Advances in Mental Health and Addiction
Series Editor: Masood Zangeneh

Jameson K. Hirsch
Edward C. Chang
Jessica Kelliher Rabon *Editors*

A Positive Psychological Approach to Suicide

Theory, Research, and Prevention

Springer

Advances in Mental Health and Addiction

Series Editor

Masood Zangeneh

More information about this series at http://www.springer.com/series/13393

Jameson K. Hirsch • Edward C. Chang
Jessica Kelliher Rabon
Editors

A Positive Psychological Approach to Suicide

Theory, Research, and Prevention

Springer

Editors
Jameson K. Hirsch
Department of Psychology
East Tennessee State University
Johnson City, TN, USA

Edward C. Chang
Department of Psychology
University of Michigan
Ann Arbor, MI, USA

Jessica Kelliher Rabon
Greenville Hospital System Children's Hospital
Greenville, SC, USA

ISSN 2570-3390 ISSN 2570-3404 (electronic)
Advances in Mental Health and Addiction
ISBN 978-3-030-03224-1 ISBN 978-3-030-03225-8 (eBook)
https://doi.org/10.1007/978-3-030-03225-8

Library of Congress Control Number: 2018965421

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

Contents

1 Positive Psychology and Suicide Prevention: An Introduction and Overview of the Literature 1
Jessica Kelliher Rabon, Jameson K. Hirsch, and Edward C. Chang

2 Future-Oriented Constructs and Their Role in Suicidal Ideation and Enactment 17
Olivia J. Kirtley, Ambrose J. Melson, and Rory C. O'Connor

3 Forgiveness, Addiction, and Suicide 37
Jon R. Webb

4 Reasons for Living 59
Raffaella Calati, Emilie Olié, Déborah Ducasse, and Philippe Courtet

5 Gratitude as a Protective Factor for Suicidal Ideation and Behaviour: The Theory and the Evidence Base 89
Karolina Krysinska

6 Considering Race and Ethnicity Using Positive Psychological Approaches to Suicide 111
Ashley B. Cole and LaRicka R. Wingate

7 Interpersonal Needs and Social Support 137
Evan M. Kleiman, Daniel D. L. Coppersmith, and Charlene A. Deming

8 Encouraging Health-Promoting Behaviors in Primary Care to Reduce Suicide Rates 161
Collin L. Davidson, Meredith L. Slish, Sarah Rhoades-Kerswill, Victoria M. O'Keefe, and Raymond P. Tucker

9 Future-Oriented Treatments for Suicide: An Overview of Three Modern Approaches 183
Elizabeth Yu, Jennifer Cheavens, Jennice Vilhauer, and Wessel van Beek

10 Meaning-Centered Men's Groups (MCMG) for the Transition to Retirement 209
Marnin J. Heisel and The Meaning-Centered Men's Group Project Team

11 The Six R's Framework as Mindfulness for Suicide Prevention 247
Thao N. Le, Leysa Cerswell Kielburger, and Bhante Buddharakkhita

12 Community-Based Participatory Research and Community Empowerment for Suicide Prevention 285
Michael J. Kral and Sean Kidd

13 Applied Resiliency and Suicide Prevention: A Strengths-Based, Risk-Reduction Framework 301
Jameson K. Hirsch, Jessica Kelliher Rabon, and Edward C. Chang

Index 321

About the Editors

Edward C. Chang is a Professor of Clinical Science in the Department of Psychology and Professor of Social Work in the School of Social Work at the University of Michigan, Ann Arbor. He obtained his M.A. and Ph.D. degrees from the State University of New York at Stony Brook. He completed his APA-accredited clinical internship at Bellevue Hospital Center, New York University Medical Center. Dr. Chang has published nearly 200 works on personality, positive psychology, suicide risk, cultural differences, coping, and psychological adjustment. He has also edited more than a dozen books focused on optimism, personality, social problem solving, cognitive behavioral interventions with ethnoracial groups, psychopathology in Asians, and health in Southeast Asians. Dr. Chang has served as Associate Editor of several leading journals in the field, including the *Cognitive Therapy and Research*, *American Psychologist*, *Journal of Personality and Social Psychology*, *Asian American Journal of Psychology*, and *Journal of Social and Clinical Psychology*. Finally, he has won numerous awards for his research and teaching over the years, including the Theodore Millon Award in Personality Psychology.

Jameson K. Hirsch is an Associate Professor of Clinical Psychology and Assistant Chair at East Tennessee State University and maintains faculty appointments in the Department of Psychiatry, University of Rochester Medical Center, and the Department of Public Health, East Tennessee State University, and is a Research Scientist at the Mountain Home VAMC. Dr. Hirsch received his Ph.D. from the University of Wyoming and completed his APA-accredited internship at SUNY Upstate Medical Center and his postdoctoral fellowship at the University of Rochester School of Medicine and Dentistry. His research focuses on protective, positive psychological characteristics that might buffer against psychopathology, particularly depression and suicidal behavior, occurring in the context of medical illness and impairment and in underserved and underrepresented groups, including rural, elderly, and ethnic minority individuals. Dr. Hirsch has published over 125 peer-reviewed articles on protective factors, and he has presented his research more than 350 times at professional conferences. He currently serves on the editorial

boards of *Suicide and Life-Threatening Behavior*, *Cognitive Therapy and Research*, and *International Journal of Mental Health and Addiction*.

Jessica Kelliher Rabon is a postdoctoral fellow at Greenville Hospital System Children's Hospital in Greenville, SC. She received her Ph.D. in Clinical Psychology at East Tennessee State University, her M.A. in Clinical Psychology from Western Carolina University, and B.S. in Psychology from Furman University. She completed her APA-accredited clinical internship at Virginia Treatment for Children in Richmond, VA. Dr. Rabon has conducted, presented, and published research on a wide range of topics including anxiety, depression, suicidal behavior, hopelessness, self-compassion, future orientation, forgiveness, and optimism. Dr. Rabon's current interests focus on the identification of positive psychosocial characteristics that protect against depression and suicidal behavior, especially in vulnerable populations.

Chapter 1
Positive Psychology and Suicide Prevention: An Introduction and Overview of the Literature

Jessica Kelliher Rabon, Jameson K. Hirsch, and Edward C. Chang

At first glance, the combination of suicidology and positive psychology might seem counterintuitive, with one field focused on despair and death, and the other focused on happiness and living life to the fullest. Yet, we know that even in joy, there is sadness, and, in misery, there is often a bright spot to be found. For clinicians and researchers working in these respective fields, however, the melding of a strengths-based approach to an often-difficult and taboo therapeutic endeavor—saving someone's life—is likely commonplace as, for example, mental health service providers routinely try to strengthen resilience, improve quality of life, and increase happiness in their patients, even suicidal ones. Why, then, is it necessary to explicitly link positive psychology to suicide prevention, if "being positive" is a frequent goal of therapeutic endeavors? Why do we need positive suicidology?

First, it is important to note that although suicide is a preventable cause of death, it is also a global epidemic and public health concern that researchers, clinicians, and policymakers seem somewhat powerless to eradicate. Conceptualized as the act of deliberately killing oneself, suicide results in over 800,000 deaths annually worldwide (World Health Organization [WHO], 2016). Rates of suicide have steadily increased since 1999 (Kuehn, 2014) and, in the United States, suicide is the tenth leading cause of death (American Association of Suicidology [AAS], 2014). Equally concerning is suicidal behavior, or thoughts of suicide and suicide attempts, which is more prevalent than death by suicide and a strong marker of risk for future suicidality; for example, prior suicide attempts are considered the most robust risk

J. Kelliher Rabon (✉)
Greenville Hospital System Children's Hospital, Greenville, SC, USA
e-mail: rabonjk@etsu.edu

J. K. Hirsch
Department of Psychology, East Tennessee State University, Johnson City, TN, USA

E. C. Chang
Department of Psychology, University of Michigan, Ann Arbor, MI, USA

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*,
Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_1

factor for eventual death by suicide (Gvion & Apter, 2012; WHO, 2016). Thus, despite clinical concern, treatment development, and research funding, mental health professionals have collectively faltered in their ability to prevent suicide, which is why new treatment paradigms, such as a positive psychological approach to suicide prevention, are necessary and emerging.

Second, much effort has been expended to identify risk factors for psychopathology and suicide, and a century of psychosocial research has uncovered a variety of individual, relational, community, and societal factors related to increased suicide risk (Centers for Disease Control and Prevention [CDC], 2017). Indeed, most of the treatments developed for the reduction of suicide and its correlates, such as depression, are deficit-oriented, meaning they rely on the amelioration of maladaptive thoughts, emotions, or behaviors to provide relief from distress.

This classical approach has yielded much success, as evidenced in the extant literature, and most experts would agree that risk factors must be addressed to prevent suicide. As examples, at the individual level, risk factors include mental illness, substance abuse, financial strain, and feelings of hopelessness (CDC, 2017; WHO, 2016). At the level of interpersonal, group and community functioning, collective traumas (e.g., disasters, war), as well as discrimination, social isolation, and interpersonal violence, heighten risk for suicide (CDC, 2017; WHO, 2016). Further, at the societal level, difficulty accessing mental healthcare, stigma surrounding mental health and suicide, and easy access to lethal means (e.g., guns, pesticide) are all prominent suicide risk factors (WHO, 2016).

Yet, this is a one-sided approach that, as evidenced by suicide rates that continue to rise despite best efforts, may represent only a partial solution to the problem of suicide. It is critical, therefore, to recognize that the development of efficacious suicide prevention and intervention strategies is dependent on the identification of not only risk factors, but also protective factors that reduce the likelihood of suicide. In general, however, protective factors for suicide have not been as extensively studied as risk factors; although, even from the time of Durkheim, who touted the benefits of social integration, there has been a somewhat-underground movement exploring their presence and effects. Broad psychosocial variables including access to healthcare, social support, holding beliefs that discourage suicide, and adaptive coping skills have been acknowledged as elements to be promoted by healthcare providers (CDC, 2017; WHO, 2016), and positive cognitions (e.g., hope for the future) and emotions (e.g., happiness, rather than sadness) are routinely promoted therapeutically to reduce distress and suicide risk (Huffman et al., 2014). Religion and spirituality have also been perennially discussed as protective factors against suicide; however, their effects are not always based in a positive framework and are sometimes conformity-demanding (e.g., suicide prohibited) and fear-based (e.g., unable to enter heaven if death is by suicide), which may precipitate suicide risk in some cases. In the 1980s, the construct of "reasons for living" (Linehan, Goodstein, Nielsen, & Chiles, 1983) emerged as an early precursor to positive suicidology, identifying factors (not all positive) that might keep a person alive if they were considering suicide, followed by hope-based prevention efforts in the 1990s. Since the turn of the new millennium, however, and with the rise of positive psychology as a

science, an increasing number of positively valenced, adaptive and strengths-based approaches to resolving stressors, and reducing risk for psychopathology and suicide, have emerged.

It is at this intersection of suicide prevention, protective characteristics, and positive psychology that this volume is centered, and the contributing authors are passionate in their global efforts to understand the synergy of joining these fields in the fight against suicide. As educators, clinicians, and researchers, we have come together to pool our knowledge in this area, to provide a translational framework for moving forward with a new paradigm of suicide prevention—one that emphasizes the strengths and character of not only the individual, but also the strengths of communities and cultures. In the following sections, we briefly introduce and integrate the fields of positive psychology and suicidology and discuss the theoretical and empirical support for our premise. As many of our authors note, current therapeutic frameworks, such as Cognitive-Behavioral and Interpersonal Therapies, which have shown some success in suicide prevention, are also well suited to accommodate positive psychological approaches to reducing suicide risk, even preemptively; therefore, we also briefly review both classic and modern theories of suicide, noting areas where positive psychological principles may be complementary or preferable. Finally, we conclude with an introduction to the work of our contributing authors, setting the stage for them to share their expertise on this new field of positive suicidology.

An Introduction to Positive Psychology

Compared to other areas of psychology, the field of positive psychology, pioneered by Martin Seligman, is relatively young and aims to understand and promote factors that allow individuals and communities to thrive (Hefferon & Boniwell, 2011). Positive psychology emphasizes valued subjective experiences, including well-being, contentment, satisfaction, hope, optimism, flow, and happiness, which are characteristics that are believed to apply to all humans (Seligman & Csikszentmihalyi, 2000), although their cross-cultural applicability has sometimes been questioned (e.g., see Chap. 6). Positive psychology focuses on positive experiences across the lifespan, and includes three nodes: (1) subjective, which encompasses positive experiences and states across the past, present, and future; (2) individual, which focuses on characteristics of the "good person" such as talent, wisdom, and love; and, (3) group node, which comprises positive institutions, citizenship, and communities (Hefferon & Boniwell, 2011).

Positive psychology, with its focus on strengths, exists in stark contrast to the field's general deficit-oriented focus on psychological disorders and the negative effects of stressors (Seligman & Csikszentmihalyi, 2000). Clinically, Seligman and Csikszentmihalyi (2000) suggest that by solely focusing on the maladaptive side of human behavior to understand psychopathology, we are missing out on a substantial portion of human psychology, particularly given that most people will not develop

psychopathology during their lives. They also noted an imperative, that the field of psychology should focus not only on personal weakness, but also on human strengths and virtues, to effectively prevent and treat psychopathology (Seligman & Csikszentmihalyi, 2000), including suicide. To this end, Peterson and Seligman (2004) published *Character Strengths and Virtues: A Handbook and Classification*, which describes and classifies human strengths and virtues that enable thriving, with the intention of doing for psychological well-being what the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* does for psychological disorders. In general, this movement of applying positive psychological principles to the promotion of physical and mental well-being has been successful, with a growing body of research indicating that positive psychological characteristics are associated with better health outcomes, including less risk for suicide.

Positive Psychology and Health Outcomes

Positive emotions, characteristics, and traits are beneficially related to a variety of outcomes including increased well-being, better physical and emotional health, and increased social connectedness (Hefferon & Boniwell, 2011). However, with psychology's historical focus on mental illness, the field has developed a distorted view of what the normal human experience looks like, often forgetting to examine and address these positive traits (Seligman & Csikszentmihalyi, 2000). When viewing psychopathology through a positive psychological lens, Seligman and Csikszentmihalyi (2000) suggest examining the strategies used to overcome the pain and despair caused by mental illness, rather than focusing on the despair itself. Likewise, suicidal behavior may be a possible target for positive psychological intervention by shifting the focus from the causes of the suicidal behavior or current negative emotional state toward a better understanding of resilience factors and processes that may decrease suicide risk (Wingate et al., 2006).

Positive Psychology and Suicide. Although there are many established and effective risk-reduction interventions for suicide and its psychopathological correlates, less attention has been paid to identifying protective factors, and even less effort has been expended to incorporate protective factors into prevention and intervention efforts. Positive experiences such as optimism, hope, and coping ability, among others, may play a role in understanding and reducing suicidality (Osman et al., 1998; Wingate et al., 2006) by disrupting the typical associations between stressors and suicidal outcomes (Wingate et al., 2006). For example, the positive psychological factors of reasons for living, meaning in life, social support, and gratitude are negatively related to suicide ideation and its associated risk factors of depression and loneliness (Heisel, Neufeld, & Flett, 2016), suggesting that protective factors may reduce suicide risk both directly and indirectly via ameliorative influences on typical contributors to suicidality, such as through self-soothing or enhanced emotion

regulation (Kleiman, Riskind, & Schaefer, 2014; Krysinska, Lester, Lyke, & Corveleyn, 2015; Wingate et al., 2006).

Indeed, positive psychological interventions for suicide have begun to be developed and tested, as described in several chapters of this book (e.g., see Chap. 9 for Future Oriented and Temporal Therapies). In an additional study, a variety of positive psychological exercises, including promotion of gratitude and use of personal strengths, were administered to a psychiatric inpatient sample of suicidal patients (Huffman et al., 2014) and were associated with reductions in hopelessness and increased optimism. Importantly, a positive psychological approach does appear to accomplish at least some of the goals of traditional therapy, that is, the elimination of distress or risk of harm to self (Kleiman et al., 2014; Krysinska et al., 2015; Wingate et al., 2006), making such strategies an excellent fit with existing etiological and therapeutic frameworks that promote emotion regulation, social well-being, and adaptive cognitive-emotional functioning. Below, we discuss the cognitive-behavioral perspective as an umbrella framework for understanding a broad range of both suicidology and positive psychology theories, given that both fields rely primarily on understanding and promoting "healthy" thoughts, emotions, and behaviors, despite any utilitarian differences.

