have good problem-solving skills, or do children have good problem-solving skills because they are socially adjusted and interpersonally competent? It seems reasonable to assume that children who get along with others, are not aggressive, and not socially inhibited have more opportunity to relate to others and more opportunity to practice social cognitive skills. It seems equally logical that an individual who becomes preoccupied with the end goal of a motivated act rather than how to obtain it, who is not adept at thinking through ways to solve a typical interpersonal problem, or does not consider consequences and the possibility of alternate routes to the goal is an individual who might make impulsive mistakes, become frustrated and aggressive, or evade the problem entirely by withdrawing. In any case, his initial needs remain unsatisfied, and, if such behaviors occur repeatedly, intense unpleasant affect will be aroused, interpersonal relationships can suffer, and varying degrees of maladaptive behavior and symptoms can ensue. On the other hand, an individual with means-ends thinking, a habit of thinking in terms of alternate possible solutions and an appreciation of consequences, should more effectively evaluate and choose from a variety of options when faced with a problem, turn to a different (more effective) solution in the case of actual failure, experience less frustration, be successful in interpersonal affairs, and be less likely to exhibit psychological dysfunction. Although there is no doubt an interaction of both premises, it seems reasonable to assume that youngsters like Zachary and Sara are likely, with their ICPS competence, to experience less frustration and failure than youngsters who cannot bounce back if their first ideas should elude them.

An implicit assumption of Spivack's theoretical position (Spivack & Shure, 1982) is that the availability of ICPS thinking is an antecedent condition for interpersonal adjustment and psychological health. This notion of mediating impact of ICPS upon behavior was put to the test via intervention created to investigate a linkage between ICPS ability and behavioral adjustment by experimentally altering ICPS skills, and then observing changes in the child's display of behaviors naturally associated with ICPS skills. If ICPS ability were found to mediate such behaviors, Spivack and Shure would be able to identify those ICPS skills that play the most significant role in adjustment, which would form the basis for a new approach to prevention of high-risk behaviors in children.

From Theory to Training Program

In the early 1970s, Shure and Spivack began systematic intervention to enhance ICPS skills with inner-city 4-year-olds. Based on Spivack's theoretical position and the content of solutions given by children when we tested them, the approach was to teach children *how*, not what to think, in ways that would help them successfully resolve everyday interpersonal problems. Originally called Interpersonal Cognitive Problem-Solving (ICPS), now called I Can Problem Solve (also ICPS), the training manuals for preschool and for kindergarten and the primary grades (Shure, 1992a, b) consist of sequenced games and dialogues, including prerequisite language skills, feeling word concepts, and the final alternative solution and consequential thinking skills to be learned.

ICPS Word Pairs

Word pairs such as is/is not, same/different, before/after, might/maybe, and some/all are first used in game form because when children learn to associate particular words with play, they are more likely to use them when it is time to settle disputes. In nonstressful situations, children first

have fun thinking about what an object in the room is and is not (e.g., "This *is* a table, it is *not* a chair, a balloon, a ceiling"), then to name something in the room that is the *same*, and something *different*, whether they pointed to the table *before* or *after* they pointed to the floor, and what thing Mom *might* point to next. Children can have fun talking about how Mom *is* the *same* as Dad, and how Mom is *not* the *same*, is *different* from Dad, what games they like to play that are *different* from games their sister likes to play, and whether it rained *before* or *after* they played outside. Children also like to play with the words *now* and *later*, and make up situations such as, "I am eating breakfast *now.* I will eat dinner *later."* The words *some* and *all* have been used in a phrase, to think, for example, that "I like to play with my new truck *some* of the time, but *not all* of the time. I can let my brother play with my truck *some* of the time too." It is fun for children to make up their own ways of using these words, ways that later help them think about how to solve conflicts that come up at home and at school. Applying these word pairs to real life, for example, a child can respond to the question, "Is your idea a good one or *not* a good one," in light of what *might* happen next, and is the child able to think about what happened before a fight began with questions such as, "Did he hit you *before* or *after* you hit him?" The words *is* and *is not* are also incorporated into phrases that help the child think about good times and *not* good times to do things, such as when a child is interrupting someone. The child can be asked, "Is this a good time or *not* a good time to talk to me?" Children enjoy thinking about the question, "Can you think of a *different* way to tell your brother what you want," and they are more willing to wait until later when they recognize the word *later* from their play games.

The second phase of the ICPS training program helps children identify feelings, not only of others, but their own. Children learn that it is possible to learn that different people can feel different ways about the same thing—that feelings change, and there are ways to determine this by watching, listening, and asking. After learning games to put words to people's feelings, children learn to think about what makes other people feel the way they do. Children who do not care if, for example, a child hits them while grabbing a truck may have become immune to their own, albeit temporary pain to get what they want. Once feeling words are identified and children think about what makes people feel the way they do, they are ready for games and dialogues that teach solution and consequential thinking skills, in light of their own and other's feelings—and that if one solution does not work, or is thought to not be a good idea—it is possible to try a *different* way.

Beginning about age 8, children in the intermediate elementary grades (Shure, 1992c) are exposed to age-appropriate problem situations to think of feelings, solutions, and consequences, as well as more sophisticated skills of thinking: How a person can have more than one feeling about the same thing at the same time (mixed emotions), understanding that there is more than one explanation why people do what they do ("Maybe he didn't wave because he's mad at me," or, "Maybe he just didn't see me"), and ability to engage in the sequenced planning, or the means-ends thinking skill described above.

In addition to the ICPS programs for use in schools from preschool through grade six, ICPS has been developed for use by parents. With the *Raising a Thinking Child Workbook* (Shure, 2000), and its Spanish edition Enseñando a Nuestros Niños a Pensar (Shure, 2005) based on *Raising a Thinking Child* (Shure, 1996) and *Raising a Thinking Preteen* (Shure, 2001), the same ICPS approach was adapted for use at home.

Shure and Spivack learned that in addition to teaching prerequisite and problem-solving skills to children, application of newly acquired ICPS skills to real life can be key to actual behavior change. Using the concepts described, the trainer, whomever that may be, learns to help children associate *how* they think with what they do through a process Shure calls "ICPS dialoguing." Replacing negative punishment, demands, or threats, such as often humiliating time-out or yelling, or even the more positive approaches of suggesting what to do (e.g., "Ask your brother for what you want"; "share your toys"), and

explaining and reasoning (e.g., "If you hit your brother, you might hurt him"), ICPS trainers ask questions that guide children to *think* about what they do in light of how they and others might feel, what might happen next, and if needed, to think of a different way to solve the problem. Here is how one mother used the ICPS dialoguing approach with her preschool child, Sean, who complained, "Mommy, Tommy hit me."

Mom: What's the problem? What's the matter?
Sean: Tommy hit me.
Mom: What happened *before* he hit you?
Sean: I hit him first.
Mom: What for?
Sean: He won't let me have any clay.
Mom: How do you think Tommy feels when you hit him?
Sean: Mad.
Mom: And then what happened *after* you hit him?
Sean: He hit me.
Mom: And how did that make *you* feel?
Sean: Mad.
Mom: Can you think of a *different* way to get Sean to let you have some clay so you both won't be mad and he won't hit you?
Sean: I could tell him I'll help him make a dog.

Sean felt less threatened when asked "What happened *before* he hit you?" than he would have from the more threatening question, "*Why* did you hit him!?" Associating the word *before* with his ICPS word games, Sean felt safe to tell his mom what really happened. When this mother discovered that her child hit first, she did not offer advice or lecture the pros and cons of hitting. Instead, she continued the ICPS dialogue by encouraging her child to think about his own and Tommy's feelings, and the original problem (wanting the clay). Then she helped him look for alternative ways to solve the problem and consider what might happen as a result of those solutions. Now active participants, not passive recipients, children who are engaged to think about what they do are much more likely to carry out their own ideas than those demanded, suggested, or even explained by an adult. By sending a covert message, "I care how you feel, I care what you think, and I want you to care too," children are also more likely to care about other people too.

Evidence of Impact with Adjusted and High-Risk Children

What did ICPS training do for the thinking and behavior of the children? When trained by teachers, not only did ICPS skills and behavior of youngsters trained as early as preschool and kindergarten improve more than comparable controls, but as measured 1 and 2 (Shure & Spivack, 1982), and up to 4 years later (Shure, 1993), the impact was maintained. In only 3-month time, and regardless of IQ, impulsive children became less impatient and less likely to explode when faced with frustration. Socially withdrawn youngsters became more outgoing, more able to express their feelings, and less fearful. Tanya, for example, who played onlooker day after day before training and shied away when her teacher tried to help her into a group, made a dramatic move during the 11th week of the program. She told a group in the doll corner, "If you need a fireman, I'm right here." One of the children who previously ignored her then happened to notice a pretend fire.

Not only did the behaviors of the trained group as a whole improve (also replicated by others, e, g., Allen, 1978; Boyle & Hassett-Walker, 2008; Feis & Simons, 1985; Kumpfer et al., 2002; Santos Elias et al., 2003; Weddle & Williams, 1993; Wowkenech, personal communication, August 26, l978), but those who most improved in the trained problem-solving skills were the same children whose behavior most improved (Shure & Spivack, 1980), suggesting a direct link and support for Spivack's theory that the trained ICPS skills played a significant role in mediating behavior. Importantly, youngsters showing behavioral adjustment and social competence in preschool were less likely than controls to begin

showing behavioral aberrance in kindergarten, suggesting that ICPS serves as a primary prevention program as well as one that reduces already existing high-risk behaviors. In the Feis and Simons (1985) study, trained preschoolers in rural Michigan, compared to comparable controls, decreased negative behaviors, especially anxious/fearful and hyperactive/distractable behaviors as measured by the Behar and Stringfield (1974) teacher rating scale, outcomes also found by Aberson et al. (1986). Behavioral changes were associated with an improved ability to problem solve. Importantly, trained children also received fewer referrals to mental health services than controls. In the Wowkenech (1978) study, behavioral impact was not only greater for ICPS-trained 5-year-olds than for age-mates trained in modeling-reinforcement groups, but as soon as the training was over, ICPS-trained youngsters continued to try other ways to resolve a conflict, while modeling-reinforcement-trained youngsters were more likely to revert to their old (often ineffective) ways of handling conflict.

A form of aggression that provokes conflicts among peers that has recently been noticed by researchers is what Crick (1996) has coined *relational aggression*, aggression that "involves harming others through purposeful manipulation or damage to their peer relationships" (e.g., using social exclusion as a form of retaliation) p. 2317. This form of aggression includes spreading rumors and telling lies about someone so others will not play with that child, talking about a party in front of a child who is not invited, being told there is no room at the cafeteria table when there are several empty seats, etc. Relational aggression is more common in girls than in boys (Ostrov & Crick, 2007), who are more relationship-oriented than boys. Being the victim of relational aggression can be more hurtful than being kicked in the shins because it lasts longer, the victim begins to wonder why no one likes her, and soon does not want to come to school. Victims of relational aggression often experience psychological distress including depression and anxiety, peer rejection, and loneliness (Crick & Bigbee, 1998; Crick & Grotpeter, 1995). While this type of aggression begins in about the third grade, there are precursors as early as preschool Ostrov et al. (2004). Crick et al. (1997) found that among 3–5-year-olds, children who say they will not invite a peer to a birthday party if they cannot have their way, will not let a classmate into their play group, will not listen to someone or may cover their ears are more likely to experience social-psychological maladjustment than peers not engaged in these kinds of behaviors. And, as Ostrov (2010) has found, even as early as preschool, victims of relational aggression are likely to engage in later relational aggression just as victims of physical aggression are likely to engage in later physical aggression. Victims of aggression may suffer in misery beyond their years in school. In fact, Smith et al. (2003) found that youngsters who were threatened, humiliated, belittled, or otherwise picked on in school—especially those who did not, and still do not have coping strategies—may continue to be victimized years later in the workplace.

It seems reasonable to assume that both the perpetrator and the victim of relational aggression would benefit by ability to solve interpersonal problems, by finding other ways to treat peers they do not like or who they feel betrayed them, and by finding ways to cope with being treated with such behaviors. Boyle and Hassett-Walker (2008), who implemented ICPS with kindergarten and first-grade children, found significant gains in positive prosocial behaviors, but also significant reductions in both physical and relational aggression, suggesting that trained children did find alternative ways to react to peers who upset them or made them feel angry. While no known research to date has studied the victims of relational aggression exposed to ICPS, Shelly, age 4, was told there was no room in the art corner for her when there was plenty of space. Before ICPS, Shelly would have walked away and sulked. This time she said, "I'll make you a ticket to the zoo," and the girl laughed and let her sit next to her. Shelly cut a "ticket" out of construction paper, gave it to her and the two girls played together the rest of the free play period. Shelly was no longer rejected, or lonely.

For fifth and sixth graders, first trained in the ICPS approach, the content of particular problems

and what adults say and do can differ, but the extent to which an adult encourages the child to think does not change as a child gets older or because he or she is a member of a particular socioeconomic level. Although it did take somewhat longer to achieve the same behavioral impact as with younger children, the positive prosocial behaviors increased in the same 3-month time period in grade five, while the negative behaviors decreased after a second exposure, in grade six (Shure & Healey, 1993). Although it is possible that the delayed impact on negative behaviors can be a result of less intense training due to academic demands (3 times weekly vs. daily for the younger children), it is also reasonable to assume that perhaps aberrant behaviors are simply more habitual in older than in younger children and therefore more resistant to change. Given that ICPS and behaviors in older children are still correlated phenomena, more intense or extensive ICPS intervention appears logical to pursue. The evidence suggests, however, that even though it may take somewhat longer to affect negative behaviors in older children, for those not trained earlier in life, grades five and six are not too late. Importantly, standardized achievement test scores improved among ICPS-trained children, especially social studies, reading, and math, suggesting that children whose behavior improved could better focus on the task-oriented demands of the classroom, and subsequently, do better in school. Returning to Brooks and Goldstein's (2001) analysis that resilience involves "hardships and obstacles as challenges to confront rather than as stressors to avoid," it is important to note that Elias et al. (1986) have shown that fifth graders who learn problem-solving skills experience less stress during their transition from elementary to middle school. In addition to the logistics of transferring to a new school and coping with peer pressure, these stresses included adjusting to more stringent academic requirements. The youngsters in the Elias et al. study stayed on-task and performed better academically in school.

It may be important here to underscore the importance of the ICPS dialoguing in effecting behavior change. Weissberg and his colleagues developed social problem-solving programs for elementary school-age children and found that compared to their first attempts, Weissberg et al. (1981) attribute improved behavioral gains in both urban and suburban second to fourth graders to methodological research improvements (e.g., better-matched controls, less teacher rating bias), more motivated, responsible teachers, and more closely monitored training, supervision, and consultation efforts. They also attribute behavioral gains to a curriculum that might better have met the needs of urban as well as suburban teachers and students, which had been started earlier in the year, and, very importantly, to newly emphasized dialoguing to help children apply newly acquired cognitive problem-solving skills to everyday interpersonal problems. In fact, Weissberg and Gesten (1982) report that the incorporation of dialoguing into the curriculum may "be a key teaching approach to facilitating children's independent problem solving efforts" (p. 59).

In addition to relational aggression, another area of research receiving recent attention is that of school bonding. Blum (2002) found that adolescents who feel connected to school, that teachers care about them and treat them fairly, feel a part of the school, and importantly, feel safe are less likely to engage in violence, substance abuse, and other serious outcomes. It turned out that the most important factor contributing to a feeling of connectedness was school climate, including teachers who encouraged students to be actively involved in classroom management, where students treat each other with respect, get along well with the teacher, are engaged in academic lessons, etc. These are all features that ICPS fosters, and recognition of bonding as a contributor to resiliency can add important insight into why behaviors of ICPS-trained youngsters improve. In 6–8-year-olds, Kumpfer et al. (2002) found that a similar feeling of belongingness to school increased significantly in ICPS-trained youngsters compared to controls, youngsters whose self-regulation also improved, suggesting the link between a feeling of school bonding and behaviors at a very early age.

Are parents able to be effective ICPS mediators? Shure and Spivack (l979) found that innercity, African-American preschoolers trained by their mothers, like those trained by their teachers, significantly improved more than controls in solution and consequential thinking and in impulsive and inhibited behaviors as observed in school, suggesting that ICPS skills learned at home generalized to a different setting—the school. Mothers who improved their own problem-solving skills and applied ICPS dialogues when handling real problems at home had children who most improved in the trained ICPS skills and behaviors. Importantly, it was the mothers who best learned to solve problems between a hypothetical mother and her child (e.g., her child has been saying "no" a lot lately) who were also most likely to apply the ICPS dialogues when real problems would arise, partly, we believe, because they learned to solve a problem one step at a time, to recognize and circumvent potential obstacles, to appreciate that problems cannot always be solved immediately (means-ends thinking), as well as to understand, or, at least accept their child's point of view. When first trained in kindergarten by their teachers, and in first grade by their mothers (Shure, 1993), children whose mothers best applied the ICPS dialogues were still maintaining their gains 3 years later, at the end of grade four.

From Training Adjusted and High-Risk Children to Clinical Applications

So far we have addressed ways that ICPS can be used to help children solve the more typical, everyday problems, such as hitting siblings or classmates and sharing. Although fewer studies have been conducted with children with clinical diagnoses, Shure and Spivack (1972) found social problem-solving deficiencies in 8–12-year-old youngsters attending a school for the emotionally disturbed compared to age-mates in public schools, and Lochman and Dodge (1994) confirm that severely violent preadolescents and adolescents tend to be more deficient in a wide range of social cognitive processes, including social problem-solving skills, than their moderately aggressive or nonaggressive peers. Similarly, Dodge (1993) cites research within his cognitive model of information processing that suggests that both aggressive and depressed youngsters who view their interpersonal worlds with anger or hopelessness are deficient in social problem-solving skills, and "demonstrate deviant response accessing patterns that indicate a dearth of competent behavioral responses" (p. 569). Consistent with Dodge, depressed 9–11-year-olds were, compared to nondepressed peers, significantly more deficient in the measured ICPS skill of means-ends thinking (Sacco & Graves, 1984). Interestingly, Higgens and Thies (1981) found that even within a group of institutionalized emotionally disturbed boys, the more socially isolated were more deficient in measured ICPS skills than those who were less isolated.

Although training of depressed children specifically with ICPS has not, to date, been conducted, severely antisocial, often isolated children can benefit from ICPS training alone or when combined with other forms of cognitive-behavior therapy. Small and Schinke (1983) applied a problem-solving approach at a residential treatment center for 7–13-year-old emotionally troubled boys of normal intelligence, referred because of hyperactivity, impulsivity, extreme acting-out, delinquency, learning difficulties, and minimal neurological dysfunction. Conducted in six 60-min training sessions over 2 weeks, the impact of an adapted ICPS curriculum was compared to a combined ICPS/social skills training, where leaders modeled use of effective gestures, expressions, and verbal statements, and group members acted as protagonists, antagonists, coaches, and feedback sources during practice role play. When combined, the boys tried new styles of problem-solving and interpersonal communication, gave one another social praise for displaying adaptive behavior, and planned how to exercise their learning when faced with problems. Compared to a time-comparable discussion-only group, in which the boys merely discussed problems but did not learn ICPS or social skills, and a test-only condition, the ICPS-adapted group combined

with social skills training had the most impact on decreasing classroom teacher-rated behaviors as measured by the Devereax Elementary School Behavior (DESB) rating scale (Spivack & Swift, 1967), including classroom disturbance, impatience, disrespect-defiance, and external blame. With teachers blind to experimental conditions, it is notable that ICPS alone and social skills training alone still had significantly more impact than groups with no problem-solving or social skills training, offering hope that "troubled young people can learn to think and act responsibly in social situations" (p. 12).

In a study with 7–13-year-old male outpatients in a psychiatric clinic, (Yu et al., 1985) children, mostly from the working class, single-parent (divorced) families, received the Rochester Social Problem Solving curriculum (Weissberg et al., 1979)—a program that, like ICPS, teaches social problem-solving (called SPS) and thinking skills. Over a 20-week period, twice a week, children were trained in groups by clinic staff members, and, in addition, concurrent group parent sessions were held. Parents were informed about the concepts their children were learning and encouraged to implement the principles at home, and group discussions included a variety of parent issues. Compared to control groups, who received generally eclectic clinical services ranging from individual to family therapy, trained children improved in both SPS skills and parent-rated behaviors, including greater social competence and less externalizing symptomatology (e.g., delinquent or aggressive behaviors). Parents who attended the most sessions also had children who exhibited less internalizing (e.g., depressed or uncommunicative behaviors). Although not compared to training by the clinical staff alone, it is important to note that among diagnostically disturbed children, SPS group training with added parent training can have more impact than non-ICPS treatment, which consisted of a variety of therapeutic treatment variables assumed to be ameliorative of the manifest psychopathology.

Over a 6-month period, DeFranco-Nierenberg and Givner (1998) found that severely emotionally disturbed low-income kindergarten to second graders trained by their counselors significantly improved compared to comparable nontrained youngsters on PIPS solution scores (Shure & Spivack, 1974a, b). They also showed increased prosocial behaviors and decreased inhibited, internalizing behaviors as measured by the Hahnemann Preschool Behavior Rating Scale (Spivack & Shure, undated) and the Achenbach and Edelbrock teacher report form (1983). When the teacher worked together with the counselor, externalizing, impulsive behaviors also decreased. While training was longer than for normal children (6 months) and in smaller groups (6 children per group), it is important to note that ICPS can have significant impact on the problem-solving skills and behavioral adjustment in this population.

In a sample of psychiatric inpatient 7–13-year-olds hospitalized for treatment of antisocial child behavior, Kazdin et al. (1987) found that 20, 45-min sessions, 3 to 4 times a week of treatment modeled after ICPS had greater impact than non-directive relational therapy or no treatment at all. The cognitive problem-solving-trained youngsters showed "significantly greater decreases in externalizing and aggressive behaviors in overall behavior problems at home and at school, and to increases in prosocial behaviors and in overall adjustment" (p. 76), and the impact was seen at the 1-year follow-up. As measured by the Achenbach and Edelbrock (1983) rating scale, prosocial behaviors of problem-solving-trained children improved to the point of falling within the normative range; the majority did, however, remain outside the normative range for deviant behaviors. The finding, with respect to prosocial behaviors, is interesting in that with normal but high-risk children within the same general age range, studied by Shure and Healey (1993) and described above, it was the prosocial behaviors that improved first as well. A later combination of problem-solving with a behavioral parent-management component (in which the parent reinforced the child's behavior with privileges, activities, and prizes) did increase the number of deviant behaviors to fall within the normal range (Kazdin et al., 1992).

Although ICPS-like training for severely antisocial children did not transform most of the

youngsters studied by Kazdin et al. into normally behaving youngsters, the decreases in externalizing and aggressive behaviors were significantly greater than those exposed to a therapy in which children were guided to express feelings, shown empathy and unconditional positive warmth, but not trained to solve problems directly. This finding is important because ICPS intervention is based on the premise that empathy, recognition, and open discussion about feelings are prerequisite to behavior change. They generate a greater repertoire of solutions, but the solution and consequential thinking most directly mediate behavior. If, for example, a withdrawn child is aware that something she did made someone angry—a step ahead of not being sensitive to that outcome—her anxiety about that person's anger will not be relieved unless she knows what to do to allay that anger. Whether the population is within the normative or the clinical behavior range, knowing what to do is a result of the final problem-solving solution, consequential and sequenced planning skills of ICPS.

We now turn our attention to how the second author (Aberson) helped three children with multiple neurological and clinical disorders develop characteristics associated with resilience as a result of training in ICPS. All three demonstrated characteristics of attention deficit hyperactivity disorder (ADHD). Patricia also had comorbid conditions of anxiety and depression, and Jimmy, of impulsivity and oppositional defiance. The third child, Jorge, developed posttraumatic stress disorder (PTSD) following a serious accident 1 year after the initial treatment, and returned to Aberson for help. These children (whose names have been changed to protect confidentiality) received training from their parents who participated in small-group family training or in family therapy.

Patricia's Story

A child of British origin, Patricia demonstrated characteristics of (ADHD) inattentive type when she was in kindergarten (as reported in Aberson, 1996; Aberson & Ardila, 2000). Her mother, a single parent, attended 6 weekly small-group parenting classes when Patricia was in second grade. By that time ratings on the Behavior Assessment System for Children (BASC) (Reynolds & Kamphaus, 1992) by her teacher, her mother, and herself suggested that she was also experiencing symptoms of depression and anxiety in addition to attention problems. Patricia was not doing her work at home or at school, despite average intelligence and achievement levels. Her grades were below average. She had only one friend at school, who was able to bully her by telling her she would not be her friend if she did not do what she wanted. Her relationship with her mother, whose ratings on the Parenting Stress Inventory (Abidin, 1990) indicated significantly high levels of stress related to parenting Patricia, was usually confrontational and punitive with specific difficulties related to getting ready for school in the mornings and doing homework. These factors resulted in destruction of the parent–child relationship, despite the fact that Patricia was regressed in her behavior and very dependent on her mother.

Aberson, who was at that time a school psychologist assigned to Patricia's school, explained to Patricia that her mother would be learning some games to play with her and would be asking her questions to help her learn how to solve problems. Patricia agreed that this would be a good idea.

To help Patricia think about her dawdling in the morning, her mother learned to ask ICPS dialogue questions as, "How do you feel when you come to school on time?" (recognizing child's feelings), "How do you think your teacher feels when you're late?" (recognizing the other person's feelings), "How do you feel when everybody's yelling at each other in the morning?" and, in time, "What can you do to solve this problem?" Her mother aided Patricia in solving the problem by breaking the solution down into smaller steps, with questions as: (1) "What can you do the night before to make it easier to get ready in the morning?" (2) "Can you make a list of the different things that you have to do to get ready?" (3) "What would you do first, second, third?" (applying sequenced steps of means-ends thinking) as a way to help her get her tasks in

order, and (4) "Can you think of a way to mark each task after doing it so you'll know it's complete?" After 6 weeks of ICPS training, these steps were no longer necessary. Patricia's mother reported that although at first ICPS dialoguing with her daughter involved lengthy conversations due to Patricia's oppositional responses, eventually it did take hold and their relationship improved. Patricia was able to plan what she was going to wear to school the night before and also independently plan how she could get ready on time in the morning.

To help Patricia complete her work in school, as well as her homework, which she often refused to do, her mother shifted from arguing about it to asking questions such as, "What do you want to do when you finish your homework?" (a way of empowering, instead of overpowering her child). Her teacher reported that her effort and work completion in school improved, and battles over homework gradually ended, with Patricia's becoming able to do her homework independently with only occasional help from her mother.

Although Patricia continued to have difficulty making friends, her peer relationships did improve when playing with children at home. Instead of going to her mother and crying when she was having difficulty getting along with a playmate, she began to think of alternative ideas of what to do when her friend wanted to play with different things.

Because Patricia was struggling due to a mild learning problem in math and was less mature than her peers, she, together with her mother, decided that she should repeat the fifth grade, despite the fact that retention was not recommended by the school. Patricia was happy with this decision, which she played a part in making, and told her peers that she felt she needed more time before going to middle school. Several years later, in the tenth grade, Patricia was earning As and Bs, even in math. She had friends and continued to enjoy a close relationship with her mother. Her resilience was demonstrated by the fact that she benefited from retention in the fifth grade. Although this outcome is not consistent with research on the effect of retention (Dawson et al., 1990), her success might be attributed to the relationship of mutual respect between Patricia and her mother and use of the problem-solving approach in making this decision.

In Patricia's case, the immediate benefit of the ICPS dialoguing was the improvement in her relationship with her mother, followed by improvement in school and eventually improved peer relationships. Four years after the parent-training sessions, Patricia was, as again measured by ratings from teachers, her mother, and by herself, free of symptoms of depression and anxiety, although mild attention problems remained. Never medicated from the start, she continued to be unmedicated and remained in a regular school program.

Jimmy's Story

Jimmy, of Southeast Asian descent, was adopted as an infant. His parents learned ICPS in a parent-training group, followed by family therapy, when Jimmy was in the second grade. At that time, Jimmy was impulsive, oppositional, and defiant in school and at home. Before ICPS, his physical education (PE) teacher told his parents that he was just a "mean kid." When asked how he felt about being left out of PE, Jimmy answered, "Sad." Using an ICPS vocabulary word, he was asked, "What happened *before* your teacher told you that you couldn't play?" He responded that he was fooling around and would kick the ball into another kid. When asked what he could do so that would not happen, Jimmy answered that he could say to himself, "Don't fool around, and make sure my hands and feet are quiet." On the next report card Jimmy earned an A in conduct in PE. Before ICPS, Jimmy often did not bring home report cards because they resulted in punishment and lectures. Now Jimmy and his parents agreed to use a report card in a new way. The teachers rated Jimmy in four different areas, on a scale of 1 to 5, including doing his work in class, homework, getting along with peers, and following rules. His parents agreed to respond to the report by asking three questions, written on the bottom of the report card: first, "What makes you feel happy about this report?" second, "Does

anything make you feel sad or frustrated?" "What?" and third, "What can you do tomorrow to make it better?" After only 2 weeks, Jimmy was earning the highest ratings in all four areas. He felt proud because he now knew that he had the power to make things better. After ten sessions, Jimmy became a better student and had more friends.

Jimmy's relationship with his parents became closer, and having been helped to think about his own and other's feelings, including how someone feels when he shouts at them, he was able to demonstrate empathy toward his younger, handicapped brother. On one occasion when his mother became frustrated with his brother shouted at him, Jimmy asked, "How do you think Steven feels when you speak to him like that?" Mom was surprised at how Jimmy had used an ICPS question she had previously learned to ask of him. When Jimmy was asked, "What did you learn from ICPS?" he answered, "I learned that the *same* solution will not work in every situation." Because of the increased academic demands 3 years later, in the fifth grade Jimmy and his mother decided that his test grades might improve with stimulant medication. And in middle school, Jimmy was on the honor roll.

Jorge's Story

Jorge, a child diagnosed with the ADHD-combined type, was in second grade in a self-contained gifted program when his parents entered into family therapy. He was, at that time, taking stimulant medication. This family is middle-class Cuban American with a second male child, who at that time was in preschool. Jorge, although gifted, was experiencing conflict with his parents primarily with regard to doing homework and fighting with his younger brother. His parents used both punitive techniques and rewards in dealing with family problems. With neither of these having the desired effect, both parents and their children were becoming increasingly frustrated.

Jorge and his family became acquainted with ICPS when they attended a brief presentation at Jorge's school. It was Jorge's idea for a family to attend sessions to learn how to problem solve. After the family learned the objectives of the program and specific goals for the family were outlined, feeling games were introduced, and each member listened to the other nonjudgmentally. During that time, Jorge's parents learned that he felt sad when they shouted at him. As a result, his parents held family meetings each week to play ICPS games and problem solve instead of shouting. Jorge also had a problem in school. He was unable to concentrate on his work because he kept talking with his friends. During the problem-solving sessions, Jorge thought of ways he could solve this problem. He asked his teacher if he could sit alone in a quiet place when doing seat work and then return to his seat next to his friends. He also planned a homework schedule with his mother and took over the responsibility for doing his homework. He and his younger brother worked out a plan so that his younger brother, who acted out for Jorge's attention, would be able to wait for Jorge to finish his homework before playing with him. Jorge used the ICPS phrase, "This is *not a good time.* I will play with you when I finish my homework." Feeling that the family's stress level was significantly reduced, therapy was terminated after 10 weeks.

A year later, an unfortunate setback occurred. On a family trip, the SUV rolled over several times and Jorge, able to exit the car, witnessed his fathers' close call with death. This accident resulted in the entire family experiencing post-traumatic stress disorder as well as physical injuries to both parents. At first, the parents did not apply the techniques of ICPS, and Jorge's behavior and school performance deteriorated. With the combination of PTSD and ADHD, Jorge was very anxious and angry and afraid to be alone in his room. At times, he became belligerent toward his mother.

Because of the traumatic accident and its resultant stress, Jorge and his parents returned to therapy for support. Learning to adapt the vocabulary and principles of ICPS to the new situation, Jorge was guided to think of different things he could visualize or say to himself when he experienced panic. He was also taught slow, deep

breathing as an additional tool for coping with panic. These new visualization and slow, deep-breathing skills, skills specific to anxiety disorder, could now provide additional options from which to choose when Jorge was faced with this new type of problem.

Jorge's parents agreed to apply ICPS dialogues rather than shouting when they became frustrated with their son. His father, who struggled with a low frustration tolerance due to his injuries, thought of things different from shouting that he could do when he became frustrated or angry. In addition, Jorge's teacher was advised about these family changes and thought of ways she could help Jorge when he began to panic, such as allowing him to see the counselor. After a few months, the family had returned close to their functioning before the accident. After 6 months Jorge's father returned to his former responsibilities at work as well. In grade 6, Jorge earned good grades at school, continued to mature, and took on more responsibility. Occasionally he, like many children with ADHD, did not study for a test or began a project late, resulting in a low grade. However, he learned from his mistakes, studied and planned earlier the next time. He was no longer afraid to be alone. Jorge and his parents learned how to share and solve problems together, paving the way for a close, positive relationship that had strengthened the family bonding in ways that had not existed before. Jorge observed with pride that other families did not listen to each other and problem solve the way his family does.

Comments on the Efficacy of Clinical Cases

Each of the children described above displayed symptoms of ADHD, and two of them also experienced at least one initial comorbid disorder, not uncommon for children with ADHD (Hinshaw, 2000). Research suggests that there is significant comorbidity between attention deficit disorder with disorders of mood, anxiety, and conduct (Biederman et al., 1991). Despite existing literature that suggests that training is based on the ICPS model has little or no impact on guiding interpersonal behaviors in real-life situations with children with ADHD (Abikoff, 1991), including parents may provide some clues for its success. In discussing interventions with children with ADHD, Hinshaw (2000) reports several studies that demonstrate that cognitive-behavioral therapies, including problem-solving, are typically conducted with the child, either individually or in small group formats. The premise of potentially greater impact by including parents can be supported by the one study reported by Abikoff that did have a positive impact. Kirby (1984) incorporated social problem-solving as one component of a 7-week summer program with unmedicated ADHD youngsters involved parents, and it was those parents who participated in the program who rated their children as most improved in self-control.

Abikoff and Gittelman (1985) also concluded that social problem-solving training yielded no significant impact on academic, behavioral, or cognitive measures in children with ADHD, nor did it facilitate withdrawal of medication. In this study, parents attended two training sessions and were instructed to encourage and praise a systematic and reflective approach to schoolwork. In addition, children were rewarded points in exchange for toys and games for "working hard and trying your best" to encourage the child's participation in the program. This would not be effective unless the child had the skills to do that. Jorge's way of "working hard" and "trying his best" was in *his* deciding to ask his teacher if he could sit away from the other children to avoid distractions while doing class work. The outcome of Jorge's making this decision was very different from what it would have been had the teacher made the decision for him. Unlike dispensing points in exchange for toys and games to try hard (external rewards), Jorge's newly acquired problem-solving skills nourished a genuine desire to succeed (internal rewards). Unlike Abikoff and Gittlemans' subjects, for whom cognitive training did not help discontinue medication, intensive ICPS dialoguing by his parents may have contributed to Jorge's becoming medication free.

More than the fact that parents were intimately involved in the therapeutic process may be *how* they were involved. Referring to clinicians who employ cognitive-behavioral (CB) strategies, Braswell and Kendall (2001) point out, "the CB clinician must strive to be sensitive to the parents' beliefs about the causes of the child's difficulties; otherwise, it may be difficult for the parents to fully endorse or enthusiastically participate in a treatment plan that is not consistent with the parents' understanding of the problem" (p. 257). In this regard, the effect of the children's neurological condition on their behavior was explained. Consistent with Braswell and Kendall's (1988) recommendation, difficulties at school and at home were viewed as "problems to be solved rather than the inevitable outcome of a specific disease process or family circumstance" (p. 176). The parents were asked what solutions they had attempted in the past and then were asked if they were ready to try a new approach. The difference between the problem-solving approach and other methods of handling problems was explained, such as commands, demands, punishing, and also, how it differed from commonly used positive approaches such as suggesting what and what not to do and why. Beginning with a very simple problem, such as the child interrupts the parent, the parent practiced the different ways of talking with their child about this. They came to see that what they were doing was *one* way, not a bad way, but that ICPS is a *different* way. These parents were excited to try something new. The transfer of the relationship of mutual respect that developed between the therapist and the parents during the sessions to their relationship with their children may have played a key role in the success of the intervention.

To help parents understand their children's behavior, some cognitive-behavior therapists help parents reframe what their children are doing. For example, a parent who views his or her child's shoving of others as innately destructive can be helped to reinterpret that behavior with statements as, "I notice he is most likely to shove other children when the classroom is very crowded and the children are expected to share a small number of supplies" (Braswell & Kendall, 2001, p. 258). Although reframing can set the stage for the parent to understand their child's behavior in a new light and "encourage constructive efforts to cope with the problem at hand," ICPS training gives the parent tools to teach their children specific skills to do that.

In addition to the parents' understanding of their children's behavior and their beliefs being in accord with the intervention they are receiving, Whalen and Henker (1991) report that "consideration of children's preferences may be a practical means of enhancing clinical outcomes" (p. 135). They continue, "Soliciting and considering the child's view when selecting and evaluating therapies conveys a positive message about the child's competence and worth, recruits the child as a partner in the therapeutic process, and provides the child opportunities to learn how to make, evaluate, and modify personally relevant decisions." In each of the case studies described above, the children were consulted regarding their family's participation in the program to which they agreed. In fact, it was Jorge himself who requested the family therapy using ICPS.

The Issue of Generalization

It may have been the therapist's approach to the parents with whom she worked that helped their children generalize their social cognitive skills from the setting in which they were learned, to another setting—an effect that Whalen and Henker (1991) report rarely occurs with children with ADHD. These authors propose two types of generalization one might look for when evaluating a program: (l) transfer of treatment-related gains in nontarget domains and nontreatment settings including academic and social skills and (2) positive ripples as improved likeability, perceived self-efficacy, willingness to take risks or accept challenges, improved frustration tolerance, and attitudes toward studying and learning. Jimmy and Jorge were helped to transfer their attitudes toward studying and learning through a home-school report card developed by the therapist which was responded to with ICPS dialoguing techniques rather than external (often negative)

consequences. Patricia's teacher at the time of parent training was aware of the intervention and, although not trained in ICPS, was more sensitive to her feelings than before.

Braswell and Kendall (1988) note that "overlap between training tasks and generalization targets is necessary for obtaining optimal gains. Training in applying the new skills to a variety of tasks provides the child with opportunities to learn how the strategies can be adapted to an as yet unexperienced situation" (p. 203). Not only did these children learn how to think in ways they could successfully resolve problems in a variety of settings and for a variety of problems, but the generalization across settings and time may have occurred because of the continued parent–child dialoguing and enhanced feelings of empowerment of the parents as well as the children.

It might be proposed that the ripple effects of the treatment, namely, increased feelings of self-efficacy, resulted in an increased motivation in school and increased frustration tolerance in these children. Additionally, the process of problem-solving, that is, thinking of different solutions, evaluating their potential consequences, including how they and others feel or might feel, may have been internalized by the children rather than believing that one particular solution is best for any one particular problem that may arise in their lives. As noted by D'Zurilla and Nezu (2001), "'Problem solving' refers to the process of *finding* solutions to specific problems, whereas 'solution implementation' refers to the process of *carrying out* those solutions to actual problematic situations" (p. 213). Not teaching specific solutions to solve specific problems plus the encouragement to implement solutions offered by the child that are predicted to have positive consequences (through ICPS dialoguing) may contribute to these children's ability to carry out their newly acquired ICPS skills in settings other than where they were first learned. In the arena of social behaviors and interpersonal competence, we saw earlier with nonclinical but high-risk children that parent-trained children were able to generalize their learned ICPS skills from the setting in which they were trained (the home) to a different setting (the school). Although socialization skills were never a problem for Jorge, improvement in the ability to solve interpersonal problems and empathize with others appears to have contributed to the improved socialization skills in Patricia and Jimmy.

The Comorbid Conditions

In all three cases, follow-up suggested the comorbid diagnoses no longer existed and the children were compensating adequately with the symptoms of ADHD. Patricia no longer experienced depression or anxiety. In fact, she tried out for the school soccer team and enjoyed attending school in England during the summer. She still had attention problems but was functioning well due to her compensating for the problem because of her high level of motivation and increased self-confidence. Jimmy had replaced impulsivity and oppositional/defiant behavior with the use of effective problem-solving strategies and continued to have positive peer relationships when observed 4 years later. Stimulant medication was introduced (in grade five), not for interpersonal behaviors, but for attention to schoolwork. And Jorge, who did not have a comorbid condition diagnosis until the automobile accident, which at that time was so severe that PTSD became primary, no longer experienced these symptoms and again was compensating for symptoms of ADHD and functioning well.

Although ICPS intervention does not cure ADHD's core symptoms of hyperactivity and the ability to stay focused, Braswell and Kendall (2001) conclude from the research they cite that cognitive problem-solving approaches can be suitable "for treatment of adjunctive issues (such as parent–child conflict), and for treatment of coexisting concerns (including aggressive behavior, anxiety, and depression)" (pp. 276–277), the very comorbid behaviors exhibited by Patricia and Jimmy. Although improvement can, at least in part, be due to improved executive functioning problems common to ADHD, such as planning and use of verbal mediation to self-regulate behavior, these three children learned the very

skills that Whalen and Henker (1991) argue must be acquired before cognitive-behavior therapy can be effective—"sufficient foresight and verbal dexterity to plan, guide, and evaluate their behaviors" (p. 131). ICPS may also provide the structure and mode of interaction in the family that increases the necessary structured environment that ADHD children need.

Amount of Training

Despite the above advantages to advance impact of ICPS, one might question how behavioral changes can occur and remain after only 6 to 10 family therapy or parent-training sessions. With regard to cognitive-behavior therapy (CBT), Goldstein and Goldstein (1998) concluded that "When cognitive behavior therapy is dealing with conditions that are 'hard wired' or neurologically based as appears to be the case with ADHD, it may be the case that CBT applications have not been implemented with the intensity that matches the true treatment needs of the clients" (as cited by Braswell & Kendall, 2001, p. 276). Despite the relatively few treatment sessions, the parents of children described in these case studies provided intensive treatment to their children on a daily basis through playing the ICPS games and dialoguing with their children about problems that came up at home and at school. In addition, the lasting effect of the treatment was also fostered through supportive telephone communication every 3 or 4 months over several years with the therapist—a form of informal booster shots.

Asperger's Syndrome

In addition to ADHD, exemplified by Patricia, Jimmy, and Jorge, ICPS can have a significant impact on children diagnosed with Asperger's syndrome. Children with Asperger's syndrome are often hyper verbose about what interests them, and their conversations are often one-sided and egocentric. They do not pay attention to the needs and interests of others, or how they react to what the child is saying. They also have difficulty noticing behavioral cues in others, and once they start talking about what interests them, they have difficulty shifting to a new topic (Klin et al., 2000). Klin et al. note that executive functioning deficits are evident across the entire autistic spectrum, including those with Asperger's syndrome. The American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM IV TR, 2009) notes that children with Asperger's have difficulty maintaining peer relations, display repetitive movements, and have a narrow range of interests.

Aberson, who has worked with children with Asperger's syndrome, has found that they not only have difficulty shifting to a new topic, but also in shifting behaviors. She adds that they have poor self-regulation and are often rigid and stubborn, lacking flexibility in their thinking. As a result, they are often rejected by their peers. They are offended without cause and are not offended when there is a cause. Continuous peer rejection may lead to unexpected aggressive responses on their part. When their parents and/or teachers teach them interpersonal problem-solving skills, they learn to think more flexibly and to better regulate their behavior. As a result, they function better at home and at school.

Billy, a very bright 4-year-old with Asperger's syndrome, was rejected by his peers at preschool due to his rigid behaviors and poor self-regulation, behavior which was also displayed at home. Because his parents did not understand why he was behaving this way, they put him in time-out, which made the situation worse. ICPS was able to help Billy modify his behavior.

Billy's Story

Billy has twin brothers who were, at the time of treatment, under 1 year of age. Both of his parents were becoming increasingly more frustrated because of his aggressive and inappropriate behaviors at home and at school. The situation came to a head when he was asked to leave his preschool for aggressively behaving like the class police officer with the other children. Additionally,

he frequently hit his baby brothers. When told to go to time-out he hit or kicked his parents or brothers on the way there or afterward.

Billy's parents sought help with the above problems and received parent training with the ICPS approach. Additionally, Billy's mother participated in ICPS games with her son in the psychologist's office. Treatment lasted for approximately 10 weeks. After 1 month changes were noticed at home. For example, one day after Billy was playing video games and was forced to stop for dinner, he demanded that he be given the ketchup. His mother asked him, "What is a *different* way you might ask for the ketchup?" He responded, "May I please have the ketchup?" Using ICPS words, he asked, "Can I finish my video game *after* dinner?" He also learned to understand that his mother could play with him *some of the time* but *not all of the time*. He also learned to recognize *good times* and *not good times* for him to play with his mother.

After 10 weeks Billy became more cooperative at home and his aggressive behavior ceased. In first grade, he was placed in a full day gifted program with accommodations where he remained with the same friends throughout the fifth grade. He is currently in a magnet program as well as gifted classes in middle school. He is an empathic high functioning student and enjoys positive relationships with teachers, parents, peers, and siblings. Most importantly, his bonding with his parents is so close that he openly problem solves with them whenever needed.

In addition to the intensity of training and the increased bonding between parent and child, the questions of ICPS dialoguing, the goal of which is to stimulate and enrich the ICPS skills of the child, help children take over tasks independently. Additionally, children become aware of the natural consequences of their behavior and how they and others feel when they do not live up to their end of the responsibility or hurt others physically or emotionally. The repeated association of ICPS dialogue questions redirecting behaviors and in planning tasks with the fun games of ICPS may, as it did for Patricia, Jimmy, Jorge, and Billy, result in children's being more attentive to their parents—and in more positive interactions with them.

Qualifying Considerations for ICPS Impact on Behavior

There are many variations of CBT (summarized in Braswell & Kendall, 1988, 2001) that may have a significant impact on how a child's thinking affects his or her behavior. No claim is made that ICPS is the most efficacious way to go about doing that, but rather, it is presented as a different way. However, a comprehensive meta-analysis of school-based social and emotional learning programs, of which ICPS is one, has shown that these kinds of programs have significant impact on behaviors that predict later, more serious outcomes as discussed in this chapter, and also, on academic achievement in normal and high-risk, but not clinically diagnosed youngsters from kindergarten through high school (Durlak et al., 2011).

Regarding impact of ICPS with children diagnosed with ADHD and Asperger's syndrome such as those described here is clearly encouraging, it should also be noted that these children were not referred. In fact, their parents initiated the therapy, and, as noted, one of them at her child's request, and were at least of average intelligence. Although Jorge and his parents did suffer a trauma, it was temporary.

For parents who have their own chronic psychological disturbances to deal with, ICPS may not, indeed, be enough. In this regard, however, Baydar et al. (2003) found that mothers of nonclinical Head Start children with mental health risk factors of depression, anger, history of abuse as a child, and substance abuse were engaged in, and benefited from, a program based on the problem-solving model at levels comparable to mothers not experiencing these risk factors. With their training adapted to meet the needs of the parents (e.g., transportation, child care), trained parents with mental health risk factors, compared to controls, significantly reduced harsh/negative and inconsistent/ineffective parenting and

increased supportive positive parenting. This finding is encouraging because the need to train parents with these kinds of maladaptive behaviors becomes evident with Cataldo (1997) finding that maltreating (child abusing) mothers, compared to nonmaltreating mothers, were not only deficient in the ability to think of solutions to problems that come up with their children, but were deficient in solving problems in general (e.g., wanting her friend to go with her to a movie). Not only were the maltreating mothers poor problem solvers, but the children of abused parents are similarly deficient in problem-solving skills (Haskett, 1990). The positive impact of training of parents with maladaptive behaviors as shown by Baydar et al. research notwithstanding, with respect to the specific behaviors of the children described here, more systematic empirical research comparing ICPS with other CBT techniques, such as cognitive restructuring and/or attribution training, and in combination with behavioral ones (e.g., rewards) is needed, as well as comparing the impact of these when implemented by diagnostically disturbed and nonclinical samples of parents. It would also be useful to compare training of peers and teachers as well as parents, a combination that Braswell and Kendall (1988) suggest might maximize generalization. Before concluding, however, that even ICPS and ICPS-like interventions alone cannot succeed with children with ADHD and Asperger's, we believe the clinical evidence presented by the four case studies described, the impact of ICPS on severely emotionally disturbed teacher- and counselor-trained youngsters, and the decreased behavioral dysfunction in nonclinical ICPS teacher-trained youngsters in the studies mentioned earlier provides sufficient justification for more systematic empirical research that actively engages parents together with their children, research that may provide further understanding of what it takes to have an impact with these particular populations at home and at school.

Final Thoughts

As Kumpfer and Alvarado (2003) have noted, "The probability of a youth acquiring developmental problems increases rapidly as risk factors such as family conflict, lack of parent–child bonding, disorganization, ineffective parenting, stressors, parental depression, and others increase in comparison with protective or resilience factors. Hence, family protective mechanisms and individual resilience processes should be addressed in addition to reducing family risk factors" (p. 458). The parent–child bonding that developed and endured into adolescence in cases documented over time by Aberson and Ardila (2000) provides the ongoing communication that helps children develop goals and confidence in confronting new challenges as well as peer pressure. These children have learned that no matter how difficult situations may be in other settings, the family will provide a sanctuary where everyone is heard and accepted and problems can be solved. It is the open and accepting communication fostered by ICPS that increases the bonding and feelings of empowerment that problems can, indeed, be solved. As one parent stated, "I learned that I as a parent can be part of the solution for my child rather than adding to the problem. Before using this approach I was trying to take power and felt powerless. Now we solve the problem together." When the parents described in Aberson and Ardila were asked 2 or more years after training how often they dialogue with their children, they often believed, as one parent explicitly said, "I can't tell you that. That's just our way of life. But honestly, we don't have to dialogue very much because our children solve problems for themselves." Children who have lived in environments using the ICPS program develop the abilities associated with resilience as they learn to think for themselves and cope with the challenges of an unpredictable world.

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Part V

Resilience in School Settings

Rethinking Approaches to Fostering Academic Resilience

24

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Equal access to educational opportunity is the philosophical cornerstone of the American public education system. Yet, disparities in educational outcomes persist along socioeconomic and racial/ethnic lines (National Center for Education Statistics; NCES, 2019). As the United States grapples with exacerbated inequality related to longstanding structural racism in the wake of the COVID-19 pandemic (Abraham et al., 2021; Cheng & Conca-Cheng, 2020), educators are focused on rethinking education to directly address the harm of racism (Wells & Cordova-Cobo, 2021). Previous attempts to address the "academic achievement gap" and related education disparities have not been successful. This lack of success in promoting educational equity may be related to problematic conceptualizations of interventions to address racial disparities, coupled with a lack of explicit attention to how structural racism and implicit racial bias affect school communities. Without acknowledging and directly addressing the harm caused by racism, widely used initiatives to promote academic resilience, such as social-emotional and character development (SECD) and trauma-informed practices, will perpetuate structural racism and may cause further harm and traumatization for students of color (Alvarez, 2020; Kohli et al., 2017; Sondel et al., 2022). In this chapter, we describe pitfalls in the conceptualizations of resilience, social-emotional and character development, and trauma-informed practices that serve to perpetuate inequity rather than ameliorate it. We also summarize strengths of each approach and offer suggestions for a path forward to promote academic resilience and educational equity.

Racism in Education

When attempting to address academic resilience, the pervasive impact of racism in education is the most pressing issue, although it is not often explicitly addressed. Education disparities for students who identify as BIPOC (Black, Indigenous, or People of Color), compared to their white counterparts, have been well-documented across several domains in education, including special education identification (Losen et al., 2015), high school completion (NCES, 2019), harsh/exclusionary school discipline (Skiba et al., 2011), and academic achievement (White et al., 2016). Though it is common for research to identify racial disparities without

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_24

measuring and clarifying the specific role of racism, there is growing evidence that these disparities are linked to racial discrimination and structural racism. For example, school-level gaps in Black-White discipline are linked to Black (but not White) students' perceptions of equity and belonging (Bottiani et al., 2017) and racial disparities in achievement and discipline have been linked to differences in perceptions of school climate (Mattison & Aber, 2007). Frequency of racial discrimination has also been associated with lower school engagement and greater school disconnection (Bottiani et al., 2020). Prevailing theories emphasize the role of racism at multiple levels—from individual to structural—in creating and maintaining educational inequity (Noguera & Angel Alicea, 2020). Lack of progress in addressing racial disparities is likely related to failure to consistently identify racism as the root cause of these disparities (Malawa et al., 2021).

Structural Racism in Education

At the systemic level, structural racism creates silos of opportunity and inopportunity linked to race, resulting in unequal access to good jobs, adequate housing, resourced schools, healthy food, clean air and water, and healthcare (Georgetown University Center on Education and the Workforce, 2019; Noguera & Angel Alicea, 2020; Transdisciplinary Resistance Collective for Research and Policy, 2020). Structural racism in the United States is rooted in history, beginning with European colonialism, enslavement and trade of African people, and genocide of Indigenous people during the colonial period, that was justified by white supremacy and white exceptionalism and codified into policies that continue to harm communities of color (Abraham et al., 2021). As Pedro Noguera and Julio Angel Alicea (2020) explain in their explication of structural racism in urban education, structural racism is not premised on the actions or beliefs of individual actors. It is, instead, a description of how hundreds of years of codified racism has organized the structure of our society. They argue that discussions about structural racism and education must also consider newer forms of structural racism impacting students in urban geographies: gentrification and environmental disasters. Certainly, the cascading impact of the COVID-19 pandemic and its disproportionate harm to students of color across many systems is another example of the far-reaching impact and downstream effects of structural racism (Abraham et al., 2021).

Implicit Racial Bias in Education

At the individual interpersonal level, racial microaggressions are frequent assaults that sap psychological resources and threaten positive adaptation for BIPOC students (Sue, 2010). Many racial microaggressions occur without the perpetrator's knowledge, and if the perpetrator does acknowledge the harm, the impact is often minimized, which causes the target further harm (Sue et al., 2007). While most educators would describe themselves as holding equitable and inclusive values, most tend to hold implicit attitudes that reflect a prodominant culture bias favoring white, Eurocentric values and people (Beachum & Gullo, 2020). Particularly when these implicit attitudes are unacknowledged, these attitudes can result in unintentional microaggressions. Students describe racial microaggressions in the classroom as occurring through verbal and nonverbal communications from teachers as well as in course content (Sue et al., 2009). For example, implicit bias may lead a teacher to interpret a student who calls out in class differently based on their race. A white student might be considered a "great leader," whereas a Black or Brown student with the same behavior is "disruptive." Course content that only celebrates white historical figures can also communicate that only white accomplishments are valued in the school. If students initiate a difficult dialogue associated with a microaggression, they often experience painful consequences when teachers are not equipped to facilitate these challenging conversations (Sue et al., 2009). In classrooms, the potential to cause harm from

unacknowledged or poorly handled microaggressions is of great consequence to BIPOC students (Sue, 2013). Microaggressions can lead to increased feelings of depression, anxiety, and disconnection from school, ultimately resulting in poorer academic outcomes.

Racial Stress and Trauma

Experiences of microaggressions, overt discrimination, and other forms of racial maltreatment are associated with anxiety, stress, and trauma symptoms (Abdullah et al., 2021; Williams, Kanter, & Ching, 2018a). Race-related stress and trauma occur when students experience daily microaggressions, chronic and collective race-related adverse experiences, acute life events, and transgenerational transmission of trauma (Bierer et al., 2014; Harrell, 2000; Helms et al., 2012). Racial trauma, specifically, is a traumatic response to accumulated exposure to race-based stress (Comas-Díaz et al., 2019). Racial stress and trauma are thought to contribute to racial mental health disparities, such as higher rates of posttraumatic stress disorder (PTSD) for Black and African Americans compared to other racial groups (Williams, Printz, & DeLapp, 2018b). Given the association of mental health and wellness with academic functioning (Durlak et al., 2011; Owens et al., 2012), racial stress and trauma should be of primary concern when promoting academic resilience and educational equity.

Pitfalls in Promoting Academic Resilience

Resilience is complex topic that continues to undergo waves of reconceptualization and reframing, particularly during periods of disaster and disaster recovery (Masten, 2021). Since Norman Garmezy's introduction of the concept of resilience over 50 years ago (Rolf, 1999), many empiricists have adopted the term and applied it toward their own work. Early studies of protective processes resulted in an important shift in how researchers viewed the life courses of individuals within challenging environments (Garmezy, 1985). Rather than solely focusing on preventing negative outcomes, researchers expanded their focus and intervention efforts to bolstering processes that were associated with adaptive outcomes—outcomes frequently termed "resilient." This work signified a shift from understanding why things go wrong to why things go right—when they should go wrong. In other words, resilience is an aberration, a failure in the predictive model (Kaplan, 1999). Most recently, there has been an effort to define resilience so that it can be studied across systems and fields of study. From this multisystem perspective, resilience is now understood as "the capacity of a dynamic system to adapt successfully through multisystem processes to challenges that threaten system function, survival, or development" (p. 521, Masten et al., 2021).

To conceptualize academic resilience, we must define "successful adaptation" in the K-12 education context. Working within the educational resilience framework narrows the focus of resilience sufficiently to reduce some of the challenges associated with defining resilience. Concentrating on the education context allows us to rely on widely accepted indicators of successful adaptation (e.g., grades, test scores, graduation rates), while also acknowledging that students who do not demonstrate successful adaptation in the academic context may demonstrate adaptation in other areas of their lives (Reyes et al., 2012).

Several fields of inquiry and related school-based interventions aim to promote academic resilience and educational equity. In this chapter, we critically examine assumptions embedded within the resilience framework itself and two specific approaches often used toward promoting academic resilience: trauma-informed practices and social-emotional and character development (SECD). Each of these frameworks offers strengths for promoting educational equity. At the same time, these approaches have the potential to perpetuate inequity, especially when underlying assumptions and value structures are not critically examined. We highlight pitfalls that

must be addressed if these approaches are to be successful in promoting academic resilience, educational equity, and ultimately social justice.

Resilience Frameworks

Pitfall 1: Resilience as an Individual Trait Luthar (1991) identified two different types of resilient processes: The first, "protective processes," counteract the harmful effect of stressors (e.g., educators providing coping strategies for students during school transitions); the second, called "protective-enhancing processes," strengthen children's competence so that they are better able to manage stressors (e.g., social-emotional skills). The former mediate the effect of stressors on the child through changing environmental characteristics; the latter mediate harm by changing the child's ability to handle challenges. This individual-level focus was characteristic of early conceptualizations and research into resilience. The pitfall here is that failure to display resilience becomes attributed mainly to individual shortcomings—exacerbated recently with the rise in prominence of the "grit" construct (Duckworth, 2016).

Despite continued perspectives that resilience is a unitary personality trait that protects against problems, there is a large and growing body of literature to the contrary. Instead, adaptive functioning in the face of adversity results from complex and dynamic processes across multiple levels, including biological, psychological, social levels (Kalisch et al., 2019; Osher et al., 2020). Contemporary perspectives on resilience, informed by advances in Developmental Systems Theory (e.g., Lerner & Overton, 2008; Overton, 2015), emphasize the multisystem and dynamic processes that support adaptation to stressors. Thus, a complex interplay of individual and environmental processes promotes successful adaptation. While this complex and dynamic perspective about resilience is well-established within resilience literature, it is common to encounter researchers and practitioners who are not experts in this area who continue to understand resilience as an individual trait. In the context of promoting academic resilience for educational equity, the tendency to conceptualize resilience as an individual trait is particularly problematic because it leads to assumptions that BIPOC students need to develop a set of individual competencies that will make them individually more resilient. This mindset can be harmful by promoting individual striving in the context of larger ecological systems that do not support academic success for all students.

Pitfall 2: Placing Onus for Resilience on BIPOC Students Understanding resilience requires first identifying the specific risk or threat to adaptive functioning (Masten et al., 2021). How the risk or threat is defined has implications for how interventions are designed to promote adaptive functioning in the face of this risk. For BIPOC students, the risk to adaptive functioning in the educational context is racism. However, racism is rarely identified as a specific threat. Instead, risk factors tend to include specific experiences (e.g., violence, poverty, homelessness), which are related to structural racism. The danger here is that attempting to address separate isolated risks (poverty, violence) without naming the primary threat to functioning (racism) sets the stage for disjointed interventions that do not address the root cause of harm (Malawa et al., 2021). Further, particularly in regards to racism, the resilience framework places the onus for resilience on children and families to adapt to unjust circumstances. Constantly striving against unjust circumstances is likely to result in learned helplessness (Mahdiani & Ungar, 2021; Seligman, 1975). As Leslie Anderson (2019) argues, expecting African American families to "keep striving despite pervasive challenges and hardships that plague their daily experiences" runs the risk of perpetuating inequality. There is growing frustration—especially fueled by the surfacing of disparities during the COVID-19 pandemic—that BIPOC students must do twice as much to go half as far (Hannah-Attisha, 2020). It is essential to strike the balance of promoting strengths while also taking action to dismantle structural forces of racism.

Pitfall 3: Emphasis on Successful Adaptation Resilience research is not the study of positive development, or simply doing well in life (Masten et al., 2021). This emphasis on adaptation in the face of risk leads to emphasizing a threshold of functioning, called "competence," which essentially indicates the bare minimum of adaptive functioning (Burt et al., 2016). This perspective is problematic for those interested in promoting educational equity. That is, educational equity means not only the absence of poor functioning or the attainment of minimal functioning, but also the promotion of optimal outcomes. Relatedly, the emphasis on "competence" tends to underemphasize the potential for posttraumatic growth in the face of adversity (Mahdiani & Ungar, 2021). This focus also ignores the possibility that resilience in one system—demonstrating academic resilience—may be associated with poor functioning in another system, like mental health (Brody et al., 2020; Mahdiani & Ungar, 2021). The alternative may also be true; poor functioning in academic contexts may be related to better functioning in other domains. The challenge of defining a positive outcome is well-known in the resilience literature because such decisions necessarily rely on the perspective of the researcher, which in turn is impacted by the researcher's social positionality and the context of the research. Even when attempting to avoid this problem by narrowly focusing on widely accepted indicators of academic functioning, the way racism interacts with the experiences of BIPOC students presents challenges for operationalizing academic resilience. Disengaging from school and finding other sources of pride and agency may, in fact, signify positive adaptation if the school environment is replete with harmful microaggressions, that is, separating the academic domain from other domains of functioning may not be possible.

Strengths of Resilience Frameworks Although the emphasis on "competence" can be a pitfall, as identified above, this emphasis also establishes something more than a minimum for development and academic functioning. It establishes developmental rights and the expectation that all students should have the same opportunities to learn and grow. One might say it puts forward the position that if research and practice indicate how some individuals become accomplished in a given domain, then this becomes the expectation for all individuals regardless of context. If context constrains possibility, then context effects must be overcome directly, rather than expecting students to overcome those effects with greater individual efforts.

Another strength of the resilience framework is the large body of literature that now supports "the short list" of resilience factors that operate across individual, family, school, community, and organizational levels (Table 24.1; Masten et al., 2021). Each of these factors can be supported in the educational context in service of academic resilience and educational equity, particularly if infused with a critical lens that exposes harmful underlying assumptions and celebrates the background and culture of each individual (Elias & Leverett, 2021).

Trauma-Informed Practices

School-based trauma-informed programs aim to foster academic resilience through minimizing exposure to adversity and strengthening supports and coping in the face of ongoing or previous exposure to trauma or adversity (Herrenkohl

Table 24.1 Multisystem resilience factors: "The Short List" (from Masten et al., 2021, p. 533)

Sensitive caregiving, close relationships, social support
Sense of belonging, cohesion
Self-regulation, family management, group or organization leadership
Agency, beliefs in system efficacy, active coping
Problem-solving and planning
Hope, optimism, confidence in a better future
Mastery motivation, motivation to adapt
Purpose and a sense of meaning
Positive views of self, family, or group
Positive habits, routines, rituals, traditions, celebrations

et al., 2019). Interest in implementation of trauma-informed practices in schools has grown over the past two decades, along with growing recognition of the negative impact of trauma on school functioning (Perfect et al., 2016). Trauma-informed practices highlight reframing of student behaviors so that trauma-exposed students who demonstrate challenging behaviors are treated with compassion and opportunities to heal (Chafouleas et al., 2016; Herrenkohl et al., 2019). Current trauma-informed practices in schools include individual and group-based interventions to treat posttraumatic stress symptoms, such as Cognitive Behavioral Intervention for Trauma in Schools (CBITS; Jaycox et al., 2018) or Bounce Back (Santiago et al., 2018). These individual and group interventions are effective in addressing trauma symptoms but seem to work best for children over 11 years and those with internalizing symptoms (Herrenkohl et al., 2019). Trauma-informed approaches also include classroom and school-wide approaches to support students with trauma histories. School-wide approaches often include multiple tiers of intervention for students with a range of social, emotional, or behavioral needs and include teacher training and community/caregiver outreach components (e.g., Healthy Environments and Response to Trauma in Schools; HEARTS; Dorado et al., 2016). While these multitier and multicomponent interventions are thought to be important for creating supportive contexts for students with trauma histories, the evidence supporting these interventions is weak (Herrenkohl et al., 2019). More research and rigorous evaluation is needed to understand these complex programs, including interventions that embed evaluation strategies within the intervention framework (Chafouleas et al., 2016; Herrenkohl et al., 2019).

Pitfall 1: Deficit-Based Narrative of BIPOC Students Engaging in trauma-informed practices in schools is often framed as a social justice issue (Ridgard et al., 2015). Indeed, compared to white students, BIPOC students experience higher rates of exposure to trauma and adversity, including higher rates of homelessness (Hatchimonji et al., 2021) and poverty (U.S. Census, 2020), which may place them at risk for further traumatic experiences. Importantly, disproportionate exposure to traumatic experiences is not explained solely by the disproportionate representation of BIPOC students in poverty (Slopen et al., 2016). It is common for trauma-informed programs to address trauma and related symptoms broadly, but it is rare for these programs to specifically attend to racism or racial stress/trauma.

As an example, a recent review of trauma-informed programs in schools examined 30 articles on school-based interventions to support students who have experienced adversity or trauma. The review does not include the words "race" or "racism" in the main text, suggesting that none of these reviewed programs focuses on this topic (Herrenkohl et al., 2019). The tendency to demonstrate the need for trauma-informed services through tallying stressors linked to structural racism—but without naming structural racism—serves to pathologize marginalized youth for their circumstances. In his race-conscious approach to reviewing literature on trauma in education, Alvarez (2020) argues: "Without centering race in a historically racialized, White-dominant context, researchers and school-based actors may (un)intentionally criminalize or pathologize trauma-exposed youth, especially Black and Brown youth, for their responses to overwhelming conditions they do not control" (p. 2). He goes on to demonstrate how trauma is assessed primarily by white practitioners (educators, psychologists), which can lead to pathologizing Black and Brown students. Furthermore, treating trauma tends to focus on the impact of trauma rather than creating solutions for alleviating conditions in which BIPOC children experience trauma. Thus, similar to pitfalls in resilience work, the overarching message from research and practice on trauma-informed practices tends to be that BIPOC students must be taught skills to deal with their circumstances; circumstances created and maintained by structural racism.

Pitfall 2: Lack of Recognition of Racial Stress and Trauma The acknowledgment of the negative impact of trauma on development is a strength of trauma-informed approaches; however, most school-based trauma-informed interventions do not recognize the specific harm caused by racial stress and trauma (Sondel et al., 2022). Despite clear need to assess and address racial stress and trauma, the phenomenon is typically unidentified in school settings (Anderson, Saleem, & Huguley, 2019a; Helms et al., 2012). This under-recognition of the role of racial stress and trauma in schools is particularly troubling in the context of recovery from the COVID-19 pandemic, when many students of color have experienced heightened racial stress and trauma and mental health concerns (Office of Civil Rights, 2021). Further, there is a corresponding lack of appreciation of the ongoing, pervasive, and accumulative nature of these conditions and how this leads to a debilitating impact on those affected and their environments.

Strengths of Trauma-Informed Approaches The recognition of the pervasive impact of stress and trauma on social-emotional development and functioning is a strength of the trauma-informed movement. A related strength is the potential to understand strong emotional responses and behaviors as normative reactions to unjust circumstances and stressors. Indeed, focusing on the powerful emotional impact of trauma allows for bridging to other phenomena that are characterized by ongoing emotional challenges. The challenge of building on these strengths from a trauma-informed perspective is to critically examine who has the power to define a "normative" response to trauma and how to guard against the tendency to focus on coping and treating trauma rather than addressing the root cause of adversity.

Social-Emotional and Character Development (SECD) Practices

Social-emotional and character development (SECD) brings together intervention strategies from social-emotional learning (SEL) and character education (Elias, 2009). SEL initiatives broadly aim to develop "social competence," defined as "the capacity to integrate cognition, affect, and behaviors, to achieve specified social tasks and positive developmental outcomes" (Elias et al., 2003, p. 1023). SEL interventions help students accumulate knowledge and skills that facilitate the optimal emotional processing of their social contexts. Targeted competencies include self-awareness, self-management, social awareness, relationship skills, and decision making (Collaborative for Academic, Social, and Emotional Learning (CASEL)., 2003). SEL interventions are associated with improvements in social-emotional skills, attitudes, positive social behaviors, and academic performance (Durlak et al., 2011; Taylor et al., 2017). Yet, there has been insufficient attention to the effectiveness of these interventions across gender, race/ethnicity, socioeconomic, disability, and sexual and gender identity considerations (Rowe & Trickett, 2018).

SECD arose from the recognition that SEL models of positive youth development are not values-neutral (Hatchimonji et al., 2020). Character education models, in contrast, aim to make values structures explicit by labeling specific character virtues (e.g., "justice," or "humility"). Ideally, though not always in practice, character education engages students in deliberative critical analysis of moral action that is culturally and contextually responsive (Bates, 2019; Peterson, 2020). Character educators build individual capacity for "practical wisdom" so that students can act in the right way about the right things for the right reason (Arthur et al., 2017). Linking social-emotional learning and character education approaches together in SECD aims to inspire students to understand and define character virtues within their own cultural context, while also supporting skill development to act in accordance with their values (Hatchimonji et al., 2020).

Pitfall 1: Centering of White/Eurocentric Values While the centering of white values could describe any area of education, the implicit centering of white values is particularly

problematic in the area of SECD. Concepts like "assertive communication" (SEL skill) and "diligence" (character virtue) are often conceptualized as "neutral." This assertion does not acknowledge the potential for harm when a teacher or school system has the power to define what assertiveness or diligence should look like. This likely plays out in how effective social-emotional skill-building is for BIPOC students as typically implemented. For example, Jones et al. (2020) found that the association of SEL with grades was much stronger for white students compared to other racial groups, with an effect size twice as large for white compared to Black and Indigenous students. For SECD to be leveraged for academic resilience and educational equity, the implicit values of the dominant culture must be critically examined and reshaped by a diverse and empowered voice from a range of backgrounds. In our highly racially segregated country, this means not only empowering within-school communities and voices. To promote educational equity through SECD, schools must commit to including voices and values that are not necessarily represented in their school building (Elias & Leverett, 2021).

Pitfall 2: Teachers Need Support to Integrate Culturally Responsive Pedagogy With increasing recognition of the centrality of white/Eurocentric values in SECD, there has been attention toward integrating culturally responsive pedagogy and equity-focused conversations into SECD (Jagers et al., 2019; Schlund et al., 2020). Despite advancements in incorporating equity considerations in "transformative SEL," this approach puts onus on teachers to know how to incorporate culturally responsive practices. Particularly for white teachers (a majority of the teaching workforce), integrating culturally responsive pedagogy will require significant support (Barnes & McCallops, 2019). This means that school systems must be prepared make a meaningful, ongoing commitment to support teachers in building culturally responsive skills.

Strengths of the SECD Approach The SECD approach to fostering academic resilience offers three strengths. First, the concept that social-emotional skills and deliberative action can be taught and learned through guided instruction and practice has be instrumental in the success of these kinds of interventions so far. This concept can be applied with racial equity in mind. Students, teachers, and communities can learn how to recognize and disrupt racism (Priest et al., 2021). Second, SECD offers the opportunity to choose community-defined character virtues and make implicit value structures explicit. Educators will likely require significant support to ensure that value structures reflect values of historically marginalized groups and are implemented in a culturally responsive/cultural humility framework. Finally, whereas resilience frameworks often focus on minimal levels of functioning or "competence," SECD approaches to promoting academic resilience aim to optimize positive development. The focus is universal thriving.

Academic Resilience: Capitalizing on Strengths and Addressing Pitfalls

The pitfalls and strengths of resilience, trauma-informed, and SECD frameworks for promoting academic resilience are summarized in Table 24.2. With these considerations, in mind, we have identified recommendations for rethinking approaches to promoting academic resilience (Table 24.3). We also acknowledge that this work is ongoing. Critically examining how researchers and practitioners think about and attempt to foster educational equity is a constant necessity.

Racism as the Threat: Balancing Resilience and Change

First, the weight of the evidence shows that the primary threat to academic resilience for BIPOC students is racism. From this realization, educators and policy makers cannot avoid considering

Table 24.2 Pitfalls and strengths of strategies to promote academic resilience and equity

Framework	Mechanisms	Target Outcomes	Pitfalls	Strengths
Resilience	"The Short List" of resilience factors (Table 24.1)	"Competence" Avoidance of poor outcome	1. Resilience as an individual trait 2. Onus for resilience on BIPOC students 3. Emphasis on successful adaptation	1. Robust support for "short list" of processes that support resilience 2. Establishes a "floor"/ developmental rights
Trauma-informed practices	Coping skills Psychoeducation	Emotion regulation Supportive relationships Knowledge about impact of trauma	1. Deficit-based narrative of BIPOC students 2. Lack of recognition of racial stress and trauma	1. Attending to very strong emotions as normative responses to circumstances 2. Recognizing impact of trauma 3. Framework for multi-tiered, school-wide approaches
Social-emotional and character development (SECD)	Student and teacher social-emotional competencies and character virtue Caring relationships	Positive school climate Academic functioning Universal flourishing	1. Implicit centering of white/ Eurocentric values 2. Teachers need support to integrate culturally responsive/ culturally humble pedagogy	1. Guided and deliberate practice to gain skills 2. Opportunities to explicitly define values 3. Focus on universal flourishing

Table 24.3 Recommendations for Rethinking Academic Resilience

Framework	Way forward
Resilience	Label racism as root cause of inequity Recognize the dual focus of supporting adaptation and changing oppressive systems Emphasize the importance of resilient support structures and systems that support individuals Use racial socialization as a practice to build resilience in individuals and systems
Trauma-informed practices	Acknowledge and validate emotional responses to racial stress and trauma Build from multi-tiered and school-wide frameworks to engage entire school communities
Social-emotional and character development (SECD)	Emphasize a school culture and climate that values equity, justice, and disrupting racism Infuse specific culturally responsive pedagogy and build specific skills for recognizing racism disrupting racism across entire school community

the possibility that emphasizing resilience may perpetuate inequity by reinforcing adaptation to unjust circumstances (Anderson, 2019; Hannah-Attisha, 2020; Mahdiani & Ungar, 2021). Promoting academic resilience ultimately requires persistent, collective work to dismantle structures that perpetuate racism. For many educators, however, this directive seems too large to act on. The way forward requires a "both/and" approach. The ultimate goal for promoting educational equity must be to eradicate racism. While this is being pursued—in many cases through political and other avenues outside of education—the effort to minimize the impact of structural racism must take place in every classroom, lunchroom, school bus, and building. There is clear movement in developing strategies for promoting antiracist education within schools (Elias & Leverett, 2021; Lynch et al., 2017; Wells & Cordova-Cobo, 2021); yet, it is also clear that all schools and school community members will need specific and explicit skill-building to be able to engage in actions against racism.

Dual Focus on Individual and Systems Resilience

To combat the common misconception of resilience as an individual trait, approaches to fostering academic resilience must address individual regulation capacities (e.g., self-regulation, problem-solving) as ecologically embedded processes within (ideally supportive) family, peer, and school systems (e.g., close relationships, sense of belonging, positive routines). For BIPOC students, promoting strong, positive ethnic-racial identity development and racial socialization may support academic resilience in the face of racism (Byrd, 2017; Martinez-Fuentes et al., 2021; Metzger et al., 2021). Racial socialization refers to the messages about race and culture transmitted to children and youth (Byrd, 2017; Lesane-Brown et al., 2006). There is robust evidence for parental racial socialization in families of color supporting positive mental health (Liu & Lau, 2013) and academic (Wang & Huguley, 2012) outcomes. Racial socialization in the school context has received much less attention than parental racial socialization (Byrd, 2017), but there is consensus that coping responses supported by racial socialization are unique from general coping socialization (Anderson, Jones, et al., 2019b), which suggests specific, explicit skill-building is needed. As with any individual competency, these racial literacy competencies will be best supported by caring and responsive communities, families, and schools, where there is shared vision for developing positive racial/ethnic and cultural identities and disrupting racism. Thus, it is important to simultaneously build supportive structures for racial socialization and racial/ethnic identity development at the systems level across ecological contexts. School systems may require structured support to foster racial socialization and racial/ethnic identity development through school routines, classroom norms, and classroom relationships. Focusing on student individual attributes alone is unlikely to have enduring impact, particularly because students respond to the systems in which they are embedded. We are under no illusions about the extraordinary challenge in following the approach we recommend; however, the history of progress to date suggests that meeting this challenge is necessary to create second-order change and reduce backsliding.

From a systems resilience perspective, the burden of resilience cannot fall solely on BIPOC students and families (Anderson, 2019; McManimon et al., 2018). While there is a clear need to support students of color in coping with racial stress and trauma, it is perhaps even more urgent to engage in racial socialization and skills for recognizing and disrupting racism in white teachers, caregivers, and students. White teachers and parents are less likely than teachers and caregivers of color to engage in racial socialization practices that promote disruption of racism (Abaied & Perry, 2021; Perry et al., 2019). When white adults do engage in racial socialization practices, it is often through a "colorblind" lens, which serves to perpetuate racial hierarchy (Loyd & Gaither, 2018). Therefore, white students, teachers, and caregivers are unlikely to have knowledge, awareness, and skills to combat racism and facilitate constructive conversations about race. Schools aiming to promote academic resilience must specifically build skills for talking about, recognizing, and disrupting racism in white members of the school community. In doings so, schools will be able to increase constructive interracial interactions, reduce harm from implicit bias, and promote an inclusive school racial climate that empowers and amplifies staff, caregiver, and student voice across the school ecology (Amemiya & Wang, 2018; Byrd, 2017). Students can be taught to recognize and disrupt racism, as evidenced by promising findings from a pilot to promote effective bystander responses to racial discrimination in primary schools (Priest et al., 2021). Again, building individual competencies will only be productive if embedded in a larger socioecological context of a school that values recognizing and disrupting racism. This implies that efforts at bias recognition and reduction will not yield to traditional in-service professional development formats; they will require intensive and extensive, ongoing challenging conversational exchanges that are deemed to be a priority.

Infuse Cultural Strengths in Supporting Optimal Functioning

Supporting academic resilience and educational equity necessitates de-centering of white/Eurocentric values and infusing cultural strengths and values from historically marginalized perspectives. While culture plays an important role in children's development, it is typically afforded a distal or indirect role in models of resilience. Culture refers to the common language, history, symbols, beliefs, unquestioned assumptions, and institutions that are part of the heritage of members of an ethnic group (Roosa et al., 2002). Researchers have paid increasing attention to the role of cultural assets in models of risk and resilience, while also recognizing that experiences of marginalization play a central role in shaping the development of BIPOC children (Causadias & Umaña-Taylor, 2018; García Coll et al., 1996). Kuperminc et al. (2009) proposed a cultural-ecological-transactional model for studying resilience among BIPOC children in the United States. In this model, the interaction between a child's culture of origin and the mainstream culture plays a central role in development. Thus, cultural factors, including values, behaviors, and norms, interact and transact with every level of a child's ecology and help shape outcomes. Again, deeply embedded white/Eurocentric values in education systems may be difficult to identify and extract (Truss, 2019). The first step is labeling and acknowledging these often implicit value structures so that they can be critically examined and addressed.

Leverage SECD for Racial Literacy

The SECD framework can be leveraged to promote individual and systems-level racial literacy. Racial literacy is a set of specific skills for navigating racialized systems and encounters (Stevenson, 2014), as well as the ability to "recognize, refute, critique, and synthesize the structure of race in daily living, moving toward […] restructuring of oppressive structures that allows us to realize equity" (p. 5, Nash et al., 2017). Building racial literacy necessarily involves individual social-emotional and character competencies and whole-community support for engaging in dialogue and actions against racism. Strategies for building racial literacy can be infused into whole school SECD approaches so that entire school communities learn to use social-emotional skills toward equity. A school-wide caring and inclusive climate is a necessary component of all SECD work (Elias & Ryan, 2015) and foundational to supporting school-wide engagement in disrupting racism.

As an example, the SECD framework prioritizes building caring communities across the school and within classrooms so that students and teachers can work collaboratively to solve social injustices. Then, in the context of constantly striving toward a caring and inclusive school community, a core character principle such as "justice," can guide the deployment of social-emotional and racial literacy skills. Within a classroom, a teacher might ask students to find opportunities to include peers in conversations or activities. Students are then supported in building racial literacy and empathy by observing and understanding what it feels like to be included or excluded because of appearances, social, or cultural identity. A caring and inclusive classroom community is critical to supporting racial literacy because students and teachers will be more motivated to use social-emotional skills in service of equity when they hold empathy for those who differ from them.

Leverage School-Wide Multitiered Approaches for Whole School Change

Multitiered school-wide approaches to promoting academic resilience and educational equity are promising approaches to creating schoolwide changes in behaviors, as well as culture and climate. This model is used widely for trauma-informed services as well as academic and behavioral supports. Using a multitiered framework allows for school-wide interventions to build specific skills for all school community members (Tier 1). Students experiencing higher

levels of social-emotional distress or academic need can be supported through small group (Tier 2) or individual (Tier 3) interventions that are connected to the strategies implemented at Tier 1. Evidence from specific trauma-informed practices that use this framework is lacking (Herrenkohl et al., 2019), though evidence for school-wide approaches for Positive Behavioral Interventions and Supports (PBIS) and SEL is strong (Bradshaw et al., 2010; Durlak et al., 2011; Waasdorp et al., 2012). Applied to the concept of promoting academic resilience in the face of racism, multitiered approaches can support skill-building across three tiers of intervention so that all school community members are equipped to recognize, cope with, and disrupt racism. Yet we must note, again, that approaches that are challenging at any one level of service delivery will be exponentially, not additively, difficult to implement in coordinated ways across tiers of intervention.

A Path Forward

In this chapter, we have argued that historical approaches to fostering academic resilience are flawed and specifically may perpetuate inequity. The way forward begins with explicitly recognizing racism as the root cause of injustice and racial disparities in education. With that acknowledgement, education systems can work to make the invisible visible. Rather than asking *whether* racism is operating in schools educators and researchers can shift to asking *how* racism is operating. Then, the path toward disrupting structural and individual racism will be clearer. How do implicit assumptions embedded within theories of resilience, trauma, and social-emotional and character development serve to perpetuate racism and educational inequity? The onus for critical examination and corrective action cannot lie solely with researchers, practitioners, and students of color. Collectively, as a community of researchers and practitioners, we must uplift voices of BIPOC students and communities as we reconceptualize together what it means to promote academic resilience and work toward equity and ultimately justice for all students.

The forces of systemic racism are larger than any school and will require long-term community and political action to dismantle. But this does not mean that it is futile to engage in dialogue and action to disrupt racism in the school community. If schools can build social-emotional and character competencies for recognizing and disrupting racism within a school, then students, staff, and families of all backgrounds, will be better equipped to engage in this necessary larger scale work. We cannot allow the daunting nature of this journey to keep us from the voyage, because for the health of our children, and our society, the destination of educational equity must be reached.

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Resilience and the Child with Learning Disabilities

25

Nicole S. Ofiesh and Nancy Mather

In this chapter, we address how the factors of risk and resilience affect children with learning disabilities. Learning disabilities encompass various disorders, including dyslexia (word reading), dyscalculia (math), and dysgraphia (writing) that are associated primarily with difficulty learning. Because these disabilities affect the acquisition of academic skills, our central focus is upon the school experience for children with learning disabilities. Given that learning disabilities are neurobiological in nature, however, it is impossible to ignore the impact of these disorders on the day-to-day interactions outside of school and how these experiences also affect the everyday lives of children. Both positive and negative school experiences shape children's self-perceptions and contribute to their academic self-concepts. Unfortunately, for many children with learning disabilities, their lowered academic self-perceptions are influenced by difficulties in both the academic and social aspects of school (Vaughn & Elbaum, 1999). In the first part of this chapter, we discuss how self-perception and, subsequently, resilience are shaped by school experiences. In the second part, we review various ways to help children with learning disabilities increase their resiliency and preserve their self-esteem and feelings of self-worth.

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Learning Disabilities and Risk Factors

For a child with learning disabilities, the school environment is riddled with conditions that place the child at risk for negative experiences. Risk can be defined as the negative or potentially negative conditions that impede or threaten normal development (Keogh & Weisner, 1993). These conditions can stem from both internal characteristics associated with the child's disability, as well as external characteristics associated with society, people, and events in the child's world that increase the likelihood of negative outcomes (Catts et al., 2021; Spekman et al., 1993b). Because of difficulties at school, children with learning disabilities are particularly vulnerable and experience ongoing challenges in their emotional, behavioral, and social development across the lifespan (Haft et al., 2016; Maag & Reid, 2006). Fortunately, over the past two decades, a number of researchers have continued to identify both the factors that place children with learning disabilities at risk as a result of their disabilities, as well as several "success attributes" and factors that contribute to their resilience (Goldberg et al., 2003; McNamara & Willoughby, 2010; Panicker & Chelliah, 2016), As a result, most recently

S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_25

resilience has been viewed less and less as a fixed trait that is innate or as one that grows in response to a deficit. Instead, it is more often conceptualized as a dynamic quality that can be nurtured internally and externally by the multiple ways individuals interact with children (Margalit, 2004). Furthermore, as research from positive psychology and strengths-based models emerge about the many positive characteristics of individuals with learning disabilities, there is growing interest in redefining resilience as a concept more than "an absence of psychopathology" (Fung, 2021; King et al., 2020). As a child's resilience increases, so do the abilities to cope with or overcome risk and adversity (Doll & Lyon, 1998). Moreover, the neurobiological differences of individuals with learning disabilities is now often seen as a highly valued attribute that can be nurtured in a school setting in order to foster resilience across the lifespan (Ofiesh & Reiff, 2021).

Environmental and Social Risk Factors

Outside of the cognitive, neurobiological, and behavioral factors that directly impact a child's ability to read, write, calculate, and manage the daily tasks of school, a variety of external factors can contribute to the vulnerability of a child with a learning disability. One such factor is known as stereotype threat (Steele, 1997). In short, stereotype threat confirms a negative belief others have about one's group affiliation. Stereotype threat can unintentionally occur when a label, identity, or other quality a person identifies with or is assigned, has an adverse effect on the individual because of the way others treat that person based on the particular quality (e.g., race or gender). For example, research has shown that some individuals who are labeled as having learning disabilities or "being in special education" perform worse than their peers in part because of society's perceived expectations of individuals in those groups (Doyle & Voyer, 2016; Flore & Wicherts, 2015; Mangels et al., 2012). Recent research found that stereotype threat actually impacts high school students who are psychologically engaged learners more than those who are disengaged which then impacts their ability to persist in school and stay engaged over time (Zhao et al., 2019). Stereotype threat is subtle and can undermine the best of teaching practices and limit students' chances to reach their potential if both teachers and students with learning disabilities are not aware of the role it plays in engagement and persistence. When stereotype threat exists, students end up feeling less competent than their peers academically (Smith & Nagle, 1995). Essentially, they become members of what Steele (1995) has described as an ability-stigmatized group.

Good (2016) recommends the following strategies to diminish stereotype threat in the classroom: (a) foster growth mindsets by teaching students the basics of neuroscience and the brain's ability to change and adapt for the better, (b) emphasize that individuals with learning disabilities are held to the same high standards as others while simultaneously giving them the technology and strategies they need to meet those standards, and (c) teach students about stereotype threat so that it is a concept that can be named and confronted.

Poverty can also play a significant factor in one's adaptation across the lifespan. Poverty has a significant impact on our society in terms of financial cost, health equity, and lost opportunities for individuals to thrive. Data suggest that individuals with learning disabilities rank highest in the lowest socioeconomic strata (Cortiella & Horowitz, 2014; Sanford et al., 2011; Schifter et al., 2019; World Health Organization Disability, 2011). Consistent across all racial and ethnic groups, data collected between 2016 and 2018 found children living in families at less than 100% of the federal poverty level (18.7%) were more likely to be diagnosed with ADHD or a learning disability compared to children living in families at 100% or more of the federal poverty level (12.7%) (Zablotsky & Alford, 2020). It follows that the public schools in low-income neighborhoods are under-resourced and under-staffed. The lack of identification and support for students with these learning disabilities can lead to

poor attendance and/or dropping out of school. Under these circumstances it becomes difficult for students with dyslexia, dyscalculia, or dysgraphia to get the skills and education they need to break out of a cycle of poverty once into adulthood, thus perpetuating the experience generation after generation. When one considers the staggering figures on illiteracy and its association with poverty, crime, chemical dependency and race, it becomes clear that opportunity to learn to read is a basic civil right that is too often denied to many and the confluence of poverty and learning disabilities is real (Celeste et al., 2019; Cortiella & Horowitz, 2014; Davis, 2019).

A third sociological risk factor that compounds poverty is the concept of "academic capital" (Bourdieu, 1979). Academic capital is the notion that even more than social class, individuals are defined by their "social space" which is a result of the background of their family, family literacy, level of education, community, and social experiences (Catts & Petscher, 2021). For example, educated parents of children with learning disabilities who have strong academic capital know how to navigate the costly process of obtaining private diagnostic evaluations that may be necessary to receive accommodations on standardized tests, licensing, and graduate exams. They may be more aware of their legal rights in public schools to have their child tested for a learning disability and how to advocate on behalf of their child at an IEP meeting. Moreover, in the case of dyslexia, successful reading development, even among parents with dyslexia is a powerful aid to resilience in children with learning disabilities (Yu et al., 2018).

Difficulty Learning and School Failure

Although a learning disability in and of itself does not predict positive or negative outcomes (Morrison & Cosden, 1997), many students with learning disabilities have a multitude of school experiences that erode their feelings of confidence and damage their academic self-concepts (Nalavany et al., 2011; Richardson et al., 2012). The finding that many students with learning disabilities maintain a positive global self-concept, despite poor feelings about how well they perform in school, is however encouraging (Meltzer, 1995; Meltzer et al., 1998). Fundamentally many children with learning disabilities understand that their difficulties are primarily academically-related and do not reflect a summation of their self-worth or their innate gifts and talents. Less is known, however, about whether the life choices individuals with learning disabilities make reflect their true potential or are simply a reflection of what they perceive to be their potential based on their school experiences. Furthermore, postsecondary admission criteria is likely to impact the opportunities that a bright student with a learning disability may have to choose from because of the heavy emphasis on timed standardized test scores and high school GPA (Sarid et al., 2019).

Nevertheless, unlike an adult who has the option of choosing a career path that capitalizes on personal strengths, children with learning disabilities are often required to read, write, and perform math 5 days week. Failed attempts at completing or mastering tasks result in feelings of frustration rather than accomplishment (Lerner & Johns, 2014). Moreover, elementary age children are oriented to the present moment; they encounter the struggles of each school day with the perception that these school experiences will take place for the rest of their lives, with struggles that will last an eternity! Conversely, reading intervention when coupled with mindset intervention significantly improves reading performance and nurtures the development of a growth mindset more than reading intervention alone (Wanzek et al., 2021).

Nicky is an example of a young woman who was not well understood by her teachers during her school years and subsequently struggled to understand herself. She was often told she was smart but had such difficulty mastering the basics of reading and math. She came from a family with poor academic capital and a history of undiagnosed learning disabilities on both sides of her family. During an evaluation to document her learning disabilities and provide justifications for accommodations, Nicky, now a college professor,

shared her school experiences with the first author (personal communication, January 7, 2015). Nicky described school as being fun until she noticed she wasn't reading like her friends. By third grade she hated school noting that her favorite day of the week was Saturday, because there's no school and she wished she could read better. When she shared a comment she wrote in third grade, she remembered erasing the word Saturday over and over again because she had no idea how to spell it. She didn't want to get in trouble so she finally just abbreviated it. Unfortunately for many students with learning disabilities, school is only fun at recess (Gregg & Mather, 2002) (Fig. 25.1).