Cognitive-Behavioral Framework for Understanding Suicide

In his classic formulation, Aaron Beck hypothesized that depressive symptoms arise from negative views of the self (e.g., as worthless or a burden), the world (e.g., overwhelmed by stressors), and the future (e.g., hopelessness), known as the "cognitive triad" (Beck, 1967). As a well-established risk factor for suicide, depression is present in approximately 50% of all persons who die by suicide (Chehil & Kutcher, 2012), and much suicidology research has focused on hopelessness, or a negative view of the future, as a primary contributor of risk (Beck, Weissman, Lester, Trexler, 1974). Emerging from unremitting stressors and goal frustration, hopelessness, and its counterpart of helplessness are characterized by negative expectations and attribution of negative events to stable, global causes, resulting in a maladaptive and erroneous view of the self, the environment, and the future (Abramson et al., 2000; Klonsky, Kotov, Bakst, Rabinowitz, & Bromet, 2012; Zhou, Chen, Liu, Lu, & Su, 2013). Across numerous samples and studies, hopelessness is consistently related to greater suicide risk, often more robustly than depression itself (Wetzel & Reich, 1989), and may also mediate the relation between suicidal ideation and death by suicide (Abramson et al., 2000), contributing to transitions between suicidal thoughts and actions.

Cognitive-behavioral theory also suggests that the way a person thinks, feels, and behaves all influence one another (Beck, 1995). In the context of suicidal behavior, for example, thoughts of being "better off dead" may result in feelings of depression and hopelessness and, in turn, to engagement in behaviors such as self-injury or a

suicide attempt. Given its direct overlap with many aspects of suicidality, Cognitive-Behavioral Therapy (CBT) has been successfully utilized to reduce suicide risk in adult and adolescent populations (Alavi, Sharifi, Ghanizadeh, & Dehbozorgi, 2013; Gotzsche & Gotzsche, 2017; Stanley et al., 2009), often by challenging maladaptive beliefs, improving problem-solving skills, and increasing social competence (Alavi et al., 2013). Developed specifically as a suicide prevention technique, Cognitive Behavior Therapy for Suicide Prevention (CBT-SP) includes additional components such as developing a chain analysis of events associated with suicidal behavior, safety planning, psychoeducation, and developing reasons for living and hope, before teaching the more traditional CBT skills of behavioral activation, mood monitoring, emotion regulation and distress tolerance skills, and cognitive restructuring (Stanley et al., 2009).

Just this brief description of cognitive-behavioral theory and therapy (CBT) allows many opportunities for a synergistic coupling with positive psychological principles. As just one example, regarding hopelessness, positive psychological factors such as future orientation, positive future thinking, optimism, hope, and positive problem orientation may serve functions that are in opposition to hopelessness, reducing suicide risk (Chang, Yu, Kahle, Jeglic, & Hirsch, 2013; Wingate et al., 2006). Given that CBT targets maladaptive cognitions and teaches patients to challenge these beliefs and replace them with accurate, adaptive beliefs (Beck, 1995), increasing positive future thinking appears to be a natural, complementary strategy to be accommodated within a CBT-based suicide prevention framework. Several other prominent theories of suicide fit well within a CBT framework and emphasize psychological pain and emotion dysregulation, and interpersonal dysfunction, as prominent risk factors (Joiner, 2005; Linehan, 1993; O'Connor, 2011; Shneidman, 1993). We briefly discuss these theories below, and highlight potential points of intersection where positive psychological principles and strategies might be integrated.

Brief Overview of Psychosocial Theories of Suicide

To understand the potential application of positive psychological theories and factors to suicide prevention, it is first important to understand current, predominant risk-based theories of suicide. To begin, as we noted earlier, from a cognitive-behavioral framework, hopelessness theory of suicidality persists in the literature and is based on a person's expectation that highly desired outcomes will not occur, or that highly aversive outcomes will occur, and that these outcomes are unchanging, resulting in depressive symptoms (Abramson et al., 2000). As a core characteristic of depression, hopelessness may serve as the link between depression and suicide (Beck, Steer, Kovacs, & Garrison, 1985), and, according to hopelessness theory, suicidality is a core symptom of hopelessness depression (Abramson et al., 2000). As will be discussed in Chaps. 2 and 9, the development of adaptive future orientation, including forward-thinking motivation toward goals, a positive problem

orientation, and a positive outlook, may counteract hopelessness and can be cultivated therapeutically to reduce suicide risk. In the following paragraphs, we note several additional theories of suicide and potential positive psychological factors that appear to align with each perspective.

Emotion Dysregulation Theory. Dialectical behavior therapy (DBT), a therapeutic approach based on cognitive-behavioral principles, but rooted in emotion dysregulation theory, has also been shown to be effective in reducing suicidality (Neece, Berk, & Combs-Ronto, 2013). From a developmental perspective, pervasive emotion dysregulation is thought to occur because of interruptions, during childhood, of normal evolvement of emotion regulation abilities (Linehan, 1993). For example, during infancy and childhood, when emotion regulation skills are dependent on caregivers, inconsistent or inappropriate responses to children's needs may thwart the development of adaptive emotion regulation skills (Neece et al., 2013). According to the DBT framework, in the face of life stressors, suicidal individuals are thought to have fewer, and more-undeveloped, emotion regulation skills, resulting in use of self-injury or suicidal behavior to cope with negative emotions. Therefore, to reduce suicidality, therapeutic endeavors should involve training in emotion regulation skills, and DBT provides a range of skills designed to do so (Linehan, 1993; Neece et al., 2013), including cultivation of distress tolerance, interpersonal effectiveness, emotion regulation, and mindfulness. Several of these components are directly addressed in this volume, including the critical role of successful social and interpersonal functioning, in Chap. 7 by Kleiman and colleagues, and the usefulness of mindfulness, in Chap. 11 by Le and colleagues, as buffers against suicide risk. As our authors note, proactive and adaptive social engagement and use of contemplative practices may result in many psychosocial benefits, including better coping ability and improved well-being, as well as less likelihood of suicide and its risk factors. Although these positive psychological principles are already a component of some traditional therapies, they could also be used to supplement other treatment approaches or be practiced independently outside of the scope of therapy.

Interpersonal Theory of Suicide. Arguably one of the most prominent modern theories of suicide is Joiner's (2005) interpersonal theory of suicide, which posits that the desire to die by suicide is caused by the simultaneous presence of perceived burdensomeness and thwarted belongingness (Van Orden et al., 2010). Thwarted belongingness is defined as an unmet need to belong, whereas perceived burdensomeness is the belief that one is a burden to others (Joiner, 2005). When these two interpersonal constructs are present, in addition to acquired capability (e.g., reduced fear) to engage in suicidal behavior (Van Orden et al., 2010), suicidal behavior is more likely to occur. Several of our contributing authors discuss positive psychological principles and constructs relevant to the interpersonal theory of suicide. For example, Chaps. 3, 5, and 7, on forgiveness, gratitude, and interpersonal relationships, respectively, are all focused on the improvement of perceived and actual social and interpersonal functioning and include strategies that can be conducted by

an individual, on their own time and according to their own values and needs. Other positive psychological constructs, such as future orientation (e.g., to transcend current interpersonal stressors; Chaps. 2 and 9) and meaning-making (e.g., in the face of illness burden; Chap. 10), may also be helpful in resolving the thwarted needs of burdensomeness and belongingness.

Psychache. Thwarted needs also play a central role in Shneidman's classic theory of psychache as the key contributor to suicide risk. Psychache refers to psychological pain that has become unbearable, unending, and inescapable, arising due to unmet psychological needs (Shneidman, 1993). Unlike Joiner's interpersonal theory of suicide (Joiner, 2005), which identifies only interpersonal deficits, Shneidman's notes that the type of unmet need and its accompanying psychological pain may be a distinct entity for each person (Shneidman, 1993), but ultimately result in depression, hopelessness, and suicide. Empirical support for this theoretical model exists; for instance, psychache is a risk factor for suicidal behavior, over and above the effects of depression and hopelessness (Patterson & Holden, 2012; Troister & Holden, 2012), and serves as a mediator of the relation between other potential risk and protective factors (e.g., forgiveness) and suicidal behavior (Dangel, Webb, & Hirsch, 2018). Accordingly, Shneidman (1993) postulated that psychache is the penultimate risk factor for suicide, and all other risk factors are only pertinent to the degree that they amplify the intensity of psychache.

As we have noted, many of the positive psychological constructs and theories discussed by our contributing authors are well suited to address an array of unmet psychological needs, whatever they may be. For example, many unmet needs might be satisfied via goal-directed behaviors, improved motivation and an adaptive future orientation, which are the topics of discussion in Chap. 2 by Kirtley and colleagues, and Chap. 9 by Yu and colleagues. Cultivation of internal meaning, including for benefits received and for making relationships whole, is an additional positive psychological strategies that might help to resolve unmet internal needs (e.g., for closeness, for resolution, for purpose), and is discussed in our chapters on meaning-making (Chap. 10), forgiveness (Chap. 3), and gratitude (Chap. 5).

Integrated Motivational-Volitional Model of Suicidal Behavior. Finally, we discuss a modern, transdiagnostic theory, the Integrated Motivational-Volitional (IMV) Model of Suicidal Behavior, which is a tripartite diathesis-stress model that suggests individual vulnerabilities are activated in the presence of stressors and increase risk for suicidal behavior (O'Connor & Kirtley, 2018). Several stages are proposed, including the pre-motivation phase, which includes background factors and triggering events which, in turn, develop into suicidal thoughts and planning in the motivational phase. Chronic and acute stressors in the pre-motivation phase are associated with the development of defeat and humiliation appraisals, leading to feelings of entrapment, where suicidal behavior is seen as a reasonable solution to life's circumstances and, ultimately, to suicidal intent and suicidal behavior. The transition between stages is impacted by stage-specific moderators that either enable or hinder movement between stages (e.g., coping skills, thwarted belongingness, fearlessness

about death; O'Connor, 2011). Stages may also be cyclical, in that the ideation-attempt progression may also feedback so that attempt behaviors prompt additional ideation (O'Connor & Kirtley, 2018).

Given that positive psychology is based on principles of empowerment, volition, and motivation, it makes intuitive sense that they could integrate functionally within the IMV model. For example, this model may be accepting of an additional layer of stage-specific volitional moderators; that is, positive psychological factors such as future orientation (Chaps. 2 and 9), reasons for living (Chap. 4), and social and emotional coping (Chaps. 7 and 11) may serve as buffers, halting the progression from vulnerability to ideation, from ideation to attempt, and from attempt to death by suicide. Our contributing authors propose many ways that the constructs comprising positive psychology might be applied to this new field of positive suicidology, and we can take many of these suggestions at face value (e.g., that hopefulness might counteract hopelessness). It is important, however, to also understand some of the underlying theories supporting the premise of positive psychology, so that the two fields might be increasingly etiologically and empirically linked together by clinicians and researchers. In the following sections, we briefly review several prominent theories that focus on well-being, motivation, and the enhancement of positive emotions and experiences, noting their sometimes-obvious overlap with theories of suicide.

Positive Psychological Theories Applied to Suicide Prevention

Broaden-and-Build Theory. Developed by Barbara Fredrickson, the Broaden-and-Build Theory of positive emotions is ideally suited for the application of positive psychology to clinical endeavors, as the basis of this theory and most therapies is to enhance opportunities for positive experiences, thoughts, and emotions, with the hope that well-being will improve. The Broaden-and-Build Theory suggests that positive emotions broaden one's awareness and, in turn, encourage a variety of novel thoughts and actions; that is, positive experiences and emotions result in a broadened thought-action repertoire that leads to the development of new skills and resources. In contrast, negative emotions narrow attention, resulting in a limited range of possible responses or urges (Fredrickson, 2004).

Although not developed as an explanation for psychopathology, the Broaden-and-Build theory of positive emotions easily applies to suicide prevention. Joiner et al. (2001) found that suicidal patients who tended to experience at least some positive moods manifested enhanced symptom remission and improved problem-solving attitudes compared to patients with primarily negative moods, and that problem-solving attitudes mediated the relation between positive affect and improved suicide symptoms (Joiner et al., 2001). That is, positive mood was associated with enhanced problem-solving ability and, in turn, to less suicide risk, suggesting that this positive psychological theory holds great promise for potential

application to suicide prevention (Wingate et al., 2006). Based on previous research indicating that it is not always the presence of negative emotions but, rather, the absence of positive emotions that contributes to suicide risk, an explicit plan to broaden-and-build our patient's repertoire of resiliency seems to be a paramount task for intervention efforts, and one which is not automatically accomplished via deficit-reduction therapeutic strategies. All our contributing authors adhere to this principle, and evidence for the beneficial psychological, emotional, and social effects of positive psychological constructs and experiences for suicide prevention is presented throughout each chapter in this volume.

Hope Theory. Another positive psychological construct that can be explicitly enhanced in therapy, or independently, is hopefulness, which is a motivational and goal-oriented construct and process that is linked to a broad array of positive psychosocial outcomes, such as better psychological and physical health, and negatively related to suicide risk factors such as hopelessness and loneliness, as well as to suicidality (Cheavens, Cukrowicz, Hansen, & Mitchell, 2016). Conceptualized as related to, but independent from, hopelessness, the construct of hope, according to Snyder's Hope Theory, frames our life experiences in terms of goal striving, and suggests that hopefulness arises from the perceived ability to determine desired goals (e.g., agentic choice) and the motivation and ability to attain identified goals (e.g., pathways problem-solving; Snyder, 1994).

Importantly, Hope Theory can explain multiple etiological mechanisms of suicide risk. On the one hand, as we have noted, the ability to identify and strive for positive goals appears to buffer suicide risk (Grewal & Porter, 2007). Further, Vincent et al. (2004) found that suicidal patients can identify positive life goals but have difficulty identifying methods to achieve those goals, consistent with Snyder's suggestion that blocked goals lead to suicidal ideation (Snyder, 2002). Therefore, when conceptualizing suicide prevention in the context of Hope Theory, not only is generation of positive life goals important, but so is development of tangible ways to achieve such goals (Snyder, 1994), such as identifying smaller, feasible sub-goals or securing social support to assist with goal attainment.

On the other hand, we must consider that suicide itself can become a desired goal, and, in fact, Snyder (1994) described suicide as the final act of hope. With repeated goal frustration, hopelessness may occur, and an individual may forsake previously set goals, setting a new goal of suicide (Snyder, 1994, 2002). If, as Shneidman (1993) suggests, suicide is conceptualized as an escape from unbearable pain, suicide may become a logical, viable goal in such instances (Snyder, 1994, 2002). Both considerations (i.e., frustrated goals as hindrances to hope; suicide as a goal) are discussed in this volume, in Chap. 2, which is focused on future orientation, hope, and optimism as protective factors against suicide, and in Chap. 9, which presents treatment strategies for therapeutically enhancing future orientation in suicide prevention efforts. Interestingly, Hope Theory and the Broaden-and-Build Theory are both predicated on motivational and volitional principles (e.g., via goal setting processes), and on experientially based growth (e.g., via positive emotions), which are also the cornerstones of the framework for Self-Determination Theory

(SDT). Indeed, SDT may be one of the best-suited theories for understanding how the human psyche and personality, and its accompanying motivational forces, contribute to the presence or absence of suicidality.

Self-Determination Theory. Comprised of numerous mini-theories, Self-Determination Theory (SDT), broadly, suggests that human motivation is a product of the satisfaction of the innate psychological needs of competence (e.g., self-efficacy), autonomy (e.g., personal choice), and relatedness (e.g., connectedness to others; Deci & Ryan, 2000), elements we have already discussed as being beneficially linked to suicidality.

According to self-determination theory, goal pursuit and attainment is dependent on the degree to which people can satisfy these basic psychological needs as they pursue and achieve their valued outcomes (Deci & Ryan, 2000). Self-determined people experience a sense of freedom to do what is interesting and important to them but are also able to regulate their behaviors according to their personal values, in the service of obtaining their desired goals (Deci & Ryan, 2012). Our contributing authors discuss similar pathways to suicide prevention; for instance, in Chap. 10, Heisel and colleagues discuss living according to one's purpose and making meaning, and Kleiman and colleagues note in Chap. 7 the importance of relatedness to others, as strategies for suicide prevention.

If we dig a bit deeper into self-determination theory, we see that it proposes four types of processes that regulate behaviors, all of which have meaning for suicide prevention, including: intrinsic motivation, identified regulation, introjected regulations, and external regulation. Intrinsic motivation represents behavior that is motivated by the enjoyment resulting from the activity, and in Chaps. 8 and 10, our contributing authors discuss physical and behavioral activities and engaging in meaningful life activities as pathways to suicide prevention. Identified regulation represents self-determined action in that even though the specific activity may not be enjoyable, it aligns with the person's values and beliefs. Such "struggle" to engage in behaviors that are difficult but rewarding suggests the process of forgiveness, which can be difficult, but which promulgates both physical and mental health benefits, as noted by Webb in Chap. 3. Next, introjected regulation represents an internally controlled functioning where the individual does not experience self-determination but, rather, behaves out of externalized pressures, such as shame and guilt. Our authors discuss this perspective explicitly, for instance, in Chaps. 3 and 11, whereby positive psychological processes such as self-forgiveness and the compassionate components of mindfulness are utilized to prevent suicide. Finally, external regulation refers to behavior that is carried out to gain material rewards or avoid punishments (Bureau, Mageau, Vallerand, Rousseau, & Otis, 2012). Again, many of the core constructs of positive psychology address such cognitive-emotional-behavioral patterns; for example, searching both inward and outward to gain meaning and purpose in life (Chap. 10), constructing valued future goals (Chap. 2), or practicing mindfulness, in the here-and-now, to regulate impulsive emotions and replace external reward patterns (Chap. 11).

There have been numerous preliminary studies applying self-determination theory to suicide prevention. For example, the satisfaction of basic psychological needs (e.g., being self-determined) is associated with lower levels of suicidal ideation and related risk factors such as perceived burdensomeness and thwarted belongingness (Tucker & Wingate, 2014). Self-determined individuals, because of their competence, choice, and connectedness, may be better able to cope with external stressors. In one study, self-determination moderated the relation between negative life events and suicidal ideation, such that individuals higher in self-determination were less likely to develop hopelessness and suicidal ideation in the face of negative life events (Bureau et al., 2012). Other research suggests that satisfying the basic psychological needs of autonomy, competence, and relatedness may help to increase perceived internal locus of control, bolster self-esteem, and foster interpersonal connectedness and, in turn, reduce suicide risk (Tucker & Wingate, 2014). In sum, current research is being conducted that links aspects of self-determination theory to reduced suicide risk, as well as tenets of Hope Theory and the Broaden-and-Build Theory, all indicating direct and indirect linkages between these theory-based approaches and suicide prevention.

In the following chapters, the reader will learn about a variety of positive psychological constructs that have empirical support in their application to suicide prevention. Whether interpersonal or intrapersonal, individually focused or community focused, positive psychology appears to have something to offer toward the amelioration of mental distress and suicidality. Historically, suicide has been a taboo topic, fraught with stigma and moral disregard, and is often thought to be a sign of weakness; however, current theory and our contributing authors have proposed a new field of exploration, that of positive suicidology, which focuses on human strengths and attributes in the service of preventing death by suicide (Hefferon & Boniwell, 2011). Given the evidence for the association between positive psychological constructs and increased well-being, better physical and emotional health, and increased social connectedness (Hefferon & Boniwell, 2011), our authors make the argument that these same principles should be applied to the prevention of suicide. Preliminary evidence suggests that our assertion is a worthwhile endeavor, as factors such as optimism, hope, reasons for living, gratitude, social support, and meaning in life have all been shown to be related to less suicidality (Heisel et al., 2016; Kleiman et al., 2014; Krysinska et al., 2015; Wingate et al., 2006). Further, treatment approaches, including bolstering personal strengths and gratitude, are associated with reductions in hopelessness and improvements in optimism, and reduced suicide risk (Huffman et al., 2014). Thus, theory and research, as well as clinical evidence, suggest that there is a role for such positive psychological variables in the prevention of suicidality.

What follows is an overview of our proposed positive psychological approach to the study of suicide and suicide prevention, and our attempt to conceptualize the burgeoning field of positive suicidology. The topics of our chapters span numerous subjects and many clinical and research areas related to both positive psychology and suicidology, including future orientation, forgiveness, reasons for living, gratitude, interpersonal needs and social support, physical health and health related

quality of life, and meaning and purpose. As well, we discuss these constructs in the context of culture and community, and as applied to prevention and intervention efforts. Our hope is that the reader will gain an understanding of the relation between positive psychology and suicidality, appreciate psychology and suicidology from a strength-based rather than deficit-oriented approach, and be able to apply positive psychological interventions to future research and clinical work focused on reducing psychopathology, promoting well-being, and lowering the risk of suicidality across diverse populations and settings.

References

Abramson, L. Y., Alloy, L. B., Hogan, M. E., Whitehouse, W. G., Gibb, B. E., Hankin, B. L., & Cornette, M. M. (2000). The hopelessness theory of suicidality. In T. Joiner & M. D. Rudd (Eds.), *Suicide science: Expanding the boundaries* (pp. 17–32). New York: Kluwer Academic.

Alavi, A., Sharifi, B., Ghanizadeh, A., & Dehbozordi, G. (2013). Effectiveness of cognitive-behavioral therapy in decreasing suicidal ideation and hopelessness of the adolescents with previous suicide attempts. *Iranian Journal of Pediatrics, 23*(4), 467–472.

American Association of Suicidology [AAS]. (2014). *U.S.A. suicide: 2014 official final data* [Fact sheet]. Retrieved from http://www.suicidology.org/Portals/14/docs/Resources/FactSheets/2014/2014datapgsv1b.pdf.

Beck, A. T. (1967). *Depression: Clinical, experimental and theoretical aspects*. New York: Harper & Row.

Beck, A. T., Steer, R. A., Kovacs, M., & Garrison, B. (1985). Hopelessness and eventual suicide: A 10-year prospective study of patients hospitalized with suicidal ideation. *American Journal of Psychiatry, 142*, 559–563.

Beck, A. T., Weissman, M., Lester, D., & Trexler, L. (1974). The measure of pessimism: The Hopelessness Scale. *Journal of Consulting and Clinical Psychology, 42*, 861–865. https://doi.org/10.1037/h0037562

Beck, J. S. (1995). *Cognitive therapy: Basics and beyond*. New York: Guilford.

Bureau, J. S., Mageau, G. A., Vallerand, R. J., Rousseau, F. L., & Otis, J. (2012). Self-determination: A buffer against suicide ideation. *Suicide and Life-threatening Behavior, 42*(2), 377–393. https://doi.org/10.1111/j.1943-278X.2012.00097.x

Centers for Disease Control [CDC]. (2017). *Suicide facts at a glance 2017* [Fact Sheet]. Retrieved from http://www.cdc.gov/violenceprevention/pdf/suicide-datasheet-a.PDF.

Chang, E. C., Yu, E. A., Kahle, E. R., Jeglic, E. L., & Hirsch, J. K. (2013). Is doubling up on positive future cognitions associated with lower suicidal risk in Latinos?: A look at hope and positive problem orientation. *Cognitive Therapy and Research, 37*(6), 1285–1293. https://doi.org/10.1007/s10608-013-9572-x

Cheavens, J. S., Cukrowicz, K. C., Hansen, R., & Mitchell, S. M. (2016). Incorporating resilience factors into the interpersonal theory of suicide: The role of hope and self-forgiveness in an older adult sample. *Journal of Clinical Psychology, 72*(1), 58–69. https://doi.org/10.1002/jclp.22230

Chehil, S., & Kutcher, S. P. (2012). *Suicide risk management: A manual for health professionals* (2nd ed.). Hoboken, NJ: John Wiley & Sons.

Dangel, T. J., Webb, J. R., & Hirsch, J. K. (2018). Forgiveness and suicidal behavior: Cynicism and psychache as serial mediators. *The Journal of Psychology, 152*(2), 77–95. https://doi.org/10.1080/00223980.2017.1408555

Deci, E. L., & Ryan, R. M. (2000). The what and why of goal pursuits: Human needs and self-determination of behavior. *Psychological Inquiry, 11*, 227–268.

Deci, E. L., & Ryan, R. M. (2012). *Self-determination theory.* Retrieved June 18, 2018, from Rochester University, Self-Determination Theory Website: http://www.psych.rochester.edu/SDT.

Fredrickson, B. L. (2004). The broaden-and-build theory of positive emotions. *Philosophical Transactions of the Royal Society B, 359*, 1367–1377. https://doi.org/10.1098/rstb.2004.1512

Gotzsche, P. C., & Gotzsche, P. K. (2017). Cognitive behavioral therapy halves the risk of repeated suicide attempts: Systematic review. *Journal of the Royal Society of Medicine, 110*(10), 404–410. https://doi.org/10.1177/0141076817731904

Grewal, P. K., & Porter, J. E. (2007). Hope theory: A framework for understanding suicidal action. *Death Studies, 31*(2), 131–154. https://doi.org/10.1080/07481180601100491

Gvion, Y., & Apter, A. (2012). Suicide and suicidal behavior. *Public Health Review, 34*, 1–20.

Hefferon, K., & Boniwell, I. (2011). *Positive psychology theory, research, and applications*. New York, NY: McGraw-Hill.

Heisel, M. J., Neufeld, E., & Flett, G. L. (2016). Reasons for living, meaning in life, and suicide ideation: Investigating the roles of key positive psychological factors in reducing suicide risk in community-residing older adults. *Aging & Mental Health, 20*(2), 195–207. https://doi.org/10.1080/13607863.2015.1078279

Huffman, J. C., DuBois, C. M., Healy, B. C., Boehm, J. K., Kashdan, T. B., Celano, C. M., … Lyubomirsky, S. (2014). Feasibility and utility of positive psychology exercises for suicidal inpatients. *General Hospital Psychiatry, 36*, 88–94. https://doi.org/10.1016/j.genhosppsych.2013.10.006

Joiner, T. E. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.

Joiner, T. E., Pettite, J. W., Perez, M., Burns, A. B., Gencoz, T., Gencoz, F., & Rudd, M. D. (2001). Can positive emotion influence problem-solving attitudes among suicidal adults? *Professional Psychology: Research and Practice, 32*(5), 507–512. https://doi.org/10.1037//0735-7028.32.5.507

Kleiman, E. M., Riskind, J. H., & Schaefer, K. E. (2014). Social support and positive events as suicide resiliency factors: Examination of synergistic buffering effects. *Archives of Suicide Research, 18*, 144–155. https://doi.org/10.1080/13811118.2103.826155

Klonsky, E. D., Kotov, R., Bakst, S., Rabinowitz, J., & Bromet, E. J. (2012). Hopelessness as a predictor of attempted suicide among first admission patients with psychosis: A 10-year cohort study. *Suicide and Life-Threatening Behavior, 42*(1), 1–10. https://doi.org/10.1111/j.1943-278X.2011.00066.x

Kuehn, B. M. (2014). Rates of suicide increases in middle age: Primary care key to suicide prevention. *Journal of the American Medical Association, 312*(17), 1727–1728. https://doi.org/10.1001/jama.2014.12816

Krysinska, K., Lester, D., Lyke, J., & Corveleyn, J. (2015). Trait gratitude and suicidal ideation and behavior: An exploratory study. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 36*(4), 291–296. https://doi.org/10.1027/0227-5910/a000320

Linehan, M. M., Goodstein, J. L., Nielsen, S. L., & Chiles, J. A. (1983). Reasons for staying alive when you are thinking of killing yourself: The reasons for living inventory. *Journal of Consulting and Clinical Psychology, 51*(2), 276–286.

Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York, NY: Guildford Press.

Neece, C. L., Berk, M. S., & Combs-Ronto, L. A. (2013). Dialectical behavior therapy and suicidal behavior in adolescence: Linking developmental theory and practice. *Professional Psychology: Research and Practice, 44*(4), 257–265. https://doi.org/10.1037/a0033396

O'Connor, R. C. (2011). Towards an integrated motivational-volitional model of suicidal behaviour. In R. C. O'Connor, S. Platt, & J. Gordon (Eds.), *International handbook of suicide prevention: Research, policy, & practice* (pp. 181–198). Chichester: Wiley-Blackwell.

O'Connor, R. C., & Kirtley, O. J. (2018). The integrated motivational-volitional model of suicidal behaviour. *Philosophical Transactions of the Royal Society B, 373*, 20170268.

Osman, A., Downs, W. R., Kopper, B. A., Barrios, F. X., Baker, M. T., Osman, J. R., … Linehan, M. M. (1998). The Reasons for Living Inventory for Adolescents (RFL-A): Development and psychometric properties. *Journal of Clinical Psychology, 54*(8), 1063–1078.

Patterson, A., & Holden, R. (2012). Psychache and suicide ideation among men who are homeless: A test of Shneidman's model. *Suicide and Life-Threatening Behavior, 42*, 147–156. https://doi.org/10.1111/j.1943-278X.2011.00078.x

Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. Washington, DC: American Psychological Association.

Seligman, M. E. P., & Csikszentmihalyi, M. (Eds.) (2000). Positive psychology—An introduction. *American Psychologist*, *55*, 5–14. https://doi.org/10.1037/0003-066X.55.1.5

Shneidman, E. (1993). *The suicidal mind*. New York, NY: Oxford University Press.

Snyder, C. R. (1994). *The psychology of hope: You can get there from here*. New York, NY: Free Press.

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*, 249–275.

Stanley, B., Brown, G., Brent, D., Wells, K., Poling, K., Curry, J., … Hughes, J. (2009). Cognitive behavior therapy for suicide prevention (CBT-SP): Treatment model, feasibility and acceptability. *Journal of the American Academy of Child & Adolescent Psychiatry, 48*(10), 1005–1013.

Troister, T., & Holden, R. (2012). A two-year prospective study of psychache and its relationship to suicidality among high-risk undergraduates. *Journal of Clinical Psychology, 68*, 1019–1027. https://doi.org/10.1002/jclp.21869

Tucker, R. P., & Wingate, L. R. (2014). Basic need satisfaction and suicidal ideation: A self-determination perspective on interpersonal suicide risk and suicidal thinking. *Archives Suicide Research, 18*(3), 282–294. https://doi.org/10.1080/13811118.2013.824839

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. (2010). The interpersonal theory of suicide. *Psychological Review, 117*(2), 575–600. https://doi.org/10.1037/a0018697

Vincent, P. J., Boddana, P., & MacLeod, A. K. (2004). Positive life goals and plans in parasuicide. *Clinical Psychology & Psychotherapy, 11*, 90–99.

Wetzel, R. D., & Reich, T. (1989). The cognitive triad and suicide intent in depressed in-patients. *Psychological Reports, 65*, 1027–1032.

Wingate, L. R., Burns, A. B., Gordon, K. H., Perez, M., Walker, R. L., Williams, F. M., & Joiner, T. E. (2006). Suicide and positive cognitions: Positive psychology applied to the understanding and treatment of suicidal behavior. In T. E. Ellis (Ed.), *Cognition and suicide: Theory, research, and therapy* (pp. 261–283). Washington, DC: American Psychological Association. https://doi.org/10.1037/11377-012

World Health Organization [WHO]. (2016). *Suicide* [Fact sheet]. Retrieved from http://www.who.int/mediacentre/factsheets/fs398/en/.

Zhou, L., Chen, J., Liu, X., Lu, D., & Su, L. (2013). Negative cognitive style as a mediator between self-compassion and hopelessness depression. *Social Behavior and Personality, 41*(9), 1511–1518. https://doi.org/10.2224/sbp.2013.41.9.1511

Chapter 2
Future-Oriented Constructs and Their Role in Suicidal Ideation and Enactment

Olivia J. Kirtley, Ambrose J. Melson, and Rory C. O'Connor

Introduction

Philosopher Friedrich Nietzsche wrote that 'the future influences the present just as much as the past'. Numerous studies have demonstrated that individuals experiencing suicidal ideation struggle with recalling autobiographical memories (Williams & Broadbent, 1986) and that this may negatively impact individuals' ability to think about their future (Williams et al., 1996; 2007). Furthermore, those who are suicidal are less able to generate positive thoughts about the future, relative to individuals who are not suicidal (MacLeod et al., 1997; O'Connor et al., 2008). Individuals who are suicidal are, therefore, trapped in limbo; their past self is inaccessible and, simultaneously, their future, or at least any semblance of a positive future, is unimaginable. The future, it would seem, is as distant and inaccessible as the past.

In as much as an absence of positive future thinking can be pernicious and increase a person's likelihood of becoming suicidal, the presence of positive future thoughts and specific beliefs in a changeable future (future orientation) can be protective. Future orientation is a broad construct, but it also encompasses other 'microconstructs', including future thinking, optimism, hope, and goal-directedness (Hirsch, Wolford, et al., 2007). Future orientation is, however, greater than simply

O. J. Kirtley (✉)
Center for Contextual Psychiatry, KU Leuven, Department of Neuroscience, Campus Sint-Rafael, Leuven, Belgium
e-mail: olivia.kirtley@kuleuven.be

A. J. Melson · R. C. O'Connor
Suicidal Behaviour Research Laboratory, Institute of Health and Wellbeing, College of Medical, Veterinary and Life Sciences, University of Glasgow, Gartnavel Royal Hospital, Glasgow, UK

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*, Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_2

the sum of its parts; it is a specific belief in a changeable future (Chang et al., 2013). Hopefulness is a cognitive set proposed to comprise three elements: goals, mechanisms of achieving such goals, and the motivation to strive for these goals (Snyder et al., 1991), whereas optimism is a more general and non-specific sense of positive future possibilities (Carver & Scheier, 2014). The absence of future orientation, in all its various forms, has been highlighted as having a deleterious relationship with suicidal ideation and behaviour.

Suicide research and prevention have traditionally maintained a strong focus on psychiatric disorders as being central to the development of suicidal behaviour (Mann, Waternaux, Haas, & Malone, 1999). A shift away from psychiatric models and towards prioritising a broader array of psychosocial risk and protective markers, including future orientation, has much to offer. There is much appeal in the transdiagnostic nature of these constructs, which represent multifaceted targets for intervention and treatment development that could mitigate risk of suicide.