Nicky recalls that she was always at the bottom reading group. She said that she finally learned to read in sixth grade, but she still couldn't read fluently. Her high school counselor told her she "wasn't college material" but could attend the community college to take classes to work at a hair salon. One experience, however, changed her life. She met a psychology research professor, Professor McDonough, who was so amazed at her scientific abilities and understanding of research he made her the class teaching assistant. Soon he noticed she was a very slow reader and after talking with her about it, raised the notion that she might have a learning disability. She was tested at 21 years of age; her overall IQ was in the 95th percentile but her reading scores were in the 16th percentile. Gaining this understanding that she was really smart but had dyslexia, allowed her to get the help she needed. She became an A student in graduate school and is now a noted professor in her field. Nicky still struggles with reading quickly and spelling but is aided daily by the use of text to speech and speech to text which she uses to keep up on both academic and leisurely reading.

Her willingness to keep trying is an example of resilient behavior; she was able to keep her academic self-concept intact and persist with effort. Indeed, a student who can maintain a positive academic self-concept is more likely to persist in areas that are difficult, as well as be perceived by their teachers as working hard (Meltzer et al., 2004). As Meltzer et al. described:

> When students with LD are successful academically as a result of hard work and strategy use, they value these strategies and feel empowered to work hard and to recognize that their persistence will lead to academic success. (p. 42)

Professor McDonough was a powerful role model for Nicky. He was able to recognize her strengths, as well as her need for intervention and support. Unfortunately, many students may not encounter such a teacher. Lerner (2000) observed: "School is often a place that makes no allowances for the shortcomings of these students, a place where teachers are unable to comprehend their difficulties" (p. 538). In fact, 50% of children later identified as having learning disabilities are retained in the first grade (McKinney et al., 1993). Thus, a negative cycle is set in motion where the child believes that things will not improve, and this sense of hopelessness becomes a barrier to future successes (Brooks, 2001). Moreover, students with learning disabilities who have negative self-perceptions are likely to work less hard (but may perceive themselves as working hard), be strategy deficient, and be judged by their teachers as exerting less effort (Klassen & Lynch, 2007; Lackaye & Margalit, 2006; Meltzer et al., 2004).

Students with learning disabilities demonstrate increased levels of anxiety and depression during the public school period compared to students without disabilities (Montague et al., 2008; Mugnaini et al., 2009; Sideridis, 2007). In 2011,

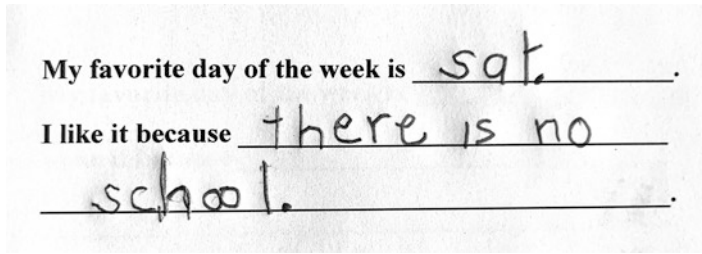

Fig. 25.1 Nicky's third-grade comment

the results from a meta-analysis indicated that students with learning disabilities had statistically significant increased scores on measures of anxiety (Nelson & Harwood, 2011). More recent research also indicated that students with learning disabilities are more at risk for anxiety than depression over the lifespan as a result of their learning disabilities (Frances et al., 2019). In the case of many students with dyslexia, the early difficulty with learning and adverse academic experiences has been shown to result in complex posttraumatic stress disorder. Some adults with dyslexia were even triggered by their own children attending school (Alexander-Passe, 2015).

A skilled clinician who works with children who have experienced the most egregious kinds of abuse and trauma, Dykstra (2019) wrote:

> Contrary to what we imagine, most victims of trauma, even those with PTSD manage to live with it fairly well, even without therapy. We can't say the same of illiteracy and academic failure.
> Yes, all those other problems make teaching them to read harder, sometimes much harder. Climb that mountain. Don't waste time trying to tear it down.

In a comprehensive review of over 100 articles, researchers found that among individuals with dyslexia, the social-emotional impact was real and impacts overall well-being for some across the lifespan (Livingston et al., 2018). Not only did this result in anxiety and depression, but their social emotional difficulties impacted executive functioning, cognition, and self-esteem. These individuals were at increased risk of suicide and had less job satisfaction (Livingston et al., 2018). Unfortunately, low education and unemployment are common adult outcomes for children who have a history of reading disabilities (Kortteinen et al., 2021). Even when they receive additional support and assistance, students with learning disabilities may not feel more competent academically over time (Smith & Nagle, 1995). More recent research shows that for college students, the emotional experience of having learning disabilities impacts functioning more than the learning disability itself (Tufo & Earle, 2020).

Figure 25.2 displays several journal comments written by Maria, an eighth-grade student with reading and spelling difficulties. She has been receiving resource services since third grade. Maria admits that school is stressful and her self-esteem is very low. Even as adults, stress, anxiety, and a negative self-concept continue to be ever-present issues (Crawford, 2002; Shessel & Reiff, 1999). As discussed later in this chapter, one of the greatest and most important activities, parents, teachers, and caring professionals can do for individuals with learning disabilities is to demystify the nature and concept of what a learning disability is, and to acknowledge and nurture a student's strengths.

In discussing how poor reading skill affects an individual's development, Fernald (1943) indicated that the greatest liability is not poor reading per se, but rather the emotional complex that accompanies the reading failure. Stanovich (1986) aptly described the broad impact of reading failure:

> Slow reading acquisition has cognitive, behavioral, and motivational consequences that slow the development of other cognitive skills and inhibit performance on many academic tasks. In short, as reading develops, other cognitive processes linked to it track the level of reading skill. Knowledge bases that are in reciprocal relationships with reading are also inhibited from further development. The longer this developmental sequence is allowed to continue, the more generalized the deficits will become, seeping into more and more areas of cognition and behavior. Or to put it more simply and sadly—in the words of a tearful 9-year-old, already failing frustratingly behind his peers in reading progress, "Reading affects everything you do". (p. 390)

Negative Teacher and Peer Feedback

Clearly, negative teacher and peer feedback contribute to feelings of low self-worth. At times, students' completed products are greeted with comments that suggest that the assignment is not their best work and reflects limited effort. While in second grade, Dan, a student with severe dysgraphia, was trying to write about his favorite animal, the elephant. He could not think of how to spell elephant and got frustrated and ripped up his paper. After coming in from recess, he taped

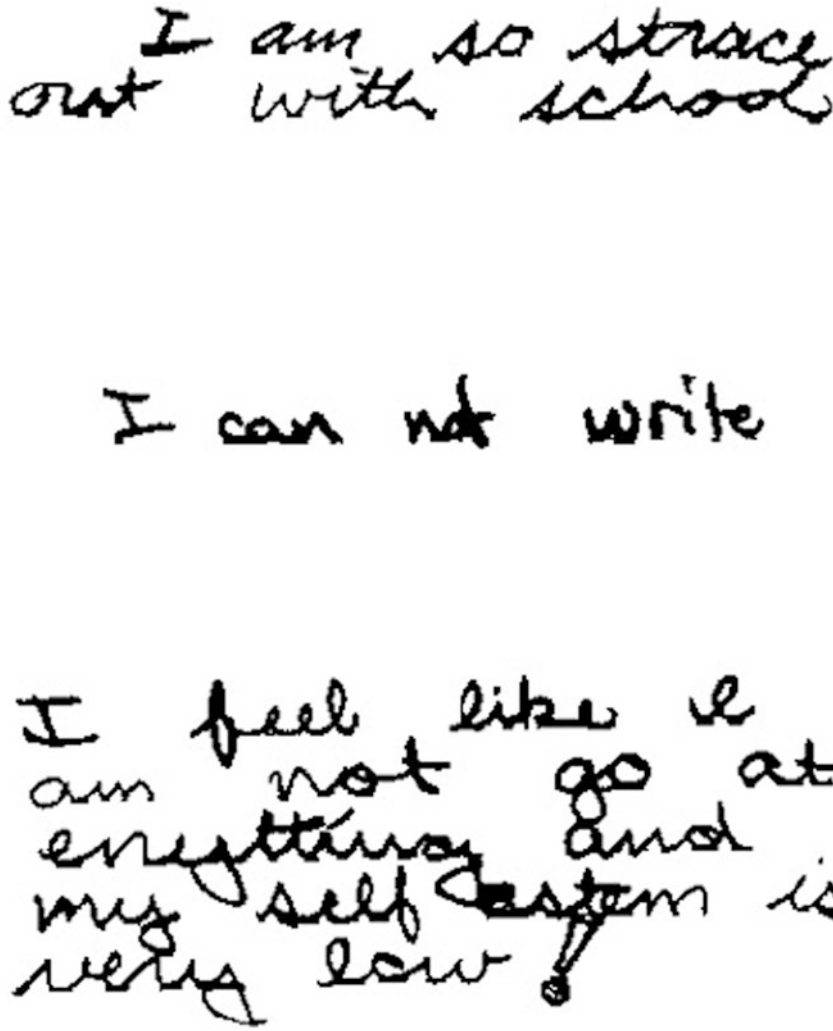

Fig. 25.2 Maria's comments in her journal

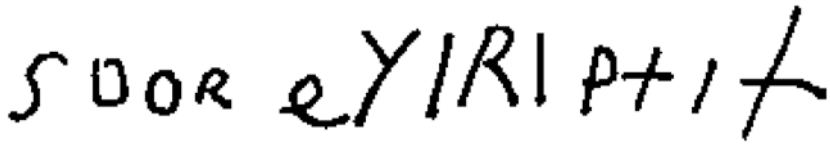

Fig. 25.3 Sorry I ripped it

the paper back together and wrote "Sorry I ripped it." (Fig. 25.3)

On another occasion, he was assigned a worksheet for handwriting practice. After evaluating the worksheet, the teacher placed a comment on the top of the paper that stated: "Work carefully, please." This feedback suggests that Dan is not putting forth his best effort and lacks motivation. Similarly, another comment on Dan's paper, "Can't read" conveys the teacher's frustration over his poor handwriting, rather than providing instructive, positive feedback. One is tempted to

respond to the comment with a succinct reply: "Can't write." Although the teachers' feedback is most likely well intentioned, children frequently perceive these types of comments in a negative and accusatory way (Brooks, 2001); these types of comments can cause disappointment, increase vulnerability, and contribute to feelings of incompetence and inadequacy. In contrast, see the comment in Fig. 25.4 from Dan's third-grade teacher. This teacher understood how difficult it was for Dan to write.

As another example of the importance of positive feedback, Fig. 25.5 presents the spelling test of Marissa, a fourth-grade student, who has dyslexia. Notice her spelling of the word "usual" on number 4 and the word "faucet" on number 9. Instead of counting the errors on the spelling test, her teacher writes a +2 with a smiley face and adds the comment "On Wednesday let's work on this together." With this type of support and understanding, Marissa will keep trying. Given the reading and spelling difficulties children with learning disabilities face, teachers who praise both perseverance and effort can help foster a growth mindset (Haft et al., 2016).

Students with learning disabilities need teachers who acknowledge and praise them for their efforts and provide verbal encouragement. Unlike Dan's third-grade teacher, some teachers are reluctant to praise children if they do not see "successful performance" (Klassen & Lynch, 2007). While academic achievement is one of the best ways to increase social emotional well-being, simple encouragement and praise can help students increase their academic competence. Without positive teacher feedback, students may attempt to hide their lower levels of

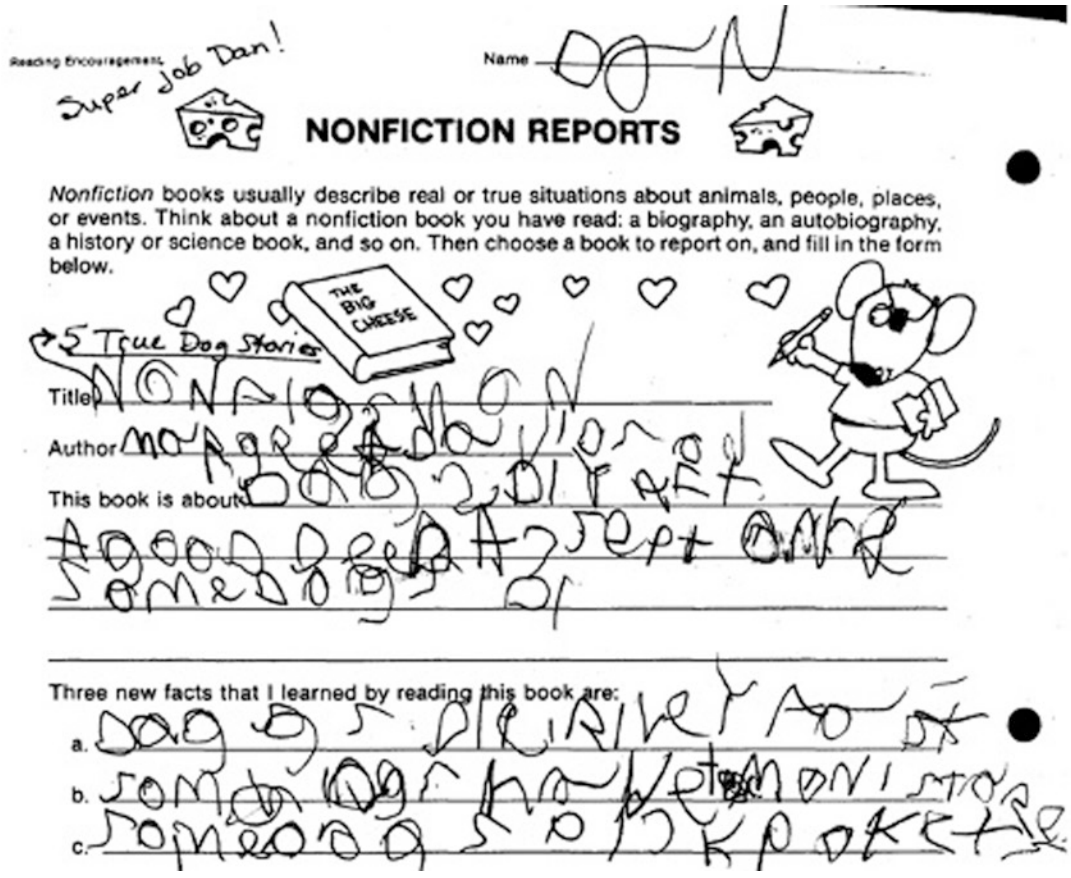

Fig. 25.4 Dan's paper

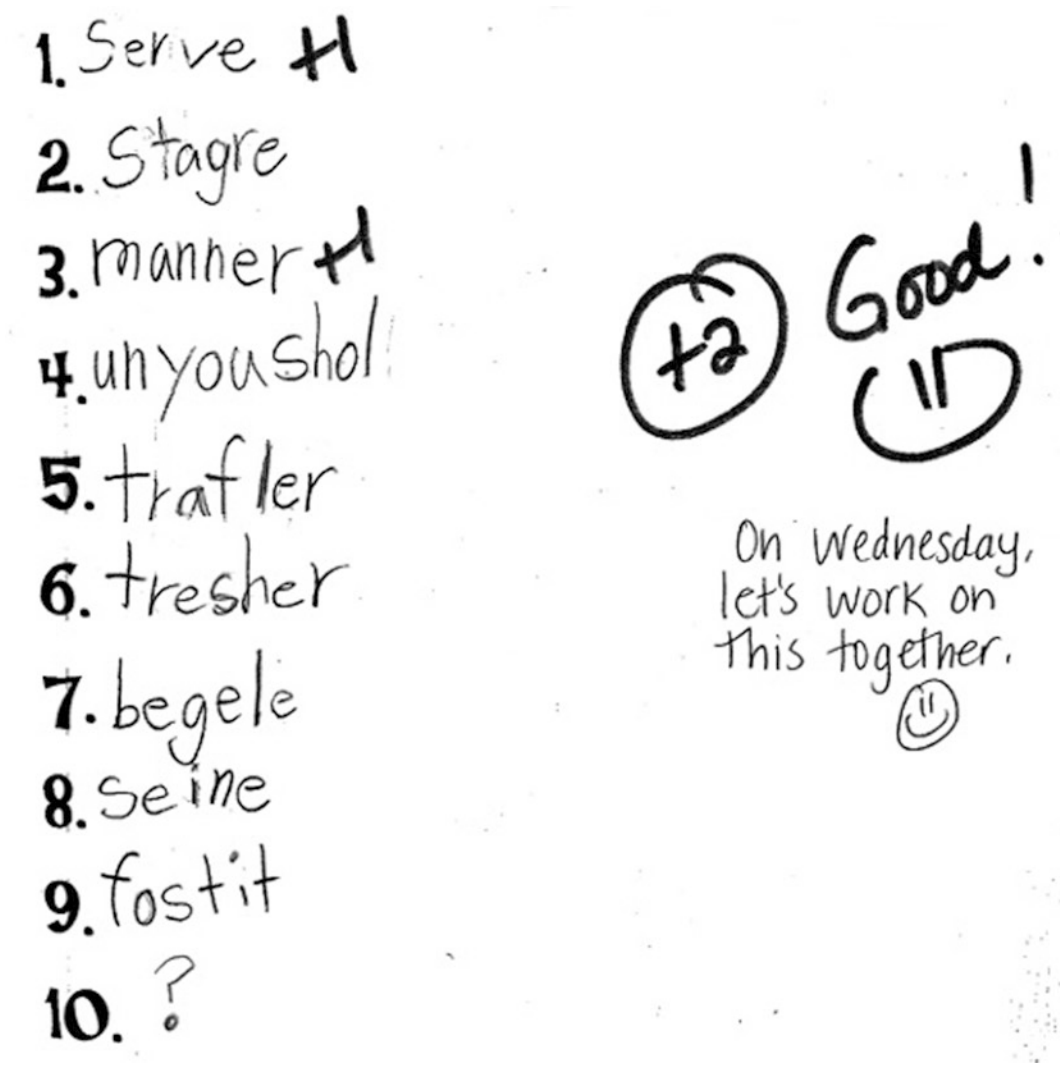

Fig. 25.5 Marissa's spelling test

academic competence. In her autobiography, Crawford (2002) described how she would try to avoid humiliation in third grade by sitting in a beanbag chair pretending to be reading. She noted:

> I couldn't even understand what I was reading; I couldn't remember any of what the teachers had taught us. I wanted it to end. I would run away in my mind to a place that was safe, my own world in which I was the winner, in which I was recognized for what I could do. NO MORE BOOKS! With the tears streaming down my face, I would still pretend to read, but I knew the truth; I knew it was useless. (p. 71)

Some individuals will even refuse to do a task or participate in an activity, rather than risk humiliation by revealing incompetence. When called upon in class, the child's apprehension and fear of failure are often readily apparent. Instead of being supportive, the school environment often exposes what children do not know rather than what they know (Brooks & Goldstein, 2001).

We are reminded of the *Peanuts* character Peppermint Patty who has trouble staying awake in class. When she is not sleeping, she spends time analyzing the probability patterns of true/false tests, rather than attempting to read and

actually answer the questions. In one cartoon, the teacher asks Peppermint Patty to come to the front of the room to work out an arithmetic problem on the blackboard. Patty ponders this request and inquires "in front of the whole class at the blackboard?" As she walks up to the board, she comments: "Black, isn't it?" For children with learning difficulties, the fear of making mistakes is a hidden presence that casts a dark shadow over what happens in the classroom (Brooks & Goldstein, 2001).

Even when teachers are supportive and understanding, students with learning disabilities are often humiliated by their classmates' performance in comparison to their own low levels of academic skills, as well as their difficulties mastering specific tasks. The child feels like an impostor worried about exposure, and the wounds caused by early experiences never heal (Salza, 2003; Shessel & Reiff, 1999). Spence, a fifth-grader, recalls the parting words of a classmate retreating from a playground argument: "Well, guess who goes to the resource room. Guess who has a learning disability. You're a retard, man." Although Spence shared the experience with his teacher and she made sure his classmate apologized, the damage to Spence's self-esteem had already been done.

Similarly, during an evaluation, Ben, a seventh-grade student, stated: "I want you to help me get out of RSP (resource specialist program) 'cause everyone at school knows it stands for Really Stupid People." Ben's comments are not surprising given that children with learning disabilities tend to want the same activities, books, homework, grading criteria, and grouping practices as their classmates (Klassen & Lynch, 2007; Klingner & Vaughn, 1999). Especially during adolescence and secondary school, students are at risk for a depression in relation to self-concept (Montague et al., 2008) and have a strong desire to simply fit in and not be seen as different (Bender, 2008). Yet for many children with learning disabilities, the social and emotional problems they experience are not predicted by where they receive special education support (e.g., resource room, self-contained class, or general education setting) (Wiener & Tardif, 2004). Spekman et al. (1993b) observed: "They may enter school eager to learn and with expectations for success, but then run head-on into academic difficulties, extreme frustration, feelings of being different or retarded, peer rejection, and resultant low self-esteem and confidence" (p. 12).

Unfortunately, it is common to hear adults with learning disabilities share painful experiences of being teased, bullied, and ridiculed during their school years (Boyes et al., 2019; Higgins et al., 2002). Their perceptions of being different resulted in feelings of fear, confusion, and anger. These feelings were more common for individuals who had difficulty with reading more than those who struggled with math (Morgan et al., 2012). These adults described these school-age misunderstandings as being traumatic and as resulting in humiliation, emotional insecurity, and self-doubt (Boyes et al., 2019; McNulty, 2003). During interviews, fourteen postsecondary students with learning disabilities described their repeated struggles and adversity, as well as the lasting emotional scarring of learning differently (Orr & Goodman, 2010). The combination of the disability and people's responses to it can create personal disruption and devastation (Crawford, 2002). Crawford recalls her feelings about failure: "There's nothing worse than failing every day: My body would shake, my stomach would ache, my head would pound with pain, and I would cast my eyes down in an attempt to hide the tears" (p. 71). In addition to repeated failure experiences, several other factors also affect the development of resiliency.

Type and Severity of the Learning Disability

The type and severity of the learning disability also influence the level of resilience and long-term outcomes (Spekman et al., 1993a, b; Wong, 2003), and thus, it is necessary to determine the specific nature and characteristics of the condition. In reality, the term "learning disabilities" is vague and can contribute to confusion. Instead, it is more accurate to refer to domain-specific disabilities, such as dyslexia, dyscalculia, and

dysgraphia, and treat them separately. In addition to making the descriptor more accurate, specific labels also help to convey that the problem is circumscribed and not global in nature. For example, one study looked at the skill profiles of college students with developmental language disorders and developmental dyslexia. The researchers found that the profiles of these students were similar in college as they were in earlier years; however, the manner in which the disabilities presented academically required different supports than those before college. For example, those with developmental language disorders struggled less with reading comprehension when tested as a discrete skill, but they had difficulty with reading comprehension under timed reading constraints. These researchers recommended both audio and visual technology to record lectures, as well as untimed testing (Tufo & Earle, 2020). They also found that the subset of college students with developmental dyslexia appear to be particularly good at compensating for their reading deficits but because of the specific phonological and orthographic nature of their disabilities also need technology to aid in capturing lecture material. For both groups, the fluent application of basic skills remained a challenge in college. However, with knowledge of the type of learning disability and the difficulties students encounter when learning, accommodations can be applied more meaningfully (Ofiesh & Reiff, 2021; Tufo & Earle, 2020).

Social Support and Competence

Social support is considered an index of resiliency in that it serves as a stress-buffering condition (Robertson et al., 1998). Subsequently, students who lack the ability to create and maintain relationships tend to lose the support network needed to resolve life's challenges and crises. In addition to academic difficulties, many students with learning disabilities experience problems with peer acceptance and are more neglected and rejected than peers (Kuhne & Wiener, 2000).

Lindsey, a fourth-grade student with dyslexia and a language impairment, described the experience of being unaccepted by and then losing her friends: "When I see other friends teasing each other about food on their clothes or toilet paper on their shoes, everyone laughs and they're still all friends … but whenever I try to make a joke about one of my friends, they're not my friend anymore and nobody laughs…They just don't like me anymore." For some students, difficulty with social competence can stem from their difficulty in understanding and using language, as well as reading social cues (Robertson et al., 1998). Students with language impairments are atypically at risk for school and peer alienation and school dropout (Morrison & D'Incau, 1997; Voeller, 1991). In the earliest grades, teachers often suspect the child has a hearing problem because they present with such peculiar responses to directions.

For example, Ms. Martin commented that during the first few weeks of school, one of her first-grade students, Ralph, who had yet to be diagnosed with a language impairment, wrote his name anywhere on the front of a sheet of paper when told to "write your name at the 'top' of the paper." Puzzled by his behavior and the observation that he did not model the behavior of his peers, Ms. Martin asked Ralph to show her where the *bottom* of the paper was. He turned it over and pointed to the backside. Ralph was an avid swimmer who conceptualized the terms top and bottom as he would in the swimming pool. It made perfect sense to him and to Ms. Martin as well once she figured it out. Fortunately, as an extremely supportive teacher, she quickly demonstrated to Ralph where to place his name on the paper and how top and bottom meant slightly different places on a paper and within a pool. Over the years, Ralph's problems with language comprehension caused him to get in trouble with teachers and peers on the playground although he rarely understood why. Through much role playing with the school's speech and language specialist, he was able to successfully navigate the social dynamics of school. As an adult he became a cabinet maker and happily worked for himself. He recently said his biggest challenge was

making sure he understood what his customers wanted, but he had developed strategies for double checking his understanding. Sorensen et al. (2003) observed: "From a mental health perspective, special education services may need to focus not only on helping children acquire skills, but also on helping them develop strategies for coping with their learning impairment in the very setting where this impairment can be expected to be most stressful for them" (pp. 20–21).

In one study, adults spoke about growing up with a learning disability. They shared social difficulties across several contexts beyond school such as work, recreation, or family settings. These individuals did not know where or how to meet new people, how to make or sustain friendships, and they developed romantic relationships later than their peers (Goldberg et al., 2003). Interestingly, several studies have indicated that despite their lower level of social functioning, students with learning disabilities tend to feel positive about how their teachers and peers view them (Morrison, 1985; Robertson et al., 1998) though the quality of relating and friendships may differ (Wiener & Tardif, 2004). This discrepancy between the real and perceived events can in fact be a result of the disability itself (Palombo, 2001) or simply a coping mechanism (Robertson et al., 1998). It may also be evidence of the resilience that parents, teachers, and professionals help foster by providing students with learning disabilities with an understanding of the nature of their disability (Kloomok & Cosden, 1994; Palombo, 2001; Sorensen et al., 2003).

Gender

Although both boys and girls with learning disabilities can encounter social difficulties, some believe that gender may also play a role in the response of children to social failure (Settle & Milich, 1999; Wong, 2003), as well as the protective factors that they develop. Some research shows no differences between boys and girls, across grade levels with the risk factors of anxiety, depression, and academic self-concept (Montague et al., 2008; Nelson & Harwood, 2011). While more research has been conducted on the risk and protective factors that affect males (Morrison & Cosden, 1997), several studies have described differences between factors affecting risk and resiliency in boys and girls. For example, in one study, in order to make a successful transition into adulthood, intrinsic characteristics such as temperament and self-concept, were more important for females, whereas outside sources of support from the family and community made a greater difference in the lives of males (Werner, 1993, 1999).

Self-efficacy is important to learning to read because individuals with strong self-efficacy will persist longer with difficulty tasks and tend to have growth mindsets. In an analysis of psychological correlates of university students and GPA, self-efficacy was the strongest predictor of strong academic performance (Richardson et al., 2012). Therefore, for students with learning disabilities, self-efficacy can help them to get the most out of reading interventions. Boys and girls have been found to have similar levels of self-efficacy which supports their ability to learn to read words fluently, but even high levels of self-efficacy did not promote reading comprehension in both boys and girls (Carroll & Fox, 2017).

Strategies for Building Resilience

Fortunately, many individuals with learning disabilities do succeed and regain confidence once they enter adulthood and the workforce. Catts et al. (2021) identified five major external and internal resilience factors that contribute to positive outcomes for individuals with dyslexia: instruction, growth mindset, task-focused behavior, adaptive coping strategies, and family and peer support. Many individuals with learning disabilities do become successful adults in later years. In a longitudinal study, Werner (1999) found that between the ages of 10 to 18, only one out of four children with learning disabilities had improved their academic and social status, but by the age of 32, three out of the four individuals had improved and had adapted successfully to the demands of work, marriage, and family life.

Werner (1993) also found that a positive temperament did not reduce negative outcomes in late adolescence, but it did predict positive adjustment by the age of 32.

Another longitudinal study found clear predictors of success for individuals with learning disabilities and underscored the importance of working on social emotional factors as much as academic skills (Goldberg et al., 2003; Raskind et al., 1999). The successful experiences of many adults with learning disabilities indicate that children raised with multiple risk factors can still achieve positive adult outcomes once they leave school (Goldberg et al., 2003). The fact that so many of these individuals have positive adult outcomes points to the powerful role of environmental factors (Dyson, 2003; Wong, 2003). Many adults with learning disabilities find innovative ways to teach themselves and thus prove that the ability to learn was always present, but perhaps, the knowledge of how to teach them was absent (Ofiesh & Reiff, 2021; Reiff et al., 1993).

In discussing his teachers, Aiden, a fifth-grade student with dyslexia, noted that he didn't blame his teachers for the fact that he did not learn how to read in the early grades. He said that they all wanted to help him, knew he was smart, but they didn't know how to teach him how to read. Once he received targeted instruction from a reading specialist, he did learn how to read even though he still reads slowly. Shaywitz (2020) reminds us that a student like Aiden who now has average word reading scores but still does not read fluently, has dyslexia.

How then can we increase children's successes in school? A variety of protective factors appear to help children with learning disabilities overcome risk and cultivate resiliency, the ability to spring back from the negative outcomes associated with stress factors and risks (Bender et al., 1999). Protective factors are those life situations or events that enhance the chances of positive outcomes (Keogh & Weisner, 1993). In the next section, we discuss several protective factors that appear to mitigate positive outcomes for children with learning disabilities.

Promote Self-Understanding and Acceptance

One critical factor for overcoming risk appears to be self-understanding, acceptance, and a feeling of control over one's life. In studying successful adults with learning disabilities, Gerber et al. (1992) found that having a sense of control over their lives was the most critical factor. One way that individuals are able to take control of their lives is by setting realistic goals that are possible to achieve. The capacity to accomplish goals is influenced by the accuracy of one's self-knowledge and self-perceptions (Nalavany et al., 2011). In fact, the central problem is not the disability, but the capacity to confront the various challenges that one faces in living with and overcoming it (Gerber & Ginsberg, 1990). Individuals who have a greater understanding of their disability are more likely to adjust successfully to adult life because they seek help when needed and find educational and vocational opportunities that incorporate their strengths (Cosden, 2001; Nalavany et al., 2011). Furthermore, understanding disability means understanding where one's strengths, gifts, and talents lie. In 1946, the authors of *The Psychology of Normal People* wrote: "…no two people are exactly alike on any trait yet studied. Indeed, the universal existence of individual variation is one of the most thoroughly demonstrated principles of modern psychology" (Tiffin et al., 1946). However, assumptions of normality remain and are pervasive in society and especially in today's classroom and workforce. Assumptions of normality have a place in science when needed to interpret aggregate data, but individually, there is no "average" learner and society misses out on the contributions of diverse individuals when we apply an assumption of normality to individuals (Rose, 2015). As Moats (2015) explained: "Meeting the needs of students across the spectrum of academic ability…requires acceptance of diversity…To use one yardstick to measure student growth, one set of standards to drive what is taught, and one view of academic success is indefensible" (p. 22).

We must begin to teach our children with an understanding of the brain and how people learn and use that information to help them remain engaged in school, develop flexible mindsets, and thrive academically and professionally. Goldberg et al. (2003) found that successful individuals with learning disabilities set goals that were specific but flexible, included a strategy, and appeared to be concrete, realistic, and attainable. Moreover, many of the successful adults in their longitudinal study indicated that their goals had been with them since their youth and had provided both meaning and direction to their lives. Much of what has been learned through science in the last fifteen years has yet to impact how we educate, test and measure ability to widen opportunities for all people. This is baffling. To design education and teach individuals without an understanding of the brain is like constructing a building without an understanding of engineering (Whitman & Kelleher, 2016).

Without an understanding of their disability, students with learning disabilities have been described as having an external locus of control, attributing their academic performance to reasons outside of their own thoughts and behaviors (Borkowski et al., 1990). They often attribute their academic successes to external factors such as luck or that the task was too easy. After several trials of reteaching, Andy, a fourth-grade boy with dyscalculia, correctly solved a double-digit multiplication problem. In an effort to reinforce the correct procedure, his teacher enthusiastically asked Andy how he figured it out. His response was, "Well Ms. Hill, I guess it's just my lucky day." Andy simply could not see how his effort could influence the events in his life. His teacher helped to build resilience by explaining to him that it was indeed a result of Andy's own effort.

Since research has shown that an internal locus of control contributes to resilience (Blocker & Copeland, 1994; Wyman et al., 1993), teachers and parents need to explicitly convey and support the relationships between a child's efforts and the positive outcomes of those efforts. Instead of just saying, "Wow, you did a great job," students need to hear comments like: "Do you see how that strategy worked for you?" "You are listening carefully and looking at me." "You remembered to bring your homework back." "Do you see that you can understand these problems when you ask for help?"

In one study, college students with and without learning disabilities differed significantly on resilience, stress, and need for achievement, but not on locus of control (Hall et al., 2002). We can learn from these students with learning disabilities who have successfully entered postsecondary education about the importance of teaching students how to understand the nature of their difficulties and how their efforts can pay off. In a 20-year longitudinal project tracing the lives of individuals with learning disabilities, Higgins et al. (2002) found that the most successful participants accepted their learning disability and could talk about their strengths, as well as their weaknesses. Understanding of their disability and self-awareness then form protective factors that facilitate lowered levels of anxiety and provide the foundation for acceptance (Morrison & Cosden, 1997; Vogel et al., 1993). Moreover, Dyson (2003) found that as time passed after a clinical evaluation, parents felt they understood their child better and reported a decline in their child's depression and adjustment problems and improvement in conduct.

Seth's disability service provider helped him to learn about his disability in college. He wrote, "She looked at my files and we sat and talked about my disability. She wanted all the students with disabilities to really know what their disability was so that when they asked for help, they could explain their own strengths and weaknesses. She always was a person that would encourage you" (Orr & Goodman, 2010, p. 221).

Counselors and therapists can also help children with learning disabilities increase their self-understanding. Palombo (2001) advised that to treat children successfully, the therapist must both understand the effects of the learning disorder on the child, as well as be able to distinguish between thoughts and behaviors caused by the disorder from those resulting from a reaction to the disorder. For example, a therapist must be able to distinguish if a child did not comply with a parent's or teacher's request due to difficulty

understanding or following directions, or if the noncompliance was a result of depression resulting from an external event. Parents and teachers often misunderstand these children because they do not recognize that the child's thoughts are neurologically driven, rather than motivated by psychological factors. To illustrate this point, Palombo provided the following example: "Simply put there is a failure to distinguish between 'she won't' and 'she can't.' A child with dyslexia does not fail to learn to read because she *does not want* to learn but because she *cannot* learn" (p. 7).

In discussing and explaining the learning disability to a student, parents and teachers need to be open, honest, and supportive (Miller & Fritz, 1998). As with the college students in the Hall et al. (2002) study, Gerber et al. (1992) found that successful adults understood and accepted their learning disabilities. They wanted to succeed, set achievable goals, and confronted their learning disabilities (Gerber & Ginsberg, 1990). In addition to understanding one's strengths and weaknesses, individuals must also be able to see themselves as being more than "having learning disabilities" (Bender et al., 1999). Some successful adults are able to reframe their learning disabilities in a positive light so that the disability itself functions as a protective factor, making them stronger, more resilient, and more self-actualized (Gerber et al., 1996; Shessel & Reiff, 1999).

The Role of Supportive Adults

Supportive adults or mentors are able to foster trust and bolster the self-esteem of children with learning disabilities (Bender et al., 1999; Brooks, 2001; Werner, 1993, 1999; Wong, 2003). Oftentimes teachers in the school environment can serve as protective factors for children. A study by Haft et al. (2019) showed a significant decrease in depression and increase in self-esteem among children with learning disabilities when paired with a young adult mentor with a learning disability who worked with them over a period of time. Some of the most powerful qualitative outcomes of the study were that students felt that they could "relate to someone who understood me and was doing just fine." The researchers noted that peer mentoring is a promising intervention that can build resilience among children with learning disabilities and ADHD and highlights the importance of strong interpersonal relationships as a protective factor.

Successful individuals with learning disabilities have at least one person in their lives who accepts them unconditionally and serves as a mentor who acts as the "gatekeeper for the future" (Werner, 1993; Wong, 2003). Hallowell (2003) recalled how he struggled to learn to read in first grade. As he tried to pronounce the words, his teacher, Mrs. Eldredge, put her arm around him protectively and took away his fear of learning to read. Now as a psychiatrist, he still recalls the power of her arm and the effect it had on his development: "None of this would have happened had it not been for Mrs. Eldredge's arm. That arm has stayed around me ever since first grade. Even though Mrs. Eldredge resides now in heaven, perhaps reclining on an actual cloud as I write these words, she continues to help me, her arm to protect me, and I continue to thank her for it, almost every day" (p. 7).

Teachers play a significant role in fostering resilience because through daily encounters, they are able to address the child's emotional, as well as academic, needs (Segal, 1988; Werner, 1993). Children who have the mentoring relationship of an adult during adolescence have a greater likelihood of high school completion and improved self-esteem. Moreover, this same research indicates that teachers and guidance counselors who have cultivated meaningful relationships with their students have a greater impact on high school completion than other types of adult mentors (Ahrens et al., 2010). Thus, educators have the power to offset certain risk factors as they touch the mind, heart, and spirit of children by creating school climates where all students will succeed (Brooks, 2001). They provide children with positive experiences that enhance their self-esteem and competence, thereby reinforcing their resilience (Brooks, 1991; Rutter, 1985). They teach children not to be afraid of making mistakes

and help students appreciate that mistakes are part of the learning process (Brooks & Goldstein, 2001). The long-term educational benefits from positive school experiences stem more from children's attitudes toward learning and their self-esteem than from what they are specifically taught (Rutter, 1985). Orr and Goodman (2010) collected statements from postsecondary students with learning disabilities regarding those individuals who had supported them along through school. One student commented on a person who inspired her in high school. She explained that this teacher consultant was "…the one person that told me I need to go to college, and that I was smart" (p. 221). Another participant commented about a counselor who had particularly inspired her. She wrote, "He pulled me to the side and asked if I needed help. He helped me put things into perspective, think about what I was doing with my life" (p. 221).

Parental support is another key factor that helps children develop a healthy perspective of self (Cosden et al., 2002). Parents or guardians can advocate for their children in school and provide emotional support (Wiener, 2003). Individuals with learning disabilities who have positive adult outcomes grow up in home environments that foster emotional stability (Hechtman, 1991). In addition, parental acceptance of academic limitations, as well as acknowledgment of strengths, may reduce the stress caused by the learning disability (Morrison & Cosden, 1997). Individuals with learning disabilities who became successful adults reflected on their relationships with their families and how their families had shaped their lives. In their descriptions, they stressed that their families had been extraordinarily supportive, had provided them with financial support and a healthy dependence, and an understanding that the learning disabilities had caused at times stresses on particular family members (Goldberg et al., 2003).

In addition, learning disabilities have a genetic basis and other family members may have experienced similar difficulties. In fact, genetic influences underlie many risk and resilience factors (Catts et al., 2021). When Rachel was diagnosed with dysgraphia in second grade, her father recalled that he had similar symptoms. He flunked handwriting and school "was torture" until college. He was in the gifted program but his teachers told his parents that he was an underachiever who was not trying his best.

Similarly, after reading a long email from a teacher, describing her daughter's most recent failure to meet the requirements of a middle school assignment, Annie's mother was painfully reminded of her own adverse childhood experiences where she struggled to learn to read. She said, "I hate to see Annie so defeated. I will be her cheerleader today. It is hard because I get down too and think it's my fault that she has this problem. I know I have to stay up…recognize her struggles and tell her about my own and really try to keep her going…" Thus, the parents of children with learning disabilities are vulnerable and subject to distress (Park et al., 2020).

Even so, parents and teachers, sometimes together, sometimes alone, often end up not only being a cheerleader, but the entire cheerleading squad. Thus, an interdisciplinary effort among parents, teachers, pediatricians, therapists, and psychologists is needed to forge a chain of protective factors that will reduce the negative impact of a learning disability (Werner, 1999). Caring parents and teachers can help preserve the self-esteem of children.

Provide School-Based Intensive Interventions

Within the school setting, teachers and administrators have to recognize the importance of addressing a child's psychological, academic, and social well-being. Early intervention is critical. Ozernov-Palchik and Gaab (2016) described what they called the "dyslexia paradox." Dyslexia is typically not identified until second grade when the child has not learned to read as expected. The paradox is that early intervention is most effective in preK-1 prior to reading failure. Thus, the sooner intervention can begin, the more positive the outcomes.

In a meta-analysis of 64 intervention studies, Elbaum and Vaughn (2001) found that the types

of interventions that were effective varied based upon grade level. The interventions that were most effective in elementary schools were those that directly focused on improving academic performance, requiring considerable time and intensity. In middle school and high school, counseling interventions were more effective. The extent of positive impact depends upon the type and quality of service, as well as the depth and breadth of intervention (Spekman et al., 1993a). The impact also varies across the different academic domains of reading and math with reading and math persisting longer for boys and reading persisting longer for girls-both impacting the time of graduation (Holopainen & Hakkarainen, 2019). A large and growing body of literature emphasizes two important points. First, academic achievement is a protective factor; when we find ways to teach children with learning disabilities strategies to succeed, they are more likely to thrive. Second, providing instruction in social emotional skills, including self-awareness, is just as important as teaching academic skills.

Vogel et al. (1993) found that the availability of long-term tutoring and one-to-one instruction characterized the education of successful adults with learning disabilities. Unfortunately, many students with learning disabilities do not receive differentiated instruction and, with continued failures, their perceptions of their academic competence are diminished. Schumm et al. (2000) interviewed third-grade teachers and students with learning disabilities. Overall, the teachers reported using whole-class instruction that included the same materials for all students in the class regardless of levels of performance. All students were expected to read grade-level materials even if they could not read the words in the material. Furthermore, students with learning disabilities did not receive instruction directed at improving their word analysis skills. One teacher voiced strong opposition to providing instruction in word analysis: "By the time they come to third grade they really should have those skills" (p. 483). With undifferentiated instruction and minimal direct instruction in reading, the students with learning disabilities made little academic improvement and their attitudes about reading declined. In contrast to general education placements, the identification process resulting in placement in special education programs does not appear to negatively affect the self-concept of students with learning disabilities, at least within the early grades (Vaughn et al., 1992).

To address students' learning disparities, teachers must help students make as much academic progress as possible. This cannot be accomplished by having the student use the same educational materials as their classmates. The academic difficulties of children with learning problems are chronic, even when they have individualized educational plans (Sorensen et al., 2003). A student with learning disabilities requires differentiated, carefully engineered educational programming. Although the student must be treated as equitably as others, the type of instruction that is provided will differ substantially from that provided to students without learning disabilities. In the short run, students who are behind in reading may feel better about their reading abilities if they have the same books as their peers; but in the long run, if their skills do not improve, they will have little basis for positive self-perceptions of their academic competence (Vaughn & Elbaum, 1999). Even the same students who reported wanting to have the same materials as their peers, explained that they "… value teachers who slow down instruction when needed, explain concepts and assignments clearly, teach learning strategies, and teach the same material differently so that everyone can learn" (Klingner & Vaughn, 1999, p. 23). Students with learning disabilities require intensive and explicit instruction that focuses on their specific needs (Schumm et al., 2000). Additionally, participants in one study were seen to lack metacognitive skills but be very aware of what they wanted from teachers. These adolescents wished for help that was *discreetly* provided by teachers sensitive to the fact they are self-conscious adolescents, and that these teachers offered help to the whole class rather than only to the students with learning disabilities (Klassen & Lynch, 2007). In preparing for a transition to a postsecondary setting, Lee et al. (2014) found that three factors predicted educational persistence for

adolescents with specific learning disabilities or emotional/behavioral disorders: grade point average, socioeconomic status, and the number of their friends who were planning to attend a 4-year college.

Select the Most Appropriate Placement

Students with learning disabilities need a social environment that supports their academic efforts and sustains their achievement (Elbaum & Vaughn, 2001; Holopainen & Hakkarainen, 2019). Although the field continues to debate the most appropriate service delivery system for children with learning disabilities, findings from studies addressing self-concept and educational placements (general education, resource room, or self-contained) are equivocal, and no one placement is clearly preferable to another (Wiener & Tardif, 2004). Elbaum and Vaughn found that some studies showed higher self-concepts for students in more restrictive settings; others showed higher self-concept for students in less restrictive settings; and still others showed no difference. It is important to preserve the continuum of placements so that children will be able to get the type of individualized instruction they need.

The age of the student can also affect the response to the type of classroom placement. Howard and Tryon (2002) investigated the relationship of depressive symptomology in a sample of adolescents with learning disabilities placed in general education or self-contained classrooms. Although their self-ratings did not differ based upon the type of placement, the guidance counselors rated the students with learning disabilities in general education classes as being more depressed than those who were in self-contained classes. This finding suggests that negative teacher and peer feedback can be more prevalent in inclusive settings and that greater acceptance may be experienced in self-contained settings.

In another study, children with learning disabilities in four types of special education settings were compared in terms of social acceptance, number of friends, quality of friendships, quality of relationship with best friends, self-concept, loneliness, depression, social skills, and problem behaviors. The results suggested a preference toward the inclusive classroom for social and emotional adjustment; however, the researchers suggested that given the size of the differences, it would be inappropriate to conclude that the major variable influencing social and emotional adjustment is the special education placement (Wiener & Tardif, 2004).

The National Longitudinal Transition Study-2 (NLTS2) is a comprehensive report that provides an analysis of many factors that can influence the education of children with disabilities (Wagner et al., 2003). The authors underscore that school programs, support services, and other experiences have a significant influence on children with disabilities, particularly in the domains of academic engagement and performance (Wagner et al., 2003). The NLTS2 research team identified many factors that relate to better school outcomes for students with disabilities. Based on these findings, parents are encouraged to:

- Maintain high expectations for future education and independence.
- Stay actively involved in the child's school experiences.
- Support extracurricular activities.

Teachers and parents are encouraged to:

- Teach and reward persistence at home and at school (Wagner et al. (2003).
- Teach social skills.
- Carefully consider placement in general education classrooms.