Among the general population, greater ability to conceive of a positive potential future is related to higher subjective wellbeing (Macleod & Conway, 2007). For example, among individuals with chronic pain—a population at elevated risk of suicide (Tang & Crane, 2006; Tang et al., 2016)—difficulties reconciling a desired future self with their actual self are associated with greater presence of depressive symptoms (Morley, Davies, & Barton, 2005). Yet, the protective effects of future orientation, such as future thinking, optimism, and hopefulness, remain largely overlooked in suicide research. Virtually everyone asks the question, 'why do individuals who are suicidal want to die?', but too few consider the opposite question, 'why do individuals who are suicidal want to live?' (Hirsch, Wolford, et al., 2007; Malone et al., 2000). Whether an individual will die by suicide or not is more than a simple scoreboard of reasons to die and reasons to live; it is the two elements in combination (Gutierrez, 2006; Jobes & Mann, 1999).

Within this chapter, we will discuss the literature around suicide risk and its relation to the future-oriented constructs of goal setting, future thinking, optimism, and hopefulness. We begin by situating these constructs within the context of three contemporary theoretical frameworks of suicide: the Interpersonal-Psychological Theory of Suicide (IPT; Joiner, 2005; Van Orden et al., 2010), the Integrated Motivational-Volitional Model of Suicide (IMV; O'Connor, 2011; O'Connor & Kirtley, 2018), and the Three Step Theory of Suicide (3ST; Klonsky & May, 2015). There are many other models of suicide (e.g. Baumeister's (1990) Escape Model of Suicide); however, we focus here on the IMV, IPT, and 3ST, as they have been the focus of substantial attention in contemporary suicidological research within the last decade. This theoretical perspective allows us to better understand how future-oriented constructs relate to other key variables of interest. We then describe the literature that underpins the relationship between suicide and each of these constructs, in turn. Finally, we make suggestions for potentially fruitful avenues for future research in this area and highlight some examples of interventions with a future-oriented focus.

Future-Oriented Constructs Within Contemporary Theoretical Frameworks of Suicide

The Interpersonal-Psychological Theory of Suicide (IPT; Joiner, 2005; Van Orden et al., 2010)

Joiner's IPT model of suicide consists of three main elements: thwarted belongingness, perceived burdensomeness, and acquired capability (encompassing fearlessness about death and elevated physical pain tolerance) (Van Orden et al., 2010). According to the theory, each of these elements may be present in isolation; however, it is only when all three exist concurrently that a suicide attempt may ensue (Ribeiro & Joiner, 2009). Future-oriented constructs are not specifically characterised within the IPT; however, hopelessness has been found to independently interact with both thwarted belongingness and perceived burdensomeness (Christenson et al., 2013) and has been studied widely for approximately 50 years (O'Connor & Nock, 2014). Rasmussen and Wingate (2011) also found that optimism moderates the relationship between suicidal ideation and both thwarted belongingness and perceived burdensomeness, even when controlling for depressive symptoms.

The Integrated Motivational-Volitional Model of Suicide (IMV; O'Connor, 2011; O'Connor & Kirtley, 2018)

The IMV (O'Connor, 2011; O'Connor & Kirtley, 2018) model is a contemporary tripartite model that seeks to explain the transition from suicidal thoughts to suicidal behaviour. The pre-motivational phase of the model centres on a diathesis-stress paradigm (Hawton & Van-Heeringen, 2009; Van Heeringen, 2012), in which pre-existing vulnerability combines with acute life stress to increase the likelihood that an individual will think (ideate) about suicide. Central to the motivational phase of the model are experiences of defeat, humiliation, and entrapment, as a final common pathway towards developing the intention to act upon suicidal thoughts. Future-oriented constructs of future thinking and goals are specifically included within the IMV model as motivational moderators, the presence or absence of which inhibits or facilitates the transition from feelings of entrapment to forming the intention to make a suicide attempt. The final phase of the model, the volitional phase, describes variables that differ between individuals who ideate about suicide (but do not make an attempt) and those who act upon their thoughts of suicide and attempt to end their life.

The Three Step Theory (3ST; Klonsky & May, 2015)

The 3ST (Klonsky & May, 2015) is the latest addition to the theoretical landscape in suicidology and comprises three elements: the combination of pain (physical and/or emotional) and hopelessness, a sense of connectedness outweighed by pain, and the capability for attempting suicide (Klonsky & May, 2015). These elements represent a stepped dose-response pathway through ideation, strong ideation, and suicide attempt, respectively; only when all three elements are combined will a suicide attempt occur. Of particular relevance for the current chapter is the idea that in the presence of pain, a person who feels hopeful about the future will be less likely to develop suicidal ideation (Klonsky & May, 2015).

Overall, however, among the majority of contemporary theories of suicidal ideation and behaviour, future-oriented constructs receive short shrift. Only the IMV model (O'Connor, 2011; O'Connor & Kirtley, 2018) and the 3ST (Klonsky & May, 2015) explicitly characterise future orientation. Noticeably, research that has focused upon future thinking, goals, hopefulness, and optimism has yet to tease apart whether these constructs are differentially associated with suicidal ideation or enactment; consistent with the IPT and IMV model, the ideation to action framework is now a key guiding principle for all suicide research (Klonsky & May, 2014).

Future Thinking

A pervasive misconception among the general population is that individuals who are suicidal have more negative thoughts regarding the future. It is not, however, a greater volume of negative thoughts that characterises those who are suicidal; rather, it is a dearth of positive thoughts about the future that appears to be most pernicious (MacLeod et al., 1997; O'Connor, Connery & Cheyne, 2000). MacLeod and colleagues developed the Future Thinking Task (FTT; MacLeod et al., 1997), a novel way of assessing individuals' ability to generate positive and negative thoughts about the future whereby individuals are asked to generate their own responses to the questions 'what are you looking forward to in the next week/next month/next 5–10 years?' Negative future thoughts are assessed by asking 'what are you not looking forward to….?' Numbers of positive and negative future thoughts are totalled and compared. Conceptualisations of future orientation for individuals experiencing psychological distress often describe a more global negative outlook; for example, Beck's Cognitive Triad that describes a negative view of the self, world, and future, or the Beck Hopelessness Scale (BHS) that assesses broad feelings about the future, loss of motivations, and expectations (Beck et al., 1974). The work of MacLeod et al. (1997) may suggest, however, that the absence of positive future thinking may be less global, and more specific to individual-level future thinking.

To this end, MacLeod and Conway (2007) investigated future thinking ability in controls who had never engaged in suicidal behaviour, comparing them to individuals

with a 'parasuicidal[1]' behaviour history. The FTT was adapted to ask participants to generate positive thoughts about the future in relation to themselves, others, and 'shared' future thoughts (items that were repeated in both self and other categories). No significant differences were found between individuals in the parasuicide and control groups in their ability to generate positive future thoughts for others; however, those in the parasuicidal group generated significantly fewer positive future thoughts in relation to themselves, as well as fewer positive future thoughts that had a shared self-other component (MacLeod & Conway, 2007). Potentially, this suggests that the positive future thinking deficit is not pervasive. Individuals who are suicidal are able to envisage positive future outcomes; however, they are not able to do so in relation to themselves. Previous evidence also supports the idea that there is something about the self-referent nature of positive future thinking that is especially problematic for suicidal individuals. Vincent et al. (2004) examined ability to generate positive future goals and the means to achieving them in a sample of non-suicidal controls and those who had engaged in parasuicidal behaviour. Contrary to many prior (and subsequent) studies, there were no significant between-group differences in the number of goals generated. Those in the parasuicide group, however, rated both their control over achieving their goals and the likelihood of them being achieved, as significantly lower (Vincent et al., 2004). Findings from Vincent et al. (2004) ought to be interpreted cautiously given the small sample size ($n = 24$ in each group), but the idea that it is not just difficulties generating the positive future goal itself, but also the means of achieving it, is an important insight. This is also a theme which is echoed in recent research examining rumination about events or goals in the future (i.e. future-oriented repetitive thoughts).

The Future-oriented Repetitive Thought scale (FoRT; Miranda et al., 2017) comprises three subscales assessing pessimistic repetitive future thinking, repetitive thinking about future goals, and positive indulging about the future. Individuals with a lifetime history of a suicide attempt reported higher levels of pessimistic repetitive future thinking than those with no history of suicide attempt, but those without a suicide attempt history scored *lower* on repetitive thinking about future goals and positive indulging about the future. A similar pattern was observed when examining individuals with suicidal ideation, although no significant differences in positive indulging were found (Miranda et al., 2017). When examining the content of the repetitive thinking of future goals subscale, items include: 'I think about how to accomplish my future goals' and 'I make specific plans for how to get the things I want in life', all aspects that relate to the mechanisms by which goals can be achieved. Consistent with the findings of Vincent et al. (2004), it appears that those who are suicidal are also less able to think of the means by which a positive future event may be brought about. Problem-solving ability has been consistently highlighted as impaired in those who are suicidal (Linda, Marroquín, & Miranda, 2012; McAuliffe et al., 2005; Pollock & Williams, 2004). One avenue for future

[1] Parasuicide is a term previously used to refer to self-harm. According to current definitions used by the UK National Institute of Health and Care Excellence (NICE, 2004; 2011), self-harm is 'self-injury or self-poisoning irrespective of suicidal intent'.

research may be to explore the potential interaction between problem-solving skills and positive future thinking ability in those who are suicidal. It may be that positive future thinking ability could be enhanced by boosting problem-solving skills, so that the means by which one may achieve a desired positive future goal are more easily accessible to individuals when in a vulnerable psychological state.

Feelings that one is defeated and trapped with no prospect of rescue are all factors associated with suicidal ideation and behaviour (Williams, 1997); however, recent research has shown that these variables are not the most important in distinguishing between suicidal ideation and behaviour (Dhingra, Boduszek, & O'Connor, 2015, 2016). It is easy to see how individuals who feel trapped and defeated may struggle to envisage a positive future, particularly when they are experiencing low mood. Two experimental studies of healthy adults (n = 39; n = 70) assessed future thinking following administration of a brief negative mood induction, during which participants listened to a piece of slow, classical music and were presented with sentences such as 'just when I think things are going to get better, something else goes wrong' (O'Connor & Williams, 2014). The first study assessed whether brooding rumination moderated the relationship between negative mood and positive future thinking, finding that individuals high on brooding exhibited a more marked decrease from pre-mood induction baseline in the number of positive future thoughts they could generate. In Study 2, participants were again administered the negative mood manipulation and then assigned to receive either an impossible anagram task (defeat condition) or a solvable anagram task (control condition), followed by assessment of positive future thinking ability. Participants were also assessed for the presence of depressive symptoms and feelings of entrapment. Individuals who experienced the defeat manipulation and scored high on entrapment generated fewer positive future thoughts than those who scored low on entrapment (O'Connor & Williams, 2014). The directionality of this relationship should be explored further; it is also possible that inability to imagine a positive potential future may exacerbate or even directly contribute to feelings of entrapment and defeat.

Thoughts about the future can take many different forms. For example, one can look forward to an interpersonal event, such as meeting a friend for dinner or going on holiday with one's family, but it is also possible to look forward to things that are more individual (intrapersonal), such as gaining proficiency in a language, or enhancing one's ability to cope with stressful life events. Just as the valence of future thoughts may differ between individuals who are suicidal and those who are not, so too may the content of future thoughts. Prospective work by O'Connor, Smyth, and Williams (2015) has taken a more nuanced approach to teasing apart the nature of positive future thoughts and their relationship to suicidal behaviour. In a sample of 388 individuals admitted to hospital following a suicide attempt, patients completed the FTT (MacLeod et al., 1997) among other measures of depression and hopelessness. Participants' FTT responses were evaluated based on whether the positive future thoughts they generated were *intra*-personal (relating to improving a personal attribute) or *inter*-personal (relating to other people). Results from multivariate analyses showed that individuals with *highe*r levels of intra-personal

future thoughts were more likely to have been readmitted to hospital for self-harm, when followed up 15 months later. This finding was somewhat surprising as all previous research—which takes a global approach to positive future thinking—suggested that the absence, rather than the presence, of positive future thoughts was pernicious. This is the first study to examine the content of positive future thoughts and indicates that their content has a bearing upon their protective or deleterious functions for individuals who are suicidal.

Future work may also further investigate the importance of content in the future thinking–suicide risk relationship, and how this relates to other relevant variables. Greater intra-personal content, for example, may be related to self-criticism or socially prescribed perfectionism, whereby individuals constantly feel they are failing to meet the imagined (unrealistically) high standards of others. Social perfectionism has previously been demonstrated to moderate the relationship between level of positive future thinking and hopelessness in an adult community sample (O'Connor et al., 2004). Taken together with the findings of previous work (O'Connor et al., 2008), this latter study also demonstrated that future thinking has predictive power for hospital readmission for suicidal behaviour over the medium- to long-term, as well as the short-term. However, there is a chronic dearth of prospective studies, generally, in suicide research, and which also applies to the future thinking literature. It may be particularly useful to assess future thinking longitudinally in order to investigate possible temporal fluctuations in future thinking.

Optimism

There has been recent research attention on the distinction between optimism and hope. Carver and Scheier (2014) characterise dispositional optimism as distinct from hope, as the former is a general positive expectancy regarding the future *without* the presence of specific steps or plans for achieving the positive outcome. Conversely, to hope for a positive outcome also requires that one envisage how to get there (Hirsch, Wolford, et al., 2007; Snyder et al., 1991). Furthermore, optimism and hope are differentially associated with wellbeing and personality variables, thereby supporting the idea that these are distinct, although related, constructs (see systematic review and meta-analysis by Alarcon et al., 2013 for discussion).

Those who are better able to reframe and reconceptualise negative life experiences positively, conceptualised as an optimistic explanatory style, may have a reduced likelihood of ideating about or engaging in suicidal behaviour (Hirsch et al., 2006). Individuals who ideate about and enact suicidal behaviour have a disproportionately greater exposure to negative life events, such as interpersonal conflict (Baca-Garcia et al., 2007) and childhood adversity (Felitti, Anda, & Nordenberg, 1998), than individuals who have never thought about or engaged in suicidal behaviour. Being optimistic and able to continue to conceive of a positive future when faced with such distressing events may be protective, buffering against suicidal ideation, whereby those who are higher in trait optimism are less likely to contemplate

suicide. Intriguingly, however, the relationship between optimism, suicidal ideation, and suicidal behaviour may not be linear. In a college student sample, Hirsch, Wolford, et al. (2007) investigated whether optimism moderated the relation between negative life events and suicidal ideation and behaviour. Participants' experiences of negative life events, such as physical abuse or having been in a car accident, were recorded, as well as dispositional optimism, hopelessness, depression, and suicidal ideation and attempts. For those individuals reporting few negative life events, being low in optimism was associated with greater presence of suicidal ideation relative to those with higher optimism. As exposure to negative life events increased, however, the presence of suicidal ideation was elevated at all levels of optimism and, furthermore, those with moderate to high levels of optimism experienced the highest levels of suicidal ideation.

The same pattern was also observed for suicide attempt, with optimism moderating the relationship between low levels of negative life events and suicide attempt history, but when negative life event exposure increased, those with moderate and high levels of optimism were those most likely to have endorsed a lifetime suicide attempt (Hirsch, Wolford, et al., 2007). Further support for this also comes from the literature around chronic health conditions, such as chronic pain. The persistence of belief in (often unrealistic) positive outcomes may actually be detrimental to well-being as it 'misallocates' valuable cognitive and emotional resources to unachievable goals whilst neglecting other more attainable aims, in a phenomenon termed 'misdirected problem-solving' (Eccleston & Crombez, 2007). Some individuals' persistence in maintaining a positive future outlook, even in the face of overwhelming evidence to the contrary, does not always have positive consequences. As such, this phenomenon has led to discussion about the 'dark side' of positivity, where a prevailing belief in positive outcomes sometimes leads people to ignore vital cues which may have led them to follow a better alternative path or to take steps to mitigate a negative outcome (Sweeny, Carroll, & Shepperd, 2006).

Sweeny and colleagues contend that too much optimism may result in a lack of preparedness, a cognitive state that allows one to anticipate and respond to unexpected events; thus, a certain degree of pessimism may be adaptive, as it allows individuals to prepare for the worst-case scenario. Chang et al. (2017) investigated the conjoint effects of optimism/pessimism and hope in relation to both depression and suicidal ideation. In their cross-sectional study of 508 Hungarian college students, Chang and colleagues found that pessimists who scored low on hope were more likely to report higher levels of depression and greater presence of suicidal ideation, than pessimists who scored highly on hope. Moreover, pessimists who reported high levels of hope were virtually equivalent in levels of depression and suicidal ideation to optimists with high levels of hope (Chang et al., 2017). Here, the authors find that for pessimists, it is the cost of *not* having hope rather than the benefit gained by having it, which is the active ingredient in the pessimism–suicide risk relationship.

Earlier work by Chang et al. (2013) examined the interaction between optimism/pessimism and future orientation in relation to depression and suicidal behaviour. Those high in optimism displayed no significant differences in depression or suicidal behaviour, as a function of greater future orientation. A different picture was

found for pessimists, however, who reported significantly lower levels of depression and suicidal behaviour when their belief in a changeable future was high (Chang et al., 2013). Taken together, with the work of Sweeny et al. (2006), it may, therefore, be the case that pessimists with higher levels of hope are better equipped if things go wrong but can also still envisage a positive outcome, as well as the necessary steps to bring this about. For pessimists low on hope, however, such a cognitive set may leave them expecting the worst, but they are unable to plan for how a positive outcome may be reached. This converges with other evidence that both optimism and hope moderate the relationship between brooding (problem-focused) and reflective (solution-focused) rumination, and suicidal ideation (Tucker et al., 2013).