Results are mixed in terms of advantages and disadvantages of placement in general education. While the general education setting fostered both learning and social skills, grades earned by students with disabilities in the general education classroom tended to be lower than their peers without disabilities. Even though their grades were lower, they performed closer to grade level in both reading and mathematics than peers who did not take as many general education classes

(Blackorby et al., 2003). Even so, poor grades can contribute to low self- esteem. As Wagner et al. (2003) wrote, "Poor grades can send a message of failure to youth that could militate against the benefits of inclusion and erode the commitment to school over time" (p. 12).

Whether a child receives services in a resource room or in a general education class, the child needs to be in an academic environment that is safe and secure so that learning will flourish (Brooks, 2001). When school teams are making decisions about educational placement, they should consider the students' own preferences, as well as their academic, social, and emotional needs (Elbaum, 2002). Some evidence suggests students with learning disabilities prefer resource services or pull-out programs to in-class service delivery (Jenkins & Heinen, 1989; Le Mare & de la Ronde, 2000). Regardless of the placement, school environments must be benevolent, supportive, and developmentally appropriate for all children (Bryan, 2003).

One fact is clear: students with learning disabilities need a strong support system throughout their school careers. This system can help preserve self-concept and self-worth by: (a) keeping failure at a minimum, (b) increasing acknowledgment of nonacademic talents and other competencies, and (c) emphasizing learning goals over performance goals (Lerner & Johns, 2014). A learning goal rewards effort, even though the final product (the performance goal) can be partially complete or incorrect. Because social life and status impact school learning (Bryan, 2003), to ensure that children with learning disabilities succeed, their feelings of low self-worth and self-esteem must also be addressed.

Acknowledge Accomplishments in Nonacademic Domains

Another way to foster resilience is to support positive development in other areas of performance besides traditional school subjects. Figure 25.6 provides the responses of Marco, a sixth-grade student when asked the one thing he can do best and the one thing he would like to do better. Hopefully, while working on reading, his teacher will also reinforce his talent in making things.

Unfortunately, some parents and teachers think that if they take away the activity the child enjoys the most and use it as a reward, it can motivate the child to perform academically. This rarely works. All children need to experience success, and caution should be used when taking away the one thing that makes a child smile, relax, or feel good at something.

Harter's (1985) multidimensional model of self-concept, which is still relevant today, included the following six domains of self-perception: academic, social, athletic, physical, behavioral, and global self-worth. Although students with learning disabilities often have lower academic self-concepts than their peers, successful accomplishments in other domains can help offset low academic self-perceptions and help students maintain self-esteem (Smith & Nagle, 1995; Vaughn & Elbaum, 1999). Success in any arena of life leads to enhanced self-esteem and a feeling of self-efficacy (Rutter, 1985). Students with learning disabilities often find success in a nonacademic arena, such as sports, the arts, or technology.

In a posting to a listserv, Mary Perfitt-Nelson (2002) noted how different schools would be if the curriculum, rules, materials, and tests were developed by artists, musicians, athletes, or mathematicians. She wrote:

> We meet and discuss kids and how they are doing in *our* environment. If they are not excelling, few of us even consider that the environment is not supporting the student's strengths. Changing the environment is rarely considered, nor is it even thought necessary. Districts have done away with technical courses. We are left with some variation of the college track, where the failure rate is astounding. And yet each child could be an expert in some area. It is important that we help the mathematicians and musicians find their way during the 12 years they must spend in a place designed for someone else.

It comes back to an acceptance and nurturing of diversity. Students differ in their abilities. Moats (2015) explained: "Although it seems contrary to American ideals, "all students" will never be at grade-level or above in reading, any more

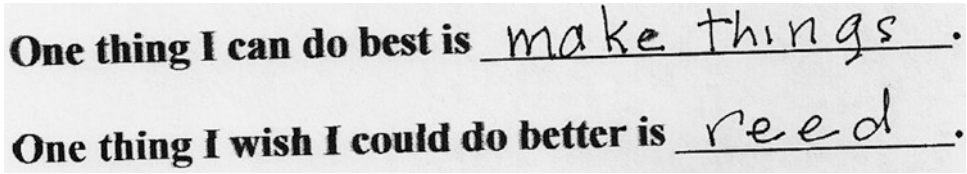

Fig. 25.6 Marco's comments

than all students will be accomplished musicians, athletes, graphic artists, physicists, or poets" (p. 20). Salza (2003) expressed similar sentiments and provided the following analogy to illustrate how the success of adults with dyslexia is often unexpected because we incorrectly assume that the skills needed for school success are the same as those needed for life success:

> Consider the giant green sea turtle lumbering across the sand to lay her eggs. She heaves herself across the sand and struggles mightily for every inch of ground she covers. She looks awkward, vulnerable, disabled, and poorly adapted. Consider the same green sea turtle swimming in the ocean. She swims with power and grace, she dives deep, stays down for long periods of time and comes up practically dry! Schools can and must give children, at the least, a glimpse and perhaps a taste of the sea to which they are headed as they struggle across this patch of ground we call school. (p. 27)

Thus, it is important to recognize and acknowledge the unique talents of individuals with learning disabilities and to remind them that successful school performance does not guarantee or negate successful life outcomes. Young children do not have the ability to shift their perspective on their own. Parents and teachers need to help them realize that a report card does not reflect how successful they will be as an adult; furthermore, they need to be reminded that school is not a life sentence! At some point, they will be able to choose where and how they learn, as well as what they do. This is big news to an elementary school child who has already started to compare her grades with that of her classmates and wonder if life will always be like it is on report card day. The late Sally Smith, founder of the Lab School in Washington D.C., wrote, "The most important help that parents and teachers can give is to dig deep into the secret, unseen pockets of their children and students and search for the treasures. All of us have talent in something" (Smith, 2003, p. 44).

Acknowledge Accomplishments in Academic Domains

For many students with learning disabilities, the problems are circumscribed or domain-specific. For example, a student can struggle with reading, but excel in math or science. Or the student can be an avid reader but experience great difficulty with spelling. Because specific cognitive and linguistic mechanisms affect functioning differentially, a student with learning disabilities will struggle with certain academic tasks, but not others. For example, a student with a circumscribed weakness in phonological awareness will exhibit difficulties in word analysis and spelling tasks, but not typically in math activities (unless reading is involved).

One important consideration is to identify specific academic areas in which students with learning disabilities can be educated with peers using the same materials and procedures (Klingner & Vaughn, 1999; Miller & Fritz, 1998). Simply having the same book is not the same as using and profiting from the same book. Students must be able to read and learn from the books they are provided. Thus, for students with learning disabilities, it is important to identify domain-specific academic strengths and match curricular materials accordingly. Children and adults who view their disabilities as circumscribed and not as affecting global functioning are more likely to have positive self-esteem (Cosden, 2001; Rothman & Cosden, 1995). For example, Miguel a high school sophomore with dyslexia received intensive, individualized reading instruction, but then he served as a math tutor for classmates

struggling in algebra class. Acknowledgment of his math competence helped Miguel maintain a positive self-image, despite his difficulties with reading and spelling.

Regardless of the level of performance, students with learning disabilities must experience realistic accomplishments (Brooks, 2001). Vail (2003) noted that self-esteem grows from the inside out, not from the outside in, and that competence leads to confidence, which then increases motivation and results in genuine self-regard. Teachers and parents are to be reminded of the power of positive praise on behavior. In a recent workshop on resilience, a parent commented, "When I look at my son's writing, I just can't think of anything to praise." At the end of the workshop, she had a list of ten items!

Praise needs to be specific and sincere. Comments like, "I'm glad you have your school supplies with you" or "That's great that you read the directions so clearly; what part do you need help with?" or "Wow! You capitalized the beginning of every sentence" can go a long way in helping children to persevere. Why does this work? Children value feedback on tasks they see as challenging to them, rather than on easy tasks. Every time an adult recognizes the genuine efforts that a child has made with sincere praise, it makes the child feel good. Moreover, this works because struggling learners do not intuitively know what was done right in the academic realm because in their minds they have already tried hard and very often "were wrong." These children who are keenly aware that they are struggling need to know what has been done correctly so that they can do more of it.

With specific praise, children can know exactly which behaviors have worked and what is expected. Kranak and Andzik (2020) recommended five strategies to implement praise in the classroom: (a) explicitly state classroom expectations, (b) provide praise statements at an appropriate rate, (c) use direct behavior-specific praise statements, (d) praise groups all at once in addition to individual praise, and (e) teach students to value praise in order to increase their self-efficacy. Tables 25.1 and 25.2 summarize ten ideas for both home and the classroom for enhancing a child's resilience.

Table 25.1 Ten ways to foster resiliency at home

Support and promote interest in both nonacademic and academic areas. Every child needs to feel good at something. As Smith said, "Dig deep to find the treasures in your child" (Smith, 2003)
Provide opportunities for your child to develop relationships with adults who can offer inspiration and hope. Caring adults can be powerful role models and provide empathy and understanding
Help your child understand that report cards reflect only one aspect of life. They do not indicate how successful a person will be as an adult. Remind your child of this over time because children hear this message differently across the age span
Help your child develop an understanding of dyslexia, dyscalculia, or dysgraphia. This may take the assistance of a teacher, school psychologist, or other professional. A child needs to know how a learning disability can impact school, home, and social life
Nurture strengths and help your child develop a growth mindset and an understanding of strengths and how these strengths can offset factors related to the learning disability
Watch for anxiety and/or depression in your child and then find an appropriate clinical therapist and/or consult with a medical provider. These emotional factors can be as detrimental to learning as the learning disability itself
Watch your child perform schoolwork. Look for new things that were done well and provide sincere praise
Praise your child's efforts during homework time. Provide breaks, humor, and try to be a good cheerleader even when it is difficult to see your child struggle. Be a model of resilience
Remember that not all learning disabilities are the same. Make an effort to understand the nature of your child's unique strengths and weaknesses and help your child become a self-advocate
Share with your child any struggles that you or another family member experienced when going through school. This will help your child see that success is possible even with a learning disability

Conclusion

We have known for many years that human variability is the norm but we have also veered toward interpreting most variation as being "not normal." When one is perceived as anything but typical or normal, stigma, and social-emotional risks ensue. What can we do to reduce the stigma of individuals with learning disabilities and redefine what it means to have a learning disability? By understanding their experiences, we can come to appreciate that individuals with learning disabili-

Table 25.2 Ten ways to foster resiliency in the classroom

When learning takes place, provide specific praise so that the student is aware that it was actions that made the learning successful, rather than it just being "a lucky day" or chance event
When learning strategies are taught, be specific about how the strategy worked. A student needs to understand what behaviors will make them successful learners now and in the future
Provide basic reading, writing, and math instruction in secondary school for students who still need it. Do not give up even though these areas are no longer a "subject" in school and should have been learned by now
Teach social awareness and social skills for students who need them. Ensure that both teachers and students understand the concept of stereotype threat so that its impact can be lessened
Pay attention to the personal learning strategies students may develop on their own; if they are successful, praise them for coming up with a strategy that works for them and reinforce it
Help students set and achieve attainable goals
Foster collaboration between general and special education teachers. All teachers and tutors need to be working together. The IEP meeting is a good time to foster this collaboration Before placement in, or removal from the general education classroom weigh carefully the academic versus social implications for a student
Reward effort when it is apparent even if the final product isn't perfect. Help students gauge and reflect upon their own level of effort and persistence
Respect a student's sensitivity when providing feedback in class. Be discreet when providing corrective feedback
Pay attention and support all of the struggling learners in your class. Teacher support and understanding are critical for the success of students with learning disabilities in the classroom

ties are not defined by their disability, and we can teach our students to understand this as well. Some have extraordinary strengths that can be nurtured (West, 2009). A learning disability is not just about reading or learning and is something that goes well beyond the classroom. It is a different way of looking at the world. If opportunities for people who learn differently are not valued or are denied, how will they show their potential? Van Der Klift and Kunc (2017) explain that "…opportunity must precede ability… but society operates on the opposite premise…you must demonstrate your absolute ability before given an opportunity to reach your potential" (p. 44).

The barriers individuals with learning disabilities face across society pose multiple threats to social justice, academic capital, and health equity. Despite years of research that legitimizes invisible disabilities, many still believe these diagnoses stem from conditions of choice (e.g., lack of motivation), environment, or limited overall intelligence.

Cortiella and Horowitz (2014) write: "Neuroscientists and other clinical and educational professionals have recently begun discussing ways that having a learning disability (LD) (e.g., dyslexia) might be advantageous for certain types of information processing and highly successful individuals with LD and ADHD have publicly disclosed their struggles and successes, pointing to the importance of self-awareness, perseverance and self-advocacy for those in need of hope and encouragement. Examining the data as well as the values, strengths and talents of those with LD is critical for them to create opportunities to achieve success and satisfaction in school, at work, at home and in the community" (p. 42). Individuals must come together to embrace a strengths-based model of learning disabilities (Lopez & Louis, 2009). It is important to create, a more humane and just world that widens the path to success for so many individuals with learning disabilities. Without doing so, the cost to our workforce, society, and individual lives is great.

Both general and special education teachers need to work together to provide effective instruction to students who are often confused and searching for personal survival and accomplishments (Masters et al., 1993). When teachers give students powerful reasons to attend their classes and minimize their failure experiences, many students with learning disabilities will not only survive, but they will thrive (Sabornie & deBettencourt, 2008). Miller and Fritz (1998) encouraged teachers to be the one a student will recall favorably when asked, "Tell me about a teacher you remember."

Well-functioning schools can serve as a protective factor for children's development and accomplishments (Catts et al., 2021; Keogh & Weisner, 1993; Rutter, 1978). Schools must be effective, benevolent, supportive, and developmentally appropriate for all children (Bryan, 2003). This requires all educators to share a vision and create a plan. We are reminded of the advice that the Cheshire cat gave to Alice in Wonderland when she asked which way to go upon reaching an intersection. The cat inquired: "Where are you going?" Alice responded: "I have no idea." The cat then replied: "When you don't know where you are going, any road will do." We need to know where we are going and be ever vigilant as we plan curriculum and select activities for children with learning disabilities. This requires being clear and rigorous in our thinking (Donahue & Pearl, 2003).

Brooks (2001) so aptly described the common mind-set of effective educators: "We can accomplish this by being empathetic; by treating students in the same ways that we would like to be treated, by finding a few moments to smile and make them feel comfortable, by teaching them in ways they can learn successfully, by taking care to avoid any words or actions that might be accusatory, by minimizing their fears of failure and humiliation, by encouraging them, and by recognizing their strengths" (p. 20). This is the road we must follow, a road paved with effective instruction, wisdom, support, and empathy for individuals with learning disabilities.

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Resilience Through Violence and Bullying Prevention in Schools

26

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The origin of public education was to prepare young people to become productive and participating citizens. Early founders such as Horace Mann wrote extensively on the moral and social aspects of personal development through education. Public education systems remain a "deeply political enterprise" and have long reflected trends in the broader society in which they operate (Hochschild & Scovronick, 2003; pg. xi). Over time, schools shifted to meet accountability standards of academic skills, through mandates such as No Child Left Behind, which brought into question the importance of including the teaching of socialization tasks within education systems.

Schools typically work to foster positive social interactions by targeting the social and emotional well-being of our nation's students—including bullying and/or violence prevention; as such, they can be said to broadly foster resilience. While the majority of formal school prevention programs target specific issues, such as drug and alcohol prevention, weapons-reduction, school-based mental health, and family support services, there are some that focus more generally on teaching prosocial behaviors and interactions.

The first edition of this chapter was written in 2004, and since that time there have been legislative, policy, and regulatory advances in the prevention of bullying, violence prevention after school massacres, and brutality on American citizens in school and community spaces. Since 2004, there have been between fifteen (2010) and 116 (2018) per year, resulting in five (2010) to 63 (2018) fatalities annually (Center for Homeland Defense and Security, 2019). As we are writing this, there are ongoing protests of George Floyd's murder by police officers, attacks by law enforcement on citizens peacefully protesting in Washington, D.C. and Portland, OR), and heightened awareness (due largely to the advent of cell phone videos) of police brutality across our nation.

The long-term consequences of bullying have been demonstrated in consolidated studies (e.g., National Academy of Sciences, Engineering, and Medicine, 2016) and have served as the grounding arguments for prevention and early intervention. At this point there is no federal legislation that specifically applies to bullying, though civil rights laws protect youth from discrimination and harassment, especially if they are from a protected class (e.g., a class that is defined by race, disability, or religion), and schools are legally obligated to address civil rights violations (Stop Bullying, n.d.).

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_26

All 50 states address bullying differently. Most have prevention legislation, policies, and regulations that require districts to implement procedures to investigate and respond to bullying when it occurs, and many require prevention programming and procedures for responding to complaints (Sacco et al., 2012). Current concerns of bullying extend into online and social media platforms of cyberbullying (Hasse et al., 2019). These sociocultural factors serve as a background to the revisions of this chapter. It begins with a shared definition of "bullying," implications for school violence, school-wide efforts in prevention—particularly violence prevention, and a brief review of evidence-based programs.

Understanding Bullying and Violence

The concept of "bullying" has been studied extensively by Olweus (1993, 1997, Olweus & Limber, 2010) and in general, the term is used to describe unwanted, intentional, aggressive behavior that involves a real or perceived power imbalance between the bully and the victim. Bullying behaviors increase risk for delinquency, truancy, and social problems (Bender & Lösel, 2011; Farrington & Ttofi, 2011). Bullying behaviors are evident in children as young as preschool-age (Hanish et al., 2004), and it becomes more prevalent into adolescence, peaking in middle school and declining in high school (Swearer et al., 2012). Data collected by the Centers for Disease Control (CDC, 2018) via the Youth Risk Behavior Survey (YRBS) suggest that approximately 20% of students indicate they had been bullied at school in the last year, and these rates have remained constant from 2009 to 2017. Other data from the National Center for Education Statistics (NCES, 2019) indicates that rates of bullying at school were on a decline starting in 1999, with a recent upswing beginning in 2016. Rates of cyberbullying, however, have dramatically increased over the last several years (NCES, 2019; Hasse et al., 2019).

There are long-term consequences of bullying—for those being bullied, those bullying others, and those who are both bully and victim. Those who are bullied are at greater risk for reduced school engagement (Cornell et al., 2013) and lower academic achievement (Davis et al., 2018), as well as psychosocial issues such as lower self-esteem (Klomek et al., 2009) and higher rates of depression, anxiety (Dempsey et al., 2009), and risk of suicidality (Bauman et al., 2013). Those who bully are at increased risk for delinquency, truancy, social problems, and ultimately criminal behavior (Bender & Lösel, 2011; Farrington & Ttofi, 2011; Olweus, 1993). Research consistently demonstrates that select student populations are at greater risk of being bullied, such as students who are LGBTQ, have disabilities, or come from immigrant families (National Academy of Sciences, Engineering, and Medicine, 2016).

While there have been tremendous legislative and policy efforts to reduce bullying, violence prevention policy and programming has not advanced at the same rate. Moreover, schools remain one of the safest places for children. Research demonstrates that physical fights are three times more common outside of school than inside of school (CDC, 2018). Homicide is the third leading cause of death for young people ages 10–24, and youth violence results in more than 400,000 nonfatal injuries each year (CDC; David-Ferdon et al., 2016; Kann et al., 2018). Over the past 35 years, juveniles aged 10–17 years, who comprise less than 12% of the population, have been involved as offenders in approximately 25% of serious violent victimizations (Task Force on Community Preventative Services, 2007). In December 2019, the federal government allocated research funds to the National Institutes of Health (NIH) and CDC for the purpose of conducting research on gun violence for the first time in more than two decades (American Journal of Managed Care, 2019). This new funding stream will advance knowledge on preventing gun related deaths and injuries, and hopefully provide guidance on future violence prevention efforts.

Role of Schools in Prevention

The key aspect of antibullying efforts focuses on prevention, and schools are the largest system capable of impacting children and their families. Schools afford the opportunity to promote social competence within its naturalistic setting—in classrooms, on the playground—where prosocial skills can be practiced and generalized, and moreover, offer more effective and efficient outcomes than traditional person-centered interventions (Weissberg et al., 1989). Bronfenbrenner's ecological framework (1986, 1992) serves as a foundation for the contextual influences that contribute to health promotion and resilience. This theory posits five levels of external influence, ranging from the distant to immediate impact on child development: the chronosystem (changes that occur within larger systems over time, e.g., environmental or historical events), macrosystem (cultural context, e.g., social and cultural values, practices), exosystem (settings or events not directly connected to child, e.g., caregivers' employment, industry, media, politics), mesosystem (interactions and relationships among microsystem individuals, e.g., school districts, health services), and microsystem (direct interaction with the child, i.e., family, peers, teachers). Each layer of the ecological system influences individuals, and the relationships within the systems generate reciprocal and ever-changing influences on a child's social, behavioral, and academic development. This framework accounts for interventions in the classroom as well as offer importance to the macrosystemic issues that influence the science of bullying and violence prevention (Pearrow et al., 2019).

Successful ecological strategies are multilevel that target developmental levels of the individual and the environment, support the positive changes in both the school and the home environments, include multiyear collaborations directed at risk and protective factors, and link with community systems (Farrington, 2002; Gutkin, 2012). Ecologically-based interventions also account for the influence of the systems and provide a foundation for emphasizing population-based well-being, early assessment and interventions, comprehensive services, consultation, and positive outcomes (Doll & Cummings, 2008; Harrison et al., 2004; Hess et al., 2017). If prevention programs are to be effective, they must address these issues in early development in an educational manner and at each of these ecological levels (Gutkin, 2012; Reiss & Price, 1996). Universal, school-wide prevention programs, which fit within a public health, ecologically oriented approach, involve teachers, family, community members, and peers and have produced positive outcomes (Power et al., 2010). Universal programs are delivered to all children, whether or not they have identified needs, are proactive, and reduce the risk of stigma while also maximizing resources by providing services to large groups of children (Macklem, 2011; Power et al., 2010).

The primary mechanisms for the prevention of violence in schools is two-fold. The first is to promote resiliency through the enhancement of protective factors, such as the promotion of prosocial behaviors, social competency, and other resilience-related factors. The second mechanism is through risk reduction, decreasing violence-related behaviors and antecedents of those behaviors. Within each mechanism, there are both internal and external levels. At the internal level are student-centered programs, which include individually based interventions such as teaching the expression of feelings, assertiveness training, conflict resolution, perspective taking, and anger management. At the external level are environment or school-centered programs, which include interventions such as changes in school policies for students' disruptive behavior, implementation of peer mediation programs, programs that address teachers' classroom organization, changes in scheduling and staffing to provide more adult supervision, or parent components (Bradshaw et al., 2009).

As such, this chapter does not review programs that target youth identified as having problems, programs with a clinical or mental health focus, or other programs that have a secondary or tertiary prevention focus. Even though prevalence rates suggest that one in five young people between ages 13 and 18 experience a serious mental health condition (Merikangas et al.,

2011), and that nearly 75% of children who receive mental health services have them provided through the school (Rones & Hoagwood, 2000), these school-based programs target students with identified problems and are more likely to have a clinically focused symptom-reduction emphasis that targets a small proportion of the overall student population. These programs play a vital role in our schools and communities and contribute, directly or indirectly, to the reduction of factors related to violence in schools. Rather, this chapter focuses on factors related to resilience in our nation's students and maintains a wellness-promotion resiliency model (Cowen, 1994; Cowen et al., 1996).

Review of Universal Prevention Programs

A systematic review of 53 studies found that universal school-based violence prevention programs were associated with reductions in violent behavior among students in all school environments, regardless of socioeconomic status, race and ethnicity, or local crime rates. Median relative reductions were 29% for high school students, 7% for middle school students, 18% for elementary school students, and 32% for prekindergarten and kindergarten students (Centers for Disease Control, 2007). Given our focus on prevention and resilience, in this section we describe primary prevention programs, designed for school-wide implementation. A great number of secondary prevention programs, targeting those children who have displayed problem behaviors, have been implemented in schools targeting the reduction of aggressive student behaviors, and related problems. Many of these programs are effective in their goals and would likely work well as companions to a universal prevention program such as the ones described below. Reviewing these programs is, however, outside the scope of this chapter.

Implementation Fidelity

High quality implementation to programs as intended is a vital aspect of expected effectiveness, and at least one study found low fidelity to implementation was at times related to detrimental outcomes (Social and Character Development Research Consortium, 2010). Research indicates that implementation can be highly variable, even in well run research conditions, with more than half of providers deviating from implementation guidelines in one study (Dusenbury et al., 2003), and meeting 57% of implementation standards in another (Gottfredson et al., 2000). Fidelity studies of universal school prevention programs identify the following important characteristics as related to implementation and treatment fidelity in schools: (1) the school's organizational and leadership support for implementation (evidenced by provision of teacher/provider training, use of program manuals, and monitoring of implementation), (2) complexity of the program, (3) teacher/provider characteristics (such as attitudes toward the value of prevention programs), (4) amount of training for teachers/providers (both prior to program implementation and ongoing) (Dusenbury et al., 2003; U.S. Department of Education, 2011). In order for a program to be successful, it is important to gain buy in from those who will be responsible for delivering it to the students. A helpful self-guided implementation guide can be found here: http://legacy.nrepp admin.net/pdfs/Questions_To_Ask_Developers.pdf

A top resource for locating such programs has been SAMHSA's National Registry of Evidence-Based Programs and Practices (NREPP). NREPP vetted and recommended programs based on the latest research and evaluation and has been a key resource for practitioners and school and organizational leaders. However, in December 2017, the federal government cut funding for NREPP and the program has been suspended indefinitely (Begley, 2018).

Here we list some of the programs with the strongest current research base, utilizing the Standards of Evidence Criteria for Efficacy, Effectiveness, and Dissemination outlined by the Society for Prevention Science: Next Generation (2015). In order to assist those working in school settings, we also provide the most current information available regarding the materials, costs, and training needed to implement these programs. As such information can change, we recommend that you use the information provided about costs as a guideline and consult the programs' websites for the most up-to-date information. We also recommend that you consider how each program will fit with your school's population, demographics, and grade levels to find the one that will fit the best.

The programs below are presented in two groupings, those with multiple controlled or randomized evaluations (evidence based) and those with fewer but promising results.

Evidence-Based Programs

Olweus Bullying Prevention

Recommended in the Blueprints for Violence Prevention series as a model program, the Olweus Bullying Prevention program has been shown to lead to a substantial reduction in reports of bullying and victimization in Norway and has had mixed findings in the United States. A recent Norwegian study evaluating the long-term outcomes of 70 elementary schools that used the Olweus Bullying Questionnaire compared to 120 schools that did not found increased awareness, preparedness, and competence in handling and preventing bullying had improved the school culture (Olweus et al., 2020). Evaluation in Norway in 42 schools over a 2-year period found that the frequency of bully/victim problems decreased by 50–70% (Olweus, 1997), and have shown a significant reduction in students' reports of general antisocial behavior such as vandalism, fighting, theft, and truancy, and significant improvements in the "social climate" of the class, as reflected in students' reports of improved order and discipline, more positive social relationships, and a more positive attitude toward schoolwork and school.

In the United States, one recent longitudinal evaluation study in 49 counties in western and central Pennsylvania followed 210 schools over 2 years, and 95 schools over 3 years found reduced rates of bullying and being bullied in nearly all of the 3–11 grade levels in the study. There was reported increase in students' expressions of empathy with bullied peers, marked decreases in their willingness to join in bullying, and perceptions that their primary teacher had increased his or her efforts to address bullying. The longer the implementation of the program, the stronger the effects (Limber et al., 2018). A study with ten public middle schools indicated no reductions in bullying in the intervention schools overall but found positive effects (reductions in bullying) for white students (Bauer et al., 2007). A research report in Pennsylvania reported that Olweus school have "seen large reductions in bullying, increased staff response to bullying, and promoted a better understanding of the impact of bullying throughout the community" (Chilenski et al., 2007, p.4).

This program utilizes both student-level and school-level approaches, which include environmental changes in school climate and in the opportunity and reward structures for bullying behavior and sanctions for rule violations in school. The intervention targets children identified as bullies for the intervention, victims and their parents is guided by the principles that adults at school and home, should (1) show warmth and positivity toward students; (2) set strict limits and restrictions on unacceptable student behavior; (3) apply consistent and nonaggressive consequences; and (4) act as positive and authoritative role models (Olweus & Limber, 2010, p. 126).

Materials

Costs for this program includes approximately $40 for a packet of 30 questionnaires for the students (for a school of 500 students approximate cost for questionnaires is $39.95 per packet × 17

packets of 30 = $679.15 for 510 surveys), approximately $46 per teacher to cover costs of the teacher guide, and approximately $79 to cover the school-wide guide for each Bullying Coordinating Committee member. The establishment of a Bullying Prevention Coordinating Committee is a prerequisite for implementation, as is completion of 2-day training for one or two committee representatives, at a cost of $3000. These individuals are then responsible for training school staff. Additional phone consultation (at $125/hour) is recommended throughout the first year of program implementation.

PAX Good Behavior Game

The PAX Good Behavior Game (GBG) is an approach to the management of classroom behavior that promotes self-regulation for improved behavior and academic performance by reinforcing prosocial behaviors. After the PAXIS Institute became the purveyor, the original Good Behavior Game used at Johns Hopkins University was adapted to include more usability, fidelity, and improved reliability of outcomes in the commercial PAX Good Behavior Game.

The GBG is incorporates social emotional learning domains such as self-awareness, self-management, social awareness, relationship skills, and responsible decision making. Approximately 20 independent replications of the GBG across different grade levels (e.g., elementary school, high school), different types of students (e.g., regular education, special education), different settings (e.g., classroom, lunchroom, urban, suburban), and some with long-term follow-up show strong, consistent impact on impulsive, disruptive behaviors of children and teens as well as reductions in substance use or serious antisocial behaviors (Embry, 2002; Kleinman & Saigh, 2011; Lannie & McCurdy, 2007; McCurdy et al., 2009). A recent county wide evaluation of The PAX Good Behavior Game found improved academic achievement and decrease in problem behaviors (Weis et al., 2015).

Materials

PAX GBG offers planning and development, an initial training, and supplemental training courses ranging from 1- to 2-day trainings for teachers and staff. There are no costs currently listed on the website. There are standardized iOS, Android, and Web applications available.

Promoting Alternative Thinking Strategies (PATHS)

The Promoting Alternative Thinking Strategies (PATHS) curriculum is a student-level program focusing on promoting emotional and social competencies and reducing aggression and behavior problems through a classroom-based intervention. The approach is a combination of cognitive-behavioral and affective education (Greenberg et al., 1998; Greenberg et al., 2003). This program has been held up as a model program by SAMHSA, a "best practices" program by the Centers for Disease Control and Prevention, and is listed as a "promising program" by the US Department of Education and the surgeon general's report on youth violence, and included in the Blueprints for Violence Prevention services (Greenberg et al., 1998). PATHS has had a wealth of research and evaluation to support its effectiveness.

Evaluations of the PATHS curriculum found the program positively impacted students' emotional understanding and interpersonal problem-solving skills (Curtis & Norgate, 2007; Greenberg & Kusché, 1996). A random control trial with nearly 3000 students found positive effects for reduced aggression, increased prosocial behavior and academic engagement (Bierman et al., 2010). A review by Leff et al. (2001) found the PATHS program to be a "possibly efficacious" program, based in part upon findings of evaluations of the PATHS program used in conjunction with another program (Families and Schools Together—FAST). A recent controlled trial found significant improvement in all dimensions for the intervention group but not the control. Another randomized controlled trial study followed students from third to fifth grade and found teachers reported

less aggressive behavior, conduct problems, and acting out problems at the end of fifth grade (Crean & Johnson, 2013). Teacher interviews also indicated that they perceived the program to help children acquire better understanding of emotions, and to improve empathy and self-control skills (Curtis & Norgate, 2007). A self-published report of the evaluation of the PATHS program in Pennsylvania reported that the program has increased elementary students' ability to prevent and resolve conflicts and resulted in significant decreases in classroom behavior problems (Chilenski et al., 2007).

Materials

A kit for preschool through fifth grade costs between $439 and 879, depending on the age level. There are additional support services and materials offered online including lessons and book lists, family communications, manuals, counselor materials, and pre- and postimplementation evaluation kits. The program implementation packages include registration for one PATHS-certified 3-hour online training for a teacher.

Resolving Conflict Creatively Program

The Resolving Conflict Creatively Program (RCCP) includes a K-12 classroom curriculum and a student-led mediation program. First developed as an initiative of the New York City public schools and Educators for Social Responsibility Metropolitan Area (now Morningside Center for Teaching Social Responsibility), RCCP is characterized by a comprehensive, multiyear strategy for preventing violence and creating caring communities of learning to improve school success for all children. The intervention has two major components: (1) training and coaching of teachers to support them in implementing a curriculum in conflict resolution and intergroup understanding, and (2) delivery of that curriculum in classroom instruction for children provided by the trained teachers. The RCCP focuses on teaching conflict resolution and intergroup relations through constructive problem solving, perspective taking, cost–benefit analysis, interpersonal effectiveness, intercultural understanding, decision- making, and negotiation (DeJong, 1994). Students are taught active listening, assertiveness, negotiation, and problem solving through such methods as role playing, interviewing, small group discussions, and brainstorming. There are also training components for teachers, administrators, and parents (Lantieri et al., 1996). RCCP also helps staff to establish peer-mediation programs, parent training workshops, and other school-wide initiatives that build student leadership in conflict resolution and intergroup relations. Schools can choose to incorporate other components of RCCP, including Peace in the Family workshops for parents that have an option of preparing them to become workshop leaders, and training for paraprofessionals, bus drivers, and security staff to help them learn skills they can use in their roles to contribute to a positive school culture. Specific program objectives include (1) reducing violence and violence-related behavior, (2) promoting caring and cooperative behavior, (3) teaching students about life skills in conflict resolution and intercultural understanding, and (4) promoting a positive climate for learning in the classroom and school.

An evaluation of the RCCP in 11 elementary schools found preservation of competence-related processes and slower growth in aggression-related processes when compared with students taught few or no RCCP lessons (Aber et al., 1998). A more recent study of over 11,000 students found RCCP has a positive impact on aggressive behaviors and related beliefs, and children with more RCCP lessons also did better in math (Aber et al., 2003).

Materials

Trainings for implementation of RCCP are individualized and personalized, and costs are not listed online currently. With the training come all relevant materials and on-site classroom visits and coaching. Teacher training is about 25 hours, and the program is delivered via 51 classroom-based lessons. Training includes a planning meeting, data collection, school needs assessment,

3- to 4-day introductory workshop, peer mediation training, administrator and school staff training, and parent training. RCCP is currently administered by Engaging Schools (www.engagingschools.org), a nonprofit in Cambridge, MA. This program is listed on their website under their programs for Early Childhood and Elementary school students.

Responding in Peaceful and Positive Ways

The Responding in Peaceful and Positive Ways (RIPP) program is a middle school (sixth–eighth grades) universal violence prevention program that combines the use of a student-level, social cognitive, problem-solving model where specific skills for violence prevention are taught throughout the school year in the classroom (Farrell & Meyer, 1997). RIPP also employs a school-wide peer mediation program. The program is grounded in social/cognitive learning theory and targets the influence of intrapersonal attributes, behaviors, and environmental factors, following Perry and Jessor's (1985) health promotion model to reduce risk factors associated with violence by promoting nonviolent alternatives. An evaluation of the curriculum in randomized classrooms found that RIPP participants had fewer disciplinary violations for violent offenses and in-school suspensions, more frequent use of peer mediation, and reductions in fight-related injuries than students in the control group. The reduction in suspensions was maintained at 12-month follow-up for boys but not for girls. The program's impact on violent behavior was more evident among those with high pretest levels of problem behavior (Farrell et al., 2001). An extension of the RIPP curriculum into seventh-grade classrooms found students who participated in RIPP-7 had fewer disciplinary code violations for violent offenses during the following school year, and participants of the program reported less drug use, fewer interpersonal problems, victimization, fewer behavioral problems, and higher life satisfaction (Farrell, Meyer, et al., 2003a). RIPP has been demonstrated to be effective in rural populations (Farrell et al., 2002; Farrell, Valois, Meyer, & Tidwell, 2003b). RIPP is recommended as a promising program by the National Gang Center, was recommended on the SAMHSA National Registry of Evidence Based Programs, and is included in the CASEL review of secondary programs.

Materials

The 3-day, on-site training (includes instructor manual) is $850 per person plus travel expenses. Instructor manuals are $350 per grade level, and student workbooks are $5 each. The implementation guide "Promoting Nonviolence in Early Adolescence: Responding in Peaceful and Positive Ways" by Meyer et al. (2000) can be purchased for about $40 from Amazon ($70 for Kindle) or other online sellers. For implementation information, contact Wendy Northup at 804-301-4909 or wendynorthup@hughes.net.

Second Step

The Second Step program, based on the work of Shure and Spivack (1978), attempts to improve children's social competence by developing student skills in the areas of perspective taking, social problem solving, impulse control, and anger management (Beland, 1992; Committee for Children, 1992). This is a school-wide program for kindergarten through eighth grade with several controlled research studies to show effectiveness in the elementary grades. The Second Step curriculum was selected as a Model Program by the US Substance Abuse and Mental Health Services Administration (SAMHSA) for inclusion in their National Registry of Effective Prevention Programs.

Preliminary research in urban and suburban areas indicated that after participation in Second Step, children's perspective taking and social problem-solving abilities improved significantly when compared with controls (Sylvester & Frey, 1997). This research, however, did not assess changes in children's behavior after the interven-

tion. In another study, a large-scale, randomized controlled trial of the Second Step was conducted in six urban schools. The researchers found modest reductions in levels of observed aggressive behavior and increases in neutral and prosocial behavior, especially in the playground and cafeteria settings, among second and third graders (Grossman et al., 1997). Another evaluation of this program with rural third through sixth graders found significant improvements in independent behavioral observations of engaging appropriately with peers, and on teacher ratings of social competencies and antisocial behaviors at the intervention school when compared with students at a comparison site (Taub, 2002).

Second Step was discussed as a promising "universal" school-based violence prevention program in a 2001 review of programs (Leff et al., 2001). Since that time, a variety of peer reviewed studies have shown Second Step to have positive effects in a variety of areas, such as decreasing aggressive behavior and improving impulse control (Edwards et al., 2005), increasing prosocial skills and empathy (Cooke et al., 2007; Edwards et al., 2005; Frey et al., 2005; Taub, 2002) and with a range of populations, including with low SES Middle school students (Holsen et al., 2009; Espelage et al., 2013). A recent evaluation of the Fourth Edition Second Step in 61 schools across six districts found moderate effects and significant improvement in social emotional competence and behavior (Low et al., 2015). Second Step has good teacher buy in (Cooke et al., 2007; Edwards et al., 2005), and is shown to be most effective when implemented school wide, with administrative support and endorsement (Larsen & Samdal, 2008).

Materials

Program kits, which can be obtained from the Committee for Children, cost roughly $500 for a grade level kit. Individual grade level kits can also be purchased for PreK to eighth grade. Training is needed to implement the program, which is available online. Currently the training is being offered for free, although there have been fees in the past.

Promising Programs

PeaceBuilders

This is a universal, elementary-school-based violence prevention program that attempts to alter the climate of a school by teaching students and staff simple rules and activities aimed at improving a child's social competence and reducing aggressive behavior. PeaceBuilders activities are built into the school environment and the daily interactions among students, teachers, and administrative staff, all of whom are taught a common language and provided models of positive behavior, environmental cues to signal such behavior, opportunities to rehearse positive behavior, and rewards for practicing it (Embry et al., 1996). A study in eight schools with comparison sites found significant gains in teacher-reported social competence for students in kindergarten through second grades, in child self-reported "peace building" behavior in kindergarten through fifth grades, and reductions in aggressive behavior in grades three through five (Flannery et al., 2003). Another study found the program to be more effective with the highest risk children, who experienced the greatest gains in social skills and the greatest reductions in aggressive behavior following program implementation (Vazsonyi et al., 2004).

Materials

A variety of program materials are available through their PeaceBuilders website. Training for each site is required; PeaceBuilders send a trainer directly to the site and will train up to 40 staff at once. The four hour "Essentials" training is required ($2500) and a variety of other training modules are available, such as PeaceBuilders for parents ($1250). Materials are available through www.PeaceBuilders.com.

Peacemakers: A Violence Prevention Program

This program, geared toward students in grades four through eight, has both primary prevention

and secondary prevention components. The primary prevention component is delivered by teachers in classrooms and consists of a psychoeducational curriculum and procedures for infusing program content into the school environment. The secondary prevention component targets students who have preexisting disciplinary problems and is delivered by school counselors. A large-scale study with a comparison group in an urban public school system was conducted on this curriculum and was found to have significant, positive program effects on six of the seven variables assessed (Shapiro et al., 2002). These positive effects included increased knowledge of psychosocial skills, decreased self-reported aggression, and teacher-reported aggression. In comparison to controls, a 41% decrease in aggression-related disciplinary incidents and a 67% reduction in suspensions for violent behavior were found in the intervention schools (Shapiro et al., 2002).

Materials

There is a six-hour training that is available but not required for implementation of the Peacemakers program. The Teacher's Manual for the Peacemakers Program costs $100. Although not required, Student Handbooks cost $7.00 each and sets of 10 cost $50. The manual and workbooks can be purchased online at Amazon and via other sellers.

Striving to Reduce Youth Violence Everywhere (STRYVE)

Striving to Reduce Youth Violence Everywhere (STRYVE) is a national initiative led by the Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control (NCIPC), and Division of Violence Prevention (DVP) for youth violence prevention from a public heath approach. STRYVE online provides guidance at varied levels with interactive resources for users to customize a comprehensive violence prevention program and track progress. Community examples are provided throughout the site resources. The success of public health programs like STRYVE for youth violence prevention has been well documented. California, Illinois, Maryland, Michigan, Minnesota, and Virginia are among the states that have decreased violence through prevention programs (David-Ferdon & Simon, 2012). The evidence-based strategies used with STRYVE resources are based on current research and have been shown to lead to reductions in youth violence (David-Ferdon & Simon, 2012).

Materials

All materials are accessed online through VetoViolence.cdc.gov. They provide free, accredited trainings, tools, and resources for practitioners to implement the prevention work with the customized resources.

Conclusion

There are many good programs available for universal implementation in schools to help children develop social and emotional competences, thereby increasing resiliency and reducing violent and socially inappropriate behavior in children. One factor associated with the positive findings of the reviewed programs is the teaching of a shared language and skills for positive and healthy interpersonal interactions within entire school communities. A shared language allows all parties—students, teachers, and staff—to communicate positively and effectively, enhance social interactions, reduce interpersonal conflict, and foster resilience, and implementation effectiveness will also be determined by the support of school leadership.

As the review of programs exemplifies, schools have a number of choices of programs that are affordable, once the commitment to implementation and training is made. Many of these programs can very well be time-efficient and cost-effective in the long run, especially if they result in a reduction of teacher and staff time for responding to students' behavior and more time for classroom instruction, and if they lead to increased student time spent in the classroom instead of in the principal's office, in detention, or on suspension. However, the review also

highlights the dearth of violence prevention programs for adolescents in middle and high school settings, which may suggest the need for universal programs that focus on specific, developmental interventions (e.g., dating violence, impulse control).

It is important to note that primary prevention programs are most effective when targeting younger children (Doll et al., 2011; Durlak & Wells, 1997; Hahn et al., 2007). Children in preschool through the early elementary grades are likely to benefit most from interventions that increase students' awareness and expression of feelings, as well as interventions that enhance cognitively based social problem-solving skills. Such interventions will most likely enhance resilience and decrease aggression and violence, although there is a lack of longitudinal data and research available. The promising outcomes of comprehensive interventions in the early school years offer hope that the repertoire of healthy interpersonal interactions will serve as a strong base for years to come.

Although there is a general need for more research in this area, there is also an incumbent need for further research of these prevention programs with children of various ethnically and linguistically diverse backgrounds. One of the authors has had the anecdotal experience of implementing the Second Step curriculum (Committee for Children, 1992) in an elementary classroom where nearly half of the children were of Asian descent. The cultural norm of restricting the expression of affect (Sue & Sue, 1999) impacted the role play and modeling activities that are central to the program. These sorts of experiences highlight the need to identify the context and ecological variables in which prevention and intervention strategies are effective. Moreover, the restrictions in funded research through the Center for Disease Control (CDC), particularly around gun violence has hampered the development of knowledge of firearms contribution to rates of violence. Funding cuts to SAMHSA and other governmental organizations has made it more challenging to locate effective programs. Thus, the influence of ecological and sociological factors warrants further exploration for future violence prevention efforts.

Long-term longitudinal studies may elucidate lasting effects of universal, primary violence prevention programs delivered to school-age children. In order for these studies to be adequately conducted, federal and state agencies will need to support research and program evaluations with a commitment to examining long-term, rather than short-term, outcomes. This support will also require effective collaboration between the education, mental health, and public health domains to address the multiple aspects of development. It is hoped that these studies will include, but not be limited to, addressing factors such as the impact of prevention programs on disciplinary infractions, later involvement in juvenile justice or mental health, as well as implementation factors that influence outcomes. Continued efforts to investigate these and other outcomes related to the effects of school-wide violence prevention programs can build knowledge of effective strategies and efficient use of our public resources.

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Caring for the Caregiver: Promoting the Resilience of Educators

Jennifer L. Robitaille and Paul A. LeBuffe

Educators play a central role in children's social, emotional, and academic development. From early childhood through high school graduation, much of children's time is spent in the classroom. Many children also attend out-of-school time programs providing structured after-school learning and play opportunities. When these environments are safe, positive, and supportive, they serve as critical protective factors contributing to children's healthy growth and well-being (Masten, 2014). But when educators face personal and professional risk factors, it can affect their ability to create these nurturing environments for their students, jeopardizing successful outcomes for children as well as their own well-being. In this chapter, we will first summarize the sources of stress educators commonly experience in their daily work, including a discussion of the new and unprecedented impacts of the COVID-19 pandemic, as well as the impact of these stressors. We will discuss the emergence of social and emotional learning (SEL) as a potential new source of stress for educators but also as a unique opportunity to enhance educators' resilience and their effectiveness in promoting children's social and emotional competence. Finally, we will highlight promising approaches that address this important need.

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A Perfect Storm of Educator Risk Factors

It is well-documented that teaching is one of the most stressful occupations in the United States. A 2014 Gallup survey found that nearly half (46%) of K-12 teachers surveyed reported high daily stress, a rate that closely matches other demanding professions such as nurses (46%) and physicians (45%) (Gallup, 2014). In a more recent 2017 survey of teachers, 61% reported that work was "always" (23%) or "often" (38%) stressful (American Federation of Teachers, 2017), reporting a rate twice that of the general population. Self-reported engagement levels of teachers have also been found to be low, with only about a third (31%) of K-12 teachers reporting active engagement in their jobs (Gallup, 2014), with levels dropping significantly during the first few years of teaching.

Educators face a variety of stressors daily that impact their well-being and engagement in their work. A recent review of the education literature by Greenberg et al. (2016) categorized sources of teacher stress into four main types: (1) school organization factors, (2) job demands, (3) work resources that limit decision making and autonomy, and (4) teachers' personal resources and competencies. The first category focuses on stressors related to the school organization, such as culture, climate, and administrative leadership. Research has shown that organizations

S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_27

characterized as unhealthy, unsupportive, or distrusting can increase stress and negatively impact job satisfaction among educators (Johnson et al., 2012; Kyriacou, 2001). Leadership changes (such as principal turnover) have also been associated with lower teacher retention, particularly with less experienced teachers (Beteille et al., 2011). Second, increasing job demands such as high stakes testing, excessive paperwork, reduced planning time, and unrealistic expectations have been shown to impact teacher well-being (Kyriacou, 2001; Lambert et al., 2009). Working conditions have also deteriorated for many teachers with more students lacking engagement and motivation, displaying problem behaviors, or arriving to school sleep-deprived or otherwise not ready to learn (McCarthy & Lambert, 2006). Teachers are also coping with an increasing number of demanding or unsupportive parents. At the same time, teachers commonly face a work environment where their participation in school decision making and sense of control within their classroom is limited (Gallup, 2014). Finally, Greenberg et al. suggest that teachers' own social and emotional competence to effectively manage their stress can play a critical role in their classroom effectiveness and in turn, their own well-being. These and other pressures have been well-documented for decades (Hammond & Onikama, 1997).

Effects of Stressors on Educators

Given the multiple stressors present in the teaching profession it is no surprise that educator health and well-being is often compromised. Although stress that is infrequent can impact the physical and emotional health of teachers, it is the influence of chronic stress that is more alarming. Across occupations, chronic exposure to a variety of stressors such as high job demands and workload, lack of personal control, insufficient rewards, quality of interactions in the workplace, perceived fairness in work decisions, and values related to the job can lead to the development of burnout over time when coping resources are inadequate (Maslach & Leiter, 2008; Maslach et al., 2011). The phenomenon of burnout has been well-documented in the education profession; in fact, it has been asserted that there are more studies of burnout in teachers than any other professional group (Aloe et al., 2014; Lambert et al., 2009).

Burnout is defined as a psychological response comprised of emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Jackson, 1981). The most central aspect of burnout, emotional exhaustion, is characterized by a feeling of being emotionally overextended and drained of mental resources. It includes feelings of fatigue, loss of energy, and being worn out. Depersonalization is defined as a negative or cynical attitude toward aspects of the job, including the people one works with, such as students, parents, or colleagues. The third component of burnout involves reduced personal accomplishment at work, such as feelings of incompetence, low morale, or reduced meaning or fulfillment with the job. Within the education field, teacher burnout has been associated with increased stress levels, less satisfaction in the workplace, changes in attitudes about teaching, reduced teaching efficacy, and impaired teaching performance (Aloe et al., 2014; Montgomery & Rupp, 2005; Santavirta et al., 2007; Steinhardt et al., 2011).

Furthermore, research suggests that chronic stress and burnout are linked to poor physical health in teachers, such as an increased risk of headaches, gastrointestinal problems, cold and flu episodes, sleep disturbances, muscle tension, and hypertension (National Institute for Occupational Safety and Health, 1999; de Souza et al., 2012) in addition to mental health problems such as depressed mood and decreased self-esteem and motivation (McLean & Connor, 2015; Montgomery & Rupp, 2005; Santavirta et al., 2007; Tennant, 2001). These physical and mental health problems can impact teachers' personal and professional lives and results in increased teacher absences and turnover.

Although reports have varied on the incidence of turnover in public schools, it appears that teachers are leaving the profession at an increasing rate. Recent estimates suggest the national

rate of teacher turnover to be about 16% (Carver-Thomas & Darling-Hammond, 2017), although this number varies greatly throughout the United States. Schools located in urban and rural areas, with high-poverty and high-minority students, have the highest rates of turnover, leading to inequities in educational access for students (Greenberg et al., 2016). This percentage is also highest for new teachers; recent estimates indicate that approximately 44% of teachers leave the profession within their first 5 years (Ingersoll et al., 2018). The loss of teachers comes at a high price for school districts. The National Commission on Teaching and America's Future (NCTAF, 2007) estimates that teacher turnover costs United States public schools over $7.3 billion dollars annually, with costs to districts associated with constant recruitment, hiring, administrative processing, and training of new teachers. The cost per teacher was estimated to range between $4000 for rural districts to $17,000 in urban districts (NCTAF, 2007). Given the high rates of turnover seen in some districts, this annual expenditure can be quite significant.

How Stress Impacts Ability to Care for and Teach Children

Of equal concern to the effects of stressors on the teachers' well-being are the effects of teacher stress on students. The negative impacts of teacher stress on students are many: in this chapter we will focus on only three: (1) reduced teacher availability and the impact on attachment and relationships with children, (2) impairments in ability of teachers to provide effective social and emotional learning (SEL) instruction and modeling of social and emotional competence, and (3) direct negative effects on children.

Reduced Teacher Availability

Teachers experiencing high levels of stress are less available to students both physically and emotionally. In addition to the higher rates of turnover described above, highly stressed teachers also have impaired job performance, lower productivity and self-efficacy, and increased absenteeism (Aloe et al., 2014; Leithwood et al., 1999; Tennant, 2001). As a result of the physical sequelae of stress noted above and the decreased morale associated with burnout, teachers experiencing high levels of stress are not physically present in the classroom as much as teachers with lower levels of stress. High rates of teacher turnover and absenteeism can disrupt the formation of relationships between teacher and students and can negatively impact the quality of care provided to children (Howes & Hamilton, 1993).

Even when physically present in the classroom, highly stressed teachers who are experiencing burnout may be less emotionally available to their students; believe they no longer contribute to student learning and growth; and show lower quality interactions with students (Belsky et al., 2007; Hamre & Pianta, 2004). In their study of over 500 teachers, Lambert et al. (2009) reported that high-stress teachers tended to both depersonalize and distance themselves from their students, seeing "the children as objects rather than developing individuals" (p. 986). The impact of these outcomes influences both the teacher's ability to form healthy relationships with children and the ability to effectively manage the classroom, both of which contribute to the overall classroom climate and may negatively influence children's social, emotional, behavioral, and academic outcomes (Jennings & Greenberg, 2009). Distressed teachers are also less able to handle misbehavior or provide guidance to their students and create environments less conducive to learning (McLean & Connor, 2015).

For young children especially, the ability to form close relationships and attachment to teachers and caregivers is critical for healthy development. Early attachment may be distorted by parental or caregiver unresolved losses, traumatic events, or chronic stressors (Osher et al., 2020). When adults are stressed and unsupported it can negatively impact their ability to provide the level of quality caregiving that infants and children need to prepare them for school and life success. Research is clear that an adult's neglect of a child's physical or emotional needs, use of harsh

or inconsistent punishment, little expressive speech, and frequent changes in routine, which are all behaviors related to experiencing high levels of stress, lead to developmental risk. When adults provide clear, consistent expectations, positive emotional expression, stability, and responsive caregiving it promotes a child's potential and lays the emotional foundation that enables readiness for learning (National Scientific Council on the Developing Child, 2004). Children grow and thrive in the context of close and dependable relationships that provide love and nurturance, security, responsive interaction, and encouragement for exploration. According to Werner and Smith (1992), common factors among resilient children include having a close bond with at least one person that provided stable care, mothers' modeling of competence, and positive relationships with extended family members and caregivers when parental ties were not available. When the teacher or caregiver is unavailable to the young child because of chronic stress, these relationships can be disrupted and the consequences can be severe and long-lasting (Center on the Developing Child, 2016; Shonkoff & Phillips, 2000). Consequently, approaches to promoting the resilience of children often include a focus on building adult capacity (Luthar & Eisenberg, 2017).

Impairments in the Ability of Educators to Model Social and Emotional Competence

According to Bandura (1977), individuals, including children, can learn through the observation and imitation of others, a phenomenon described as social learning. Within this theory, children perceive adults' behavior and may later imitate that behavior. This theory has been applied to help explain the development of prosocial behavior in children. For example, parental modeling of empathy and concern for others influences children's prosocial behaviors (Eisenberg et al., 1991; Fabes et al., 1990) and parents' ability to manage emotions influences the way children experience and express their own emotions (Eisenberg et al., 1992).

Teachers too, influence the social and emotional development of children. A multitude of social and emotional learning (SEL) curricula exist to promote these skills in children and youth (CASEL, 2021). These programs typically emphasize both direct instruction and continual modeling of the skills by teachers in the classroom. This modeling provides children with the opportunities to apply concepts to their daily lives, for example by observing a teacher appropriately manage a frustrating event or problem-solving through a peer conflict. Numerous studies have demonstrated the effectiveness of SEL programs for students (Weissberg et al., 2015) and suggest that teacher willingness and ability to generalize social and emotional skills by modeling during interactions with students throughout the day impacts student behavior.

However, educators who are already overwhelmed by the demands of teaching may find it difficult to model appropriate social and emotional behaviors for children. Educators are constantly exposed to emotionally challenging situations, and if they are already experiencing high levels of stress, they may not have the capacity to effectively manage those emotions in the presence of children. Similarly, it may be difficult to model an appropriate conflict-resolution approach for students if teacher emotions, such as frustration, are already at a high level. When this occurs, students miss out on critical opportunities to apply learned skills to their everyday lives and may instead imitate inappropriate or ineffective behaviors. This may ultimately impact their ability to internalize these skills and may contribute to later emotional or behavioral concerns.

Direct Negative Effects on Children

A growing evidence-base explores the link between teacher stress-related behaviors and children's subsequent outcomes. For example, greater burnout in teachers has been associated with more student behavior problems in the classroom, decreased social adjustment among students, and lower academic performance and

achievement (McLean & Connor, 2015; Hoglund et al., 2015). Student mental health also appears to be associated with teacher stress. Milkie and Warner (2011) found that teachers who reported higher stress levels had more students in their classrooms with internalizing, externalizing, and interpersonal problems. Teachers low on self-efficacy (which is associated with high stress and burnout) have been found to demonstrate less effective teaching practices, impacting achievement, motivation, and self-efficacy of students (Skaalvik & Skaalvik, 2007). In a recent study using cortisol levels as a measure of student physiological stress, Oberle and Schonert-Reichl (2016) found that higher levels of self-reported burnout in teachers significantly predicted higher morning cortisol levels in students. This study was the first to link teacher stress to students' physiological stress regulation. These and other studies have contributed to our understanding that a "stress contagion" exists in classrooms whereby teacher stress has a direct effect on students (Oberle & Schonert-Reichl, 2016).

Two Recent Developments Providing Additional Sources of Stress

COVID-19 Pandemic

The COVID-19 pandemic has introduced many new and unprecedented stressors in our lives. According to the 2020 edition of the American Psychological Association's (APA) annual Stress in America report, the United States is "facing a national mental health crisis that could yield serious health and social consequences for years to come" (APA, 2020, p. 1). The COVID-19 pandemic and its subsequent impacts to work, health, and family responsibilities was cited as a significant source of stress by nearly 8 in 10 Americans (78%). Although financial stability and the economy were consistently cited as significant sources of stress prepandemic, about half of adults (52%) report experiencing negative financial impacts from the pandemic, with low-income adults disproportionally impacted (APA, 2020). The increased awareness of systemic racism impacting our nation has also been cause for stress, with most adults (59%) regardless of race, reporting police violence toward minorities as a significant source of stress in their lives. These and other societal and political concerns have resulted in 77% of Americans citing stress over the future of our nation.

Educators have experienced these and other risk factors specific to the teaching profession (Bintliff, 2020). For example, teachers have faced abrupt school closures and transitions to remote learning. Many teachers had to quickly learn new technologies and redesign their curriculum to meet the needs of students learning at home. As schools reopened in the fall of 2020, teachers had to cope with teaching and reaching students in a variety of learning formats (remote, in-person, and hybrid learning approaches), while also facing concerns for their own safety and that of their family. For educators who are also parents, they've faced added stress related to childcare (APA, 2020). In March 2020, the Yale Center for Emotional Intelligence launched a national survey to learn about the emotions teachers were feeling near the start of the pandemic. Teachers were asked to describe, in their own words, the three most frequent emotions felt each day. Findings from nearly 5000 teachers revealed that the five most mentioned emotions were anxious, fearful, worried, overwhelmed, and sad (Yale Center for Emotional Intelligence, 2020).

Emergence of Social and Emotional Learning

Over the past 25 years, increasing attention has been placed on the promotion of social and emotional competence in children and youth. Social and emotional competence has been defined as "the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions" (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2020).

These competencies are critical skills that often serve as protective factors, buffering children and youth from the negative effects of risk and adversity and thereby supporting their resilience (Masten, 2014; Masten & Garmezy, 1985).

A growing body of research has linked social and emotional competencies to important outcomes for children and youth (Weissberg et al., 2015). For example, Durlak et al. (2011) conducted a meta-analysis of 213 studies involving more than 270,000 students that investigated the outcomes of universal school-based social and emotional learning (SEL) programs. They found that students in well-implemented SEL programs showed positive outcomes compared to students in control groups in a wide range of domains, including increased social and emotional skills; improved attitudes toward self, school, and others; decreased behavioral concerns; and an average 11 percentile point gain in tests of academic achievement. A follow-up study showed many of these positive effects persisted across time and were also associated with higher graduation rates and college persistence (Taylor et al., 2017). These and other studies substantiate the conclusion that social and emotional competence is foundational to positive development and school success.

As a result of these benefits, the promotion of social and emotional competence has become commonplace in thousands of schools and out-of-school time programs across the United States and around the world (Weissberg et al., 2015). According to recent national surveys, most principals report being committed to developing students' social and emotional skills (DePaoli et al., 2017) and nearly all educators surveyed believed SEL can benefit all students and should become a greater focus in schools (Bridgeland et al., 2013). Many evidence-based programs are now available to promote social and emotional competence in children and youth (CASEL, 2021), with these programs typically being delivered by educators in the classroom. Similarly, in the early care and education field, the National Association for the Education of Young Children (NAEYC) recommends the use of *developmentally appropriate practice*, which includes a strong emphasis on a teacher nurturing a child's social and emotional development by basing all practices and decisions on current research and understanding of child development, individually identified strengths and needs of each child, and the social and cultural background of each child (NAEYC, 2020). These practice standards reflect the recognition of the importance of SEL by leading professional organizations concerned with the well-being of children and youth.

With respect to policy, a growing number of state departments of education and local school districts have adopted SEL standards. CASEL reports that all 50 states, the District of Columbia, and four of five U.S. territories have preschool educational SEL standards, while fourteen states currently have standards for SEL in preschool through 12th grade (Dusenbury et al., 2018). At the federal level, recent legislation including The American Rescue Plan Act of 2021 and the Every Student Succeeds Act provide support for state and district-wide implementation of SEL programming.

As the evidence for the critical importance of social and emotional competence in promoting success in school and life continues to accrue, and as more state and local educational agencies adopt SEL standards, teachers are increasingly expected to teach and promote these skills in the classroom. For many teachers, this is yet one more mandate to add to their growing list of responsibilities. And often, this mandate comes with little preservice training in SEL. Preservice teacher education programs currently offer few, if any, opportunities to learn about and gain experience in implementing SEL (Schonert-Reichl et al., 2017) leaving teachers feeling unprepared to effectively deliver SEL programming to their students (Bridgeland et al., 2013). Furthermore, few preservice programs provide opportunities for teachers to cultivate their own social and emotional competencies and protective factors despite the high rates of stress in the profession and the growing recognition of the essential role teacher well-being plays in student outcomes (Jennings & Greenberg, 2009). Paradoxically then, the expectation that teachers promote the social and emotional competence of their students

may be a source of stress for the teachers themselves and jeopardize their own resilience.

Recognizing these gaps, leading organizations have begun to emphasize the need to build the capacity of educators to promote the social and emotional competence of their students more effectively. For example, in their recent consensus report summarizing the state of knowledge, practice, and policy in the field of SEL, the Aspen Institute National Commission on Social, Emotional, and Academic Development (2019) concluded that, "Supporting teachers so that they can support students is essential" (p. 25). Furthermore, in the accompanying "Practice Agenda," one of five recommendations is to "Build Adult Capacity—Provide opportunities for school faculty and staff, families, after-school and youth development professionals, and future professionals…to learn to model and teach social, emotional and cognitive skills to young people" (Berger et al., 2019, p. 10). Similarly, CASEL (Mahoney et al., 2020) has recently updated their theory of action for effective systemic implementation of SEL to include as a core focus the need to "strengthen adult SEL competencies and capacity by cultivating a community of adults who engage in their own SEL, build trusting relationships, and collaborate to promote and consistently model SEL throughout the school" (p. 3).

Following these recommendations of promoting both educator capacity and competencies, we are provided with a unique opportunity with dual advantages. First, by promoting the social and emotional competence of educators, we can expand their repertoire of key protective factors that can help address the many risk factors and stressors experienced daily. This can ultimately enhance educator well-being and resilience. Second, the promotion of educator social and emotional competence can enhance their ability to deliver SEL programming more effectively to their students, resulting in improved student outcomes.

Programs Promoting Educator SEL and Resilience

In response to calls to better support and enhance educators' social and emotional competence and resilience, a growing number of interventions are now available to both preservice and in-service educators. We will focus here on a few promising approaches.

One such approach is single or multisession professional development opportunities designed for educators and offered by education or SEL-focused organizations. Often delivered as webinars or virtual courses, they provide just-in-time access to important and relevant topics at the forefront of teachers' minds. For example, the Yale Center for Emotional Intelligence launched a self-paced 10-hour course for teachers and school personnel in October 2020 focused on enhancing knowledge and skills for managing difficult emotions in times of stress (Yale Center for Emotional Intelligence, 2020).

Mindfulness-based interventions have also emerged as an effective method for promoting teacher well-being and reducing stress (Klingbeil & Renshaw, 2018). The Cultivating Awareness and Resilience in Education (CARE) program is one such approach. CARE is a professional development program designed for educators and focuses on teaching mindful awareness, emotion skills, and compassion practices. Offered in a variety of formats to meet the specific needs of schools (in-person, online, short workshops, or as a retreat), the program has shown positive benefits for teachers, students, and classroom outcomes across several studies in the United Stated and Europe (Jennings et al., 2013, 2017, 2019). Additional mindfulness-based intervention programs with promising benefits for educators include the Community Approach to Learning Mindfully (CALM) program (Harris et al., 2015) and the Stress Management and Relaxation Techniques in Education (SMART) program (Roeser et al., 2013).

The Devereux/Aperture Approach to Fostering Educator SEL and Resilience

The Devereux Center for Resilient Children, recognizing the critical need for supporting the resilience of adults as a requisite for enhancing the social and emotional competence and resilience of children, developed a program designed to enable adults, particularly early care and education teachers, to reflect on and enhance important protective factors in their lives. Building on this work, Aperture Education, which was formed in 2017 as a spin-off company by the Devereux Center for Resilient Children and Apperson, an educational technology company, has extended these resources for use by K-12 teachers, developing a professional development program that continues to include reflection and skill development as core components. We will discuss each of these programs in turn.

Building Your Bounce

The Devereux Center for Resilient Children's approach to educator resilience begins with *The Devereux Adult Resilience Survey* (DARS; Mackrain, 2007). This self-reflective instrument is designed to help adults, including teachers, reflect on the presence of important protective factors in their lives. The DARS items are based on information gleaned from a thorough literature review of adult resilience, national focus groups with adults who care for and work on behalf of young children (e.g., parents, home visitors, infant mental health specialists, and early care and education providers) and conversations with national experts. The focus groups and conversations with experts focused on gathering information related to (1) what behaviors adults felt were important to help them "bounce back" or cope successfully with risk and adversity as well as, (2) what behaviors adults need to provide nurturing, quality care and instruction to young children. The DARS was developed to accompany the Devereux Early Childhood Assessment Program for Infants and Toddlers (Mackrain et al., 2007); therefore, the focus groups and literature reviews focused on parents, teachers, and other caregivers of young children. However, the protective factors identified and the items on the DARS are applicable to all adults.

The result of this process was the creation of a set of 23 items that relate to four adult protective factor domains. The *Relationships* grouping (5 items) addresses behaviors that reflect *the mutual, long-lasting, back-and-forth bond we have with another person in our lives*. Sample Relationship items include "I have good friends who support me," and "I have a mentor or someone who shows me the way." The *Initiative* grouping (8 items) inquires about *the ability to make positive choices and decisions and act upon them*. Sample Initiative items include "I try many ways to solve a problem," and "I can ask for help." *Internal Beliefs* (6 items) asks the adult to reflect on *the feelings and thoughts we have about ourselves and our lives, and how effective we think we are at taking action in life*. Sample Internal Beliefs items include, "My role as a caregiver is important," and "I am hopeful about the future." The *Self-Control* grouping (4 items) probes behaviors related to *the ability to experience a range of feelings and express them using the words and actions that society considers appropriate*. Sample Self-Control items include, "I set limits for myself," and "I can calm myself down." Adults completing the DARS are asked to reflect on the presence of these protective factors in their lives and then indicate that, "Yes" that protective factor is present, "Sometimes" it is present, or it is "Not Yet" present. The DARS has demonstrated high internal consistency and shown to demonstrate convergent validity with the well-established Connor-Davidson Resilience Scale (CD-RISC: Connor & Davidson, 2003; Ball & Mackrain, 2009).

A guiding principle of the Devereux Center for Resilient Children is that assessments should provide information that guides the development and implementation of strategies to enhance the resilience of the person who is the subject of the assessment. That is, the purpose of assessments developed by the Center is to promote, not just measure, resilience. In keeping with this principle, that DARS is accompanied by a self-reflective journal, *Building Your Bounce: Simple Strategies*

for a Resilient You (Mackrain & Bruce Poyner, 2013). In addition to including the DARS, this resource provides strategies, derived from both research and practice, which are linked to the 23 items and designed to promote adult resilience. For example, in relation to the Internal Beliefs item, "*My role as a caregiver is important*" one of the strategies is to first list all the routine, sometimes tedious, things that one does as a teacher. Next the adult is asked to reflect and write down the positive effects of these routines on themself. A teacher might list as a routine task writing weekly progress notes on each child, but then reflects and realizes that those notes enable her to see progress in her students' abilities and communicate that news to parents and the child. After completing the DARS, the adult selects one or more of the items that receive a rating of "Sometimes" or "Not Yet" and then selects a related strategy from Building Your Bounce to promote the development of that protective factor.

As a self-directed and self-reflective approach, the DARS and Building Your Bounce can be utilized by an adult interested in enhancing their resilience. Although it can be used in group settings, it can also be utilized by a single adult. As a self-reflective approach, the results do not have to be shared or discussed with others enabling participants to be more honest and forthright. In addition, as Kyriacou (2001) noted, it is important for teachers to discover which strategies work best for them. Although professional development is available from the Devereux Center for Resilient Children in the use of the DARS and Building Your Bounce, it is not required. As such, these resources are easily used by a variety of adults and complement group interventions, such as mindfulness-based approaches described above.

Educator Social-Emotional Reflection and Training (EdSERT)

Growing out of the Devereux Center for Resilient Children but with a focus exclusively on K-12 settings, Aperture Education has recently developed the Educator Social-Emotional Reflection and Training (EdSERT) program (Robitaille & LeBuffe, 2019) to address the critical need for resources that support educator social and emotional competence and resilience. EdSERT is a professional development program designed for use by school-based teachers and out-of-school time program staff working with children and youth in K-12th grades. EdSERT has two main goals: (1) to improve the efficacy of SEL instruction and ultimately student outcomes by enhancing the social and emotional knowledge and skill set of teachers, and (2) to enhance teacher well-being through the development of social and emotional practices that increase coping skills, well-being, and resilience.

The EdSERT program provides professional development, including both knowledge acquisition and skill development, related to eight key social and emotional competencies: self-awareness, self-management, social-awareness, relationship skills, goal-directed behavior, personal responsibility, decision making, and optimistic thinking. These competencies are derived from the CASEL framework (CASEL, 2020) and align to the Devereux Student Strengths Assessment (DESSA) system (LeBuffe et al., 2018), a widely used suite of tools to measure and promote K-12th grade students' social and emotional competence. This alignment provides teachers with a deeper understanding and improved ability to instruct, model, and integrate the competencies they are teaching to their students.

There are four main components to the EdSERT program: (1) professional development, (2) self-reflective assessment, (3) personal development plan, and (4) strategies. The program is organized as eight modules, one for each of the eight competencies. Each module contains the four program components with content specific to the competency being addressed. There is also an introductory module providing an overview of SEL and EdSERT. Two delivery options are available: a digital delivery of the modules via a learning management system or a paper-based delivery with printed booklets for each competency module.

Each module begins with a brief introduction to the focus competency, including a definition of

the competency and an overview of why it is important to both teachers and students. Teachers are then presented with a 10-item self-assessment and asked to reflect on their current teaching practices related to the focus competency. For example, on the self-awareness self-assessment, the teacher is asked to consider the statement, "*I have identified specific ways in which my personal values, beliefs, and biases have influenced my teaching practices and interactions with students*," and then indicate on a 5-point Likert scale if that statement is "Not at all like me," "Somewhat like me," or "Very much like me." The decision to focus on teaching practices rather than more general behaviors or attitudes (e.g., "*I am aware of how my personal values, beliefs, and biases influence my relations with others*") is intended to both increase educator buy-in and to keep the focus on the primary goal of improving SEL instruction and student outcomes. The practices included on the self-assessments were developed through reviews of the research and practice literature and informed by a national advisory board composed of experts in the fields of education and SEL. Feedback was elicited from teachers and administrators (e.g., principals, counselors) via interviews and focus groups throughout development.

Once teachers have completed the self-assessment for the focus competency, the next step is to complete the Personal Development Plan. This tool encourages the educator to engage in a four-step process. First, they are prompted to review their self-ratings and identify Areas of Strength, Emerging Practices, and Growth Opportunities. In the second step, they identify one to three Focus Areas. Often, focus areas are chosen because they are Growth Opportunities (i.e., areas where the educator rates the practice as "Not at all like me.") However, an educator may give themselves a high rating of "Very much like me" and still choose that item as a focus area if they want to broaden and build that skill. For instance, even though the Self-Management item, "*I use effective strategies for managing multiple priorities in order to get things accomplished*," was rated highly, an educator might still want to focus on learning new strategies to do even better. This flexibility enables educators to focus on what they regard as most important to them, their students, and their school or program, rather than having their personal development plan being determined solely by a score on an item. The third step is selecting a growth strategy that addresses the identified focus area and finally in step four, the educator articulates a plan on how often, when, and how long to use the strategy. This flexibility and personalization, along with the private nature of this process encourages frank and honest self-appraisal and meaningful personal development plans, which has been highlighted as a core principle for enhancing educator social and emotional competence (Gimbert et al., 2021).

EdSERT provides teachers with six to eight research-based and practice-informed strategies per competency that are aligned to the practices in the self-assessment. About half of the strategies are designed to focus on enhancing the teacher's own competence in that area. For example, the optimistic thinking item "*I can list specific ways in which my work as an educator adds pleasure and meaning to my life*" includes a strategy focused on raising awareness of all the ways teaching is meaningful for themselves and for their students. The remaining strategies are focused on enhancing actual teaching practices used in the classroom. For example, a second optimistic thinking item "*I create an environment for students that encourages the expression of gratitude, appreciation, and celebration for one another*" includes a strategy to assist teachers with developing a habit of optimistic closure (e.g., set aside a few minutes at the end of the day to reflect on what went well that day) that can be used with students at the end of each school day.

Incorporating many of the same values as described for the DARS and Building Your Bounce, the EdSERT resources can be implemented in a group setting (such as a professional learning community) or individually by teachers. In addition to being self-reflective, EdSERT also provides the opportunity to incorporate teacher choice in both the selection of social and emotional practices of focus and strategies.

Conclusion

Nearly all adults in the United States experience stressors of too many demands and too little time. The COVID-19 pandemic has exacerbated concerns over employment, financial stability, health, and family responsibilities for many adults. For teachers, the stressors are many and multiplying. Existing demands such as administrative requests, lack of control, high stakes testing, and student behavior problems have been coupled with abrupt shifts to remote learning, students facing increased risk factors, and mandates to deliver social and emotional learning with little prior training. These risk factors are overwhelming the coping resources of educators. It is critical that schools promote the well-being of teachers and work to enhance their capacity so they can in turn support students in acquiring the social and emotional skills and protective factors that are essential for school and life success. Supporting teachers' resilience is a promising practice that is vital to educational planning efforts at the national, state, and local levels.

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Enhancing Resilience in Classrooms

28

Beth Doll and Samuel Y. Song

Schools have historically been the great equalizer in American communities—the "ticket out" for youth struggling to overcome adversity and poverty (Pianta & Walsh, 1998). For children who immigrated to the United States at the turn of the twentieth century schools were safe havens where they learned English received public health services and became literate and employable (Fagan, 2000; Goldstein, 2014). As each wave of homesteaders moved west across the country schools popped up alongside the newly broken sod. Universal access to public education is a defining feature of the North American society and schools are fertile settings for promoting youth's intellectual psychological and personal competence (Luthar & Eisenberg, 2017; Masten, 2014)

Poignant tales of schooling have passed down through our own families. Doll's grandmother told vivid stories of being 12-years-old and traveling alone by train from her parents' homestead in Montana to central Kansas where she could live with relatives and attend school. At 18, Doll's father worked alongside his father for a mountain lumber company and, 65 years later, was still grateful to the foreman for telling him that he would be fired each fall and rehired each summer because he needed to be in college. Her father would shake his head gently and remember, "He said I was too smart to be lumbering for the rest of my life." In Korea, Song's uncles chose to send his mother (the youngest sibling) to college instead of attending themselves, as the family could only afford to support college costs for one of the three. His mother is still grateful to her elder brothers for making that sacrifice for her education.

Then and now, schools are vested with responsibility for ensuring the success of each generation's youth (Goldstein, 2014). Indeed, an unanticipated realization during the 2020 COVID-19 pandemic was that once schools closed, many children went without meals, the social camaraderie of friends, secure caretaking while parents worked, and reliable monitoring of their safety and wellbeing (Nuamah et al., 2020). Threaded through contentious debates about the adequacy of schools, political will in the United States reinforces the central importance of public education. To quote the prominent journalist, Dan Rather, children's dream for success "begins with a teacher who believes in you, who tugs and pushes and leads you to the next plateau, sometimes poking you with a sharp stick called truth." In response, schools do "deliberately intervene in

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_28

children's lives" (Werner, 2006, p. 102), and they are entrusted by the public to do so.

The purpose of this chapter is to reframe this American dream around contemporary research and conceptual frameworks of resilience, and to show how these frameworks can be foundations for classroom level interventions that contribute to students' psychological wellness and strengthen their competence. The chapter uses Masten and Coatsworth's (1998) simple definition of resilience: "Resilience is how children overcome adversity to achieve good developmental outcomes" (p. 205). Within this definition, our own sons and daughters would not be considered "resilient" although they are successful adults, because they did not struggle with significant adversity in their first three decades of life. Alternatively, in many schools where we have worked, substantial numbers of children came to school hungry, frightened, with inadequate clothing, or with shocking memories of family or community violence and abuse. Resilience describes the conditions that allow these children to succeed nevertheless.

This chapter's translation of resilience research into classroom practices assumes that resilience emerges out of the systemic interdependence of children with their families, communities, and schools. Within this framework, it makes no sense to speak about resilience as a characteristic of a child because children do not achieve resilience by "pulling themselves up by their own bootstraps" (Doll et al., 2014a, b). Instead, practices to strengthen children's resilience are best integrated into the natural contexts where children live their daily lives (Masten, 2014). Consequently, we examine resilience as a characteristic of school settings where children will spend at least fifteen thousand hours during their lifetime (Rutter et al., 1979). Even more narrowly, this chapter focuses on the resilience of classrooms. Other scholars have described the resilience of schools, school climates that promote wellness, and school-community partnerships that promote student success (Cohen et al., 2015; National Research Council / Institute of Medicine, 2004; Thapa et al., 2013). While these are worthy endeavors, daily classroom interactions hold particular relevance because resilience emerges out of personal classroom interactions that occur between children and adults, and between children and other children (Luthar & Eisenberg, 2017; Masten, 2018).

The remainder of this chapter will first describe the characteristics of classrooms that make it possible for children to overcome adversity and experience success and competence. Next, the chapter will describe three intervention frameworks to strengthen these characteristics in classrooms: (1) Resilient Classrooms, a data-based decision-making strategy that employs local microstudies using classroom needs assessments that are translated into planned classroom modifications that incorporate embedded evaluations of the classroom changes. (2) Restorative Peer Ecology, a data-based strategy that translates restorative justice and bullying resilience research into similar Resilient-Classroom-type microstudies. (3) Happiness-promoting interventions that can be incorporated into Resilient-Classroom-type microstudies (Suldo, 2016). Sprinkled throughout this description will be the lessons learned in carrying out these classroom change strategies with teachers and students. The chapter will close with a candid discussion of the research that is not yet done—the next steps. Throughout the chapter, the singular focus is to describe practical strategies to create classroom environments that predispose their students to success.

Classroom Conditions That Foster Resilience

A useful description of the classroom conditions allowing children to succeed despite the odds can be derived from the past seven decades of developmental research on risk and resilience (Luthar & Eisenberg, 2017; Masten, 2014, 2018; Werner, 2013). Soon after World War II, several longitudinal studies were initiated that meticulously followed children from birth into adolescence and adulthood. Each study examined this essential question: What are the characteristics of children, their families, or their communities that predict

which children will develop disabilities or disturbances as adolescents or adults? Even though the studies were conducted on multiple continents and predicted different outcomes, these identified the same eight-to-ten factors as potent predictors of childhood risk (Garmezy et al., 1984; Masten, 2014). Many of these were characteristics of families and communities rather than of individual children. Importantly, the strongest indicator that children would succumb to risk was the total number of factors rather than the precise combination of factors. In essence, the developmental risk studies showed that children can weather some adversity but are far more vulnerable when struggling with multiple adversities piled one on top of the other.

Although the examination of childhood risk is worthwhile in its own right, this chapter's operational framework of classroom resilience grew out of a subsequent question that began to be raised in the 1970s (Masten, 2014; Werner, 2013). Every study had some participants who were quite successful even though, because they were growing up with multiple risk factors, they would have been predicted to fail. These were the resilient children. Again with remarkable consistency, study results identified the protective characteristics of children, their families, and their communities that predicted which children would overcome adversity to succeed. When present in sufficient numbers, these factors insulate children from some deleterious effects of risk and make it more likely that they will grow into successful adults with ample education, rewarding vocations, satisfying family lives, making worthwhile community contributions.

Masten (2014) describes these protective factors in a ten-item short list. Prominent on her list are rewarding and caring relationships between and among the adults and children. Our operational definition emphasizes three of these relational characteristics as essential to Resilient Classrooms: (1) the quality of the relationships that exist between the teacher and students in the classroom; (2) the nature of the peer relationships that exist among classmates; and (3) the degree of collaboration and connectedness that exists between the classroom and students' families (Doll et al., 2014a, b). Another important set of protective factors on Masten's short list are those that promote children's autonomy and self-regulation. In our operational definition, we have emphasized two of these autonomy characteristics: (4) the degree to which the students are empowered to set goals and make decisions on their own behalf (academic self-determination); and (5) the degree to which students' are supported in managing their own behavior (academic self-control). Finally, but equally important, Masten's short list describes factors that foster children's optimism and hope. Within our operational definition, we emphasize (6) the degree to which classrooms support students' confident expectations that they will succeed in class (academic efficacy). More extensive descriptions of these six characteristics of classroom resilience, and the research that underlies their selection, can be found in Doll et al. (2014a, b). The central thesis of this chapter is that it is possible to deliberately embed these protective factors into the fabric of everyday classroom practices; and that doing so increases the likelihood that children will learn and be successful in these classrooms even when they are struggling with many and very significant social and economic disadvantages (Doll et al., 2014a, b).

Translating Resilience Research: Resilient Classrooms

Resilient Classrooms (Doll et al., 2014a, b) use a familiar data-based problem-solving strategy that begins with a needs assessment to identify essential protective factors that are present or missing within a classroom, the data from which are thoughtfully considered by teachers in collaboration with their students and colleagues, to become the basis for planned modifications in classroom practices, the effects of which are carefully monitored by recollecting classroom data. In effect, this is a classroom microstudy in which the teacher and students conduct local research to verify that their classroom environment maximizes the competence and success of the students. To facilitate these microstudies, Resilient

Classrooms provide clear operational definitions of the classroom protective factors; a measure of these characteristics that is technically sound, meaningful, and practical to collect—the ClassMaps Survey (CMS); a classroom meeting that engages teachers and their students in examining and making sense of the classroom data; and a resource list of classroom modifications that can strengthen those characteristics. Described in these terms, the Resilient Classrooms change strategy is deceptive in its simplicity. The challenge is that all of this occurs within the existing system of schools in which classrooms exist within grade level teams which, in turn, exist within schools, school districts, and then communities. Moreover, even though classrooms operate under the legitimate authority of teachers and administrators, classroom changes emerge transactionally out of the interactions of adults and children within and among each other. Thus, it is a very complex endeavor to implement classroom change strategies while simultaneously respecting the existing classroom system.

Classroom Needs Assessment Precious resources should never be squandered on strengthening protective factors that are already amply represented within a classroom. For example, CMS surveys in elementary classrooms have often shown that teachers' relationships with their students are exceptionally strong and caring while, simultaneously, students described their classmates as arguing a lot, picking on each other, and often disruptive (Doll et al., 2010a, b). In such classrooms, the logical focus of classroom changes would be on peer conflict and student disruption and not on teacher–student relationships. This planful decision about where to intervene contrasts with some manualized interventions that are implemented in standard ways across all classrooms. The wisdom of a fourth-grader explained why over-standardization can be a problem "We really like you and we don't mind doing this stuff. But we think you ought to know – we already know this."

Measures used for classroom needs assessments must be sound technically and pragmatically feasible. A measure that is too time-consuming intrudes into the instructional mission of classrooms, while one that is too complicated will not "speak" to the classroom's teachers and children (Doll, 2022). As a result, the ClassMaps Survey (Doll et al., 2014a, b; CMS) was developed to be reliable, valid, brief, simple to collect, easily collated, and with results that can be readily graphed. The resulting CMS is a 55-item anonymous student survey with eight subscales: Three peer relationships subscales examining peer friendships in the classroom (My Classmates), peer conflict (Kids In This Class), and worries about being victimized (I Worry That); two other relationships subscales examining teacher–student relationships (My Teacher) and parents' participation in students' learning (Talking With Parents); two self-regulation subscales describing students' discipline (Following Class Rules), and self-determination (Taking Charge); and one scale describing optimism and expectations for success (Believing in Me). Students complete the CMS by selecting "never," "sometimes," "often," or "almost always" for each item, and results are aggregated across all students in a class. Early research established that the CMS factors consistently into the six classroom characteristics, has strong internal consistency (α ranges from 0.79 to 0.93 in elementary classrooms and from 0.82 to 0.91 in middle school classrooms), and correlates in predicted ways with other indices of the six characteristics (Doll et al., 2010a, b). Subsequently, a dozen studies conducted in the United States, China, Indonesia, and Greece have also supported the internal consistency and structural integrity of the scale (Doll, 2020).

The advantage of aggregated CMS surveys is that these provide new information that teachers are not always privy to—students' private perceptions of the support they experience from classmates and teachers, their personal sense of belonging and expectations of success, and their felt responsibility for charting their own course into academic success (Chapla, 2018). Chapla's comparisons of teacher expectations with their students' actual CMS responses showed that students' descriptions of their class were frequently

more positive than their teachers expected. In particular, teachers were poor judges of their students' peer friendships, capacity to accommodate their behavior to the difficulty of the work, worries about being bulled, and parental conversations about school. The collective CMS responses of all students in a class provide the teacher with an invaluable barometer of the "felt experience" of the class system and a stable reflection of classroom-level characteristics. Combined with teachers' own classroom experiences and focused very specifically on aspects of classrooms that are linked to the success of students-at-risk, these intersecting perspectives describe the ecological system of the classroom in a way that is highly relevant to student resilience.

The brevity of the CMS is important because carving out time to collect data is challenging in today's rushed classrooms and could become a significant barrier to a Resilient Classrooms microstudy. Using contemporary technology, most students now complete the CMS in less than 15 minutes using an online survey platform (e.g., Qualtrics™). Teachers provide students with an online link to the CMS that is unique to the classroom teacher. Franta (2018) conducted a readability study to show that 92% of 4th graders could read and understand the scale independently as could 72% of 2nd graders. Thus, even in elementary grades, most students can complete the CMS independently but, for those students who struggle with reading the survey, the online software can read each item to students over headphones. When all students are finished, the teacher can access a graph of the results immediately.

Planning for Classroom Modifications The simple act of showing teachers their classroom data can be highly reactive. In early investigations of school playgrounds (Doll et al., 2003), we carefully guarded data describing recess problems from teachers' eyes or they would "fix" the problems before the study's conclusion. Eventually, realizing that this was what we wanted to occur, we began deliberately sharing classroom data with teachers (Doll et al., 2014a, b). Teachers were quick to then share the data with the students in simple classroom meetings and, when this occurred, students' suggestions for solutions were often quite innovative. For example, teachers thought that a class needed more playground supervisors and stricter playground rule enforcement, and students thought that there needed to be more games so that students were kept busy playing instead of fighting. Master teachers showed us to pose four simple questions to the students: *Is the classroom data accurate? What do students believe causes the strengths and weaknesses in the classroom? What could teachers do to make the classroom a better place for kids to learn?* And, *what could students do that would strengthen the classroom*? Brief chart notes focused the students' attention on the questions, and also became permanent records that teachers consulted when planning classroom modifications. Classroom meetings about the data actively engaged students as partners in the microstudy broadened teachers' ecological perspectives on classroom practices and diversified the solutions that they used to strengthen classroom routines.

Some teachers were immediately comfortable with collecting and using classroom data and quickly took leadership over their microstudies; others struggled with this level of data literacy and relied on a classroom consultant to manage the CMS collection and analysis. The disadvantage of this split role was that teachers sometimes thought the consultant was the "true owner" of the microstudy, although the intent of Resilient Classrooms is to empower teachers and their students. This has prompted in a new line of research to prepare teachers to be proficient users of classroom data to inform their own practice (Doll et al., 2014b). A year-long professional development program for teachers (NU Data) blended online instruction with teaming, coaching and guided practice to strengthen teachers' mastery of six data-use skills: (1) familiarity with data-collection tools; (2) selecting tools that are best suited to the teachers' questions about their classrooms; (3) collating and graphing data; (4) discerning trends and differences in data; (5) using

data trends to make decisions; and (6) planning modifications in response to the data. Results of an iterative mixed-method study showed that teachers could be taught these basic data-use skills, and that improvements in their data use had a significant effect on their students' classroom success. One teacher who completed the NU Data training explained, "It's like I was driving without the side mirrors on the car, and now I can see into the blind spots."

Sometimes, simple but necessary changes in classroom routines are quickly apparent to teachers as they discuss their classroom data with their students. Many of these could be implemented immediately. For example, playground soccer games are a frequent source of disturbing peer conflict. Students disagree about the "right" rules for soccer; they struggle to choose fair teams; they play soccer on fields that are too small (and the ball flies into nearby ball courts) or that are too large (and students cannot tell where the sidelines and goals are located.) The arguments leave very little time to play, and the disagreements follow students back into the classroom. Teachers' commonsense solutions have included researching the rules for soccer as part of the classroom social studies lesson; choosing teams for the week every Monday; or relocating the soccer field and marking it more clearly.

One natural and systemic way to extend the number and quality of teachers' solutions is to pair them with two or three other teachers at similar grades, or to pair inexperienced teachers with an experienced master teacher. Within these professional learning communities, teachers shared solutions that had proven successful in their own classrooms. We supported these teacher groups with one-page strategy sheets that align with the six classroom characteristics. (See Doll et al., 2014a, b for copies of strategy sheets.) The top half of each strategy sheet lists eight-to-ten classroom modifications that other teachers have used with good success; the bottom half lists routines and practices from the published literature. Rather than "teach" the strategy lists, we simply laid them on the table while teachers were planning and allowed teachers to scan them for strategies that seemed most relevant and about which they wanted more information.

By far, the most common barrier to classroom change is time—time for teachers to reflect on their classroom, search out new information or gather together simple data, and implement changed routines. In most classrooms, the time and energy of students is a plentiful, untapped resource. As examples, elementary and middle school students have collected and collated simple data, created the graphs for the data, been "coaches" who remind classmates to carry out a new routine, served on advisory boards that conduct mini-studies, retrieved rule manuals for playground games, and written newsletters home for parents.

Implementing Modified Routines The best plans for classroom modifications have little impact unless they are actually acted upon. Planned changes were more likely to be carried out if they were carefully written down, described as discrete steps, and clearly assigned to members of the classroom. A written plan can also be used as a checklist to mark steps as each is completed. Still, fidelity is a bi-directional phenomenon. When planned changes were not carefully implemented, the fault sometimes lay with the plan itself. Plans were abandoned if they overreached the resources of a classroom, were overambitious, did not fit seamlessly into a classroom day, or competed with other classroom demands. Teachers needed the option to fix the plan or fix the implementation.

Once planned changes had been in place for four or more weeks, the microstudies collected postdata to see whether the classrooms' targeted protective factors had improved when the modification was implemented. The CMS was deliberately designed for this purpose; any one of the subscales can be administered independent of the full survey, and most microstudies recollected only those subscales that were relevant to their plan. In some cases, the microstudy showed that nothing had changed or that the classroom's protective factors had deteriorated. In this event, a logical next step was to implement evidence-

based intervention that rigorous, peer-reviewed studies have demonstrated to hold promise for strengthening classrooms' relationships, student autonomy, or expectations of success. Several resources are available for identifying evidence-based educational interventions, including programs listed on the What Works Clearinghouse (www.whatworks.ed.gov), the Collaborative for Academic, Social and Emotional Learning (http://www.casel.org); and the UCLA Center for Mental Health in the Schools (http://smhp.psych.ucla.edu). Examples of Resilient Classrooms microstudies are included at the end of each chapter in Doll et al. (2014a, b).