Thus, whilst optimism/pessimism may have a direct relationship with suicidal ideation and behaviour, it may also have an indirect relationship by exerting an influence upon other risk markers for suicide (e.g. rumination, perfectionism). For instance, high levels of optimism have been found to reduce the strength of the relationship between socially prescribed perfectionism and suicidal ideation (Blankstein, Lumley, & Crawford, 2007). Socially prescribed perfectionism, the constant belief that one is falling short of the (unrealistically high) standards of others, has been consistently associated with suicidal ideation (see O'Connor, 2007 for a review of this topic). As well, both optimism and hope are associated with lower levels of thwarted belongingness and burdensomeness, although surprisingly not with lower suicidal ideation (Davidson & Wingate, 2013). The sense that one is disconnected and is a detriment to others, are both key constructs within the IPT model of suicide (Joiner, 2005; Van Orden et al., 2010). As an example, in a sample of active service US military personnel, those who were high in optimism were more likely to exhibit lower levels of depression, hopelessness, and suicidal ideation compared to those low on optimism (Bryan, Ray-Sannerud, Morrow, & Etienne, 2013). Optimism, however, did not significantly affect post-traumatic stress disorder symptoms within this population. Future research should seek to elucidate more clearly the potential indirect relationships between optimism/pessimism and other key risk markers of suicidal ideation and enactment, as this will provide a fuller picture of the mechanisms by which optimism and other future-oriented constructs may exert a protective influence.

Hopefulness

In contrast to the generality of optimism, hope comprises two distinct facets; that of an initial will to pursue or achieve a particular goal and then the specific steps that one may take to realise such a goal (Alarcon et al., 2013; Snyder et al., 1991). This definition of hope is at odds with a definition put forward by Bruiniks and Malle (2005) who, following a series of three studies which mapped individuals' definitions of 'hope', 'optimism', 'wishing', and other related states, concluded that hope is, in fact, an emotion, as opposed to a cognitive set. Furthermore, hoping encompassed an attachment to positive outcomes, even when these were unlikely to occur, as well as such outcomes also being less subject to perceived personal control

(Bruininks & Malle, 2005). One argument posited by Bruininks and Malle (2005), related to this, is that the two-faceted definition does not allow for the presence of hope in the absence of control over one's life. This is particularly interesting within the context of suicide, as feelings of defeat, being brought to one's lowest point, and entrapment, having no prospect of rescue or escape, are strongly and directly related to suicidal ideation and behaviour (O'Connor et al., 2013). They are also indirectly related to suicidal ideation and behaviour via hopelessness, as individuals perceive no prospect of rescue or escape from their distress (Williams & Pollock, 2001). Thus, within the context of suicide, it is entirely plausible for hope to be absent in the presence of reduced life control. This is further supported by recent work that has shown that hope moderates the relationship between entrapment and suicidal ideation at low and moderate levels of hope, such that when entrapment was high, those low on hope reported significantly higher suicidal ideation (Tucker, O'Connor, & Wingate, 2016).

Rather than solely an emotion then, hope appears to be a cognitive resource and asset which can be drawn upon to buffer psychological challenge in times of need. As discussed by Alarcon et al. (2013), such a conceptualisation of hope is consistent with the Conservation of Resources Theory (COR; Hobfoll, 2001), which suggests that it is the fit between the challenge faced and individuals' resources which determines whether a positive or negative outcome will ensue. For those faced with distressing and negative life events, presence of hope appears to ameliorate negative outcomes. Chang et al. (2015) examined suicidal behaviour in relation to hope among a sample of college students with and without experiences of sexual assault. Among the 325 participants, reports of suicidal behaviour were highest among individuals who had experienced sexual assault and were low in hope, even when controlling for depressive symptoms. Independent of their experience of sexual assault, students reporting high levels of hope endorsed the lowest levels of suicidal behaviour (Chang et al., 2015).

In another study, utilising a sample of 200 African-American women from low-income backgrounds who had experienced intimate partner violence (IPV), the potential protective role of hope in the relationship between IPV and suicide risk was examined (Kaslow et al., 2002). This case-control study compared individuals reporting a previous suicide attempt (n = 100) with those never having made a suicide attempt (n = 100). Compared to their counterparts who had never attempted suicide, individuals who had attempted suicide scored lower on all protective factors, including hopefulness, social support, coping, and self-efficacy (Kaslow et al., 2002). Whilst the case-control design prevents conclusions being made regarding whether the presence of hopefulness reduces risk of future suicide attempt, these findings suggest that even in the presence of similar stressful life experiences, those lower on hopefulness are more likely to have attempted suicide in the past.

A similar relationship between absence of hopefulness and suicidal behaviour has also been observed in other minority populations. Lesbian, gay, bisexual, transgender, and questioning (LGBTQ) individuals are disproportionately at risk for engaging in suicidal behaviour (Haas et al., 2010; Skerrett, Kolves & De Leo, 2015); however, to date, most of the research concerning LGBTQ suicide has focused upon

the presence of psychiatric disorders. Hirsch, Cohn, Rowe, and Rimmer (2017) investigated the relationship between LGBTQ status, trait hopefulness, depression, and suicidal behaviour among a sample of American college students. Whilst LGBTQ status was independently associated with suicidal behaviour, there were also two indirect serial relationships: between LGBTQ status, depression, and suicidal behaviour, and between LGBTQ status, low trait hopefulness, depression, and suicidal behaviour (Hirsch et al., 2017). Consistent with Kaslow et al.' (2002) findings, the evidence from Hirsch et al. (2017) suggests that, for minority individuals, the relationship between psychological distress and suicide may be mitigated by individuals' ability to foresee the necessary steps required to achieve a desired positive future. Given that distress directly stemming from belonging to a sexual minority group has been highlighted as particularly deleterious (Haas et al., 2010; King et al., 2008), an important consideration for future research will be examining the nuanced nature of hopefulness among minority groups; is hopefulness that is specifically related to issues of minority status particularly protective, or is general hopefulness equally protective for this population?

Whilst there is a direct relationship between hope and suicidal ideation and behaviour, an indirect relationship may also exist via hope and its relationship with other proximate risk factors for suicide, such as acquired capability (encompassing fearlessness about death and elevated physical pain tolerance). Curiously, previous research has demonstrated that higher levels of hope correlated with higher levels of acquired capability for suicide (Davidson et al., 2009; Mitchell et al., 2015). Anestis et al. (2014) sought to further investigate this by examining whether distress tolerance—the ability to persist through aversive circumstances or states—explained this relationship, by administering self-report measures of distress tolerance, acquired capability, and trait hope to 230 US college students. Previous findings from Davidson et al. (2009) were replicated, in that higher levels of hope were associated with reduced feelings of burdensomeness and increased feelings of belongingness. Once again, higher trait hope was also correlated with higher levels of acquired capability. As predicted, Anestis et al. (2014) found that the relationship between higher hope and greater acquired capability for suicide was fully mediated by distress tolerance, even when controlling for depression. The ability to persist through pain and distress is a key contributor to acquired capability for suicide, in the form of reduced fearlessness about death and increased tolerance for physical pain (Ribeiro et al., 2014; Van Orden et al., 2010). Given that hope is comprised not only of the belief that a positive outcome is possible, but also of the cognitive capacity to envisage a specific plan for bringing about the desired outcome, it seems logical that the ability to tolerate an aversive state, in order to achieve such an outcome, may play a key explanatory role in this relationship. Within a therapeutic context, the association between high levels of hope and increased capability for suicide may present a unique challenge. The increased cognitive availability of suicide as a method of escaping one's intense emotional pain could potentially lead distressed individuals to feel more hopeful that their desired future outcome—reducing their emotional pain and their (perceived) burden upon others—may be within their reach. Anestis et al. (2014) posit that hopefulness may, in fact, be a proxy indication

of distress tolerance. Given the mediation effect found, these authors suggest it is highly unlikely that hope itself increases capability for suicide.

As discussed earlier in the chapter, acquired capability, along with thwarted belongingness and perceived burdensomeness, represents the three facets of Joiner's (2005) IPT model of suicide. The latter two constructs have also received attention in relation to hope; however, the evidence is not always convergent. Hollingsworth et al. (2016) investigated whether trait hope moderated the relationship between both thwarted belongingness and perceived burdensomeness, and suicidal behaviour in African-American college students. Even when controlling for depressive symptoms, hope was a moderator, such that at high levels of hope, there was no longer a significant relationship between thwarted belongingness and suicidal ideation. This was also the case for perceived burdensomeness; the relationship between burdensomeness and suicidal ideation only remained significant when hope was low. Conversely, a study by Cheavens et al. (2016) did not find a moderating role for hope in the relationship between thwarted belongingness and suicidal ideation in older adults. Both studies employed the same measure of hope and both had relatively comparable sample sizes (n = 91, Cheavens et al., 2016; n = 107, Hollingsworth et al., 2016). Cheavens et al. (2016) posit that their null finding may potentially be related to the differing importance of belongingness for different age groups; older individuals may already have a smaller social network and, thus, the effects of thwarted belongingness may not be as pronounced as for younger individuals with wider social networks. Feelings of burdensomeness, however, may be more present in older individuals. Differing effects of hope upon suicidal ideation should be further explored as a function of age, as this may contribute to the development of interventions that are tailored to address the most salient risk factors for particular age groups. Recent work by Walker, Chang, and Hirsch (2017) provide further support for the idea that other established risk markers for suicide, such as social problem-solving, may play a moderating role in the relationship between hopelessness and suicidal behaviour. Their study of 233 primary care patients from low-income backgrounds found that neuroticism was indirectly related to suicidal behaviour via hopelessness. Furthermore, the relationships between neuroticism and hopelessness, and hopelessness and suicidal behaviour, were strongest when individuals' social problem-solving ability was low (Walker et al., 2017). This suggests that interventions that embed future-oriented approaches within existing therapies, such as problem-solving therapy, should be considered in further research on treating suicidal thoughts and behaviour.

Future-Oriented Interventions for Suicidal Thoughts and Behaviour

Over the last decade, a small but growing body of research has investigated future-oriented interventions for suicidal ideation and behaviour in both adults (e.g. van Beek, Kerkhof, & Beeker, 2009) and adolescents (Walsh, 1993). Given the proliferation of research around future-oriented constructs and their relationship with suicidal ideation and behaviour, it is surprising that comparatively little attention has

been directed towards translating these findings into interventions and treatments. Here we present some examples of future-oriented interventions; however, a more detailed account of the literature can be found in Chap. 9. van Beek and colleagues (van Beek, 2013; van Beek et al., 2009) developed Future Oriented Group Therapy (FOGT), which specifically targets reduction of hopelessness and worrying, and increasing realistic future perspectives within the context of suicide, by drawing upon elements of cognitive and problem-solving therapies (van Beek et al., 2009). In a randomised controlled trial (RCT) of FOGT in 150 patients with depression and suicidal ideation, the primary outcome of suicidal ideation was not significantly different between FOGT and treatment as usual (TAU) when all (intervention completing and non-completing) individuals were included in the analysis (van Beek, 2013). *Post-hoc* analysis comparing only individuals who attended seven or more of the ten sessions with the TAU group, found a suicidal ideation reducing effect in the FOGT group (van Beek, 2013). Walsh (1993) also found no significant differences from baseline in depressive symptoms, self-efficacy, or future time perspective following an art-based future orientation intervention with adolescent inpatients hospitalised for suicidal ideation. Additionally, an RCT conducted with adult outpatients with a recent suicide attempt found similarly unexpected results; the active control (cognition-focused) intervention performed better than the (future oriented) positive psychology intervention in reducing suicidality, hopelessness, and depressive symptoms, as well as increasing optimism, gratitude, and positive affect at 6-week follow-up (Celano et al., 2017). Evidently, there are numerous points to be discussed around future-oriented interventions for suicidal ideation and behaviour; however, as previously mentioned, this is covered in detail in Chap. 9.

Future Directions

Compared to risk factors for suicide, such as impulsivity or rumination, protective factors have received precious little attention. The literature around future orientation is burgeoning and with this comes great opportunities for exciting and fruitful new avenues of research. Whilst the research energy around future-oriented constructs is gaining momentum, it is key that research around risk and protective factors is integrated. 'There is no one path to suicide' (O'Connor & Sheehy, 2000); thus, research around risk and protective factors must achieve a greater level of cross-pollination than at present. It is essential for us to gain greater understanding of which protective factors work when and for whom, as well as whether certain protective factors are specific to particular aspects of risk or offer more generalised protection against suicidal crises.

A strong and persuasive literature has established a direct relationship between a lack of future orientation and suicidal ideation and behaviour. Future research should also look to potential indirect pathways between future orientation and suicide, as some studies have already begun to do (e.g. Hirsch et al., 2017; Tucker et al., 2016), by examining factors that may mediate or moderate the relationship between future-oriented constructs and suicidal ideation or behaviour. For example,

Anestis et al. (2014) have highlighted the mediating role of distress tolerance in the relationship between hope and acquired capability for suicide. It may well be the case that other such mediating relationships exist. Recent work by Walker et al. (2017) suggests that the relationship between hopelessness and suicidal behaviour may be most pronounced when social problem-solving ability is low. These exploratory strategies, which consider other factors involved in the relation between future orientation and suicidal behaviour, could maximise opportunities for intervention for those at potentially elevated likelihood of experiencing suicidal thoughts, prior to the occurrence of suicidal crisis. For example, embedding future-oriented content within therapies for perfectionism and rumination may promote successful movement towards desired goals, and enhancing future orientation in vulnerable groups, such as veterans or LGTBTQ persons, may help patients transcend past traumas and current stressors, which may otherwise confer elevated risk for suicide.

Identifying factors that differentiate those who will think about suicide, without making an attempt, from those who will go on to make a suicide attempt, has been pinpointed as an area of critical research importance (Klonsky & May, 2014; O'Connor & Nock, 2014). Whilst several studies within the future-oriented constructs and suicide literature have examined both suicidal ideation *and* behaviour (e.g. Hirsch, Wolford, et al., 2007; Hirsch et al., 2017), it would be highly beneficial for future research to directly compare individuals with suicidal ideation in the absence of behaviour to those who have enacted suicidal behaviour, on measures of future orientation.

Thus far, research examining the role of future-oriented constructs in suicidal thoughts and behaviours has not yet fully explored whether particular kinds of future orientation may be more protective than others, or if specific 'profiles' combining different forms of future orientation may exist, which delineate differing trajectories of suicidality. These avenues of inquiry could prove fruitful for distilling down potential intervention targets from the wider pool of possibilities. It may also mean that more individually specific pathways, through which future orientation plays a role in suicidality, could be identified, leading to more nuanced psychosocial assessment and treatment targeting.

Conclusions

Much has already been achieved in the exploration of the role of future orientation in suicidal ideation and behaviour and there has been fertile ground laid for new avenues for research to take in the future. Within the current chapter we have discussed the literature around future-oriented constructs, and specifically future thinking, optimism, and hope. For the most part, future-oriented constructs have received short shrift within theoretical models of suicide, even in more contemporary models.

In general, the absence of positive future thinking is related to increased likelihood of repeat suicidal behaviour (O'Connor et al., 2007, 2008). It appears though that this phenomenon is specifically self-referent, with individuals who have engaged in suicidal behaviour being better able to generate positive future thoughts for others

compared to themselves (MacLeod & Conway, 2007). Positive future thoughts per se may not always exert a protective effect. Indeed, the self-referent, that is, intrapersonal, nature of positive future thoughts may in fact be deleterious; individuals with a greater proportion of intrapersonal future thoughts as compared to interpersonal future thoughts were more likely to be readmitted to hospital for a suicide attempt (O'Connor & Williams, 2014). So, it is not the case that any positive future thought will suffice as a protective factor. The content or achievability of positive future thoughts may also play a pivotal role in their capacity to be protective during a suicidal crisis, with those engaging in suicidal behaviour potentially feeling less control over the actualisation of their positive future thoughts as well as less idea of the specific steps that one might take to achieve them (Vincent et al., 2004).