Translating Resilience Research: Restorative Peer Ecology

The Restorative Peer Ecology (RPEco) model was developed as a variation of the Resilient Classrooms microstudy that focuses on important peer relationships that discourage bullying and promote a restorative peer culture. It was inspired by a social justice vision of practice that emphasizes repairing the harm caused by bullying in addition to preventing future victimization (Song & Sogo, 2010). Moreover, RPEco was designed to be feasible in the real world of schools, overcoming the common research-practice gap of school bullying research. Historically, bullying interventions have faced two central obstacles: (a) difficulties addressing the complex and persistent ecological factors that encourage bullying such as peer encouragement and bystander action or inaction (Craig & Pepler, 1998; Salmivalli, Lagerspetz, Björkvist, Österman, & Kaukianen, 1996) and (b) the limited real-world feasibility of comprehensive bullying intervention programs in schools (Smith et al., 2004). Reconceptualizing the school bullying problem from this larger perspective, theoretically and practically, has been termed *the "real" bullying problem* (Song & Stoiber, 2008; Song & Sogo, 2010).

The RPEco model addresses the complexity of real school bullying by augmenting the microstudy framework with substantial research describing classroom factors that encourage or discourage peer bullying. Consistent with the microstudy format, RPEco incorporates a brief measure of these factors that is technically sound and feasible for use by classroom teachers (the Protective Peer Ecology Scale), includes classroom meetings that engage students with their teachers in examining their own classroom data, and incorporates a set of resources that teachers can draw upon when planning their plans for classroom modifications. In addition, RPEco incorporates a restorative curriculum that guides students to take responsibility for preventing future bullying and repairing the harm that was done by prior bullying.

Ultimately, the purpose of RPEco is to create a healthy peer ecology that will, in turn, prevent bullying. From an ecological framework, peers are part of the microsystem, which is the immediate, proximal setting in which behavior unfolds. "The peer ecology is that part of a children's microsystem that involves children interacting with, influencing, and socializing one another. Peer ecologies do not include adults but can affect and be affected by them" (Rodkin & Hodges, 2003, p. 384). A peer ecology is restorative when aspects of children's interactions with one another serve to promote a peer culture that is positive, collaborative, reconciliatory, inclusive, and empowering; and when the inherent power imbalances among peer relationships (vertical structure) are balanced. These peer ecologies include both horizontal and vertical social structures that organize children's behavior (Rodkin & Hodges, 2003). Horizontal structures describe children's many different social relationships of varying quality that provide them with social support. Vertical structures refer to social power and status, and the influence that is a consequence of these. Sociometric network research has shown that some children have more power in the peer group and are more valued than other children. Vertical social relationships occur between children who occupy different levels of influence within the peer social hierarchy. A Restorative Peer Ecology is a healthy one when children's horizontal peer relationships are positive and empowering, and their vertical peer relationships are balanced so that all children both have influ-

ence and are influenced by peers within the classroom. A peer culture with these characteristics is important to prevent bullying (Frey et al., 2005; Olweus et al., 1999) and promote restorative justice in schools (Song & Swearer, 2016; Frey et al., 2005; Olweus et al., 1999).

Classroom Needs Assessment Within the microstudy framework, the Protective Peer Ecology Scale (PPES; Song & Sogo, 2010) is a technically sound and pragmatically useful measure of the health of classrooms' peer ecology. The PPES is an 18-item scale that includes three subscales: *Peer Advocate, Peer Allyship,* and *Peer Encouragement*. The 5 items comprising the *Peer Advocate* subscale assess a student's inclination to protect others from bullying. The 8 items of the *Peer Allyship* subscale assess the extent to which students believe that peers would intervene if they were being bullied. The *Peer Encouragement* subscale includes 5 items that assess the extent to which students believe that their peers would encourage the bully. Students complete the survey by selecting "never," "sometimes," "often," or "almost always" for each item, and results are aggregated across all students in a class. Early research established that the PPES factors into the three classroom characteristics of the peer ecology, has strong internal consistency (0.87 to 0.94 in elementary school classrooms and 0.80 to 0.94 in middle school classrooms; Song & Sogo, 2010), and correlates in predicted ways with other indices of these characteristics (Chen et al., 2015; Hamm et al., 2011; Farmer et al., 2011; Norwalk et al., 2016). Like the CMS, the PPES is anonymous and is analyzed for a class, rather than individually by student. It can be completed in 10 minutes of class time or electronically. In some cases, the survey may be modified in partnership with the teacher so that the bullying definition matches existing school policies.

Planning for Classroom Modifications The REPco classroom meeting is derived from the Resilient Classrooms microstudy but with modifications that directly address classroom bullying. In addition to assessing the nature and extent of the bullying problem in the class, a second aim of the classroom meeting is to teach what bullying means and introduce the restorative process. This aim is important because virtually all evidence-based bullying intervention programs incorporate components addressing student misconceptions of the definition of bullying and unfamiliarity with restorative justice principles.

The REPco classroom meeting begins by projecting a bar graph of the PPES results to the class, reminding students of the questions that they answered and guiding them in a careful examination of the data. Next, the teacher asks, "*Do you think these results are true?"* Once students commit to the data, the teacher leads students in a thoughtful discussion of the various participants in bullying shaped around six questions: *How do you think it feels to be bullied? How is bullying harmful to those who have been bullied? How do you think it feels when classmates don't help during bullying? How is bullying harmful to classmates who watch it? How do you think it feels for the bullies? How is bullying harmful to classmates?* The second half of the classroom meeting incorporates the principles of restorative justice into the continued discussion of four additional questions: *What do we think we could do to repair the harm that has happened? What can we do to make things right? Do you think we can improve this situation? (The teacher answers, "I do.") Who is willing to try to improve? Show of hands?*

Discussion notes from the classroom meeting are assembled into a classroom plan to strengthen the peer ecology that acknowledges the unique aspects of bullying that students have described, using protective peer groups that were identified as a result of the discussion, and that builds upon the experiences of the students, who have now been engaged in a variety of restorative cognitive-behavioral intervention strategies including problem solving, challenging common inaccurate beliefs about bullying, developing empathy for victims of bullying, and developing a shared view of the bullying problem in their classroom and a shared desire to change.

Translating Positive Psychology Research: Promoting Student Happiness

Since Seligman and Csikszentmihalyi's (2000) influential introduction to positive psychology at the turn of the twenty-first century, substantial empirical research has applied their model of positive psychology to children, describing the predictors of happiness, benefits of happiness, and interventions to enhance children's happiness (Suldo, 2016). Seligman's definition of positive psychology overlaps substantially with results of developmental risk and resilience research in that it emphasizes high quality relationships and experiences of accomplishment. However, Seligman's definition gives greater emphasis to frequent experiences of positive emotions (happiness) and of deep engagement in learning or accomplishing. Given the overlap of positive psychology and resilience research, it is not surprising that positive psychology research has shown that children's academic success and mental health is related to their healthy experiences at school with relationships, competence, autonomy and happiness.

Suldo's (2016) work on promoting student happiness translates the positive psychology definition into feasible practices for intervention in school classrooms, and it is a useful extension of the Resilient Classrooms microstudies that expands the emphasis on hope and optimism. Consistent with the Resilient Classrooms framework, her strategies are built on a similarly strong foundation of basic research in positive psychology and the impact of happiness promotion. She has identified a brief assessment (the Student Life Satisfaction Scale, Huebner, 1994) that can be used to gather classroom happiness data. Results could be incorporated into a Resilient Classrooms meeting, and she has identified and field tested class-wide strategies to promote happiness and psychological well-being.

Classroom Needs Assessment The Student's Life Satisfaction Scale (SLSS; Huebner, 1991; Gilman & Huebner, 1997) is an ideal progress-monitoring assessment for class-wide interventions to strengthen students' happiness. Early versions of the scale were developed to assess children's subjective well-being including their positive emotional experiences, negative emotional experiences, and general satisfaction with their lives. Developed initially as a research tool to examine relations between students' school success and their subjective well-being, the SLSS has been used to examine the impact of diverse positive psychology interventions in schools (Suldo, 2016). The most recent version of the SLSS (Gilman & Huebner, 1997) is 7 items describing students' evaluation of the quality of their life using a 6-point Likert-type scale (from *strongly agree* to *strongly disagree*). Results show that the scale represents a single factor with strong internal consistency (alpha = 0.82) and appropriate correlations with other measures of subjective well-being. Suldo (2016) summarizes research demonstrating that life satisfaction as assessed by the SSLS was enhanced by a strengths gym program, a goal-setting program, and programs of collective positive psychological interventions, *Planning for classroom modifications.*

Suldo's practices are premised on the observation that individual happiness has a considerable biological determinant such that, once some time has passed following an exceptionally positive or negative event, individuals tend to revert to their modal level of happiness. Gains in happiness can be accomplished through behavioral activities, but these tend to be temporary. To maintain higher levels of happiness over time, purposeful happiness-inducing activities must be integrated into ongoing school and classroom routines. This is the goal of Suldo's intervention, and it adds a new and powerful component to efforts to build resilience into classrooms. Suldo et al. (2015) describes a pilot study and Suldo et al. (2014) describes a random assignment waitlist control study that found significant increases in student life satisfaction upon completion of happiness promotion activities. In turn, Suldo et al. (2011) found that measures of subjective well-being predicted middle school students' grade point averages and their performance on state standards assessments one year later.

The happiness-promoting activities that Suldo has identified fit naturally into Resilient Classrooms microstudies because they are brief, simple to lead, reinforce student strengths and well-being, and demonstrate impact on students' classroom success. Five types of activities were integrated into Suldo and Savage's (2016) happiness promotion interventions: Gratitude, Kindness, Character Strengths, Optimistic Thinking and Hope. Gratitude activities engage students in activities to count their blessing, appreciate and journal about the positive benefits they have received, write down three good things that happened to them at the end of each day, or write letters to or pay visits to express their gratitude to others. Kindness activities engage students in carrying out acts of kindness, effortful acts that make other people happy. Character strengths engage students in surveys and activities to identify their own positive strengths and plan ways they can use these strengths in the coming days. Learned optimism teaches students to think of positive experiences as permanent, pervasive and due to their own efforts; and simultaneously, to think of negative life events as temporary, less likely to happen again, and due to external forces. Activities to promote hope engage students in setting goals and planning strategies to develop their academic "best selves"—a type of activity that shares a lot in common with the goal setting and decision-making assets identified in the Resilient Classrooms framework. As a collective, and when infused into daily classroom routines, the happiness-promoting activities have the potential to strengthen the emotional well-being of a classroom.

Next Steps

The rich tradition of research in developmental resilience holds special relevance to schooling because it establishes the characteristics of social and psychological environments that are optimal for children's capacity to overcome adversity. The data-based microstudies employed within Resilient Classrooms engage teachers and their students in systematically examining and strengthening these characteristics in their own classrooms. The essential elements of the Resilient Classrooms data-based microstudies are that these are (1) teacher directed; (2) employ simple, practical strategies for collecting classroom data describing resilience-promoting characteristics; (3) engage teachers and students as coresponsible for reflecting on classroom data and planning for classroom changes; and (4) draw upon existing research and classroom knowledge to develop and carry out simple classroom improvement plans. This essential framework still stands.

Now, we are directing much of our attention toward three dilemmas that we have encountered in implementing these elements in many different schools. The first of these is the challenge we have faced in reinforcing students' engagement in and ownership of classroom change activities. It is true that master teachers originally taught us about the importance of student engagement and strategies for building student ownership of their classroom learning environment. Nevertheless, the default in many schools and districts where we have worked is that classroom data collection is often done to students and even to teachers, rather than with them. Alternative possible reasons for the omission present themselves: perhaps this is an issue of feasibility (it is too time-intensive and difficult to include students), or a cultural issue (our strategies need to reinforce the status of classroom teachers as the full authority in a classroom), or a deficit of imagination (we have never seen this done before and so cannot imagine the purpose of doing it now.) This does not appear to simply be a North American phenomenon; we have also encountered a reluctance to fully include students in collecting and making sense of Resilient Classrooms data in China (Doll & Ni, in press). In the short term, we are simply including student advisory boards and classroom meetings as necessary parts of the package of services that we offer to schools that are our research partners. However, the important empirical question is, "What are the barriers to student engagement in data-based problem

solving for schools and what are some practical strategies for addressing these."

The second dilemma relates to teachers' ownership of the microstudy process. Originally, we had developed the Resilient Classrooms microstudy as a form of consultation and planned to carefully "manualize" the microstudy consultation procedures. However, we have learned that the microstudy is a more effective strategy when we craft more balanced partnerships with teachers and, in some cases, with students, and they work alongside us to translate developmental resilience research into classroom practices. We have learned that an important element of this change is streamlining the collection and collation of classroom data, and representing the data in a visual figural format that is immediately usable for teachers and students (such that their attention is on the classroom change and not decoding the data). We believe that this requires a level of comfort and literacy with classroom data that some teachers do not yet possess. This is why we are developing and refining a professional development program for teachers that fosters their literacy in classroom data and so builds and protects teacher ownership of the microstudies. Ultimately, the success of the microstudies will be sustained over time if teachers find the microstudy strategy to be viable, interesting, authentically relevant to their teaching, a strategy that saves them time and maximizes their impact with students—in short, a strategy that is worth their time.

The third dilemma is a classic example of a "good problem to have." In the 25 years since we first began working with the Resilient Classroom framework, other very intriguing lines of research have emerged related to important characteristics of psychologically healthy classrooms. Our vision is that these are complimentary, and not competing, conceptual frameworks for fostering resilience in classrooms. To the degree possible, we are working to integrate these complimentary findings into the microstudy strategy—particularly when these incorporate a brief measure that lends itself to a classroom needs assessment, substantive evidence that the constructs are indeed related to subsequent school and life success, and a set of routines and practices that can be blended into ongoing classroom activities and so promote the psychological well-being of classrooms.

The central purpose of our classroom change efforts remains the same: to enhance youth success in schools. We remain convinced that it is essential to draw broadly from developmental resilience research and carefully apply educational and developmental research on classroom relationships, student autonomy, and optimism. Still, the act of translating this research into practice is shifting our frame of reference and inherently reshapes our understanding of resilience. Microstudies provide committed teachers with one more tool that they can use to stretch their capacities as teachers, maximize the match between their students' needs and their classroom practices, and nudge their students onward toward rewarding and successful adulthood.

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29 School Climate Improvement: A Data-Driven Strategy That Supports Individual and Organizational Health

Amrit Thapa and Jonathan Cohen

Stress and distress are normal facets of life. Over the last decade, there has been growing interest in what it means to be resilient and methods for recognizing and managing stress and distress (Masten, 2014). Although there are meaningful debates about how to best define resiliency (Bonanno & Diminich, 2013; Goldstein & Brooks, 2021), there is a growing consensus that the ability to "bounce back" from adversity develops and changes as individual, relational, and larger "protective" systems develop. How we "bounce back" reflects problem-solving or coping abilities at a core social and emotional competency that shapes all our lives (Vaillant, 2012). Developmental research has revealed that there are specific *relational* experiences (e.g., positive attachment bonds with caregivers, positive relationships with other nurturing and competent adults, friends or romantic partners who are supportive and prosocial); specific *individual competencies* (e.g., intellectual skills, self-regulation skills); *beliefs* (e.g., faith, hope, and a sense of meaning in life); *larger systemic experiences* (e.g., bonds to effective schools and other prosocial organizations, communities with positive services and supports for families and children, and cultures that provide positive standards, rituals, relationships, and supports); and more that foster "protective factors" that support resiliency (Goldstein & Brooks, 2022a; Masten, 2021). Our understanding is that creative and flexible problem-solving abilities and mature and adaptive coping capabilities provide the foundation for resiliency. In 2017, the Aspen Institute convened a group of 28 distinguished scientists to develop a series of consensus statements based upon the evidence for how we learn (Jones & Kahn, 2017). During these conversations, we (one of us was a member of this group) talked about what were the most important social-emotional competencies. Virtually all suggested that being a creative and flexible problem solver was the single most important social-emotional competency. Likewise, longitudinal studies have reinforced the foundational importance of how we recognize and solve problems in ways that help us cope and defend ourselves (Vaillant, 2012).

In this chapter, we will use the term resiliency to refer to the person's capacity to overcome stress or adversity. Resilience is not a trait that people either have or do not have. It involves problem-solving and/or coping behaviors, thoughts, and actions that can—at least to some extent—be learned and developed by anyone. This chapter will highlight how the measurement

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_29

and use of K-12 school climate data in the engagement of students, parents and school personnel is a practical, helpful, and data-driven school improvement strategy that promotes and develops several protective factors noted above and provides a foundation for creative problem-solving, resilience, student learning, and positive youth development.

Social, Emotional, and Civic Competence; School Climate Improvement; and Resiliency

School climate improvement is an ecologically informed process that recognizes and seeks to promote individual pro-social learning (e.g., social-emotional learning, character education, mental health promotion) as well as systemically informed improvement efforts that foster safe, supportive, engaging, and healthy schools and school communities (Bradshaw et al., 2021; Cohen, 2006; Cohen et al., 2021). These conditions will promote a resilient mindset that are associated with specific skills (Brooks & Goldstein, 2001).[1] These conditions include feeling appreciated and competent, learning to become more intrinsically motivated, learning realistic goals and expectations for the self, developing social and emotional skills (e.g., reflective and empathic capacities, flexible problem-solving/decision-making, perspective taking, clear communication and dispositions), and viewing mistakes and obstacles as challenges rather than avoidable events. These conditions overlap with the developmental research noted above on the series of relational social-emotional competencies, beliefs, and larger systemic experiences that provide the foundation for resiliency.

Social, emotional, and civic skills, knowledge and dispositions can be learned (Cohen, 2006; Zins et al., 2004). This overlaps with findings from Positive Psychology suggesting that many aspects of resilience are teachable (Reivich & Shatte, 2002; Seligman, 1990). Seligman et al. (2009) suggest that when children develop the skills of "emotional fitness" it promotes resiliency. Again, in an overlapping manner, there seem to be a number of evidence-based protective factors that contribute to resilience; some of which correspond with social, emotional and civic abilities and dispositions (e.g., optimism, effective problem-solving, impulse control, empathy) that contribute to resiliency (Masten & Reed, 2002). For example, a recent meta-analysis of social-emotional learning programs in schools across the world showed significant improvements in indicators of well-being and social-emotional skills among participants when compared to their control counterparts. These results were consistent across age, race, socio-economic background, and location and proved to be long-lasting through postintervention follow-up studies (Taylor et al., 2017). Studies have also shown the connection between measurable social-emotional skills in kindergarteners and key young adult outcomes such as education, employment, and mental health (Jones et al., 2015). Literature also indicates that students with dyslexia, when exposed to social-emotional learning programs in year 6, are able to navigate the transition to secondary school and cope with related challenges at rates similar to their peers without dyslexia (Firth et al., 2013).

Brooks et al. (2012) as well as Goldstein & Brooks (2022a) have recently summarized an important and growing body of empirical research that supports the notion that when we teach children to become more (intrinsically) motivated and promote engagement, we are also promoting resilience. These ideas compliment the following summary of factors that support the development of resiliency (American Psychological Association, 2010): (a) making connections, (b) avoiding seeing crises as insurmountable problems, (c) accepting that change is a part of living, (d) moving toward one's goals, (e) taking decisive actions, (f) looking for opportunities for self-discovery, (g) nurturing a positive view of yourself, (h) keeping things in

[1]These are mostly supported by correlational studies rather than experimental or quasi-experimental. Disconfirm this notion. There are only correlational studies that support this argument.

perspective, and (i) maintaining a hopeful outlook.

School Climate: Research, Policy, and Practice Trends

Research on school climate dates to over 100 years (Anderson, 1982; Thapa et al., 2013). Over the last three decades there has been a growing body of empirical research that has studied which factors color and shape the learning environment at school. A range of terms have been used to describe school climate such as tone, atmosphere, feelings, ethos, occupational health, organizational health, setting, milieu, culture, and conditions of learning (Bradshaw et al., 2021; Thapa et al., 2013). Some look at the "subjective" nature of school climate and others on the "objective" aspect of school life. Some argue that school climate is a composite of systemic, instructional, and relational elements while others focus more on aspects related to safety, support, and engagement (e.g., see Osher et al., 2017). Regardless, a synthesis of research on this topic indicates that one of the commonly used definitions of school climate is "the quality and character of school life" (Anderson, 1982; Cohen, 2017; National School Climate Council, 2007, 2015; Thapa et al., 2013). Recently, the U.S. Department of Education, Office of Safe and Healthy Students (U.S. DOE, OSHS, 2016) has described school climate as comprising of safety, engagement, and environment and characterized it as one that "reflects how members of the school community experience the school, including interpersonal relationships, teacher and other staff practices, and organizational arrangements."

Some scholars and researchers have argued that it is useful to distinguish "climate" and "culture" and "supportive learning environments" or "conditions for learning" (e.g., Deal & Peterson, 2009; Schoen & Teddlie, 2008). We suggest that what is most important is that we are clear about what we are operationally referring to when we use any or all of these terms.

Over the last three decades, educators and researchers have worked to identify specific elements that make up school climate. Although there is not a singular list that summarizes these elements, virtually all researchers suggest that there are four major areas that are essential, which we will present in the next section.

Research As early as a century ago, educational reformers recognized that the distinctive culture of a school affects the life and learning of its students (Perry, 1908; Dewey, 1916). However, the rise of systematic empirical studies of school climate grew out of industrial/organizational research coupled with the observation that school-specific processes accounted for a great deal of variation in student achievement (Anderson, 1982; Kreft, 1993). Since then, research in school climate has been expanding systematically and many countries are showing a keen interest in this field. Over the last 40-some years, there has been a growing body of empirical research confirming the importance of school climate although a majority of these studies are correlational studies rather than causal (Benbenishty et al., 2016). Positive and sustained school climate predicts and is associated with increased academic achievement, positive youth development, effective risk prevention, health promotion efforts, and teacher satisfaction and retention (for detailed summaries of this research, see Berkowitz et al., 2017; Bradshaw et al., 2021; Cohen & Espelage, 2020a; Larson et al., 2020; Thapa et al., 2013; Wang & Degol, 2016). As a result of this research several government institutions, including the U.S. Department of Justice (2004), the Centers for Disease Control and Prevention (2009) the U.S. Department of Education (2016), and a growing number of state departments of education emphasize the importance of safe, civil, and caring schools, school connectedness, and positive school climates. The research on school climate overlaps with several fields including social, emotional, and physical safety; positive youth development, mental health, and healthy relationships; school connectedness and engagement; academic achievement; social, emotional, and civic learning; teacher

retention; and effective school reform. Furthermore, it must be understood that both the effects of school climate and the conditions that give rise to them are deeply interconnected, growing out of the shared experience of a dynamic ecological system (Bronfenbrenner, 1979; Ma, Phelps, Lerner, & Lerner, 2009). In general, the research on school climate can be categorized into four or five essential areas: safety, relationships, teaching and learning, institutional environment, and the school improvement process (Cohen et al., 2009; Thapa et al., 2013). Over time, empirical research will help to refine, redefine, and further develop our understanding of what aspects of school climate can and need to be assessed. As summarized below, there is a compelling and robust body of empirical research that underscores how various aspects of safety, relationships, teaching and learning, and the environment predict learning and positive youth development. This contributes to the development of what Brooks and Goldstein have referred to as a "resilient mind set" (Brooks & Goldstein, 2001).

The rising interest and attention in school climate reform efforts in recent years is due to three factors (Thapa et al., 2013). First, there is a growing body of empirical research that supports the notion that context and systems matter: group trends, norms, expectations, and belief systems shape individual experience and learning while influencing all levels of relationships. Second, there is an increasing awareness that school climate reform contributes to effective violence prevention in general and bullying prevention efforts in particular. As a result, local, state, and federal interest in school climate reform as an effective, data-driven, and evidence-based strategy for reducing violence is emerging. Third, research-based prosocial educational efforts have been given tremendous attention in recent years. These efforts include character education, social emotional learning, mental health promotion, service learning and civic engagement, and others (for a compendium of the wide-range of interventions, see Brown, Corrigan, & Higgins-D'Alessandro, 2012). Moreover, school climate reform is a process that necessarily focuses on and supports students, parents/guardians, and educators in considering how effective current prosocial educational efforts are and how we can strengthen them.

Nevertheless, it must be noted that the diversity among definitions, models, and experimental methodologies on school climate produce limitations that influence current school climate research findings. For example, comprehensive reviews by several studies (e.g., Anderson, 1982; Bradshaw et al., 2021; Freiberg, 1999; Cohen et al., 2009; Thapa et al., 2013) showed that defining school climate was complicated by the fact that practitioners and researchers used a wide range of school climate definitions and models that were often more implicit than explicit in nature. Naturally, how we define school climate has implications for what we measure. There is not a national or international consensus about how to define "school climate," a "positive and sustained school climate," or the "school climate process" nor the dimensions that need to be regularly measured in school climate research and improvement efforts. To some extent, the lack of consensus has challenged the advancement of school climate research that is necessary to inform school improvement efforts and continues to be an issue. In addition, it hampers the development of the field and, more specifically, measurement practices (Cohen & Espelage, 2020b).

Policy As a result of many countries taking an interest in school climate, we are seeing growing discussions and developments on the policy side as well (Cohen & Espelage, 2020a). Most of these policy initiatives are focused on school climate, social-emotional learning, and bullying. However, this is largely true in developed countries only. In 2017, 35 states in the United States had school climate policies, and all 50 states had a bullying prevention policy or law (Cohen & Espelage, 2020b). In the European Union, there are variations in school climate related policies due to diverse educational systems. However, there are discussions toward a greater European antibullying policy. In Latin American countries (such as Mexico, Chile, and Peru), countries are

developing "laws on school violence." In other places, school climate policies mostly revolve around "bullying" and/or "school-violence" related issues.

In theory, research shapes policy, which in turn dictates and encourages quality practice. But there are a variety of factors that commonly undermine this logical framework (Hess, 2008). For unknown reasons, the federal government and state departments of education have not yet responded adequately to school climate research findings. For example, school policy scans from the State Department of Education revealed significant shortcomings in how climate is defined, measured, and incorporated into policies (Cohen & Espelage, 2020b). This troubling gap is perplexing given that most classroom, building, district, state, and federal educational leaders appreciate the importance of school climate (e.g., Jennings, 2009; National Middle School Association, 2003).

A bipartisan group of educational and mental health leaders—The National School Climate Council—developed *National School Climate Standards*: *Benchmarks to promote effective teaching, learning and comprehensive school improvement* (National School Climate Council, 2009). The following five standards, linked to a set of indicators and subindicators, are designed to support local school communities by addressing three essential questions: (i) What is our vision for the kind of school we want for our children? (ii) Given this vision, what kinds of policies and rules do we need? (iii) Given this vision and set of policies or rules, what kinds of instructional and systemic practices do we need to actualize this vision? The five standards are:

1. The school community has a shared vision and plan for promoting, enhancing, and sustaining a positive school climate.
2. The school community sets policies specifically promoting (a) the development and sustainability of social, emotional, ethical, civic and intellectual skills, knowledge, dispositions and engagement, and (b) a comprehensive system to address barriers to learning and teaching and reengage students who have become disengaged.
3. The school community's practices are identified, prioritized, and supported to (a) promote the learning and positive social, emotional, ethical, and civic development of students; (b) enhance engagement in teaching, learning, and school wide activities; (c) address barriers to learning and teaching and reengage those who have become disengaged; and (d) develop and sustain an appropriate operational infrastructure and capacity building mechanisms for meeting this standard.
4. The school community creates an environment where all members are welcomed, supported, and feel safe in school: socially, emotionally, intellectually, and physically.
5. The school community develops meaningful and engaging practices, activities, and norms that promote social and civic responsibilities and a commitment to social justice.

The school climate standards focus on the iterative *process* of whole school improvement. These standards are interestingly in contrast with the growing number of state-level social emotional learning (SEL) standards, which focus on individual students meeting grade-level standards for social emotional capabilities.

Practice Trends School climate is an important factor in the successful implementation of school reform programs. Until the last 15 years, school reform was largely focused on promoting reading, math, and science achievement, which actually did not help students or schools increase achievement levels. Although there are a number of school climate informed improvement models, they all tend to recognize and promote the following processes:

- A collaborative and *engaged* intergenerational effort that recognizes the personal "voice" of students, parents, and the school.
- An explicit focus on social, emotional, civic, and academic learning and problem-solving.
- An appreciation that adult/educator learning is an essential foundation for students' being

able to be successful social, emotional and academic learners.
- There are a series of school-wide instructional and relational improvement goals that are all important. However, school leaders and communities cannot focus on all of these goals at the same time. School leaders need to be intentional and strategic as well as—hopefully—being fundamentally collaborative when deciding which improvement goals to focus on in any given year or multi-year period.

Virtually all school climate improvement models are organized around a series of data-driven improvement stages. Although different improvement models use somewhat different terms and sequences, they are all based on an iterative and continuous model of learning and development that recognize some form of the following steps: (1) preparing for the next phase of the improvement process; (2) evaluating current strengths and challenges; (3) using evaluation findings to develop an action plan; (4) implementing the action plan; and (5) beginning anew in the continuous process of learning and improvement. Each of these stages is characterized by a series of tasks or challenges. Using the National School Climate Council's School Climate Standards as an example, the preparation phase includes the following tasks: forming a representative school climate improvement leadership team and collaboratively establishing ground rules; building support and fostering "buy-in" for the school climate improvement process; developing a shared vision for the desired type of school and school climate; establishing a "no-fault framework" and promoting a culture of trust; ensuring that team members have adequate resources to support the process; celebrating successes and building; and, reflecting on successes and challenges during this preparation phase (Cohen & Pickeral, 2009).

School climate and social-emotional learning improvement processes are intersecting and increasingly aligned with findings from implementation science. Implementation science, which acknowledges learning and improvement as an ongoing process, highlights that effective instruction and implementation, along with enabling supportive systems, can support educationally significant outcomes (Blase et al., 2013; Bryk et al., 2010, 2015; Fixsen et al., 2005). School climate informed research has shown that positive school climate improvement efforts are associated with effective prevention of bully-victim-bystander behavior, high school dropouts, and school violence while supporting healthy and "connected" relationships, student learning and achievement, and higher teacher retention rates (Jones & Kahn, 2017; Weissberg et al., 2015). Due to this growing body of empirical research that supports the notion that context matters and an increasing awareness that school climate reform supports effective violence prevention, there has been a rising interest and attention in school climate reform efforts in recent years.

Three core goals that color virtually all school climate improvement efforts include promoting: social, emotional, and academic learning; safer, more supportive, and engaging climates for learning; and, healthy "connected" relationships (Fink et al., 2017). These core goals and the collaborative and hopefully, engaged process of students, educators and parents learning and working together will enhance student learning and skills that provide the foundation for resiliency and a resilience mindset (American Psychological Association, 2010; Brooks & Goldstein, 2001). These core goals include feeling appreciated and competent; learning to become more (intrinsically) motivated; developing and practicing a range of social-emotional competences including reflective, empathic, perspective taking and flexible problem-solving capacities; and, understanding that mistakes and obstacles are inevitable individual and organizational challenges. In an overlapping manner, school climate and SEL informed improvement efforts are explicitly relationally based. As such, school climate reform tends to foster more connected, supportive and positive attachment or relations (Masten, 2021; Goldstein & Brooks, 2022a, b).

In the world of practice, an underlying premise is that what is measured is what counts. Measuring and recognizing the social, emotional,

civic, and intellectual dimensions of learning and using this data to mobilize school community members to create a safe, supportive, engaging, and helpfully challenging learning environments supports the development of a resilient mindset. Today, there are hundreds of school climate measures. There are a few important issues in relation to measuring school climate. First, since there is no one agreed definition of school climate and various interpretations of what school climate comprises, measurement of school climate often points in different and, at times, confusing directions. Second, there are very few valid and reliable measurement tools that recognize student, parent/guardian, and school personal "voice" that comprehensively measure all of the dimensions of school climate. Among those, most school climate assessments are based on student reports (Bottiani et al., 2020; Thapa et al., 2013; Waasdorp et al., 2011; Wang & Degol, 2016). And, even within student populations, there are issues related to differences in perceptions of school climate not being tapped by the assessments (Lindstrom et al., 2019; Waasdorp et al., 2019) as well as issues related to gaps in achievement and discipline across race and ethnicity (Voight et al., 2015). Third, the "community voice" has been almost completely absent in the school climate assessment practice (see Ice et al., 2015; Thapa & Cohen, 2017).

Besides these construct and representation related issues, measurement systems for data today are too often used as a "hammer" or a way of simplistically giving schools, districts or states a literal or figurative "grade" which can have immediate funding implications. As a result, it is not uncommon for educators to lie about test scores. Measurement systems and educational data should be a "flashlight" rather than a "hammer"—information that guides learning and improvement efforts.

Too often, school improvement efforts are fragmented and uncoordinated. For example, schools often focus on improving reading instruction or promoting safety or engaging parents/guardians. These goals in fact, overlap. How safe students feel, for example, will color and shape language (and other aspects of) learning. How engaged parents/guardians are in the life of the school powerfully colors our ability to protect students and promote their learning. School climate evaluations provide a snapshot of safety, relationships, teaching and learning within the school, as well as other environmentally related strengths and needs. Depending on how these findings are used, the school community then has the opportunity to learn, plan and implement improvement efforts that build on current strengths and needs.

Conclusion

In conclusion, measuring and improving school climate is an important, research-based strategy that supports the whole child and the entire school community working and learning together. Current educational policy does not recognize the array of children's needs and as a result, tragically poses a greater risk of leaving children behind in the American public education.

Clearly, school climate assessment and improvement efforts are useful if we aim to support children developing the skills, knowledge, and dispositions they need as the foundation to love, work, and effectively participate in a democratic society. When we measure and work to improve school climate, we are recognizing the essential social, emotional, ethical, civic, and intellectual aspects of learning; furthering our school improvement efforts; supporting shared leadership and learning; promoting school-family-community partnerships; and spurring student engagement. In doing so, we are promoting the development of resilient mindsets.

We now have sets of policy and practice tools and guidelines that will narrow the socially unjust gap between school climate research, policy, practice guidelines, and teacher education. For too many years, American public education has focused all its energies on reading and math scores. As important as linguistic and mathematical competences are, it is unfair and, in some ways, socially unjust to not recognize the whole child and the entire school community. In fact, we suggest that this is violation of children's

rights (Cohen, 2006; Greene, 2006). Measuring and improving school climate is a practical, prosocial strategy that supports all children and their ability to become healthy, lifelong learners.

Challenges of the Field

There are a number of meaningful limitations of the field. First, as highlighted in the earlier section, there is a lack of well-defined and research-based models, and it has hampered process as well as outcome evaluation. As noted earlier, there is not a national or international consensus about how to define "school climate," or the "school climate improvement process" and the dimensions that need to be regularly measured in school climate research and improvement efforts. To some extent, this has stymied and continues to stymie the advancement of school climate research so necessary to inform school improvement efforts. In addition, it hampers the development of the field, specifically measurement practices. Second, there is a huge gap between research and practice in this area. For example, most of the school climate improvement work has not been aligned with findings from implementation science. Third, a meaningful school improvement is necessarily an ongoing and iterative process. But, annual assessments of school climate are a major challenge, particularly in countries constrained by resources and expertise in designing or using school climate assessments.

Future Directions

School climate research is clearly evolving. The field demands rigorous and empirically sound research that focuses on relating specific aspects and activities of interventions to changes in specific components of school climate. We also need empirical evidence based on sound research techniques that shows how interventions and climate affect specific socio-moral, emotional, civic, and cognitive development and the teaching and learning of both students and teachers. Understanding the interactions of these processes in the contexts of interventions will enable schools to successfully adapt interventions that have been shown to promote one or more of these positive outcomes. We need to translate these research findings into smarter educational policies to improve low performing schools and to enhance the quality of our students' lives. The research in school climate points out the need for resilient individuals, educators in every school community, and policy makers to work hand-in-hand to achieve these essential goals.

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30 Nurturing Positive Emotions in the Classroom: A Foundation for Purpose, Motivation, and Resilience in Schools

Robert B. Brooks and Suzanne Brooks

The planning for this chapter commenced shortly before COVID-19 emerged in the United States in March, 2020. Our goal was to describe (a) the burgeoning body of research detailing the impact that positive emotions have on brain development, intrinsic motivation, learning, problem solving, and resilience, and (b) the implications of these research findings for implementing effective practices in schools. In actuality, the effect of positive emotions is evident not only in schools but in a variety of other settings and situations, including mental health agencies, psychotherapy, coaching, and financial and business consulting (Achor, 2010; Brooks, 2018; Brooks & Richman, 2020; Davidson, 2016; Fredrickson, 2009).

The themes we planned to address have assumed even greater relevance and urgency given the disruptive and unprecedented ramifications of COVID-19 in all arenas of our lives. As the vast majority of educators will attest, they were required to make a dramatic shift in their teaching techniques with little, if any, time to adjust. The challenges they faced often felt Herculean as the unrelenting presence of the coronavirus necessitated that they teach remotely and/or within a hybrid model for which neither they nor their students nor the families of the students were adequately prepared.

Descriptive words such as "unsettling," "scary," and "unpredictable" became commonplace when describing the consequences of the pandemic, but these and similar words could not fully capture the extent of the physical and emotional turmoil that arose throughout society, including our schools. In-person educational practices applied successfully in the past to connect with and teach students seemed questionable in the face of COVID-19. Staring at a computer screen filled with 25 boxes, each housing one student, replaced the richness of live interactions. In many schools that used a hybrid model, half of the students were in the classroom while the other half were attending remotely. This necessitated that teachers interact in-person with some students while at the same time struggling to maintain contact with other students on a computer screen. Problems were magnified, at least during the first few months if not longer, by the need of educators to learn new technologies and to apply these technologies to teaching practices.

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https://doi.org/10.1007/978-3-031-14728-9_30

Suzanne,[1] in her role as a school psychologist, experienced firsthand the stresses and pressures on students, parents, faculty, and administrators brought about by the pandemic. Bob, in planning and offering numerous webinars for parents, educators, and mental health and health care providers, heard many examples of the struggles these groups faced in adapting to the realities of the coronavirus. While these struggles were noteworthy, we were impressed by the creativity, perseverance, and resilience displayed by educators in their quest to meet both the academic and social-emotional needs of students.

The case material offered throughout this chapter to illustrate the ideas and strategies of our strength-based approach are taken from both pre-pandemic and pandemic times. The basic tenets of the approach are relevant whether educators are facing a challenge as formidable as COVID-19 or while teaching during what might be perceived as calmer, less traumatic times.

In this chapter we will address the following topics:

- The concept of mindsets and its application in the school setting.
- The impact of one person to change a child's life forever.
- Theories and research that highlight the impact of positive emotions.
- A framework with specific strategies for nurturing positive emotions, learning, intrinsic motivation, caring, purpose, and resilience in schools.

The Concept of Mindsets

Mindsets may be understood as a set of assumptions and attitudes that we possess about ourselves and others that influence our behaviors and the skills we develop. In turn, these behaviors and skills influence our assumptions and attitudes so that a dynamic process is constantly operating (Brooks & Goldstein, 2001, 2004). The mindsets that educators possess about themselves and their students will determine their expectations, teaching practices, and relationships with their students (Goldstein & Brooks, 2007). These mindsets also determine the disciplinary techniques that are applied in classrooms (Okonofua et al., 2016a, b),

Educators bring assumptions about student behavior into all of their interactions with students. The more aware they are of these assumptions, the more they can modify those beliefs that may work against the creation of a positive classroom climate. Even those assumptions about which we may not be cognizant have a way of being expressed to students.

As an example of this phenomenon, Suzanne consulted with a teacher about Jonathan, an 8-year-old patient who had learning and attention problems. The child constantly asked questions in class, which triggered the teacher's annoyance and frustration. In discussing Jonathan with Suzanne, the teacher became aware that her annoyance was rooted, in part, in her assumption that his constant asking of questions was an intentional ploy to distract her and the class. If teachers assume the main purpose of a student's questions is to distract them or disrupt the class, they are likely to respond in a judgmental, punitive manner.

In her consultation, Suzanne reframed the purpose of Jonathan's questions, using information from the evaluation she had conducted, including test data as well as parent and teacher observations. She highlighted both his anxiety as he attempted to understand the material as well as his impulsivity, which contributed to his constant questions.

The teacher displayed refreshing openness in modifying her assumptions about Jonathan's behavior, no longer interpreting his asking questions as an intentional ploy to disrupt her teaching. This change in mindset paved the way for a shift in her approach. Knowing that the presentation of new material was especially problematic and anxiety-provoking for Jonathan, she asked her student teacher to prepare him in advance for

[1] Since the authors have the same last name and prefer not to use the description "first" or "second" author when referring to specific examples that involve the work of one of them, their first names will be used.

this material. She also established a "question time" in which she or the student teacher would put aside a few minutes each hour to listen to and answer Jonathan's questions, a practice that actually decreased the amount of time she had to spend with him. Jonathan felt less anxious knowing that he had this "question time" available, which allowed him to hold off from asking constant questions in class. Another strategy involved Jonathan writing down pressing questions to be reviewed at "question time," a technique that proved effective in managing his impulsivity.

Most revealing was when Jonathan informed his parents that he thought his teacher really liked him. In fact, his assessment was accurate given her change in mindset and the accompanying implementation of effective, nonjudgmental strategies.

A second illustration of the way in which the mindsets of educators determine the extent to which they nurture positive emotions, motivation, and resilience is apparent in the following example:

Parents of a high school student, John, contacted Bob and asked him to serve as a consultant to their son's school program. An earlier evaluation revealed that John was struggling with learning disabilities and academic demands. When Bob met with John's teachers and requested that they share their perceptions of him, one immediately responded with obvious anger, "John is one of the most defiant, oppositional, lazy, unmotivated, irresponsible students we have at this school!"

Another teacher seemed surprised by the harshness of this assessment. In a manner that maintained respect of her colleague's opinion, she said, "I have a different view. I think John is really struggling with learning and he feels very vulnerable every day when he enters the school. I think that as a staff we should figure out a different way of teaching him because what we are doing now is a prescription for failure."

In listening to these two descriptions of the same student, one might question if the teachers were actually offering opinions of two very different youngsters, which of course they were not. It was not surprising to discover that these vividly contrasting opinions or mindsets and the consequent teacher behaviors contributed to John having a markedly different mindset and response to each of the two teachers.

After the meeting Bob interviewed John and asked him to describe his teachers, not revealing what they had said about him. In describing the teacher who had portrayed him very negatively, John said with noticeable emotion, "She hates me, but that's okay because I hate her. And I won't do any work in her class."

John continued, "And don't tell me that I'm only hurting myself by not doing work" (he must have heard that advice on numerous occasions). "What you don't understand, Dr. Brooks, is that in her eyes I am a failure. Whatever I do in her class is never going to be good enough. She doesn't expect me to pass, so why even try?" He added that from the first day of class he felt "angry vibes" from her.

"She just didn't like me and soon I didn't like her. I could tell she didn't want me in her class just by the way she spoke to me. Right away she seemed so angry at me. I really don't know why she felt that way. So after a while I knew there was no way I could succeed in her class so I just decided that I wouldn't even try. It would just be a waste of time. She told me I was lazy, but if she was honest she would have to admit that she doesn't think I could ever get a good grade in her class."

John's face lit up as he described the teacher who thought that the primary issues that should be addressed were his struggles with learning and his sense of vulnerability. He said, "I love her. She went out of her way the first week of school to tell me something. She said that she knew I was having trouble with learning, but she thought I was smart and she had to figure out the best way to teach me. She said that one of the reasons she became a teacher was to help all students learn. She's always there to help."

In hearing John's perception or mindset of these two teachers, it is not difficult to appreciate why he was a discipline problem with the first teacher but not the second. His behavior with each of them reflected what he believed were their mindsets and expectations for him. We

recognize that it typically takes "two to tango" and most likely at some point John bore some responsibility for adding fuel to the "angry vibes," thereby confirming the first teacher's negative perceptions of him. However, it is essential for educators to identify and modify those features of their mindset that work against student motivation and student engagement and serve as barriers to students becoming more optimistic and resilient.

Theories of Mindset

The concept of mindsets has become a prominent area of study in the fields of education and mental health during the past 25 years. Several well-known theories were actually proposed more than 60 years ago, although the label "mindset" was not used when these theories were first described (Brooks et al., 2012; Goldstein & Brooks, 2007).

Rotter (1954, 1966) introduced the theory of "locus of control," Weiner (1974) outlined "attribution theory," Bandura (1977, 1997) defined "self-efficacy" theory, and Seligman (1975, 1995) shifted his focus from "learned helplessness" to "learned optimism" as he became a driving force in the development of the field of "positive psychology." More recently, Dweck (2006) differentiated between a "fixed" and "growth" mindset, which, similar to the underpinnings of "learned helplessness" and "learned optimism" theories, has its roots in attribution theory, and Duckworth (2016) articulated the concept of "grit."

These different theories when applied to the field of education have contributed to our understanding about the ways in which the mindsets of teachers and students play a critical role in schools and the learning process. We believe that one shortcoming of many of these theories is that they primarily examine the ways in which mindsets determine what may be understood as achievement outcomes (e.g., one's grades or scores on tests or completion of homework). A consideration of the role interpersonal and social-emotional factors play is often lacking. For instance, they do not address such questions as: What is the mindset and behaviors of adults who are effective in promoting self-efficacy, optimism, or a growth mindset? Or, what are the social-emotional qualities associated with resilience? An understanding of these qualities can serve as guideposts for educators, parents, and other caregivers as they seek to nurture hope and resilience in children and adolescents.

A "Resilient Mindset"

Brooks and Goldstein (2001, 2004) introduced the concept of a "resilient mindset." The components of a resilient mindset and accompanying behaviors embraced a wide spectrum of beliefs and phenomena in both children and adults. These included effective goal-setting, coping strategies, and problem-solving skills, an attitude that one can learn from rather than feel defeated by setbacks and obstacles, and an appreciation of one's strengths or "islands of competence." Brooks and Goldstein (2001) also highlighted what may be understood as the social-emotional components of a resilient mindset and behaviors such as empathy, compassion, enriching the lives of others, and gratitude.

Goldstein and Brooks (2021) recently elaborated on their work in the area of resilience by proposing the concept of *tenacity,* which they describe as composed of seven instincts, including intuitive optimism, compassionate empathy, genuine altruism, and virtuous responsibility (Brooks, 2022; Goldstein & Brooks, 2021). As the word implies, the *instincts* of tenacity are understood to be inborn attributes. However, unlike instincts observed in other species, they are not fixed patterns of behavior that lead to very specific outcomes such as a bird building a nest for the first time or a salmon returning upriver to its place of birth. Instead, they are conceptualized as intuitive ways of knowing and behaving that provide the seeds for ongoing growth and adaptation.

Whether describing resilience or tenacity, Goldstein and Brooks (2021) emphasize a critical foundation for both to develop—the power of one

person to change the trajectory of a child's life forever. We are aware that the belief that one can have such a positive influence has been sorely questioned by educators during the pandemic. We turn to that topic next.

The Lifelong Impact of One Person

Robitaille and LeBuffe (2022) report that teaching is one of the most stress-filled occupations in the United States, which we believe will not come as a surprise to most teachers. Research identifies several key factors that contribute to this stress and burnout, including a lack of perceived support from school leadership, many of whom feel they receive little, if any, support themselves, increasing job demands such as high stakes testing and reduced planning time, and a limited, if not nonexistent, role in making decisions that impact directly on their responsibilities. As Robitaille and LeBuffe (2022) observe, high levels of stress experienced by teachers adversely affect their ability to develop meaningful relations with students and reinforce both academic and social-emotional strengths.

The stress and lack of support experienced by many educators, evident well before the emergence of the pandemic, have prompted a significant number to leave the field of education, with 44% departing within the first 5 years of their career. The price of failing to retain teachers is significant on many levels, including the high cost associated with constantly recruiting, hiring, and training new teachers (Robitaille & LeBuffe, 2022).

There are no simple remedies to reduce the dynamics that contribute to teacher stress and the consequences that follow. Sadly, what we have observed in our workshops and consultations with educators is that some, burdened with anxiety and a lack of job satisfaction, begin to lose sight of a reality that has the possibility of reducing stress and reinforcing resilience—namely, the profound, lifelong influence that they can have on the lives of students As Brooks and Goldstein (2001, 2004) have emphasized, resilience is fostered in both children and adults when they are involved in activities that they believe enrich the lives of others. This belief provides a sense of purpose that fuels well-being and alleviates feelings of malaise and burnout.

Imagine if you went to work each day (in person or virtually) believing that what you do has minimal value and makes little, if any, difference in the lives of others. Such an outlook is a recipe for unhappiness and emotional strain. In our consultations and workshops with teachers we have heard a number question the positive influence they have on students. A teacher attending one of our workshops several years ago lamented, "I feel that I'm losing touch with my students, I feel so much pressure to do things that aren't enjoyable and from my perspective seem to have little value. As one example, I'm putting in an increasing amount of time and energy preparing my students to take high stakes tests rather than really getting to know them. If I knew I was going to feel this way about teaching, I probably would never have gone into the field."

Another observed, "I work in a school district that has many students living under the poverty level. They deal everyday with food insecurity, violence, and drugs. Given all of the challenges they confront on a regular basis, I wonder what if any impact I can have in school, if I can improve their lives in any way."

In our experience the disillusionment expressed by these and numerous other teachers intensified during the pandemic. Many feel disconnected from their students, unable to fully engage them in learning tasks or to identify and respond effectively to emotions displayed on a computer screen. It is little wonder that their enthusiasm for teaching has waned and they question the purpose they serve for their students. In such an atmosphere, negative rather than positive emotions are likely to permeate and dominate the learning process, intensifying an already challenging situation.

A "Charismatic Adult"

What can help to counteract, at least in part, this disillusionment? Clues reside in the feedback

Bob has received from teachers about his webinars since the start of the pandemic. They particularly voiced appreciation of his message about the power of "charismatic adults" in developing hope and resilience in children.

Research conducted during the past 30 to 35 years has attempted to identify factors that help children and adolescents overcome adversity and become resilient. A primary finding, especially when studying children who have grown up under very distressing situations, is the presence of at least one adult, hopefully more than one, who provides support and encouragement (Brooks, 1994; Brooks et al., 2012; Brooks & Goldstein, 2001; Goldstein & Brooks, 2007; Werner & Smith, 2001). As noted by the late psychologist Julius Segal (1988) who introduced the notion of a "charismatic adult," schools can play a significant role in nurturing resilience. He wrote:

> From studies conducted around the world, researchers have distilled a number of factors that enable such children of misfortune to beat the heavy odds against them. One factor turns out to be the presence in their lives of a charismatic adult—a person with whom they can identify and from whom they gather strength. And in a surprising number of cases that person turns out to be a teacher. (p. 3)

Teachers are in a unique position to assume the role of a charismatic adult for a child of any age. Even seemingly small gestures on the part of an educator can have a lifelong impact on a student (Brooks, 1991). A smile, a warm greeting, a note of encouragement, a few minutes to meet alone with a student (even virtually in the face of the pandemic) are but several activities that define the behaviors of a charismatic teacher.

To reinforce a sense of purpose and resilience in teachers and lessen the possibility of burnout, it is important that that they truly appreciate the lifelong impact they can have on students. To emphasize this point, we pose several questions at our workshops for educators. They include the following:

"Who was a charismatic teacher in your life when you were a student?"

"What did that teacher say and do to make her/him a charismatic teacher for you?"

At one of our workshops a teacher asked, "If there are charismatic adults, are there also anti-charismatic adults?" When asked to define what she meant, she replied without hesitation and with much feeling, "They suck the energy out of you and put you down!" Everyone attending the workshop agreed about the existence of anti-charismatic adults, with many eager to share anecdotes about such a negative person in their lives. Given the notion of an anticharismatic adult, we added the following questions:

"Who was an anti-charismatic teacher in your life when you were a student?"

"What did that teacher say or do that made her/him an anti-charismatic teacher for you?"

"Do you use memories of your charismatic and anti-charismatic teachers to guide what you do today?"

What has impressed us are the vivid memories and emotions evoked by these questions even when the actual event they are reporting occurred years earlier. One teacher began to cry while relating a painful vignette from 40 years ago when she was 6 years old. The incident involved a teacher humiliating her in front of the entire class. She appeared surprised by her strong emotional response, observing, "This happened 40 years ago and it's hard to believe how painful that experience continues to be." In contrast, another educator recounted an interaction that occurred 30 years earlier with a high school teacher. "He went out of his way to be very encouraging when I was feeling really down. I never tire thinking about that moment when he asked to speak with me and was very comforting. Because of him, I became a high school teacher."

Experiencing these strong emotions when thinking about and describing one's own school experiences as a student serves to reinforce the belief that teachers have a lifelong impact—a belief that provides a sense of purpose and meaning to what educators say and do each day. This

prompts another couple of questions for educators to consider:

"What memories do you hope your students take away from their experiences with you?"
"What do you *intentionally* say or do on a regular basis so that they are likely to have the memories of you that you hope they have?" (We emphasize *intentional* since we believe that we must be more intentional in our words and behaviors if we want our students to see us in the way we hope.)

A goal of asking teachers to reflect on all of these questions is not only to help them identify guideposts for their own practices with students but to remind them of the profound influence they can have each day on their students.

Empathy

Closely tied to the questions raised above are others related to empathy, an essential skill necessary to forge positive relationships and assume the role of a charismatic adult (Goleman, 1995, 2006). Empathic teachers display the capacity to put themselves in the shoes of their students on both a cognitive and affective level and perceive the world through their eyes. Empathy fosters connectedness between people.

Empathy is promoted when educators ask themselves the following questions:

"Would I want anyone to say or do to me what I have just said or done to this student?"
"In anything I say or do, what do I hope to accomplish?"
"Am I saying or doing it in way in which my students will be most likely to hear and respond constructively to my message?"

The following example captures the importance of considering these questions as an educator. A teacher may attempt to motivate a student by exhorting the latter to "try harder." While the teacher may be well-intentioned, believing the words "try harder" convey encouragement, the words are easily interpreted as assuming that the student is not willing to expend the time or energy to succeed. It is little wonder that students frequently experience "try harder" as accusatory and judgmental. In fact, factors other than a presumed lack of effort, such as an undiagnosed learning problem or the presence of anxiety, may be the main sources of the student's learning difficulties and seeming lack of motivation.

Empathic teachers, attempting to see the world through the eyes of their students, might ask themselves, "If I were struggling in my role as a teacher, how would I feel if a colleague or principal said to me, 'If you tried harder, you wouldn't have this problem and you would be a better teacher.'?" When we ask this question at our presentations many teachers smile and say they would be upset. One teacher told us, "I never really thought about how judgmental a comment like 'try harder' can come across."

In addition to the questions we have already raised in this section, there are additional ones we pose to highlight the importance of empathy:

"Just as you have words to describe your teachers when you were students, your students have words to describe you. What words do you hope your students use to describe you?"
"What do you *intentionally* say and do on a regular basis so that they are likely to use the words you hope they would use?"
"What words do you think they would actually use?"
"If you think they will use words that differ from the words you hope they would use, what changes will you make to bring the two descriptions closer together?"

Various studies have found that when teachers are experienced as empathic, students feel more positive toward them, which leads to more effective learning and fewer incidents of misbehavior (Okonofua et al., 2016a; Parker, 2016). Parker, citing the work of Okonofua, Pauneski, and Walton, asserted that too often teachers resort to a "default punitive mindset" due in part to zero-tolerance policies on student behavior. Such a negative default mindset interferes with the

establishment of positive teacher-student interactions. These researchers wondered what would occur if they could replace a punitive mindset with an empathic mindset in teachers.

The findings from numerous studies indicated very promising results when teachers were primed to develop an empathic mindset. For instance, one study involved asking a group of teachers to write an essay of how positive teacher-student relationships are critical for students to learn self-control (empathic mindset), while another group was requested to write about how punishment is critical for teachers to take control of a classroom (punitive mindset). In another study that encouraged an empathic mindset, teachers were asked to review articles about the ways in which negative emotions on the part of teachers could prompt students to misbehave, while communicating empathy helped nurture positive relationships and improve student behavior.

These seemingly simply exercises had a significant impact on developing an empathic mindset in teachers, which translated into positive behaviors on their part toward students; the result was an improvement in both student behavior and learning (Parker, 2016).

Personal Control and Resilience

The questions and research included in the previous section will be applied most successfully if we are guided by a belief in "personal control." In identifying personal control as a key ingredient of a resilient mindset, Brooks and Goldstein (2004) offered the following description of this concept:

> Taking ownership of our behavior and becoming more resilient requires us to recognize that we are the authors of our lives. We must not seek our happiness by asking someone else to change but instead always ask, "*What is it that I can do differently to change the situation?"* Assuming personal control and responsibility is a fundamental underpinning of a resilient mindset, one that affects all other features of this mindset. (p. 7)

We noted earlier that a number of teachers have shared doubts about their effectiveness with students. Some wonder what impact they can have if their students have faced noteworthy adversity such as poverty, housing insecurity, or witnessing violence. These doubts have intensified as a result of the disruptions caused by the pandemic. The adversities faced by students should never be minimized and as much as possible we must ensure the safety of students, especially when the latter are in dangerous situations. However, in keeping with the tenets of personal control, it is important that teachers not lose sight of what factors they can control in the lives of students. We must recognize for some students their main source of safety, security, and comfort resides in their classroom experiences. Their main positive relationships with adults are with their teachers.

Adopting an outlook of personal control not only empowers teachers to become charismatic adults in the lives of their students but also places them in a position of reinforcing a similar outlook in their students. A focus on what we have control over encourages problem-solving skills and hope while lessening feelings of helplessness and hopelessness. It encourages students to consider that while negative events have transpired in their lives over which they have had little, if any, control, what they do have control over is their attitude toward and response to these events.

Seth, a 9-year-old boy with a diagnosis of ADHD, was not only struggling in school but with the emotions elicited by the recent divorce of his parents. In one session, frustrated and angry, he asked Bob, "Why did God choose me to be the one with ADHD?"

It is not unusual for children or adults faced with challenging situations to ask, "Why me?" or "Why my child?" The problem emerges when the "Why?" question continues to dominate one's thinking year after year. When that occurs the shackles of helplessness and what may be understood as a victim's mentality become the dominant features of a person's mindset. Gerber et al. (1992), in studying adults with learning disabilities, found that those who were most successful in different arenas of their lives had adopted the belief, "I had no control over being born with learning problems, but I do have control in terms of how effectively I cope with those problems."

The less successful adults continued to ask, "Why did I have to be born with learning disabilities?"

How might a therapist or teacher respond to Seth's question, "Why did God choose me to be the one with ADHD?" When asked what he thought, Seth could offer no explanation other than to say he has always had ADHD. Gerber et al.'s (1992) research findings offer some guideposts of how best to reply to Seth. A strength-based response guided by reinforcing personal control might include the following: "We're not sure why some kids have ADHD and some don't, but the encouraging news is that now that we know you have ADHD, there are things that adults can do to help you. And there are things that you can learn to do yourself to be more successful in school and other places."

As a clinical and school psychologist, Suzanne regularly reinforces a feeling of personal control in her sessions with children who are experiencing difficulties in school. Anna, an 8-year-old, was beset with social anxiety. Although she was willing to talk with Suzanne about her interests, she became paralyzed when the discussion turned to peer relationships and school. Her teacher reported that Anna hesitated to join groups of two or more children, particularly on the school playground. As long as Anna continued to feel paralyzed in confronting her problems, it would be almost impossible for her to develop a sense of personal control and become resilient.

In this situation, Suzanne utilized an effective technique well-known to therapists, especially those who work with children. She relied on "displacement" so that Anna would not immediately feel threatened. Suzanne informed Anna that she knew a little boy who was having a problem talking with friends and was not certain the best way to help him. Anna, similar to many other children, moved into this displacement with ease, asking, "Does he have a hard time on the playground?" Suzanne replied, "Yes, the playground is where he has most trouble."

Even if Anna had not directly referred to the playground, Suzanne could have introduced that specific area within the displacement. It was obvious that Anna was ready to discuss her problems as long as the right venue was found. She asked, "Is he scared to talk with other children?" Eventually, Anna observed, "I think he might be worried they will make fun of him."

Once this worry was verbalized, Suzanne engaged Anna in considering strategies for helping this boy, which, of course, were the same strategies that Anna could implement to deal with her own problems. In essence, Anna no longer felt helpless. Rather, in assuming a position of expertise, she felt increasingly confident in her problem-solving skills.

The Influence of Positive Emotions

Anna's improved outlook and successful application of effective coping strategies were accompanied and supported by the emergence of positive emotions. The presence of positive emotions plays a significant role in reinforcing the success of individuals and organizations, including schools.

In recent years, there has been an increased interest in studying the "emotional culture" of an organization (Barsade & O'Neill, 2016). While much of this focus has centered on business organizations, the concept is equally relevant to the school environment. Barsade and O'Neill (2016) distinguish between "cognitive" culture and "emotional" culture. They define cognitive culture as "the shared *intellectual* values, norms, artifacts, and assumptions that serve as a guide for the group to thrive. Cognitive culture sets the tone for how employees think and behave at work" (p. 60).

Barsade and O'Neill (2016) add:

> Cognitive culture is undeniably important for an organization's success. But it's only part of the story. The other part is what we call the group's *emotional culture:* the shared affective values, norms, artifacts, and assumptions that govern which emotions people have and express at work and which ones they are better off suppressing. . . . Emotional culture is rarely managed as deliberately as cognitive culture—and often it's not managed at all. (p. 60).

They describe several kinds of emotional culture, including joy, companionate love (the degree of affection, caring, and compassion that

employees feel and express toward one another), and fear.

Barsade and O'Neill (2016) emphasize that an organization's lack of attention to its emotional culture, especially in light of the impact it has on the organization's well-being, is unfortunate. They observe:

> Countless empirical studies show the significant impact of emotions on how people perform on tasks, how engaged and creative they are, how committed they are to their organizations, and how they make decisions. Positive emotions are consistently associated with better performance, quality, and customer service—this holds true across roles and industries and at various organizational levels. On the flip side (with certain short-term exceptions), negative emotions such as group anger, sadness, fear, and the like usually lead to negative outcomes, including poor performance and high turnover. (p. 60)

These insights about the influence of positive emotions on the well-being of an organization parallel the work of psychologists Shawn Achor (2010), Richard Davidson (2016), and Barbara Fredrickson (2009). A central tenet of Achor's approach is his questioning the belief that success leads to happiness, proposing instead that it is happiness that sets the stage for success. Certainly, there are many situations in which success at a task prompts a feeling of happiness. However, referring to a burgeoning body of research, Achor (2010) advanced the following view:

> More than a decade of groundbreaking research in the fields of positive psychology and neuroscience has proven in no uncertain terms that the relationship between success and happiness works the other way around. We now know that happiness is the precursor to success, not merely the result. And that happiness and optimism actually *fuel* performance and achievement (pp. 3–4).

Achor's definition of happiness helps to clarify that this emotion involves much more than the often-stated comment, "Be happy." Achor (2010) captures the sense of purpose embodied within a feeling of happiness when he writes:

> Happiness is the experience of positive emotions—pleasure combined with deeper feelings of meaning and purpose. Happiness implies a positive mood in the present and a positive outlook for the future. . . . The chief engine of happiness is positive emotions since happiness is, above all else, a feeling. (pp. 39-40)

Research findings cited by Achor (2010) have major implications for any environment, including schools, namely, that the existence of positive emotions contributes to people being more successful in meeting different challenges. As one example, physicians reinforced to be in a positive mood before making a diagnosis of a patient displayed greater speed and accuracy than physicians in a more neutral emotional state. Similarly, students primed to feel happy prior to taking math achievement tests did far better than their peers in an emotionally neutral position. "It turns out that our brains are literally hardwired to perform at their best not when they are negative or even neutral, but when they are positive" (p. 15).

Achor (2010), in bolstering this conclusion, stressed the work of Fredrickson (2009) who proposed the "broaden and build" theory of positive emotions. Based on her body of research, she found that negative emotions narrow people's thoughts about actions they can take in any given set of circumstances. In contrast, positive emotions are understood to broaden one's planning and problem-solving skills, and an openness to new ideas. "Joy, for instance, sparks the urge to play and be creative. Interest sparks the urge to explore and learn, whereas serenity sparks the urge to savor our current circumstances and integrate them into a new view of ourselves and the world around us" (p. 21).

In Fredrickson's (2009) opinion, positivity and positive emotions depend on one's mindset. "Positive emotions—like all emotions—arise from how you interpret events and ideas as they unfold" (p. 49). Since positivity is understood as rooted in our thoughts, Fredrickson contends that we have more control over the emergence of positive emotions than we might realize but that creating positivity in one's life involves more than wishful thinking. It involves intentionally doing things that will reinforce positive emotions.

Paralleling the work of Achor and Fredrickson is the research of psychologist and neuroscientist Richard Davidson (2016). The latter asserted that

"well-being is fundamentally no different than learning to play the cello. If one practices the skills of well-being, one will get better at it." Davidson's studies support the belief that there is noteworthy plasticity in the brain, and as a result there are actions both children and adults can initiate to strengthen these neural circuits. As examples of these actions, Davidson spotlighted practicing mindfulness meditation, engaging in acts of kindness, and displaying generosity. He offered this very powerful summation of his research (2016):

> There are now a plethora of data showing that when individuals engage in generous and altruistic behavior, they actually activate circuits in the brain that are key to fostering well-being. These circuits get activated in a way that is more enduring than the way we respond to other positive incentives, such as winning a game or earning a prize.

Similar to Achor's stance that our brains are hardwired to perform at their highest level when filled with positivity, Davidson (2016) provides the following view:

> Human beings come into the world with innate, basic goodness. When we engage in practices that are designed to cultivate kindness and compassion, we're not actually creating something *de novo* that didn't already exist. What we're doing is recognizing, strengthening, and nurturing a quality that was there from the outset.

The belief in the innate, basic goodness of humans is also captured by Goldstein and Brooks (2021) in their identifying the seven instincts of tenacity—inborn positive attributes such as empathy, compassion, and altruism that exist from birth and do not require "creating something *de novo* that didn't already exist."

Davidson and his colleagues applied his research findings to develop a "Kindness Curriculum" for preschoolers (Flook & Prager, 2016). This curriculum included a "kindness garden" that involved placing a sticker on a poster when students performed or benefited from an act of kindness; the curriculum also involved helping students to attend, relax, care about others, display gratitude, identify feelings, and show forgiveness toward themselves and others.

Flook and Prager (2016) reported that 68 students participated in the study with half exposed to the Kindness Curriculum and the other half serving as a control group. Although the study was small in nature, the results of the curriculum were very promising. Students who experienced the curriculum compared with those who did not demonstrated increased empathy and kindness, a greater capacity to calm themselves when they were upset, and an improvement in their ability to think flexibly and delay gratification.

The work and insights of Achor, Fredrickson, and Davidson have direct bearing on the emotional culture that is established in schools and indicate that the reinforcement of positive emotions, positive relationships, and purpose serves as the foundation for effective teaching strategies—strategies that address not only the academic success of students but their social-emotional development as well.

A Framework to Guide Our Work

The challenge, especially given the ongoing disruptions caused by the coronavirus, is how best to create positive emotions and a positive climate in schools—what Bob (Brooks, 2006a, b) has referred to as a "motivating environment"—in which intrinsic motivation, cooperation, resilience, and accomplishment thrive.

In our presentations for educators, we often ask, "What theories guide your interactions and learning strategies with students?" We pose a similar question for mental health clinicians. It is our belief that if we are to assume the role of a charismatic educator for our students, we must establish to direct us—guideposts that embrace the notion of the "whole child" and strengthen both academic and social-emotional growth (Paget, 2019).

A framework that we believe resonates with the strength-based approach we advocate and provides blueprints for strategies to reinforce learning, intrinsic motivation, caring, responsibility, and resilience has been proposed by psychologists Edward Deci and Richard Ryan (Deci & Flaste, 1995; Deci et al., 2001; Deci & Ryan, 2000). They have labeled their framework "self-

determination theory" (SDT). While SDT is best known as a theory of intrinsic motivation, it also includes other concepts we have detailed in this chapter such as personal control, positive emotions, and the significance of interpersonal relationships in influencing different organizations and schools.

A basic premise of Deci and Ryan's theory is that people will be intrinsically motivated to engage in tasks when certain inner needs are being satisfied. When this premise is applied to classrooms, it suggests that educators who focus on meeting these needs from the moment they first interact with students will help to create positive emotions and relationships that secure the foundation for academic and social-emotional success.

Four Needs

Those familiar with Glasser's (1998, 1999) "choice theory" and Brendtro et al.'s (1990) "Circle of Courage" approach will see the similarities between their frameworks and that proposed by Deci and Ryan. All three theories are based on satisfying particular needs. The four needs outlined by Deci and Ryan (2000) include:

The Need to Belong and Feel Connected

As we have emphasized throughout this chapter, a positive relationship between teacher and student is essential for creating a motivating environment in which teaching and learning will thrive. Assuming the role of a charismatic adult in a child's life is predicated on nurturing a sense of connectedness with that child. While some students, given past negative interactions with adults, may be more difficult to engage than other students, we believe that with time, patience, and empathy even these challenging students can come to trust us and feel safe in our presence.

As noted earlier, even seemingly small gestures on the part of an educator can have a lifelong impact on a student (Brooks, 1991). A smile, a warm greeting, a note of encouragement, learning each student's name, meeting alone for a few minutes with a student (even virtually in the face of the pandemic) are but several activities that define the behaviors of a charismatic teacher and help students to feel welcome and connected to their teachers.

Barsade and O'Neill (2016), when describing the emotional culture of an organization, have observed the importance of seemingly small gestures or what they call "micromoments." Positive micromoments have been labeled "microaffirmations" while negative micromoments are viewed as "microaggressions." Barsade and O'Neill describe micromoments as "small gestures rather than bold declarations of feeling. For example, little acts of kindness and support can add up to an emotional culture characterized by caring and compassion" (p. 61).

A body of research has found impressive results from teachers displaying positive greetings at the door (PGDs) at the beginning of a class or a school day (Aliday & Pakurar, 2007; Brooks, 2019; Cook et al., 2018; Tereda, 2018). In one study, Cook and his colleagues (2018) involved more than 200 middle school students in 10 classrooms. These researchers examined the impact of certain teacher behaviors at the door as students entered their classroom. The PGDs included the following gestures:

Say the student's name.
Make eye contact.
Use a friendly, nonverbal greeting such as a handshake, high five, or thumbs-up.
Give a few words of encouragement.
Ask how their day is going.

The teachers involved in the study reported that the PGD strategy was realistic and reasonable given the many demands they face.

Cook et al. (2018) noted that PGDs led to a 20% increase in student engagement and a 9% decrease in disruptive behaviors. Tereda (2018) observed, "Both measures improved in classrooms where teachers greeted their students, confirming what many teachers already know. Meeting students' emotional needs is just as important as meeting their academic needs."

Obviously, these positive actions should not be confined to the beginning of the school day. Microaffirmations should be expressed in a genuine fashion throughout the school day (and school year) and, when possible, even after school hours via brief emails that teachers send to students and their parents about noteworthy behavior/accomplishments on the student's part.

A hybrid or totally remote model of instruction poses special challenges for teachers to create an atmosphere that nurtures belonging and connectedness. While the challenges are formidable, we have been impressed with the creative ways in which teachers have fostered positive relations with students and among students even in the absence of in-person interactions.

Suzanne witnessed such creativity on the part of her colleagues at Weston Middle School. As one illustration of promoting connectedness via a hybrid model of instruction, a team of eighth grade social studies teachers considered how best to provide an environment that would allow students to engage in discourse with one another, debate the important issues faced in our country, and become more active participants in their community through a remote/hybrid model.

With a critical presidential election looming and a nation divided, dialogue in the form of group discussions was needed more than ever. However, given COVID restrictions, there were several barriers to in-person group work. At the beginning of the school year, Wednesdays were fully remote, with both cohorts coming together on Zoom (on the other days of the week when one cohort attended in-person, the other cohort attended remotely at the same time). Engaging such a large group of adolescents over Zoom seemed a daunting task. The teachers adapted their usual approach as they selected and implemented their most engaging group activities. The Zoom technology afforded students the opportunity to meet in breakout rooms, which allowed them to engage in lively and interactive small group discussions. In a small group setting many felt more comfortable and willing to participate and share their ideas than they would have in a larger group. In addition, they were able to connect and collaborate without having to wear masks so that everyone could see each other's faces.

Recognizing that many students felt isolated and overwhelmed, staff found ways to support them with increased outreach. At the beginning of the school year, when students were dismissed from their virtual attendance at midday, teachers offered 1:1 extra help and small group office hours. These office hours proved to be an invaluable format through which to connect with students individually, to check in with them, and to provide additional support. Similarly, during in-school mask breaks, staff routinely went outside with students to have conversations with them while observing their full facial expressions in a more relaxed setting.

At the start of the school year, the middle school implemented a remote "advisory" class that was focused on students' social-emotional development. Each week, a different topic was discussed. In one advisory lesson around the Thanksgiving holiday, students were asked what they were grateful for, and more specifically, "What's one kind or thoughtful thing someone did for you recently." When students were struggling to come up with ideas on their own, prompts were given (e.g., "I'm grateful for these three teachers…."). At the end of the lesson, students were asked to write thank you emails to a person in their life for whom they are grateful. Expressions of gratitude have been found to nurture well-being and resilience (Teh, 2019; Thompson, 2020).

The Need for Self-Determination and Autonomy

In our presentations for educators we frequently ask, "What choices or decisions do you feel you are encouraged or permitted to make about your work and responsibilities?" and "If we asked your students what choices and decisions they have in your classroom, how would they respond?" We pose these questions since a foundation for intrinsic motivation, personal control, positive emotions, and resilience is the belief that our voices are being heard and respected and that we have some control over what transpires in our lives.

Sadly, as we noted earlier in citing the observations of Robitaille and LeBuffe (2022) about stress and burnout in the teaching profession, many teachers report that they feel they have little say in what transpires in their classrooms. Unfortunately, while this is often an accurate assessment, we still encourage teachers to identify factors over which they have control, such as their attitude toward and interactions with their students. We make clear that this encouragement is not intended to minimize an essential finding in Deci and Ryan's work—that it will be easier for teachers to adopt a positive, optimistic attitude in their classrooms when they believe their input is being heard and validated.

Similarly with students, intrinsic motivation and a sense of ownership will be nurtured when adults seek and acknowledge their input (Merrill & Gonser, 2021). This does not imply that youngsters be permitted to do whatever they wish but rather that they be invited to share their ideas even if adults disagree with them. Such an invitation strengthens problem-solving and decision-making skills.

There are many examples of the benefits of reinforcing self-determination in the school setting. As one illustration, Bob described having students conduct research about possible charities to support (Brooks, 2006b). The students selected a charity and then made decisions about the best ways to raise money. These activities reinforced academic as well as social-emotional skills. In another school, seemingly small choices produced a noteworthy improvement in motivation and resilience. Teachers offered students a choice of which homework problems to do. For instance, if there were eight problems on a page, students were told, "It's your choice. You have to review all eight problems, but you select the six that you think will help you to learn best." Teachers observed that this simple choice resulted in students not only completing their homework but they did so with a higher quality.

Disciplinary practices can have more effective results when guided by the principles of self-determination and ownership. Teachers can ask students at the beginning of the school year, "What rules do you think we need in this classroom for all students to feel comfortable and learn best?" Once rules are established with the teacher's input and guidance, teachers can add, "Even as your teacher I may forget a rule. If I do, this is how I would like to be reminded. (Teachers can list one or two ways they would like to be reminded.) Now that I have mentioned how I would like to be reminded, how would you like me to remind you if you forget a rule?" (When students inform teachers how they would like to be reminded, they are less likely to experience a teacher's reminder as a form of nagging and more likely to hear what the teacher has to say; in addition, it is easier for students to consider ways of being reminded if teachers first serve as models by describing how they would like to be reminded.)

Given the anxiety associated with remote and hybrid learning during the pandemic, we constantly recommended that teachers encourage students to provide regular feedback about how they thought teaching and learning were progressing, what they thought was working and what they would recommend changing. The involvement of students in providing feedback reinforced a feeling of ownership and personal control and served to lessen anxiety.

When Suzanne interviews students as part of the testing process, she always asks a seemingly simple yet very important two-part question; "In what situations have you felt successful (either in school or outside of school)?" and "In what situations have you struggled?" When testing is completed, Suzanne conducts a feedback session with the student during which she ensures that her recommendations and strategies reflect the specific areas of strength and vulnerabilities that the student articulated during the interview. Suzanne has found that when she has obtained the input of students about their perceived areas of both strengths and challenges, they become more engaged and invested in their own learning and in adhering to the strategies that are implemented. Too often students are left out of this process and not asked for their input, which can result in a more passive approach to learning and a resistance to accepting available supports.

Parent involvement and input will help to maximize student success (Brooks, 1991). Suzanne has found that obtaining parent feedback has been very beneficial, especially for those parents who feel disconnected and lack a sense of say about their child's education. Prior to testing a student, Suzanne typically reaches out to parents to identify their concerns and to answer any questions. During one such conversation with the parent of a sixth grader (who was new to the school) and learning remotely, Suzanne sensed frustration and negativity in the parent's tone of voice, and in the comments she expressed. She was not certain if this was an accurate read, and, if so, what was he source of this mother's frustration.

Suzanne decided to acknowledge to the parent how difficult it has been for students and parents to stay engaged and organized with a hybrid schedule. Suzanne then asked the parent what she felt was particularly challenging for her as a parent and for her daughter. The parent replied, "Do you really want to know?" After Suzanne said, "Of course," the mother reported that her daughter does not do well with transitions and that becoming accustomed to a new school, changing schedules, and toggling back and forth between live teaching and zoom learning has been especially challenging. She added that her daughter is a "relationship person," and once she is more comfortable with a teacher and sees the teacher as her "go to," she is then much more motivated to do her work.

Suzanne thanked this mother for that feedback and asked her permission to share her insights with the school Team. During the IEP meeting, Suzanne referenced the strengths and concerns that were reflected during that initial conversation, and they were then incorporated into her education plan, much to the mother's satisfaction.

The Need to Feel Competent

In the early 1980s, Bob introduced the metaphor of "islands of competence" and described its importance and application in schools (Brooks, 1991). He observed that early in his career in meetings with parents and teachers, he was directed far too much by what has been referred to as the medical model, namely, identifying and "fixing" deficits, rather than focusing and building on strengths (Goldstein & Brooks, 2021). At that point in his career it seemed reasonable to Bob to focus on a child's problems since that was the reason parents and teachers contacted him. Bob had little appreciation that spending an inordinate amount of time identifying what was "wrong" with a child—even with the best intentions of helping the child—reinforced negative emotions and pessimism in the significant adults in the child's life.

A recognition of the negative emotions being elicited in these meetings prompted Bob to shift his approach. In his sessions with parents and teachers, after hearing about several of the child's problems, he said, "I appreciate your letting me know about some of your concerns about your child (student). I think it's important to identify your child's (student's) problems if we are to address these problems. However, now that we've discussed some of your child's (student's) struggles, I think it would be helpful if you could tell me what you view as your child's (student's) strengths or what I call their 'islands of competence.'"

When parents or teachers had difficulty identifying a child's islands of competence, Bob would engage them in a discussion about the child's interests and the activities that they noticed brought joy to the child. Once the significant adults in a child's life began to discuss the child's strengths, Bob noticed in most instances a shift in their mood and mindset. A renewed sense of optimism was accompanied by a greater openness to exploring new strategies to help the child. This shift in mood may now be understood in terms of the research noted earlier about the impact of positive emotions on improving problem-solving skills (Achor, 2010; Davidson, 2016; Fredrickson, 2009).

Deci and Ryan (2000) and other clinicians and researchers have emphasized the significance of reinforcing strengths as a source of intrinsic motivation and resilience. For instance, Rutter (1985), in describing resilient individuals, observed, "Experiences of success in one arena

of life led to enhanced self-esteem and a feeling of self-efficacy, enabling them to cope more successfully with the subsequent life challenges and adaptations" (p. 604). Katz (1994) noted, "Being able to showcase our talents, and to have them valued by important people in our lives, helps us to define our identities around that which we do best" (p. 10).

A positive tone can be established at the beginning of the school year by focusing on the strengths of students. Teachers have shared with us examples of the ways in which they have applied the concept of islands of competence in their schools. In one school students were asked to draw a strength or interest of theirs. Each drawing was displayed in the school lobby. As one teacher observed, "As students, staff, or parents enter the school, the first thing we see are examples of each student's strengths. What a positive tone that sets."

In a middle school, a teacher decided not to introduce any academic work on the first day or two of school but rather to ask students to write down on a small, circular piece of paper what they believed was an island of competence they possessed. She then placed each circle on a large board at the front of the room. She reported that this exercise prompted an enthusiastic discussion among her students about activities they enjoyed and forged closer student relationships as they shared common interests and strengths. She commented after 1 month into the school year that intrinsic motivation, student relationships, and student behaviors were significantly improved when compared with past years when she did not incorporate the island of competence activity at the beginning of the school year.

Another approach to assist students to feel competent is to lessen their fear of failure in schools. We believe that fear of failure is rooted in a fear of humiliation. One strategy for teachers to help students deal more effectively with possible mistakes and setbacks is to "prepare" them for these possible situations (Brooks, 2016). A technique to manage failure has been proposed by Oettingen (2014). She advocates that in any tasks we undertake, we identify not only our goals but also possible obstacles that may emerge as we attempt to reach these goals. To avoid the possibility that thinking about obstacles might contribute to a self-fulfilling prophecy for failure, Oettingen recommends that any discussion of setbacks be accompanied with a consideration of how to cope with these setbacks should they appear.

Oettingen (2014) found that this technique, which she calls "mental contrasting," resulted in better outcomes than when one focuses only on goals or only on obstacles. Being prepared for obstacles and setbacks as well as knowing strategies for coping reinforces problem-solving skills and a sense of personal control. "Mental contrasting" can be applied in the classroom by teachers discussing goals for learning, possible mistakes and setbacks that may arise, and how to cope with these adversities. In her role as a school psychologist, Suzanne regularly has students anticipate inevitable challenges they may encounter and the ways in which they will confront these situations. This kind of discussion reinforces in students a sense of empowerment and an appreciation of the competencies they possess.

The Need to Experience a Sense of Purpose

Earlier in this chapter we noted that intrinsic motivation and resilience are reinforced when people are involved in activities that enrich the lives of others, what Bob (Brooks, 1991) has referred to as "contributory" or "charitable activities." This is true for both children and adults. In research that Bob conducted via a questionnaire filled out anonymously, one of the questions he asked respondents was to briefly describe "one of their favorite memories of school when they were students, something a teacher or other adult said or did that reinforced their self-esteem, motivation, and dignity."

One of the most frequent themes cited by the respondents, who ranged in age from the early 20s to the early 70s, involved an occasion when they were asked to help out at school in some manner. Answers included, "I remember when a teacher asked me to pass out the milk and straws." "I loved when a teacher asked me to tutor a

younger child." "I felt really good when I was asked to water the plants in the lobby."

Supporting the importance of "contributory activities," Pink (2007), citing the work of Deci and Ryan, shared this thought about purpose and improving the lives of others: "Autonomous people working toward mastery perform at high levels. But those who do so in the service of some greater objective can achieve even more. The more deeply motivated—not to mention those who are most productive and satisfied—hitch their desires to a cause larger than themselves. (p. 131)".

In our consultations with teachers about particular students, especially those struggling in school, we typically ask, "If we interviewed this student and asked them what is one thing they do at the school that helps other students or staff, what would they say?" It is our belief, supported by numerous research findings, that when students are involved in "contributory activities" at school such involvement nurtures their sense of purpose and belonging, which reinforces their intrinsic motivation in the school setting.

An example of the impact of helping others in schools was noted in a Carnegie Council report (1989). They cited The Value Youth Partnership Program in San Antonio in which the dropout rate of at-risk adolescents was cut significantly when they were provided with opportunities to serve as tutors for younger students. The Carnegie report noted that the lowering of the dropout rates was remarkable since all of the tutors had already been left back twice and were reading at least two grade levels below their current grade. Other positive results were observed, including a decrease in disciplinary problems, an improvement in grades, and an increase in attendance.

Other illustrations of the impact of "contributory activities" on both the provider and the recipients include the following:

- A 9-year-old boy with behavior and learning problems whose self-proclaimed island of competence was his knowledge about taking care of his pet dog. The principal appointed him as the "pet monitor" of the school, which involved his helping to take care of the pets in the school, writing a brief book about this topic and having the book placed in the school library, and visiting many classrooms to inform other students about the care of pets. This boy's intrinsic motivation and behavior in school improved greatly.
- A middle school girl who loved painting had several of her paintings placed in the school lobby. In addition, she was asked to assist a number of other students with their paintings. As she entered school each day, she would be greeted by her paintings, which helped her to feel more comfortable in school. Her confidence was boosted by the compliments she received from peers and staff about her artistic abilities.
- A high school boy who had difficulty making friends noted that he sometimes felt like a "stranger" in his own school. Perhaps it was not surprising that given this feeling of being a stranger, he was drawn to helping refugees in his community adapt and develop friends in their new environment. With the assistance of the PTA and several other students, he planned a bake sale that raised money to help the refugees. This activity strengthened his sense of purpose and confidence and provided an avenue through which he became friends with several of his peers.

We have been questioned at times about the advisability of providing opportunities for students who are misbehaving and/or not completing their own work to tutor peers or engage in activities such as a "pet monitor." Some teachers have voiced their concerns with us, including, "Shouldn't the 'good' students, who are meeting all of their responsibilities, be the ones asked to take part in contributory activities? Isn't it reinforcing negative behavior when you 'reward' students who are misbehaving and/or not doing their work by allowing them to take time to tutor others or help out in the office (or some other activity)?"

These are important questions. In terms of leaving out the "good" students, our position is that "contributory activities" should be available for all students, not just a subsection of the

population. Resolving the issue of "reinforcing negative behavior" involves a shift in mindset. In our experience, in most schools when students are invited to engage in "contributory activities" it is in the context of a reward. That is, the students are told if you meet academic and behavioral requirements at a high level, you will then be permitted to tutor other students or to help out in the office. In this scenario, students who have adapted most successfully to school are the ones who are provided with opportunities that reinforce positive emotions, a sense of purpose, and intrinsic motivation, variables that are already a large part of their experiences.

Again, we believe all students should participate in these experiences and no group should be excluded. What this requires and what research supports, is that we move away from the following message to students, "If you act in a responsible way and meet all of the expectations we set for you, we will reward you with dignified things to do" (i.e., if you do your own work, then we will allow you to help others). Instead, we advocate the adoption of the following, perhaps more controversial, perspective: "We should provide students with activities that will nurture their sense of belonging and dignity in school. We should do so without imposing numerous preconditions that they may have difficulty meeting. We believe that when you provide students, especially those who are struggling, with positive experiences, they will in most instances rise to the occasion and their success in school will be markedly improved."

This alternative mindset requires that we also reflect on other questions. One is predicated on the notion of personal control. "If our efforts with a student are not effective, what is it that we can do differently to reach and teach this student rather than expecting the student to change first?" Another question is, "If we attempt a new approach such as inviting students who are struggling to be involved with contributory activities without any preconditions, what do we have to lose by implementing this strategy?" If such a strategy is not effective, we can learn from the setback and consider other interventions that might prove to be successful.

The four needs identified by Deci and Ryan (2000) can serve as valuable guideposts in creating positive relationships, positive emotions, intrinsic motivation, learning, and resilience in our schools. And, as one teacher told us, "Meeting these needs takes little time and can be built in to the regular schedule and activities of a classroom."

Concluding Thoughts

In this chapter, we have reviewed different theories and strategies of educational practice. As we consider these strategies, it is important to keep in mind that whether or not they prove effective will be determined in great part by the quality of the relationship educators develop with students. As we expressed earlier, we believe that one shortcoming of many mindset theories is their focus on achievement outcomes (e.g., one's grades or scores on tests or completion of homework) with only lip service paid to the power of the relationship. In the absence of teachers and other school staff assuming the role of a charismatic adult—an adult from whom students gather strength and with whom they develop a sense of trust and hope—educational strategies will be greatly compromised.

Let us always remember that it is the relationship, whether created during a pandemic or less challenging times, that provides the nourishment for intrinsic motivation, learning, and resilience to blossom and to have a lifelong impact on students. The legacy we leave for the next generation is rooted in this relationship.

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The BARR Model: Fostering Resilient School Systems, Staff, and Students

31

Angela Jerabek, Megan Reder-Schopp, Anu Sharma, and Maryann Corsello

Introduction

Systems perspectives on resiliency explain that children develop in the context of many systems, including families, peer groups, schools, communities, and societies (Bronfenbrenner, 1977, 1979). Within a school system, then, resilience is fostered through coordinated efforts of students, educators, families, communities, and numerous others. A systemic approach embraces the roles of the bidirectional processes of the individual and their environments (Luthar et al., 2000; Masten, 2001, 2007) and, thus, considers the protective factors and assets of each system in fostering resilience (Cameron et al., 2007; Ungar, 2011).

Schools function as one of the most powerful spaces to capitalize on the resilience of students (Rutter, 1979; Henderson & Milstein, 1996, 2003; Benard, 2004; Werner & Smith, 1982).

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Research has been consistent in identifying what children need to thrive and become resilient, and in stating that well-functioning adaptive systems create the ordinary magic that supports students who have faced challenges and bounced back to achieve success (Masten, 2009). Therefore, investigating resilience from a systems approach in a school setting provides a window into the mediating and moderating factors that impact students. Given that all children will at one time face adversity either through the recent pandemic or larger social issues of systemic racism or poverty or more individual adversities such as divorce, death, abuse, it is important that all children have access to skills and support that they can access when needed. Expanding the scope of resiliency to include all children paves the way for a more inclusive and proactive approach (Brooks & Goldstein, 2001, 2007; Goldstein & Brooks, 2007).

System-focused intervention programs support a positive, healthy school environment and foster resiliency among and between educators, students, and the school system. Several student and educator focused resilience programs have shown relative success within specific study populations (Masten, 2014). Until recently, system-focused programs that targeted resiliency from multi-tiered approaches were rare. However, comprehensive approaches are emerging within the field.

S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_31

Review of Interventions Fostering Resilience in Schools

Within the field of resilience literature, several interventions have emerged for fostering resilience for student populations (Masten, 2014). Among these approaches, the interventions are grouped by either target population or level. These include student-focused, teacher-focused, and system-level focused interventions. However, most existent interventions within the field are specifically designed and targeted for students.

Student-focused interventions align most predominantly within two prongs which include counseling-based interventions and prevention-based programs. Strength-based school counseling approaches (Galassi & Akos, 2007) rely on six major principles based on promotion of student assets and strengths, focus on cultural and context-based development and strength-enhancing environments, use of evidence-based practices, and prioritizing building strengths over problem reduction. On the other prong, multiple prevention programs have been designed to strengthen support for students including targeting negative behaviors, mental health, and school dropout. For example, several programs specifically target the prevention of negative student behaviors such as alcohol and drug prevention (Benard & Marshall, 2016; Soole et al., 2008) and aggressive behavior including bullying (Jiménez-Barbero et al., 2016) and cyberbullying (Tanrikulu, 2017). Further, resilience-focused prevention programs focus on the overall mental and academic well-being of the student, such as for preventing school dropout (Tanner-Smith & Wilson, 2013; Wilson et al., 2011), stress, anxiety, and depression (Allen et al., 2019; Feiss et al., 2019; Fenwick-Smith et al., 2018) and suicide (Brann et al., 2021).

In addition to student-focused approaches, intervention programs also focus on teacher-level as target populations or system-level with schools. Teacher-level interventions are designed to strengthen support and connections for teachers within schools and communities. For example, the Seattle Social Development Project/Skills, Opportunities, and Recognition program (Hawkins et al., 2005) promotes positive bonding to schools and families. Other interventions aimed at fostering resiliency among teachers are examined as part of an extensive review of programs from Kangas-Dick and O'Shaughnessy (2020). Along with teacher-level interventions, system-focused interventions target multiple groups of individuals within schools. Durlak et al. (2011) conducted a meta-analysis of 213 universal, school-based interventions and found that social-emotional learning (SEL) interventions significantly improved social and emotional skills, attitudes, behaviors, and academic performance in K-12 students. Twum-Antwi et al. (2020) conducted a review of programs that promote child and youth resilience by strengthening home and school environments. They advocate the adoption of a multisystemic view of resilience that supports the well-being of parents and teachers which in turn supports the well-being of children.

Building Assets, Reducing Risks (BARR) is a school-based, system level intervention. As such, it can advance our understanding of the nature of resilience, foster a resilient mindset in both teachers and students, and create an environment where access to key protective factors is commonplace. With its focus on comprehensive whole school systemic change, the Building Assets, Reducing Risks (BARR) model fosters resilience within students, educators, and school systems through collaboration and capacity-building based on two pillars: positive intentional relationships and real-time actionable data.