The more generalised conceptualisation of the possibility of a positive future (Carver & Scheier, 2014), optimism, may play a key role in buffering the effects of the many negative life events often encountered by those who are suicidal. Optimism, though, may also have its limits, such that when levels of negative life events are low and optimism is also low, individuals report greater suicidal ideation, but when negative life events increase, it is those with moderate to high levels of optimism who are at greatest risk (Hirsch, Wolford, et al., 2007). This relation was also found for suicidal behaviour. Thus, for individuals experiencing the highest levels of psychological challenge, optimism may not offer increased protection. Optimism also exhibits a similar relationship to suicidal ideation and behaviour when examined in conjunction with other future-oriented constructs. Those who are low on optimism (i.e. pessimists) exhibit low levels of both suicidal behaviour and depression when their belief in a changeable future is high, but for those who were highly optimistic, suicidal behaviour did not significantly alter as a function of greater presence of future orientation (Chang et al., 2013). Chang et al. (2017) posit an interesting and empirically testable explanation for these and similar findings—that the cost of future orientation being absent is greater than its protective presence at higher levels (i.e. there is an 'essential' threshold level for future orientation). If it falls below such a level, its absence leaves an individual more vulnerable to the effects of risk factors, but above the threshold it offers little additional shield against psychological distress. Additional explanation for this may be that individuals who are very high on optimism may completely ignore the possibility of a negative outcome and, thus, not prepare for such an eventuality (Sweeny et al., 2006). Pessimistic individuals may benefit from preparedness for a worst-case scenario and, in the presence of higher levels of hope, may have more specific and achievable plans for how a better outcome may be achieved. This may be particularly interesting to explore, given the longstanding association between suicidality and poor problem-solving (e.g. Pollock & Williams, 2004).

Extant research on future thinking converges with the body of research around hope, suicidal ideation and behaviour, as integral to hope is the ability to envisage the specific steps that one may take to bring about a desired positive future event, or to steer a negative event to a more positive conclusion (Snyder et al., 1991). Hope has been found to moderate the relationship between sexual assault and suicidal behaviour (Chang et al., 2015), as well as the relationship between perceived burdensomeness and thwarted belongingness and suicidal ideation (Hollingsworth et al., 2016);

however, presence of the latter relationship has not always been consistent (Cheavens et al., 2016). Of note, the planning capacity encompassed in hopefulness exhibits a positive relation to acquired capability for suicide, such that individuals high in hope have greater acquired capability for suicide (Davidson et al., 2009). It may, however, be the case that it is the capacity to withstand aversive states and circumstances (distress tolerance) that explains this relationship, as this in itself is a step to achieving a desired, albeit negative, outcome (Anestis et al., 2014).

Protective factors are all too frequently understudied within the field of suicide research and prevention. Suicide risk assessment tools rarely take protective factors into consideration, focusing instead on aspects that increase risk (e.g. history of mental illness, impulsivity, access to means). Whether or not an individual attempts to take his or her own life is not, however, the result of a mere accumulation of risk factors alone. Instead, it is where the cumulative weight of numerous complex risk factors interacts with an absence of protective factors, limiting one's ability to see a future, or causing one to see it as so aversive that suicide is perceived as the sole escape.

References

Alarcon, G. M., Bowling, N. A., & Khazon, S. (2013). Great expectations: A meta-analytic examination of optimism and hope. *Personality and Individual Differences, 54*(7), 821–827. https://doi.org/10.1016/j.paid.2012.12.004

Anestis, M. D., Moberg, F. B., & Arnau, R. C. (2014). Hope and the interpersonal-psychological theory of suicidal behavior: Replication and extension of prior findings. *Suicide and Life-Threatening Behavior, 44*(2), 175–187. https://doi.org/10.1111/sltb.12060

Baca-Garcia, E., Parra, C. P., Perez-Rodriguez, M. M., Sastre, C. D., Torres, R. R., Saiz-Ruiz, J., & de Leon, J. (2007). Psychosocial stressors may be strongly associated with suicide attempts. *Stress and Health, 23*(3), 191–198. https://doi.org/10.1002/smi.1137

Baumeister, R. F. (1990). Suicide as escape from self. *Psychological Review, 97*, 90–113. http://dx.doi.org/10.1037/0033-295X.97.1.90

Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The hopelessness scale. *Journal of Consulting and Clinical Psychology, 42*, 861–865. https://doi.org/10.1037/h0037562

Blankstein, K. R., Lumley, C. H., & Crawford, A. (2007). Perfectionism, hopelessness, and suicide ideation: Revisions to diathesis-stress and specific vulnerability models. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 25*(4), 279–319. https://doi.org/10.1007/s10942-007-0053-6

Bruininks, P., & Malle, B. F. (2005). Distinguishing hope from optimism and related affective states. *Motivation and Emotion, 29*(4), 324–352. https://doi.org/10.1007/s11031-006-9010-4

Bryan, C. J., Ray-Sannerud, B. N., Morrow, C. E., & Etienne, N. (2013). Optimism reduces suicidal ideation and weakens the effect of hopelessness among military personnel. *Cognitive Therapy and Research, 37*(5), 996–1003. https://doi.org/10.1007/s10608-013-9536-1

Carver, C. S., & Scheier, M. F. (2014). Dispositional optimism. *Trends in Cognitive Sciences, 18*(6), 293–299. https://doi.org/10.1016/j.tics.2014.02.003

Celano, C. M., Beale, E. E., Mastromauro, C. A., Stewart, J. G., Millstein, R. A., Auerbach, R. P., … Huffman, J. C. (2017). Psychological interventions to reduce suicidality in high-risk patients with major depression: A randomized controlled trial. *Psychological Medicine, 47*(5), 810–821. https://doi.org/10.1017/S0033291716002798

Chang, E. C., Martos, T., Sallay, V., Chang, O. D., Wright, K. M., Najarian, A. S.-M., & Lee, J. (2017). Examining optimism and hope as protective factors of suicide risk in Hungarian

college students: Is risk highest among those lacking positive psychological protection? *Cognitive Therapy and Research, 41*(2), 278–288. https://doi.org/10.1007/s10608-016-9810-0

Chang, E. C., Yu, T., Jilani, Z., Fowler, E. E., Yu, E. A., Lin, J., & Hirsch, J. K. (2015). Hope under assault: Understanding the impact of sexual assault on the relation between hope and suicidal risk in college students. *Journal of Social and Clinical Psychology, 34*(3), 221–238. https://doi.org/10.1521/jscp.2015.34.3.221

Chang, E. C., Yu, E. A., Kahle, E. R., Jeglic, E. L., & Hirsch, J. K. (2013). Is doubling up on positive future cognitions associated with lower suicidal risk in Latinos?: A look at hope and positive problem orientation. *Cognitive Therapy and Research, 37*(6), 1285–1293. https://doi.org/10.1007/s10608-013-9572-x

Cheavens, J. S., Cukrowicz, K. C., Hansen, R., & Mitchell, S. M. (2016). Incorporating resilience factors into the interpersonal theory of suicide: The role of hope and self-forgiveness in an older adult sample: Hope and forgiveness as resilience factors in suicide. *Journal of Clinical Psychology, 72*(1), 58–69. https://doi.org/10.1002/jclp.22230

Christenson, H., Batterham, P. J., Soubelet, A., Mackinnon, A. J. (2013). A test of the Interpersonal Theory of Suicide in a large community-based cohort. *Journal of Affective Disorders, 144*, 225–234.

Davidson, C. L., & Wingate, L. R. (2013). The glass half-full or a hopeful outlook: Which explains more variance in interpersonal suicide risk in a psychotherapy clinic sample? *The Journal of Positive Psychology, 8*(3), 263–272. https://doi.org/10.1080/17439760.2013.787446

Davidson, C. L., Wingate, L. R., Rasmussen, K. A., & Slish, M. L. (2009). Hope as a predictor of interpersonal suicide risk. *Suicide and Life-Threatening Behavior, 39*(5), 499–507. https://doi.org/10.1521/suli.2009.39.5.499

Dhingra, K., Boduszek, D., & O'Connor, R. C. (2015). Differentiating suicide attempters from suicide ideators using the integrated motivational–volitional model of suicidal behaviour. *Journal of Affective Disorders, 186*, 211–218. https://doi.org/10.1016/j.jad.2015.07.007

Dhingra, K., Boduszek, D., & O'Connor, R. C. (2016). A structural test of the integrated motivational-volitional model of suicidal behaviour. *Psychiatry Research, 239*, 169–178. https://doi.org/10.1016/j.psychres.2016.03.023

Eccleston, C., & Crombez, G. (2007). Worry and chronic pain: A misdirected problem solving model. *Pain, 132*(3), 233–236. https://doi.org/10.1016/j.pain.2007.09.014

Felitti, V., Anda, R., & Nordenberg, D. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine, 14*, 245–258. https://doi.org/10.1016/S0749-3797(98)00017-8

Gutierrez, P. M. (2006). Integratively assessing risk and protective factors for adolescent suicide. *Suicide and Life-Threatening Behavior, 36*(2), 129–135. https://doi.org/10.1521/suli.2006.36.2.129

Haas, A. P., Eliason, M., Mays, V. M., Mathy, R. M., Cochran, S. D., D'Augelli, A. R., & Clayton, P. (2010). Suicide and suicide risk in lesbian, gay, bisexual, and transgender populations: Review and recommendations. *Journal of Homosexuality, 58*(1), 10–51. https://doi.org/10.1080/00918369.2011.534038

Hawton, K., & van Heeringen, K. (2009). Suicide. *Lancet, 373*(9672), 1372–1381. https://doi.org/10.1016/S0140-6736(09)60372-X

Hirsch, J. K., Cohn, T. J., Rowe, C. A., & Rimmer, S. E. (2017). Minority sexual orientation, gender identity status and suicidal behavior: Serial indirect effects of hope, hopelessness and depressive symptoms. *International Journal of Mental Health and Addiction, 15*(2), 260–270. https://doi.org/10.1007/s11469-016-9723-x

Hirsch, J. K., Duberstein, P. R., Conner, K. R., Heisel, M. J., Beckman, A., Franus, N., & Conwell, Y. (2006). Future orientation and suicide ideation and attempts in depressed adults ages 50 and over. *The American Journal of Geriatric Psychiatry, 14*(9), 752–757. https://doi.org/10.1097/01.JGP.0000209219.06017.62

Hirsch, J. K., Wolford, K., LaLonde, S. M., Brunk, L., & Morris, A. P. (2007). Dispositional optimism as a moderator of the relationship between negative life events and suicide ide-

ation and attempts. *Cognitive Therapy and Research, 31*(4), 533–546. https://doi.org/10.1007/s10608-007-9151-0

Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology, 50*(3), 337–421. https://doi.org/10.1111/1464-0597.00062

Hollingsworth, D. W., Wingate, L. R., Tucker, R. P., O'Keefe, V. M., & Cole, A. B. (2016). Hope as a moderator of the relationship between interpersonal predictors of suicide and suicidal thinking in African Americans. *Journal of Black Psychology, 42*(2), 175–190. https://doi.org/10.1177/0095798414563748

Jobes, D. A., & Mann, R. E. (1999). Reasons for living versus reasons for dying: Examining the internal debate of suicide. *Suicide and Life Threatening Behavior, 29*(2), 97–104. https://doi.org/10.1111/j.1943-278X.1999.tb01048.x

Joiner, T. (2005). *Why people die by suicide*. Boston: Harvard University Press.

Kaslow, N. J., Thompson, M. P., Okun, A., Price, A., Young, S., Bender, M., … Parker, R. (2002). Risk and protective factors for suicidal behavior in abused African American women. *Journal of Consulting and Clinical Psychology, 70*(2), 311–319. https://doi.org/10.1037//0022-006X.70.2.311

King, M., Semlyen, J., Tai, S. S., Killaspy, H., Osborn, D., Popelyuk, D., & Nazareth, I. (2008). A systematic review of mental disorder, suicide, and deliberate self harm in lesbian, gay and bisexual people. *BMC Psychiatry, 8*(1), 70. https://doi.org/10.1186/1471-244X-8-70

Klonsky, E. D., & May, A. M. (2014). Differentiating suicide attempters from suicide ideators: A critical frontier for suicidology research. *Suicide and Life-Threatening Behavior, 44*(1), 1–5. https://doi.org/10.1111/sltb.12068

Klonsky, E. D., & May, A. M. (2015). The three-step theory (3ST): A new theory of suicide rooted in the 'ideation-to-action' framework. *International Journal of Cognitive Therapy, 8*(2), 114–129. https://doi.org/10.1521/ijct.2015.8.2.114

Linda, W. P., Marroquín, B., & Miranda, R. (2012). Active and passive problem solving as moderators of the relation between negative life event stress and suicidal ideation among suicide attempters and non-attempters. *Archives of Suicide Research, 16*(3), 183–197. https://doi.org/10.1080/13811118.2012.695233

MacLeod, A. K., & Conway, C. (2007). Well-being and positive future thinking for the self versus others. *Cognition & Emotion, 21*(5), 1114–1124. https://doi.org/10.1080/02699930601109507

MacLeod, A. K., Pankhania, B., Lee, M., & Mitchell, D. (1997). Parasuicide, depression and the anticipation of positive and negative future experiences. *Psychological Medicine, 27*(4), 973–977.

Malone, K. M., Oquendo, M. A., Haas, G. L., Ellis, S. P., Li, S., & Mann, J. J. (2000). Protective factors against suicidal acts in major depression: Reasons for living. *American Journal of Psychiatry, 157*(7), 1084–1088. https://doi.org/10.1176/appi.ajp.157.7.1084

Mann, J. J., Waternaux, C., Haas, G. L., & Malone, K. M. (1999). Toward a clinical model of suicidal behavior in psychiatric patients. *The American Journal of Psychiatry, 156*(2), 181–189. https://doi.org/10.1176/ajp.156.2.181

McAuliffe, C., Corcoran, P., Keeley, H. S., Arensman, E., Bille-Brahe, U., De Leo, D., … Wasserman, D. (2005). Problem-solving ability and repetition of deliberate self-harm: A multicentre study. *Psychological Medicine, 36*(1), 45. https://doi.org/10.1017/S0033291705005945

Miranda, R., Wheeler, A., Polanco-Roman, L., & Marroquín, B. (2017). The future-oriented repetitive thought (FoRT) scale: A measure of repetitive thinking about the future. *Journal of Affective Disorders, 207*, 336–345. https://doi.org/10.1016/j.jad.2016.09.055

Mitchell, S. M., Cukrowicz, K. C., Van Allen, J., & Seegan, P. L. (2015). Moderating role of trait hope in the relation between painful and provocative events and acquired capability for suicide. *Crisis, 36*(4), 249–256. https://doi.org/10.1027/0227-5910/a000319

Morley, S., Davies, C., & Barton, S. (2005). Possible selves in chronic pain: Self-pain enmeshment, adjustment and acceptance. *Pain, 115*(1), 84–94. https://doi.org/10.1016/j.pain.2005.02.021

National Institute for Health and Care Excellence. (2004). *Self-harm: The short-term physical and psychological management and secondary prevention of self-harm in primary and secondary care.* Retrieved from http://www.nice.org.uk/guidance/cg16.

National Institute for Health and Care Excellence. (2011). *Self-harm: Longer term management.* Retrieved from https://www.nice.org.uk/guidance/cg133.

O'Connor, R. C. (2007). The relations between perfectionism and suicidality: A systematic review. *Suicide and Life-Threatening Behavior, 37*(6), 698–714. https://doi.org/10.1521/suli.2007.37.6.698

O'Connor, R. C. (2011). Towards an integrated motivational-volitional model of suicidal behaviour. In R. C. O'Connor, S. Platt, & J. Gordon (Eds.), *International handbook of suicide prevention: Research, policy and practice* (pp. 181–198). Chichester: Wiley-Blackwell.

O'Connor, R. C., Cleare, S., Eschle, S., Wetherall, K., & Kirtley, O. J. (2016). The integrated motivational-volitional model of suicidal behaviour: An update. In R. C. O'Connor & J. Pirkis (Eds.), *International handbook of suicide prevention: Research, policy and practice*. Chichester: Wiley-Blackwell.

O'Connor, R. C., Connery, H., & Cheyne, W. M. (2000). Hopelessness: The role of depression, future directed thinking and cognitive vulnerability. *Psychology, Health & Medicine, 5*(2), 155–161. https://doi.org/10.1080/713690188

O'Connor, R. C., Fraser, L., Whyte, M.-C., MacHale, S., & Masterton, G. (2008). A comparison of specific positive future expectancies and global hopelessness as predictors of suicidal ideation in a prospective study of repeat self-harmers. *Journal of Affective Disorders, 110*(3), 207–214. https://doi.org/10.1016/j.jad.2008.01.008

O'Connor, R. C., & Nock, M. K. (2014). The psychology of suicidal behaviour. *The Lancet Psychiatry, 1*(1), 73–85. https://doi.org/10.1016/S2215-0366(14)70222-6

O'Connor, R. C., & Sheehy, N. P. (2000). *Understanding suicidal behaviour*. Leicester: BPS Blackwell.

O'Connor, R. C., Smyth, R., Ferguson, E., Ryan, C., & Williams, J. M. G. (2013). Psychological processes and repeat suicidal behavior: A four-year prospective study. *Journal of Consulting and Clinical Psychology, 81*(6), 1137–1143. https://doi.org/10.1037/a0033751

O'Connor, R. C., Smyth, R., & Williams, J. M. G. (2015). Intrapersonal positive future thinking predicts repeat suicide attempts in hospital-treated suicide attempters. *Journal of Consulting and Clinical Psychology, 83*(1), 169–176. https://doi.org/10.1037/a0037846

O'Connor, R., O'Connor, D., O'Connor, S., Smallwood, J., & Miles, J. (2004). Hopelessness, stress, and perfectionism: The moderating effects of future thinking. *Cognition & Emotion, 18*(8), 1099–1120. https://doi.org/10.1080/02699930441000067

O'Connor, R. C., Whyte, M.-C., Fraser, L., Masterton, G., Miles, J., & MacHale, S. (2007). Predicting short-term outcome in well-being following suicidal behaviour: The conjoint effects of social perfectionism and positive future thinking. *Behaviour Research and Therapy, 45*(7), 1543–1555. https://doi.org/10.1016/j.brat.2006.11.006

O'Connor, R. C., & Williams, J. M. G. (2014). The relationship between positive future thinking, brooding, defeat and entrapment. *Personality and Individual Differences, 70*, 29–34. https://doi.org/10.1016/j.paid.2014.06.016

Pollock, L. R., & Williams, J. G. (2004). Problem-solving in suicide attempters. *Psychological Medicine, 34*(1), 163–167. https://doi.org/10.1017/S0033291703008092

Rasmussen, K. A., & Wingate, L. R. (2011). The role of optimism in the interpersonal-psychological theory of suicidal behavior. *Suicide and Life-Threatening Behavior, 41*(2), 137–148. https://doi.org/10.1111/j.1943-278X.2011.00022.x

Ribeiro, J. D., & Joiner, T. E. (2009). The interpersonal-psychological theory of suicidal behavior: Current status and future directions. *Journal of Clinical Psychology, 65*(12), 1291–1299. https://doi.org/10.1002/jclp.20621

Ribeiro, J. D., Witte, T. K., Van Orden, K. A., Selby, E. A., Gordon, K. H., Bender, T. W., & Joiner, T. E. (2014). Fearlessness about death: The psychometric properties and construct validity of the revision to the Acquired Capability for Suicide Scale. *Psychological Assessment, 26*(1), 115–126. https://doi.org/10.1037/a0034858

Skerrett, D. M., Kolves, K., & De Leo, D. (2015). Are LGBT populations at a higher risk for suicidal behaviors in Australia? Research findings and implications. *Journal of Homosexuality, 62*(7), 883–901. https://doi.org/10.1080/00918369.2014.1003009

Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., … Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*(4), 570. https://doi.org/10.1037/0022-3514.60.4.570

Sweeny, K., Carroll, P. J., & Shepperd, J. A. (2006). Is optimism always best? Future outlooks and preparedness. *Current Directions in Psychological Science, 15*(6), 302–306. https://doi.org/10.1111/j.1467-8721.2006.00457.x

Tang, N. K. Y., Beckwith, P., & Ashworth, P. (2016). Mental defeat is associated with suicide intent in patients with chronic pain. *The Clinical Journal of Pain, 32*(5), 411–419. https://doi.org/10.1097/AJP.0000000000000276

Tang, N. K. Y., & Crane, C. (2006). Suicidality in chronic pain: A review of the prevalence, risk factors and psychological links. *Psychological Medicine, 36*(5), 575. https://doi.org/10.1017/S0033291705006859

Tucker, R. P., O'Connor, R. C., & Wingate, L. R. (2016). An investigation of the relationship between rumination styles, hope, and suicide ideation through the lens of the integrated motivational-volitional model of suicidal behavior. *Archives of Suicide Research, 20*(4), 553–566. https://doi.org/10.1080/13811118.2016.1158682

Tucker, R. P., Wingate, L. R., O'Keefe, V. M., Mills, A. C., Rasmussen, K., Davidson, C. L., & Grant, D. M. (2013). Rumination and suicidal ideation: The moderating roles of hope and optimism. *Personality and Individual Differences, 55*(5), 606–611. https://doi.org/10.1016/j.paid.2013.05.013

van Beek, W. (2013). *Future thinking in suicidal patients: Development and evaluation of a future oriented group training in a randomized controlled trial* (Unpublished PhD thesis). Vrije Universiteit Amsterdam, Netherlands.

van Beek, W., Kerkhof, A., & Beekman, A. (2009). Future oriented group training for suicidal patients: A randomized clinical trial. *BMC Psychiatry, 9*(1), 65. https://doi.org/10.1186/1471-244X-9-65

Van Heeringen, K. (2012). Stress-diathesis model of suicidal behavior. In Y. Dwivedi (Ed.), *The neurobiological basis of suicide*. Boca Raton, FL: CRC Press.

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. (2010). The interpersonal theory of suicide. *Psychological Review, 117*(2), 575–600. https://doi.org/10.1037/a0018697

Vincent, P. J., Boddana, P., & MacLeod, A. K. (2004). Positive life goals and plans in parasuicide. *Clinical Psychology & Psychotherapy, 11*(2), 90–99. https://doi.org/10.1002/cpp.394

Walker, K. L., Chang, E. C., & Hirsch, J. K. (2017). Neuroticism and suicidal behavior: Conditional indirect effects of social problem solving and hopelessness. *International Journal of Mental Health and Addiction, 15*(1), 80–89. https://doi.org/10.1007/s11469-016-9648-4

Walsh, S. M. (1993). Future images: An art intervention with suicidal adolescents. *Applied Nursing Research, 6*(3), 111–118. https://doi.org/10.1016/S0897-1897(05)80171-5

Williams, J. M. G. (1997). *The cry of pain*. London, UK: Penguin.

Williams, J. M. G., & Pollock, L. R. (2001). Psychological aspects of the suicidal process. In K. van Heeringen (Ed.), *Understanding suicidal behaviour*. Chichester: John Wiley and Sons.

Williams, J. M., & Broadbent, K. (1986). Autobiographical memory in suicide attempters. *Journal of Abnormal Psychology, 95*(2), 144–149. https://doi.org/10.1037/0021-843X.95.2.144

Williams, J. M. G., Ellis, N. C., Tyers, C., Healy, H., Rose, G., & Macleod, A. K. (1996). The specificity of autobiographical memory and imageability of the future. *Memory & Cognition, 24*(1), 116–125. https://doi.org/10.3758/BF03197278

Williams, J. M. G., Barnhofer, T., Crane, C., Herman, D., Raes, F., Watkins, E., & Dalgleish, T. (2007). Autobiographical memory specificity and emotional disorder. *Psychological Bulletin, 133*(1), 122–148. https://doi.org/10.1037/0033-2909.133.1.122

Chapter 3
Forgiveness, Addiction, and Suicide

Jon R. Webb

Addiction and suicide are, each, clear and present world-wide public health problems (see Webb, Hirsch, & Toussaint, 2015). Moreover, addictive behavior and suicidal behavior are related and intertwined such that there is a high degree of comorbidity (up to 40%; see Yuodelis-Flores & Ries, 2015). Recent estimates of annual world-wide mortality rates are 3.3 million deaths for problematic alcohol use, alone (World Health Organization, 2014), and over one million deaths for suicide (Värnik, 2012). As well, the annual economic burden in the USA for alcohol use and illicit drug use is $234.9 billion (Rehm et al., 2009) and $193.1 billion (National Drug Intelligence Center, 2011), respectively, and for suicide about $30 billion (Corso, Mercy, Simon, Finkelstein, & Miller, 2007). The scientific community, through purposeful and concerted efforts, has made much headway in addressing these problems, yet they persist. Much of the work to date, particularly in the context of mental health, has been focused on lessening the impact of *pathological* psychosocial factors, with relatively little work focused on increasing *positive* psychological factors; that is, fostering pre-existing strengths and/or facilitating virtuous activities. In this chapter, the positive psychology of forgiveness, as a particular manifestation of spirituality, is discussed as it relates to addiction and suicidal behavior. Current modeling of the forgiveness–addiction/suicidal behavior association is presented, along with a study designed to test specific aspects of the model. The chapter concludes with a discussion of implications for treatment and prevention.

J. R. Webb (✉)
Department of Community, Family, and Addiction Sciences, Texas Tech University, Lubbock, TX, USA
e-mail: jon.r.webb@ttu.edu

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*,
Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_3

Spirituality and Forgiveness as Aspects of Positive Psychology

A relatively new movement in scientific psychology, positive psychology is concerned with the direct and intentional cultivation of human strength and virtue (Lopez & Gallagher, 2009). Positive psychology encompasses many constructive and health promoting characteristics such as humility, gratitude, hope, spirituality, and forgiveness (see Snyder & Lopez, 2009). Indeed, spirituality (see Koenig, King, & Carson, 2012) and forgiveness (see Toussaint, Worthington, & Williams, 2015) have been empirically observed to be beneficially associated with myriad health-related outcomes, including addiction and suicidal behavior (see below).

Spirituality and Health

Rates of belief in God or a universal spirit are about 70% world-wide (ISSP Research Group, 2012). In the USA, nearly 90% report such belief and 75% report that religion is at least fairly important in their life (Gallup Poll, 2016). In this regard, scientific evidence supports the notion that spirituality is a universal component of human nature (Pargament, 2013; Piedmont & Wilkins, 2013) and is embedded in human culture (Cohen, 2009).

Defining spirituality. In the scientific arena, arriving at definitions of, and the interplay between, religiousness and spirituality has been difficult. One manifestation of this process is reflected by the notion that humans can be described as (1) religious and spiritual, (2) religious, but not spiritual, (3) spiritual, but not religious, and (4) not religious and not spiritual (e.g., Connors, Tonigan, & Miller, 1996), such that an all-too-often polarized dichotomy arises—religiousness versus spirituality—one being bad and the other being good (see Hood, 2003; Pargament, Mahoney, Exline, Jones, & Shafranske, 2013; Webb, Toussaint, & Dula, 2014). In an effort to address this sometimes contentious and otherwise artificial dichotomy, Webb et al. (2014) sought to disentangle the two constructs and provide a more refined operational definition. The notion of two separate constructs of religiousness *or* spirituality was collapsed into an overarching term, *Spirituality*, with three dimensions, and defined as: "the salient, searching pursuit of the transcendently sacred ritualistic [i.e., a structured connection with deity], theistic [i.e., a non-structured connection with deity], and/or existential [i.e., a non-theistic search for meaning and purpose] aspects of the human condition" (i.e., the RiTE Model of Spirituality; Webb et al., 2014, p. 974).

Spirituality, addiction, and suicidal behavior. Although there is meaningful evidence supporting deleterious associations with health and well-being (e.g., negative religious coping; Pargament, 1997), Koenig and colleagues have provided comprehensive overviews of the mostly constructive association of spirituality with a variety of aspects of physical health (e.g., pain, healthy behaviors, mortality), mental

health (e.g., depression, anxiety, stress), and well-being (e.g., quality of life, life satisfaction, purpose in life) (Koenig et al., 2012; Koenig, McCullough, & Larson, 2001). Toussaint, Webb, and Keltner (2012) updated Koenig et al.'s (2001) review of various aspects of mental health and concluded that, through 2009, 85.5% of studies regarding substance abuse and suicide, in the context of spirituality, found at least one statistically significant favorable effect.

Forgiveness as an aspect of spirituality. Forgiveness, particularly other-forgiveness, is a core principle shared by the world's major spiritual/religious traditions (e.g., Judeo-Christian, Islamic, Hindu, Buddhist; Webb, Toussaint, & Conway-Williams, 2012). Yet, forgiveness is not limited to spirituality, whether ritualistic, theistic, or existential (Webb et al., 2014), as it also is central to psychology and philosophy (McCullough & Worthington, 1994). Forgiveness may be a universal construct, unbound by culture, historical context, or geography (Webb, 2007), as it is "woven into the fabric of human existence but rarely recognized as such" (Fincham, 2000, p. 5).

Forgiveness and Health

Worthington and colleagues have developed a comprehensive stress-and-coping based (Worthington, 2006a) model of the forgiveness–health association (e.g., Lavelock et al., 2015). As a component of the larger association of spirituality with health, forgiveness is thought to be one of a variety of potential mechanisms (others include justice, avoidance, revenge) to cope with the stress of unforgiveness—a confluence of negative emotions in response to transgression (e.g., anger, hostility, resentment). As such, forgiveness is thought to directly promote health, as a function of its otherwise intertwined association with the ruminative stress of unforgiveness (see Toussaint & Webb, 2005), as well as indirectly through a variety of *distinct* mediators (e.g., health behavior, social support, and interpersonal functioning). Toussaint, Worthington, and Williams (2015) and Woodyatt, Worthington, Wenzel, and Griffin (2017) have provided state-of-the-science reviews of the increasingly well-established salubrious association of forgiveness with myriad aspects of health and well-being.

Defining forgiveness. Although forgiveness research has received increasing attention over the past 30+ years and is currently burgeoning (see Toussaint et al., 2015; Woodyatt et al., 2017), agreement on common definitions has been elusive. Forgiveness is a multidimensional construct as it can involve a variety of targets (e.g., self, others, deity) and methods (e.g., offering, seeking, feeling), and can be considered as a state or trait based variable (Toussaint & Webb, 2005). Although nuanced definitional differences among the varying dimensions are acknowledged, the definition of other-forgiveness has served as the default definition for all dimensions (Webb, Hirsch, Visser, & Brewer, 2013). While potentially challenging in a

general sense, this is particularly problematic in the context of self-forgiveness, given critical differences based on the self being both the transgressor and the victim, such as the inability to avoid the self and the need for self-reconciliation (Enright et al., 1996; Tangney, Boone, & Dearing, 2005). That is, scholars largely agree that other-forgiveness does not require reconciliation (e.g., Worthington, 2006a).

In this regard, Webb, Bumgarner, Conway-Williams, Dangel, and Hall (2017) have reviewed the extensive peer-reviewed psychological literature and provided consensus-based definitions of both the broad, overarching construct of forgiveness and the particular dimension of self-forgiveness. In general, forgiveness, regardless of dimension, "occurs over time and is a deliberate, volitional process involving a fundamental shift in affect, cognition, and/or behavior in response to negative feelings regarding an acknowledged offensive experience, without condoning, excusing, or denying the transgression(s)" (p. 220). Building upon this general definition of forgiveness as a broad construct, self-forgiveness is:

> initiated in response to one's own negative feelings in the context of a personally acknowledged self-instigated wrong, [and] results in ready accountability for said wrong and a fundamental, constructive shift in one's relationship to, reconciliation with, and acceptance of the self through human-connectedness and commitment to change (p. 221).

Forgiveness and addiction. Webb and colleagues have provided periodic reviews of the scientific literature regarding the empirical association of forgiveness with addiction and recovery (Webb, Hirsch, & Toussaint, 2011; Webb & Jeter, 2015). Most recently, Webb and Toussaint (2018) reported that of the now 33 such data-driven studies, about 90% "support the notion that forgiveness, as a broad construct, plays an importantly salubrious role therein" and that "it seems likely that self-forgiveness remains the most critical dimension of forgiveness in relation to addiction and recovery" (p. 16 and 17). Importantly, whereas initially most of such research was in the context of alcohol-related problems only, additional forgiveness–addiction related work in the context of other compulsive behavioral sets is increasing (e.g., gambling and sexual activity; see Webb & Toussaint, 2018).

Forgiveness and suicidal behavior. In a previous review of the scientific literature focused on the empirical association of forgiveness with suicidal behavior (Webb et al., 2015), 13 of 14 extant data-driven studies were found in support of a beneficial association of multiple dimensions of forgiveness (e.g., self-forgiveness, other-forgiveness, and feeling forgiven by God) to suicide risk. In a March 2018 updated literature review of the same databases (i.e., PsycINFO and PUBMED) and using the same search terms (i.e., "forgiv*" and "suicid*"), an additional five empirical studies were identified. Quintana-Orts and Rey (2018) found that forgiveness weakened the association of depression with suicidal ideation among adolescent boys, but not girls. Dangel, Webb, and Hirsch (2018) found multiple dimensions of forgiveness (i.e., self-, other-, of uncontrollable situations) to be associated with less suicidal behavior among undergraduate students, as mediated by cynicism and/or

psychache (i.e., psychological pain). Cheavens, Cukrowicz, Hansen, and Mitchell (2016) observed self-forgiveness to weaken the association between perceived burdensomeness and suicidal ideation among older adults. Nagra, Lin, and Upthegrove (2016) found self-forgiveness to be negatively associated with suicidality among people who self-harm. Kopacz, Currier, Drescher, and Pigeon (2016) found that problems with forgiveness (i.e., self-forgiveness, other-forgiveness, and feeling forgiven by God measured together as total forgiveness) were associated with risk for suicide among veterans with PTSD.

Also, two studies have been accepted for publication. Hall, Webb, and Hirsch (in press) found self-forgiveness and/or psychache to mediate the association of multiple dimensions of spirituality (i.e., ritualistic, theistic, and existential) with suicidal behavior, among a US community-based sample. Lastly, Kelliher Rabon, Webb, Chang, and Hirsch (in press) found multiple dimensions of forgiveness (i.e., self-, other-, by God) to be individually associated with less suicidal behavior among rural primary care patients, as mediated by future orientation.

Taken together, 19 of 21 extant scientific studies (90%) focused on the association between forgiveness and suicidal behavior provide empirical support for a salubrious association. Of note, the two studies showing an otherwise deleterious association do not suggest that higher levels of forgiveness are associated with higher levels of suicidal behavior. Rather, more suicide attempts have been associated with lower levels of self-forgiveness, other-forgiveness, and believing being forgiven by others (Sansone, Kelley, & Forbis, 2013), and problems with forgiveness have been associated with risk for suicide (Kopacz et al., 2016). In this regard, it is reasonable to conclude that *all 21* extant, data-driven studies (100%) support and, thus, suggest a robust constructive association between forgiveness and suicidal behavior.