Building Assets, Reducing Risks (BARR)

As a strengths-based, whole-school system approach, the BARR model recognizes that caring relationships, high expectations, and opportunities for participation are critical elements for healthy school systems that encourage learning and development. BARR fosters the development of resilient schools and communities by empowering students, teachers, and families, so that schools can realign existing resources

to nurture a unified and personalized culture of support and success for every student, both inside and outside of the classroom. This approach is consistent with research that shows that youth with more assets tend to engage in fewer high-risk behaviors and that protective factors can buffer risks (Sesma Jr. et al., 2013), as well as the importance of school environments providing meaningful relationships, access to resources, and academic, social, emotional, and identity development (Tseng & Seidman, 2007). With consideration to the individual and system, BARR incorporates key interlocking strategies and supports to build intentional staff-to-staff, staff-to-student, and student-to-student relationships and uses qualitative and quantitative data in transparent and effective ways including an evidence-based social-emotional learning curriculum (I-Times and U-Times), effective use of team meetings to discuss students' strengths and barriers based on quantitative and qualitative data, and on-going virtual and in-person educator coaching and professional development.

Although grounded in the extensive experience of the educational practitioners involved in implementing and researching BARR, the model's theoretical underpinnings derive from developmental theory reflected in the literature. For its theoretical framework, BARR integrates three developmental theories: Developmental Assets, Risk and Protective factors focused on prevention strategies, and the Attribution Theory of Student Motivation. Developmental Assets identifies the 40 internal and external sources of support that are critical for young people's successful growth and development (Benson et al., 1999). As factors that shape behavior, the more assets young people experience, the more they engage in positive behaviors and fewer assets are likely to result in behaviors of concern. Catalano and Hawkins's (2002) strategy of risk and protective factors addresses substance abuse, delinquency, teen pregnancy, school dropout, and violence. Finally, the Attribution Theory of Student Motivation (Wentzel & Wigfield, 1998; Wigfield & Wentzel, 2007) articulates the cognitive-behavioral-social process by which students develop beliefs about their ability to succeed in school. This theory asserts that how students perceive themselves affects their interpretation of current successes and failures, thereby leading to future effort and performance for that activity. Thus, with a fundamental understanding of this student behavior, educators understand how students react to success and failure in school. By changing the atmosphere and context in which students learn, motivation is affected. Reorganizing a school to enable meaningful adult and student relationships provides a support network and opportunities for students to succeed. By changing the atmosphere and context in which educators teach and students learn based on these principles, school environments can foster resilience (Brooks & Goldstein, 2001, 2007).

BARR Evidence: Inspiring Confidence with Results

With over 20 years of evidence-based research and evaluation, the BARR model is established as one of the most proven, system-wide school improvement models within K-12 education (Bos et al., 2019; Borman et al., 2018; Corsello & Sharma, 2015). With funding from the i3 program for development, validation, scale-up grants, the BARR model has been rigorously studied through 12 within school randomized controlled trials (RCTs) and a between school RCT with 66 schools (in progress). As a result, the BARR model has shown positive outcomes for high-need students in a variety of settings, including better academic performance on standardized assessments (Bos et al., 2019; Corsello & Sharma, 2015). Further, BARR students earned more core course credits, higher grade point averages, and higher standardized test scores in mathematics and English Language Arts than students in the control group, and effect sizes were highest for students of color, males, and economically disadvantaged students. In addition, students reported more supportive relationships, higher rigor and expectations in classes, and higher levels of engagement in school than students in the control group (Bos et al., 2019). Because of these changes in structure and belief systems, BARR

teachers reported significantly higher levels of support by administration, a greater sense of self-efficacy, more collegiality, a better understanding of student behaviors, and more effective use of data than did teachers in a non-BARR comparison group (Bos et al., 2019). As a result of these findings, BARR is listed five times in Evidence for ESSA (www.evidenceforessa.org) for having strong evidence for all secondary students in math, reading, and socioemotional skills, and for struggling students in math and reading, based on the model's ability to improve standardized test scores in these areas and meets What Works Clearinghouse (WWC) standards without reservation at the high school level (What Works Clearinghouse, 2020; Bos et al., 2019; Boulay et al., 2018).

BARR Mediation Analysis

BARR's theory of change was tested using a mediation analysis (Fig. 31.1) which included potential moderating and mediating factors in increasing academic performance. According to this analysis, BARR changed teacher attitudes and behaviors which led to changes in student attitudes and behaviors, which resulted in increased student academic achievement (Bos et al., 2019).

In this chapter, we describe the BARR model and its approach to fostering resilience in (1) school systems; (2) educational staff; and (3) students. In the process, we highlight the alignment of BARR's two pillars of relationships and data and its strategies with the broader landscape of resilience literature.

Fostering Resilient School Systems

Literature Aligned with the BARR Model

Schools are uniquely situated for fostering individual, group, and systemic resilience. Because resilience is both an individual characteristic and a quality of an individual's environment that provides the resources necessary for positive development (Cameron et al., 2007), comprehensive, developmentally based, and holistic systemic approaches to fostering resilience are needed within school environments. As such, these approaches will address the bidirectional dynamics amongst and between the individual and their different contexts (Luthar et al., 2006; Masten &

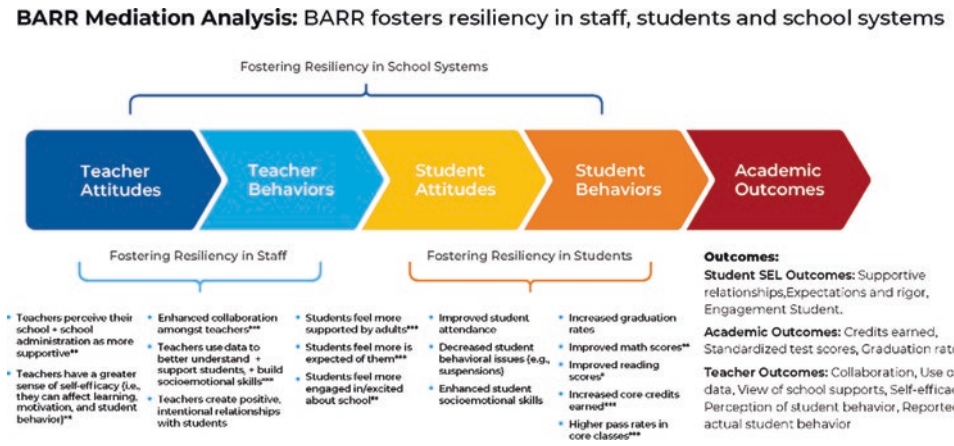

Fig. 31.1 BARR mediation analysis. *Per most recent AIR evaluation of BARR, this outcome is statistically significant at $p \leq .05$, ** at $p \leq .01$, *** at $p \leq .001$

Obradović, 2006). From a practitioner lens, this translates into a two-fold approach to embracing and fostering resilience in which schools fundamentally understand their unique role and ability to foster resilience from a developmental and societal perspective and to provide the collaborative structure and healthy environment needed to do so.

Disrupting Silos

In considering a broader ecological systems approach, school-based intervention models need to transform the current system in which they are implemented to bring about effective change (Seidman, 2012; Tseng & Seidman, 2007). Taking a systemic approach to fostering resilience, the BARR model fosters the development of resilient school systems through the empowerment of educators, students, and families and supporting schools to realign their existing staff and resources to maximize student, educator, and system growth. System-level change requires a fundamental understanding of the school's context and often fails when approached from an "outsider" lens.

The BARR model provides schools with a shared lens, belief system, and vocabulary to prioritize relationships and use of data to empower all individuals within the system. Prior research indicates supportive relationships, physical and emotional safety, consistency and boundaries, higher levels of trust, respect, and supportive care indicate a positive school climate (Masten et al., 2008; Mulloy, 2011). As such, the school's shared understanding and collective actions facilitated by implementation of the BARR model help cultivate a positive school climate, which provides the environment for all children and adults to develop resilience.

Prioritizing People: Key to Successful Restructuring

In alignment with cultivating a positive school environment for resilience development, the BARR model supports schools to realign their existing staff and resources to maximize learning while prioritizing people. Commonly, in practice, staff rarely are able to interact, collaborate, and collectively engage. When staff are able to meet, these meetings often focus on curriculum, instruction, or individual subject matters. Further, senior-level or master staff and resources are typically allocated in areas that are institutionally prioritized, such as upper-level grades and advanced placement courses (Metz et al., 2019). As a typical, standard approach in practice, this often overlooks the students, classes, and areas most in need.

As a core component of BARR, restructuring allows schools to group teachers and students into cohort groups. Students take groups of core courses as part of a block or cohort, and each cohort typically has three core-subject teachers. As such, teachers' and students' schedules are aligned, which helps to cultivate relationships—with students and each other—that allow for more effective education. Regardless of the size of the school, the block structure helps ensure that all students feel they have a place to belong, since all students belong to a block/team. Further, this approach provides the structure for effective, collaborative meetings for teachers. Core class teachers meet several days per week in their blocks/teams to monitor progress of all the students in their block. This encourages each staff member involved to see himself or herself as part of the same team, providing consistently coordinated and connected efforts. The result of this work is that teachers know their students' progress, teachers' interest is energized by the opportunity to work together, and both "at-risk" students and students for acceleration are identified.

Fostering Resilience in Staff

Literature Aligned with the BARR Model

The status quo in education focuses solely on the student. Staff are often isolated, making it impossible to get a full picture of each student to address the whole child and difficult to engage

and collaborate with colleagues. However, educators are fundamental to a students' academic success and overall development (Brooks & Goldstein, 2008; Masten et al., 2008). Seminal resilience research of Werner and Smith (1982) identified educators as key partners to students' resilience processes. Yet, educators also need support in times of stress within their schools or classrooms to foster their own resilience (e.g., Raver et al., 2011 as cited in Masten, 2014 p. 237). For educator resilience, relational dynamics are key as teachers work to connect with students and their colleagues within a school environment (Gu, 2014). Research also supports different types of relationships—professional and peer—as a protective factor in resilience development for educators (Beltman et al., 2011; Doney, 2013; Van Maele & Van Houtte, 2011, 2012, 2015). Thus, attention and intentionality to different types of relationships, such as student-educator, educator-to-educator, and student-to-student, needs to be valued within a school's environment.

Block (Teacher Team) Meetings

In addition to supporting relational dynamics, the BARR model provides the structure and support for educators to collaborate, innovate, and create change within their own school systems. Within common practice in K-12 education, teachers often work in "silos," which promotes sole focus on one's own classroom and rare opportunities for collaboration and consultation of other teachers within the building. With implementation of the BARR model, schools need to create teacher teams, commonly referred to as "block" teams in BARR. These block teams are composed of a group of cross-disciplinary cohort teachers and continually evaluate students' progress based on student-level qualitative and quantitative performance data from week to week. In addition, these teams meet with the school's mental health specialist or counselor, BARR coordinator, and an administrator involved with the BARR model to discuss and review student situations and plans for intervention on a weekly basis. As a result of this teacher teaming while implementing the BARR model, teachers report enhanced collaboration with other teachers and higher levels of self-efficacy in affecting students' learning, motivation, and behavior (Bos et al., 2019). The affirmation of knowing that their actions have a positive impact on students helps to foster educator resiliency (Meister & Ahrens, 2011). In addition to the individual educator, this sense of impact can develop on a group level, which is known as collective efficacy. Collective efficacy, as defined by Bandura (1998), is a shared belief of a group on its ability to achieve a given goal or purpose based on its ability to coordinate and execute through dynamic processes. Thus, educator collaboration, collegiality, and collective efficacy provide a frame for coordinated change to address student situations.

Administrative Engagement

Engaging administrators is key to creating a climate that values positive intentional relationships—staff-to-staff, staff-to-student, and student-to-student. BARR supports the creation and facilitation of cohort teams for effective team collaboration and problem-solving to effectively intervene with students. School administrators join these meetings and work with the teacher/staff teams to meet the needs of students. This provides the adequate encouragement, support, and agency from administrators through being a vital partner in planning and management (Brooks, 2006). Further, as part of the implementation of the BARR model, administrators restructure the school day to create cohorts of students and time for teachers to meet and discuss their observations weekly. Research on resilience in schools highlights the role of restructuring for interactive group dialogue as an avenue to empower teachers to support each other and participate in collaborative decision making (Benard, 1991). Similarly, BARR teachers perceive their school administration as more supportive (Bos et al., 2019).

Connections to Community

Focus on the whole child provides the opportunity for schools and educators to understand each and every student's experiences within and outside of the school environment. With application of an ecological systems approach (Bronfenbrenner, 1977, 1979), schools can leverage students' strengths, family support, internal school, and external community resources. As applied to the construct of resilience, research highlights the opportunity to shift the burden of attaining resources and capital from individual children to the school and surrounding communities and give all children the capacity for resilience (Ungar et al., 2014; Crawford et al., 2006).

While BARR's main focus is supporting the healthy development of all students, students who exhibit any risk behaviors (e.g., substance use, failure, truancy, discipline issues) are identified early by teachers and school staff. In certain circumstances, student interventions may not be successful after several attempts, which can leave educators frustrated and unsure of how to proceed. The BARR model provides a process in which educators identify limits to student interventions and actively refer students for a more intensive, community-resource-based intervention. A BARR Community Connect team reviews these student cases and makes appropriate referrals. The Community Connect team consists of several stakeholders within the school and community including the BARR coordinator, a school administrator, school mental health specialist/counselor, and a representative from the community (e.g., Student Resource Officer and/or the community health organization representative). During these meetings, team members develop strategies to meet the needs of students and their families by capitalizing on students' strengths and devoting significant time in determining the appropriate community resources for the intervention strategy. As such, this model of early identification and referral greatly reduces the likelihood of risk behaviors becoming the norm.

Trained Teachers: Noticing Quantitative and Qualitative Real-Time Data

Access and quality of professional development and opportunities are essential for maintaining teacher resiliency (Balfanz & Mac Iver, 2000; Catalano et al., 2003; Gu, 2018). Unlike many other school intervention programs, BARR works with the current staff at the school and acknowledges their experience, expertise, and student and community knowledge. To enhance and strengthen existing knowledge and skill, all school staff participate in training, receive coaching, and are equipped in continuous improvement practices to effectively build relationships and use real-time data. At individual schools, BARR coaches support implementation of the BARR model with fidelity. Through regularly scheduled, structured, and planned coaching conversations, as well as on-site or virtual visits, the BARR coach guides the staff at the school involved with BARR toward achievement of each school's identified goals while building upon the individual's existing capacity. As such, school teachers report increased use of data to better understand and support students and build social-emotional skills when implementing the BARR model (Bos et al., 2019). In this process, BARR coaches fundamentally understand the schools' contexts and focus attention on student, staff, and systemic change and growth.

Fostering Resilience in Students

Literature Aligned with the BARR Model

The BARR model delivers a strengths-based view of the importance of resilience for bolstering the success of all students. Fostering resilience within schools requires a supportive and caring school environment where knowing the whole student is imperative. Supportive school environments and caring adults reinforce successful student learning and development through

the identification of students' strengths (Benard, 2004; Henderson & Milstein, 2003). Students' strengths, which can be thought of as internal protective factors, can be identified and fostered with the reinforcement of supportive and encouraging environments, educators, and opportunities (Benard, 1997). Identification of students' "islands of competency" shifts mindsets from a deficit-base to a strengths-based orientation (Brooks & Brooks, 2014). Further, teachers can help students identify what works best for them and teach them the most effective strategies to be academically successful (Brooks & Goldstein, 2008; Henderson & Milstein, 2003). The BARR model trains staff to identify and leverage student strengths and provides the school with structures to ensure that all students thrive.

Building Social-Emotional Skills

Within resilience research, the importance of SEL skills for an individual cannot be overstated (Benard, 2004; Goleman, 2006). SEL skills positively impact overall healthy student development (Benard, 1991) and are as important—if not more—than academic skills for an individual's success (Benard, 2004). Further, academic achievement increases an estimated 10% when educators incorporate SEL within the classroom (Durlak et al., 2011). Educators should encourage and support SEL skills within school environments, such as optimistic thinking (Alvord & Grados, 2005) and positive self-worth (Ungar, 2015). Within the BARR model, students participate in weekly social-emotional learning curricula, known as I-Times (secondary curriculum) and U-Times (primary curriculum) focused on building intentional relationships—teacher to student and student to student and fostering individual learning. As students interact, share, and connect, this time also provides teachers with a wider lens to understand and learn the whole child. Also, unlike other SEL curricula, BARR's I- and U-Times engage the teacher as an active facilitator to share and participate with the students in the lesson. Comprehensively, this supports students' determination to overcome obstacles, enhanced self-esteem through more positive interactions and increased academic success, problem-solving skills related to their daily lives, and self-regulation that leads to accomplishing their stated goals.

Bringing Multiple Perspectives to the Table

BARR takes away the siloed experience of the teacher, resulting in impacts on students. Through a system-change approach, the school's classroom walls become permeable. Known as Block Meetings, educators meet in "Small Blocks" and "Big Blocks" to discuss the status, strengths, progress, and possible interventions for every student. These meetings serve to ensure every student receives necessary support and care. These meetings also allow teachers to perceive their students in a different light, one provided by their colleagues. Teachers are able to see all their students in a more holistic way. Additionally, the collaborative nature of brainstorming interventions and developing strategies as a team reinforces the relationships among teachers. These teacher teams are trained and supported to be attentive to the whole student, building relationships and using real-time data to engage in collaborative assessment and problem solving on a weekly basis.

Cultivating Positive Relationships

Next to the importance of the family, schools serve the important role of creating an environment to support the facilitation of relationships. BARR develops positive student-teacher relationships and integrates student supports into a school's existing model for addressing nonacademic barriers to learning. The seminal research of Werner and Smith (1982) provided a strong early research base on the critical importance of supportive and caring adults to the development of resilience in children. Further studies confirmed that forming relationships is the most critical protective factor for young people at risk

(e.g., Luthar, 2006) and vulnerable children (Johnson, 2008). In fact, within a school context, strong student-educator relationships can support and motivate students and improve academic performance (Masten et al., 2008; Doll, 2013; Ungar et al., 2014). In addition to student-to-educator relationships, connections amongst student peers provide additional support for students. The facilitation of peer relationships proves critically important to the development of resilience in students (Benard, 1991), as these relationships provide students with a sense of support, self-esteem, and connection.

Through professional development and coaching provided by BARR, school staff learn how to form positive intentional relationships with students while closely monitoring data. Teachers come to know each student—not just from an academic perspective, but from a personal perspective—their interests, strengths, hopes, and dreams. At the same time, teachers closely monitor both quantitative and qualitative data on each student—their grades, assignment completion, attendance, as well as any changes in their behavior, appearance, and peer groups. This combination of forming intentional relationships and monitoring data provide an authenticity to these relationships and create the foundation for students and teachers to thrive.

Use of Data

Research on resilience in schools emphasizes the importance of data-based practices (Doll, 2013). This is especially true when the informed data use is reflected in changes of the classroom instruction, behaviors, and interactions (McGee, 2004). BARR is built on the foundation of relationships and data. Throughout each key component, staff consider both quantitative and qualitative data on students and combine this with strong positive relationships. Although not necessarily a key feature of resilience research to date, we have found that adding data to relationships creates a deeper authenticity and connection.

In the block meeting structure, qualitative and quantitative data are shared about each student. Quantitative data typically include grades, course assignments, attendance, suspensions, and standardized test scores. Qualitative data may include changes in the student's appearance, peer group, demeanor, life events, information from I/U Time lessons, and their strengths. Each student is discussed by multiple teachers who have them in class, which provides a range of perspectives and challenges stereotypes. The discussion starts with the student's strengths, and if needed, ends with a SMART (Specific, Measurable, Achievable, Relevant, and Time-Bound) goal and intervention plan which is shared with the student. At the following meeting, staff check on the progress made toward the goal based on data collected and either modify the plan or scale it to other students.

Family and Community Engagement

Schools' relationships and interactions with students to foster resilience and overall success are typically heavily influenced by how the school system (e.g., administrators, teachers) interact with other major systems in a student's life, such as their family system (Doll, 2013). BARR engages students' families through positive communication and transformational engagement. As an integral component to success, the BARR model encourages teachers to establish families as partners in their child's education and develop their agency within the school building. American Institutes for Research (AIR)'s 2017 Validation Study Teacher Survey found that BARR teachers had more positive interactions with parents in comparison with non-BARR teachers. These proven positive interactions improve the school culture, empower family voices, increase student academic performance and social well-being, and build strong relationships.

A major component of the individual interventions resulting from the block and Community Connect meetings is engagement with families.

Such engagement helps strengthen the impact of interventions with individual students and helps sustain their effects. Active parental engagement is a major component of several efficacious interventions with secondary students and is well aligned with the BARR model's central focus on improving relationships (DeSpain et al., 2018).

Case Study: Experiencing BARR from a Student Perspective

As a typical student, individuals often face day-to-day experiences that can help or hinder their journey toward being a successful—resilient—student. As Masten (2001, 2009, 2014) often notes, resilience within individuals is an "ordinary magic," which does not require a major crisis or adversity to overcome to truly understand, experience, and conquer. For the majority of students, fostering resilience often comes from facing the day-to-day challenges with an existing supportive framework for which a student is known, seen, and heard from supportive adults and peers. In this case study, a typical day of an elementary student named Devon is described and followed from the student's perspective at a school with the BARR model. It offers both the student's intimate lens, but also an extensive overview of what a resilient school environment looks like to support the healthy, holistic approach to students' overall success including fostering their resiliency in school and at home.

Experiencing BARR from a Student Perspective

Devon, age 7, second grade:

I finally get to go to back to school today! It was a long weekend and I miss my teacher and my friends. The bus ride this morning was loud, as usual. Everyone was talking about their weekend. I was glad my best friend, Joe, was on the bus today. He always tells the best jokes.

Once I got off the bus, I headed into the school. "Hi, Mr. Brown!" "Hi, Ms. Turner!"

I love how the teachers always say hi to me and Mr. Rose, my principal, is out there giving high fives and fist bumps to just about everybody who comes near him. Fist bump for him. (I like fist bumps more than high fives.)

I head down the hall to my classroom. I am hanging up my coat and saying hi to my friends in the hall. I see Ms. Ramirez in the hall. She is the counselor. "Hi Ms. Ramirez!" She tells me that she likes the drawing I did in art. "How did you see my drawing?" She says she saw it at a meeting. That makes me feel good. I worked hard on that tiger. I really wanted the stripes to be just right.

Room 128 is my room. My teacher Ms. Garcia is the best! She tells the greatest stories, and she knows my big brother. When I get to my desk, Ms. Garcia has left me a post-it note. The note says, "You got this!" Ms. Garcia knows that today I am sharing my Lego creation in STEM club after school. I am nervous about sharing but also excited. Ms. Garcia always knows how to make me feel a little better.

The bell rings. We all line up to grab our breakfast from the cart. Today is mini pancakes, my favorite. I like how they taste like syrup, but I don't even put any on. I grab my milk and head to my desk. I love my new school. We all eat breakfast together and in our classroom! I never did that in my old school. In my old school, I had to go to the lunchroom to eat breakfast before the bell rang. We had to eat kind of quick, so we weren't allowed to talk. I never got to finish and had to hurry to get to my room. Sometimes class had already started, and I missed the morning story from my teacher. That made me sad. I love stories.

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Ms. Garcia is eating her mini pancakes, too, and says they are her favorite! That makes me smile. We have something in common. Now it is time for our U-Time, one of my favorite parts of the day. We get to do fun things together and there are always good stories! Today we read *Duck! Rabbit!* I think it is a rabbit. Tasha, my friend, thinks it is a duck. She tells me why she thinks it is a duck, and I tell her why I think it is a rabbit. Ms. Garcia tells us 10 kids in the class think it is a duck and 15 kids think it is a rabbit. Ms. Garcia says she thinks it is a duck. Hmm, I guess I can see a duck.

The morning went fast, and Ms. Garcia says it is time to get ready for lunch. LUNCH! I love lunch and recess. We head to the cafeteria and I get in line. Grilled cheese today. I put all of my food on my tray and head to punch in my lunch code. "Hi Ms. Taylor!" Ms. Taylor is my favorite lunch teacher. She makes sure we punch in our codes right and get healthy foods on our tray. I like Ms. Taylor. She knows that I like to draw. Ms. Taylor tells me she likes the tiger I drew. "How did you know I drew a tiger?" She said she saw it at a meeting. Wow, two teachers like my tiger.

Lunch, recess, and math go by fast. Ms. Garcia comes over to my desk and reminds me that gym is next, and I need to head to the nurse. I LOVE GYM! We are doing an obstacle course today. Before I can go to gym, I have to go see Ms. Weis. She is our nurse. I have asthma and she gives me my inhaler before every gym class. I like her office. Ms. Weis has one of my cat drawings hanging on her wall. "Hi, Ms. Weis. You like my tiger drawing! Did you see it in a meeting? You are the third teacher to say that. I really tried hard on the stripes." Ms. Weis says she has to call my mom and tell her I am almost out of my inhaler. She says that I can get more from the clinic next door.

Gym was awesome. I ran a lot. Mr. Ahmed said that I really showed good teamwork today. That made me feel proud. Mr. Ahmed also saw my tiger drawing! I feel awesome.

Next is my special reading group. Reading is hard for me, but Ms. Jones says that I just need more practice. Ms. Jones met with my mom and my teacher, Ms. Garcia, last week and told them that she thinks I can move up to the next reading group soon. I hope so. I asked Ms. Jones if she has read *Duck! Rabbit!* She thinks it is a rabbit. I told her I did, too. Today in our reading group we work on clusters. Consonant clusters to be exact. I am pretty good at these. I can't wait to show Ms. Garcia. Ms. Jones walked me and the rest of the group back to our room. Ms. Jones whispered to me. I smile big. "You saw it, too. I really worked hard on that!"

I get back to my class just as Ms. Garcia is starting our reading groups. I walk over to the carpet. Ms. Garcia has *Duck! Rabbit!* "Didn't we read this book already? It was a rabbit." Ms. Garcia smiles and tells me we are going to read the book again, and this time we are looking for consonant clusters. "I know how to do these. Ms. Jones taught me." Ms. Garcia lets me show the group the first cluster. "Duck. ck is a cluster." Ms. Garcia says I am right. That feels good.

It is time to pack up. The bell is going to ring. We all line up and Ms. Garcia stands by the door. High five, fist bump, or hug. We all get to pick what we want. Today I feel like a hug. Ms. Garcia hugs me and tells me again, "You got this," just like the post-it note.

I head to the cafeteria with my other STEM club friends, and we have our snack together. We are laughing so hard. Joe is telling more jokes.

STEM club went great! Mark and Javon loved my Lego creation! They said it was

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awesome. They took a picture of it for me and said they would email it to my mom. I can't wait for her to see it.

What a great day! I can't wait till tomorrow.

What the Student Does Not Know:

Central Elementary School is a K-5 building, serving 530 students. The school has 100% free and reduced lunch; all students receive breakfast, lunch, and afterschool snacks with programming.

The school has named equity as a priority for this school year. They selected the BARR model, because it emphasizes knowing each and every student and has validated research to show it is effective in closing opportunity gaps. The school is in it's first year of BARR implementation.

Within the BARR model, students participate in U-Times, which are SEL lessons with a focus on building intentional relationships, teacher to student and student to student. U-Times facilitate conversations, and model empathy, collaboration, and listening skills. U-Times include a literacy component, using books to extend the concept and skill of the lesson/activity through a variety of literature options and provide additional questions to help students dive deeper and identify those connections.

Today's U-Time lesson is titled: *It Depends on the View,* reading the book *Duck! Rabbit!* by Amy Krouse Rosenthal and Tom Lichtenheld. The purpose of this U-Time is to explore the idea of one's point of view and accept differences. In addition to this U-Time lesson, the teacher will continue to utilize the literacy extension activities that are available as a part of the U-Time lessons to draw connections and support the language arts curriculum.

Once a week, the school's block meeting is held. Block meetings are a shared meeting time where teachers meet to discuss each student, from a strengths-based perspective, using student-level data that is updated every week. Teachers collaborate to identify struggling students and interventions. They also focus on students who should be accelerated. Intentional relationships is a crucial component of the BARR model so there is transparency of data to ensure every student thrives.

Each student in a BARR school has a SMART goal that has been created by their classroom teacher. When bringing students forward in block meetings, teachers share the SMART goals with the team, and the team actively uses these goals to construct interventions.

Today Ms. Garcia had Devon's name on the list for discussion. Devon is newer to the building, moving here about two months ago. He came to the school identified as a "struggling reader," behind grade level in his reading scores. The team agreed that Devon's SMART goal should be to identify consonant clusters at a 95% accuracy level over five consecutive reading sessions, with all members working toward that goal.

Team who were present at block meeting:

Principal—Mr. Rose
BARR Coordinator/School Counselor—Ms. Ramirez
1st grade teacher
2nd grade teacher—Ms. Garcia
3rd grade teacher
4th grade teacher
5th grade teacher—Devon's brother's teacher
Gym teacher—Mr. Ahmed
Art teacher
Food Service worker—Ms. Taylor
Nurse—Ms. Weis
Reading Specialist—Ms. Jones
STEM Club after school leader—Mark

The Art teacher knew that Devon was being discussed today, so she brought Devon's tiger painting from last week to share.

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Ms. Garcia, classroom teacher, shared that Devon is very active in U-Times. Last week she learned that he wants to be an astronaut or an inventor.

Ms. Jones, reading specialist, shared Devon's latest reading scores and the conversation she had with his mom last week. Devon will move to the next reading group starting next week.

Mr. Ahmed, gym teacher, shared that Devon had been trying harder lately and not quitting when things are difficult.

Ms. Weis shared that Devon had been coming down consistently to her office before gym class for his inhaler now that his classroom teacher has been reminding him.

Mark shared that he had a concern that Devon was nervous about sharing his creation in STEM club and wondered if anyone could help support that.

Conclusion and Future Directions

Educational reform and improvement efforts for student achievement continue to reinforce and lean into a "factory model" approach (Robinson, 2010). Consequently, as expectations and accountability standards continue to rise, the educational research and practice lens needs to focus on shifting its limited, often conformist perspective to a broader, more inclusive transformative understanding of student success and well-being. Thus, schools have the unique opportunity to transform current educational systems via systemic change.

Through a strengths-based, whole-student approach, the BARR model supports transformative school-system change by fostering resiliency on multiple levels including within the school system, with school staff, and with individual students. In the process, the thoughtfully structured environment of caring and supportive relationships, high expectations, and opportunities for meaningful participation in combination with use of real-time, transparent data becomes a critically important underpinning for continued stability. Further, as school systems continue to function as resilient systems, a network of schools will serve as critical infrastructure within the larger educational ecosystem. Just as individual students and staff are strengthened by resilient relationships, resilient networks will form as resilient school systems continue to connect, support, and reinforce one another.

For models that demonstrate effectiveness, scaling often presents a new challenge. Research and practice guidance regarding effective scaling remains scarce. Often, developers feel forced to choose between fidelity of implementation and scaling at large, as fidelity may be compromised the farther afield an intervention gets from its conceptual or geographic origin. Through its extensively researched history, BARR has learned that successful intervention is reliant upon measurement of whether the program was implemented as intended. Research recommends that programs promoting resilience in schools need to incorporate a) education for teachers, staff, administration, etc., b) established teacher objectives and strategies to aid student development, and most importantly, for this discussion, and c) periodic evaluation of a program's effectiveness (Richaud, 2013).

BARR has developed fidelity markers for block meetings, Community Connect, I/U Times, and implementation of its structural components. These markers are scored using a combination of observational measures and structural interviews. Each fidelity marker has a rubric which details progression in successful implementation. BARR's research has documented the positive correlation between implementation fidelity and decrease in course failure rate (Bos et al., 2019). Successful scaling is dependent upon consistent use of these fidelity markers, both by school staff and BARR coaches. For other models to demonstrate success in scaling, development and adherence to similar fidelity markers will need to occur. Because BARR relies heavily upon coaching as a critical component, scaling of the coaching process, and thereby fidelity of coaching, requires particular attention. Recently, BARR

has developed a coaching rubric for use with its coaches for professional development and monitoring quality of coaching. This rubric will undergo its pilot phase of roll-out and testing this upcoming year.

In addition to successful monitoring of implementation and scaling, research is needed for further development of resiliency-based education and successful models on the postsecondary level. A two-pronged approach is needed for the future. First, with past and current emphasis on resilience models within the K-12 systems, educational researchers and practitioners should understand that human development continues far after the adolescent years. The BARR model and other successful resiliency programs could seamlessly be integrated from K-12 through the next 2 years, e.g., through the sophomore year for those who continue to college. With the high levels of students entering postsecondary settings and consideration to the generational-based adversities experienced by these students, educational researchers, practitioners, and institutions of higher education face formidable challenges and obstacles when considering the overall health, well-being, and success of their students, faculty and staff, and system.

Second, with the established importance of resilience for students, teachers, and school systems, teacher preparation programs and Colleges of Education need to fully understand and consider the critical nature of such research and practice within their programs. BARR and other successful resiliency models could be taught to teachers during their preparatory years, rather than teachers having to learn while on the job, where it is that much more difficult to catch up via a whole school, systems approach. Thus, research and innovation on successful resilience models within these settings remain critical for the future.

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Part VI

Conclusions

After Resilience, What?

32

Sam Goldstein and Robert B. Brooks

In the closing chapter of the second edition of this volume in 2013, we asked: How do we go about predicting the future of children today? What statistics should be examined? What outcomes should be measured? What formulas computed? We noted that despite our best efforts there were no definitive or precise answers. The third edition of this volume is published following 2 years during which our lives have been significantly impacted and the world we know changed forever. Therefore, in this third edition we have attempted to expand upon and address these questions with a greater sense of urgency than ever before through the study and clinical application of resilience and resilience processes. We have again sought to address which variables and through what processes within the child, immediate family, and extended community interact to offset the negative effects of adversity, thereby increasing the probability of our children's survival.

Some of these processes may serve to protect the negative effects of specific stressors while others simply act to enhance development. In the truest sense, the study of resilience as an outcome phenomenon has gathered much knowledge that hopefully can be used to shape and change our children's future for the better. We have yet to fully comprehend the pandemic-specific stressors that may undermine proven protective factors. In addition to the stress of safeguarding familial health from the coronavirus, stay-at-home orders and public health recommendations for physical distancing have reduced access to a range of support systems for children and families. The increased demands on parents and the corresponding rise in parenting stress have also been apparent. Supporting children's academic goals through online distance learning may have kept children "in school" but at an increased burden even just considering the significant time children spent in front of screens.

Preparing for Their Future

Michael Jordan once said, "I can't speak for the future, I have no crystal ball." Even prior to the Pandemic, predicting what the future held for our children and the challenges that must be met along their journey to adulthood had become increasingly more challenging. In 2013 Ann Masten in her Presidential address to the Society for Research in Child Development said:

> The development of children around the world is threatened by disasters, political violence, pandemic and other adversities that can have life-altering consequences for individuals, families,

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
https://doi.org/10.1007/978-3-031-14728-9_32

> and the future of all societies. The beginning of the 21st century was punctuated by a terrifying sequence of events affecting large numbers of victims across the world. These include 9/11 and subsequent terror attacks, Hurricanes Katrina and Sandy, the 2004 tsunami in the Indian Ocean triggered by one of the largest earthquakes in human history, the BP Oil Spill in the Gulf of Mexico, the 2008 earthquake in China, HIN1 flu, and the triple disaster of 2011 in Japan of earthquake, tsunami, and meltdown of the Fukushima Daiichi nuclear power plant. (Masten, 2014)

So now we must again ask: post Pandemic, what is the future of children today? Across the world, about 1 billion children are multidimensionally poor, meaning they lack necessities as basic as nutrition or clean water. Approximately 150 million additional children have been plunged into multidimensional poverty due to COVID-19. An estimated 356 million children live in extreme poverty (UNICEF, 2021). Worldwide, the poorest children are twice as likely to die in childhood than their wealthier peers. For those growing up in humanitarian crises, the risks of deprivation and exclusion are even greater. Even in the world's richest countries, one in seven children still reside in poverty. Today, one in four children in the European Union is at risk of falling into poverty. Although children make up around a third of the global population, around half of the extreme poor are children. Children are more than twice as likely to be extremely poor as adults (17.5% of children vs. 7.9% of adults). The youngest children are the worst off—nearly 20% of all children below the age of 5 in the developing world live in extremely poor households. No matter where they reside, children who grow up impoverished suffer from poor living standards, develop fewer skills for the workforce, and earn lower wages as adults. Child poverty is more prevalent in fragile and conflict-affected countries, where more than 40% of children live in extremely poor households, compared to nearly 15% of children in other countries, the analysis says. More than 70% of children in extreme poverty live in a household where the head of the house works in agriculture (World Bank, 2020). Yet, only a limited number of governments have set the elimination of child poverty as a national priority, an action that would greatly enhance childhood resilience. It is widely suggested that on average an American family's needed income is about twice the United States federal poverty level to make ends meet. Children living in families with incomes below this level in 2006, for example, represented 39% of the nation's children, more than 28 million (Douglas-Hall & Chu, 2007).

Poverty is associated with multiple risk factors and long-term stressors that threaten development, ranging from exposure to violence, lack of appropriate medical, educational, and psychological care and poor nutrition (Brady et al., 2017); Garbarino, 1995). As multiple authors in this volume have demonstrated yet again, stress during all stages of children's development increases risk for a wide range of adverse outcomes, including those related to education, vocation, and psychological and emotional adjustment. These have a long-term effect well into the adult years (Shore, 1997). Further, the younger the child the greater is the risk and vulnerability (Fantuzzo et al., 2003). For example, 20% of children world-wide under age six live at or below the poverty level (UNICEF, 2021).

Multiple barriers for change exist, including a continued lack of understanding of those forces or phenomena that protect vulnerable youth as well as access to those services that have been deemed effective for those at risk (Children's Defense Fund, 2021; National Advisory Mental Health Councils Workgroup on Child and Adolescent Mental Health Intervention, Development and Deployment, 2001; National Institute of Health and Mental Health, 1998). A report by the Surgeon General issued more than 20 years ago (U.S. Department of Health and Human Services, 1999) set forth priorities to reduce stigma and increase access to assessment and treatment services, take advantage of resources available in the community, and foster partnerships among professionals.

These reports and the data they summarize about the functioning of children during the past 25 years raise grave concerns about the future of

children in the decades ahead. Yet, on the positive side, our knowledge of those variables that protect and insulate children from risk factors continues to grow. We know more about how to help vulnerable children, or for that matter all children transition successfully into adult life than ever before. As the authors in this third edition have attested, we have progressed in our goal of understanding and creating an applied science of resilience; a model that embraces the "whole-child perspective" that focuses on competence, context, and contributors to children's physical and mental health. For example, Fantuzzo et al. (2003) note, "Competencies of the whole child, not disorders or deficiencies, are core to this developmental perspective" (p. 17). As such, a model of resilience must focus on examining the tasks children are required to perform and master at each age as they prepare to transition into adulthood. In understanding these tasks and the forces that nurture mastery, we become better prepared to foster resilience in all children. Such a model at its core highlights assets, competencies, and abilities rather than diagnoses and disabilities and is rooted in the belief that the interaction of the child and the environment form the context in which development takes place. It also emphasizes the role that adults in the child's world play in contributing to healthy development and resilience.

The Propositions of Resilience

An important study published in 2006 (Ungar) reported on a fourteen-site evaluation of more than 1500 youth globally. These findings support four propositions underlying a culturally and contextually embedded understanding of resilience:

1. There are global as well as culturally contextually specific aspects to young people's lives that contribute to their resilience.
2. Aspects of resilience exert differing amounts of influence on a child's life depending on a specific culture and context in which resilience is operating.
3. Aspects of children's lives that contribute to resilience are related to one another in patterns that reflect a child's culture and context.
4. Tensions between individuals and their cultures and contexts are resolved in ways that reflect highly specific relationships between aspects of resilience. As Ungar points out, resilience as a phenomenon may be far more complex than originally theorized. Interventions that seek to bolster aspects of resilience among culturally diverse populations of children and youth at risk will only succeed if these phenomena are better understood.

To gaze into the future of our species is but to gaze into the eyes of children. Our future is determined by the success or failure of our efforts to prepare children to become happy, healthy, functional, and contributing members of society in their adult lives. But the task of raising children and preparing a generation to take our place has become exponentially more challenging. Perhaps it is the complexity of our culture combined with a world-wide Pandemic that brings with it the increased risks and vulnerabilities that have fueled the statistics of adversity for youth—delinquency, mental health problems, and academic difficulty. These behaviors reflect the rising difficulty we face in instilling children with the qualities necessary for health, happiness, and success. It is within this framework that the fields of medicine, mental health, and education jointly arrive at a crossroads. This path reflects a conscious effort to help all children develop and become proficient in ways of thinking, feeling, and behaving, which can and will insulate them from the many adversities they are likely to face in our world. The many accomplished and gifted authors contributing to this volume represent as Wright and Masten (2004) and Masten (2014) point out, the third and fourth waves of resilience research, representing an effort to bring scientific theory and hypothesis into clinical practice and system wide policies. The breadth, depth, scope and quality of the work in this volume offer great promise that, as Bell (2001) points out, resilience can be cultivated and strengthened in all youth.

As this third edition attests, there is an increasing body of research focusing on understanding the means and manner by which some youth overcome adversities that prove overwhelming to many others. For example, although estimates of the incidence of a range of psychiatric disorders in children of depressed mothers are high, a sizable proportion of children having such mothers eventually achieve acceptable levels of psychosocial functioning (Downey & Coyne, 1990). How do these children, despite exposure to a significant adversity, manage to achieve positive adaptation? One approach to examining resilient outcomes in the face of adversity has been to measure protective factors that may interact with risks as well as "resource factors" that may have positive effects on both high and low risk groups (Conrad & Hammen, 1993). In their study, Brennan et al. (2003) examined parent–child relationships in detail as predictors of resilient outcomes in children of depressed mothers. Depressed mothers have been found to display less optimal parenting qualities than nondepressed mothers (Goodman & Gotlib, 1999). Brennan et al. (2003) followed over 800 15-year-old teenagers and their parents drawn from a large longitudinal study. They demonstrated that positive parent–child relationship qualities acted as protective factors for adolescent children of mothers with a history of depression. High levels of perceived maternal warmth and acceptance and low levels of perceived maternal psychological control and emotional overinvolvement were associated with higher levels of resilient outcomes in these youth. These results are consistent with findings of others (NICHD Early Child Care Research Network, 1999; DePanfilis, 2006). In 2017 Goodman and Garber demonstrated the success of interventions targeted at mothers with depression as an outcome of their young children's adjustment. It is likely that these qualities act as resource factors even for children of mothers who are not depressed. In fact, the parenting qualities these authors assessed had the same direction of effect for children of depressed and nondepressed mothers.

Research findings such as these can be applied to create an applied science of resilience. As one example, in 1998, Olds, Pettit, Robinson and Henderson identified risk factors for disruptive and aggressive behavior in children. They provided a program of prenatal and early childhood home visitation for groups of mothers who were then followed through their children's 15th birthday. Many of these mothers were 18 years old or younger at the start of the study. This program reduced three domains of risk for the development of problem behaviors in children. The effects of the program included a reduction in maternal substance abuse during pregnancy, a reduction in child maltreatment, and a reduction in family size, closely spaced pregnancies, and chronic welfare dependents. In essence, a comprehensive prenatal and early childhood visitation program was able to affect risks that likely contribute to adversity, increasing resilience among children and youth born into at-risk families. Even since the publication of the first edition of this volume, there has been a significant increase in scientific research as well as trade and educational programs under the umbrella of resilience.

As Fraser and Galinsky (1997) hypothesize, we will eventually collect and integrate sufficient research to create a resilience-based model of practice. Such a practice, these authors suggest, provides a framework for conceptualizing psychological, emotional, and behavioral conditions in childhood well beyond symptom and impairment descriptions. This kind of model offers markers, correlates, and possible causes classified ecologically as broad environmental conditions, family, school, and neighborhood conditions, and individual psychosocial and biological conditions. It is a model that appreciates that some risk factors contribute uniquely to particular problems and some protective factors may insulate certain problems but may also act in an affirmative way for even unaffected youth. Guided with such a model, clinicians would have information to choose the best course of "treatment" for each affected individual by taking advantage of protective factors, seeking to reduce risks, and as needed, providing direct intervention to the affected child. As Fraser and Galinsky (1997) point out, this perspective is "based on the

idea that childhood problems are multi-determined. That is, they develop as the result of many causes whether at the level of the individual, the family or community or the broader environment" (pg. 267). For such a model to be utilized effectively, certain thresholds of knowledge must be crossed by clinicians. These include the following:

- Basic knowledge of risk and protection
- Specific knowledge of risk and protective factors for specific problems or disorders
- Specific knowledge of risk and protective factors in a local community
- Knowledge of interventive research so that effective change strategies can be used to reduce the influence of risk
- Knowledge of interventive research so that effective change strategies can be used to strengthen protective mechanisms (Fraser & Galinsky, 1997)

Resilience and Prevention

An article "Prevention That Works for Children and Youth" by Weissberg, Kumpfer, and Seligman published in 2003 in an issue of the *American Psychologist* reflects the growing interest in applying resilience processes through a preventive model. Yet, there is much work to be done to systematically evaluate the myriad of variables within children, their families, and in the environment that may contribute to, mediate, and moderate adult outcome. Much additional research remains to be completed to understand how to best disseminate and promote this knowledge so that it becomes an integral part of raising and educating children and fostering their mental health. It is hoped that the clinical application of resilience processes will lead to a primary prevention model which, as Weissberg et al. (2003) note, "is a sound investment in society's future" (pg. 425). We would add that at this time this is an "essential investment" if we are to prepare our children for a truly unknown future. In the absence of preparing a truly resilient generation of children, there may not be a future. However, as we recently wrote (Goldstein et al., 2021):

> The world has changed more in the last 45 years since we started our work as psychologists than in the previous one hundred years or more. Accompanying these rapid advances have been equally developing adversities, many of our own making.

The evolution of technology races ahead at breakneck speeds. We worry that this frenetic speed is quickly outpacing our human capacity to cope and adapt, to harness and effectively utilize our instincts not just to survive but to thrive. British novelist Zadie Smith wrote: "The past is always tense, the future perfect." Mahatma Gandhi, best known for his nonviolent methods of protest, advised: "The future depends on what you do today."

We are optimistic that as our understanding of ourselves and our children grows, we will find the means to better prepare the next generations to lead us into a promising, though not likely, perfect future. The strength of our conviction is drawn not just from the knowledge conveyed in this volume, but from the thousands of children and families from whom we have learned time and time again about the, resiliency, self-discipline, and creativity of the human mind and spirit.

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S. Goldstein, R. B. Brooks (eds.), *Handbook of Resilience in Children*,
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