Although the scientific literature base remains modest, in terms of quantity, for both the forgiveness–addiction association and the forgiveness–suicidal behavior association, the extant empirical evidence suggests that forgiveness is an important and salubrious factor in the context of both addiction and suicide. Recent theoretical modeling suggests particular mechanisms that may help: (1) explain the nature of this process and (2) provide guidance for future work.

Modeling the Forgiveness–Addiction/Suicidal Behavior Association

Webb and colleagues have expanded upon Worthington and colleagues' stress-and-coping based model of the general forgiveness–health association (e.g., Lavelock et al., 2015) to include addiction and suicidal behavior as particular health-related outcomes (Webb et al., 2011, 2015; Webb & Jeter, 2015). Again, in the larger context of the relationship between spirituality and health, forgiveness is thought to be associated with better outcomes related to addiction and suicidal behavior both

directly and indirectly through distinct mediators (see Fig. 3.1a). Consistent with Worthington's general model and the fundamental role of the ruminative stress and resentment-building associated with the process of unforgiveness (see also Toussaint & Webb, 2005), Webb and colleagues have argued that the direct effect of forgiveness on addiction and suicidal behavior is based on the common, central role of *resentments* in the processes of (un)forgiveness, addiction, and suicidal behavior. Indeed, the 12-Step Model of addiction and recovery, for over 75 years, has identified the development, maintenance, and resolution of resentments as the crucible of addiction, relapse, and recovery (e.g., Alcoholics Anonymous, 2001; see also Suicide Anonymous, 2010).

Regarding indirect effects, in addition to Worthington and colleagues' distinct mediators (e.g., Lavelock et al., 2015) categorized as health-related functioning (Webb & Jeter, 2015), Webb et al. (2015) have expanded the model to include a separate category of mediators termed, *Existangst*, or "emotionally struggling with affirming one's meaningful existence" (p. 52). Existangst, which encompasses variables such as depression, anxiety, hopelessness, and psychache, *when* driven by emotional and philosophical psychological distress, is thought to play a critical role in the relationship between forgiveness and both addiction and suicidal behavior (Webb et al., 2015).

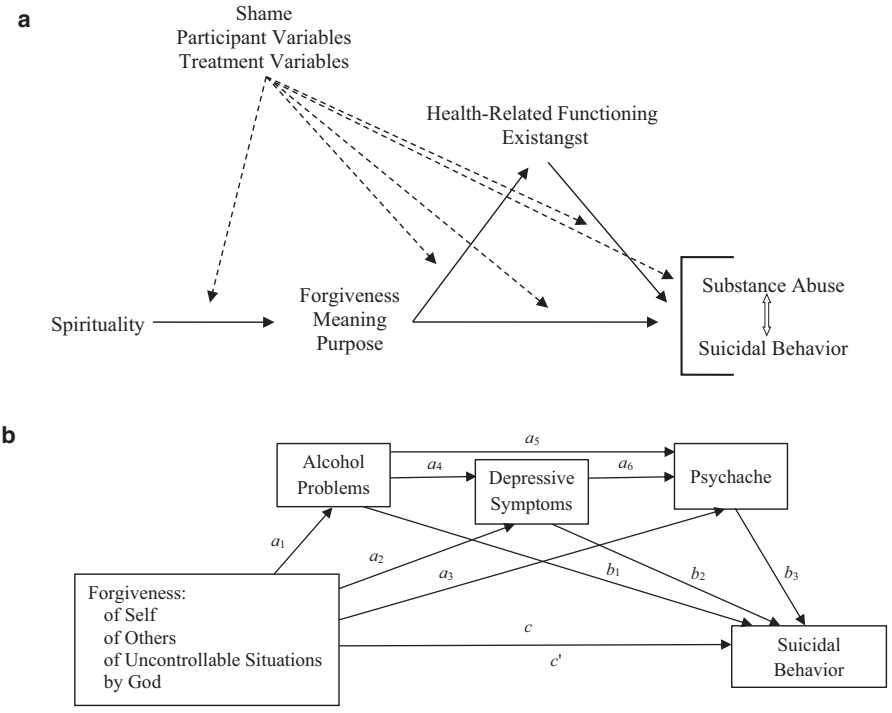

Fig. 3.1 (**a**) The Forgiveness–Substance Abuse/Suicidal Behavior Association (Webb et al., 2015). (**b**) Forgiveness and suicidal behavior among likely to be hazardous/harmful drinkers

Given the apparent central role of *self*-forgiveness in addiction and suicidal behavior, Webb and colleagues have further expanded such modeling to incorporate the effects of self-condemnation (e.g., shame, guilt, anger, regret, and disappointment; Griffin et al., 2015) on addiction and suicidal behavior (Hirsch, Webb, & Toussaint, 2017; Toussaint, Webb, & Hirsch, 2017; Webb, Toussaint, & Hirsch, 2017). In this modeling of the relationship between self-condemnation and self-forgiveness, self-condemnation arises as a result of the not only counterproductive, but destructive, activities and behaviors associated with addiction and suicidal behavior (e.g., problems related to health, financial, and legal consequences, and the stressful impact on family, friends, and children). Moreover, changing such self-defeating patterns is difficult and returning thereto is commonplace, often resulting in resentments. With repeated failures to change, self-loathing and, ultimately, psychache and the exacerbation of self-condemnation may occur. Self-forgiveness can be a powerful antidote to the effects of self-condemnation and, thus, particularly useful in addressing addiction and suicidal behavior (see also Webb & Toussaint, 2018).

The Forgiveness–Addiction/Suicidal Behavior Association: An Initial Study

Although extant studies have empirically examined associations of forgiveness with outcomes related to *either* addiction *or* suicidal behavior, Webb and colleagues' aforementioned modeling is not only concerned with each as an independent health-related outcome, but also addresses each in the context of a potentially concomitant and/or bidirectional association *between* addiction and suicidal behavior (Webb et al., 2015; Yuodelis-Flores & Ries, 2015; see also Suicide Anonymous, 2010). As such, following is a first study designed to examine the association of multiple dimensions of forgiveness with suicidal behavior *among* college student problematic drinkers. Consistent with the previous empirical findings and current theoretical modeling outlined above, the guiding general hypotheses for this study are that multiple dimensions of forgiveness will be associated with less suicidal behavior, and that this association will operate through alcohol problems, depressive symptoms, and psychache as serial mediators. That is, higher levels of forgiveness will be associated with fewer alcohol problems, fewer depressive symptoms, and lower levels of psychache, in sequence, which, in turn, will be associated with less suicidal behavior.

Methods

Participants for this cross-sectional study were drawn from a larger research project investigating positive psychology and health conducted at a regional university in rural Southern Appalachia. From a larger sample of 1686 respondents who completed the study, a subset of 343 undergraduate students (see Table 3.1) identified as

Table 3.1 Sample characteristics ($N = 343$)

Variable	*n*	Percent
Sex		
Male	151	44.02
Female	192	55.98
Age (years)	$M = 20.80$	SD = 4.53
Ethnicity		
White	311	90.67
African American	14	4.08
Hispanic	4	1.17
Asian	4	1.17
Native American	1	.29
Mixed	9	2.62
Belief status[a]		
Atheist	11	3.21
Agnostic	17	4.96
Unsure	20	5.83
Spiritual	151	44.02
Religious	144	41.98
Education level (year in college)		
1	141	41.11
2	76	22.16
3	63	18.37
4	42	12.24
5	18	5.25
6	1	.29
7+	2	.58

M mean; *SD* standard deviation

[a]Measured by the Religious Background and Behaviors Questionnaire (Connors et al., 1996). Of note, *Spiritual* is defined as "I believe in God, but I'm not religious" and *Religious* is defined as "I believe in God and practice religion"

likely to be hazardous or harmful drinkers—based on a score of 8 or above on the Alcohol Use Disorders Identification Test (AUDIT; Babor, Higgins-Biddle, Saunders, & Monteiro, 2001)—were included in this analysis. Participants completed an anonymous online self-report survey and received course credit upon completion of the survey.

Measures

This study included measures of forgiveness, alcohol problems, depressive symptoms, psychache, and suicidal behavior, as well as measures of religiousness and social desirability that were included as covariates. Scoring for each measure was

adjusted for intuitive understanding (i.e., reverse scored, if necessary), such that higher scores are indicative of higher levels of the variable. Internal consistency estimates (Cronbach's α) for each multi-item measure are included in the table presenting the zero-order associations among study variables (see Table 3.2).

Independent variables. The 18-item Heartland Forgiveness Scale (Thompson et al., 2005) was used as a measure of dispositional: forgiveness of self (example item: I hold grudges against myself for negative things I've done), forgiveness of others (example item: I continue to be hard on others who have hurt me), and forgiveness of uncontrollable situations (example item: It's really hard for me to accept negative situations that aren't anybody's fault). Each of these three subscales is comprised of 6 items and is scored on a 7-point Likert scale ranging from 1 to 7 (i.e., "almost always false of me" to "almost always true of me"), with a total possible range of 6 to 42 for each subscale. A single-item, dispositionally based assessment of feeling forgiven by God (i.e., I know that God forgives me) was also used, from the 40-item Brief Multidimensional Measure of Religiousness/Spirituality (Fetzer Institute, 1999). This item is scored on a 4-point Likert scale ranging from 1 to 4 (i.e., "always or almost always" to "never").

Mediator variables. The 8-item College Alcohol Problems Scale (Maddock, Laforge, Rossi, & O'Hare, 2001) was used to assess for the occurrence of problems related to alcohol consumption typically experienced among college students, including unplanned sexual activity, poor self-image, and appetite/sleep related problems, among others. Each item is scored on a 6-point frequency-based scale ranging from 0 to 6 (i.e., "never" to "yes in the past year: ten or more times"), with a total possible range of 0 to 48. The 7-item depression subscale of the 21-item Depression Anxiety Stress Scales (DASS21; Lovibond & Lovibond, 1995) was used to assess for depressive symptoms (example item: I felt down-hearted and blue). Each item is scored on a 4-point Likert scale ranging from 0 to 4 (i.e., "did not apply to me at all" to "applied to me very much, or most of the time"), with a total possible range of 0 to 21. The 13-item Psychache Scale (Holden, Mehta, Cunningham, & McLeod, 2001) was used to assess for Shneidman's (1993) conceptualization of intense, unrelenting, unremitting psychological pain (example item: My soul aches). Each item is scored on a 5-point Likert scale ranging from 1 to 5 (i.e., "never" or "strongly disagree" to "always" or "strongly agree"), with a total possible range of 13 to 65.

Dependent variable. The 4-item Suicidal Behaviors Questionnaire-Revised (Osman et al., 2001) was used to measure suicide risk, which includes lifetime ideation and attempts, past year ideation, communication of intent, and likelihood of future attempts. Each item is scored on a Likert scale with varying ranges and options, with a total possible range of 3 to 18.

Covariates. The 6-item lifetime religiousness subscale of the 13-item Religious Background and Behaviors Questionnaire (Connors et al., 1996) was used to assess

Table 3.2 Bivariate correlations and descriptive statistics ($N = 343$)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Sex[a]														
2.	Age	.00													
3.	Education level	.10*	.34****												
4.	Race/ethnicity[b]	−.02	−.02	−.03											
5.	Lifetime religiousness	.09*	.07	.10*	.01	(.72)[c]									
6.	Social desirability	−.03	−.02	.04	−.02	−.04	(.66)								
7.	Forgiveness of self	−.04	.04	.02	.02	.03	.17***	(.71)							
8.	Forgiveness of others	.02	−.05	.00	−.06	.12**	.13**	.47****	(.79)						
9.	Forgiveness of uncontrollable situations	−.10*	.04	−.05	−.10*	.10*	.23****	.66****	.57****	(.72)					
10.	Forgiven by God	.09*	−.01	−.02	.01	.43****	−.09*	.20****	.15***	.16***	–				
11.	Alcohol problems	.00	.10*	.08	−.08	.06	−.29****	−.26****	−.11**	−.18****	.01	(.80)			
12.	Depressive symptoms	.06	.01	.10*	.03	.03	−.24****	−.53****	−.24****	−.46****	−.15***	.40****	(.93)		
13.	Psychache	.19****	−.01	.02	.02	.06	−.23****	−.50****	−.18****	−.43****	−.13**	.41****	.74****	(.97)	
14.	Suicidal behavior	.10*	−.02	−.01	−.06	−.01	−.22****	−.36****	−.09*	−.31****	−.15***	.33****	.56****	.61****	(.80)
	M	–	–	–	–	14.36	6.03	28.26	29.08	27.45	3.58	13.82	5.64	24.08	5.23
	SD	–	–	–	–	2.47	2.78	6.17	6.65	6.16	.85	8.76	5.39	11.81	2.94
	Skewness	–	–	–	–	−.43	−.06	.15	−.03	.40	−2.02	.42	.97	1.14	1.39

M mean, *SD* standard deviation; $^{*}p \leq .10$; $^{**}p \leq .05$; $^{***}p \leq .01$; $^{****}p \leq .001$

[a]Sex: 1 = Male; 2 = Female

[b]Ethnicity: 1 = White; 2 = Non-white

[c]Numbers in parentheses are estimates of internal consistency (Cronbach's α)

for lifetime history of religious beliefs and practices such as belief in God, service attendance, and scripture study. Each item is scored on a 3-point Likert scale ranging from 1 to 3 (i.e., "never," "yes, in the past but not now," and "yes, and I still do"), with a total possible range of 6 to 18. The 13-item version of the Marlowe–Crowne Social Desirability Scale (Reynolds, 1982) was used to assess for participants' tendency to respond in a socially desirable fashion. Each item is scored true/false, with a total possible range of 0 to 13.

Statistical Analyses

Pearson product-moment correlations were calculated to assess the zero-order associations among each dimension of forgiveness, alcohol problems, depressive symptoms, psychache, and suicidal behavior. The general hypothesis regarding multivariable associations was tested through serial mediation analysis using Hayes' (2013) PROCESS macro. This analysis allows for the assessment of the direct effect of forgiveness on suicidal behavior among likely problematic drinkers, as well as the indirect effect of forgiveness on suicidal behavior through the mediating role(s) of alcohol problems, depressive symptoms, and/or psychache. Four separate serial mediation analyses were conducted with each dimension of forgiveness subsequently designated as the independent variable, while controlling for the three additional dimensions of forgiveness. As such, statements regarding the relative importance of each dimension of forgiveness in association with suicidal behavior, as mediated by alcohol problems, depressive symptoms, and/or psychache, can be made. To account for potential basic demographic differences among variables, as well as common associations of religiousness and social desirability with forgiveness, sex, age, education level, ethnicity, lifetime religiousness, and social desirability were included as covariates.

Results

Sample Characteristics

Of the 343 participants, the majority were white (90.67%, $n = 311$), female (55.98%, $n = 192$), and spiritual or religious (86.01%, $n = 295$; i.e., belief in God, with or without practicing religion). A sizeable proportion of the sample were in their first year of college (41.11%, $n = 141$) and the age of the participants ranged from 18 to 59 years with an average age of 20.80 (SD = 4.53). More detailed sample characteristics can be found in Table 3.1.

Bivariate Associations

All dimensions of forgiveness (i.e., of self, of others, of uncontrollable situations, by God) were individually, positively, and significantly associated with each other (*r*s = .15 to .66). Each dimension of forgiveness was individually, negatively, and significantly associated with each potential mediator variable (i.e., alcohol problems, depressive symptoms, psychache; *r*s = −.11 to −.53), except for the relation between alcohol problems and feeling forgiven by God ($r = .01$, non-significant [ns]). Similarly, each dimension of forgiveness was negatively associated with suicidal behavior as the dependent variable (*r*s = −.15 to −.36), except forgiveness of others ($r = -.09$, $p < .10$). Lastly, each potential mediator variable was positively associated with suicidal behavior (*r*s = .33 to .61). All *p*-values for these associations were less than .05. All bivariate correlations are shown in Table 3.2.

Multivariable Associations

Overall (see Table 3.3 and Fig. 3.1b), the variables in each of the models for this study account for about 42% of the variance in suicidal behavior scores ($F(13, 329) = 13.85$, $R^2 = .4224$, $p < .0001$). Before accounting for alcohol problems, depressive symptoms, and psychache, the total effect (i.e., each dimension of forgiveness and all covariates, only) accounted for about 20% of the variance in suicidal behavior ($R^2 = .2007$, $p < .0001$). Thus, in this study, alcohol problems, depressive symptoms, and psychache contribute about 22% of the variance accounted for in suicidal behavior scores ($R^2\Delta = .2217$).

Regarding various dimensions of forgiveness, self-forgiveness exhibited a total effect on suicidal behavior (i.e., prior to the inclusion of the potential mediator variables in the overall model; $c = -.1203$; 95CI: −.1855, −.0551), but not a direct effect (i.e., after inclusion of the potential mediator variables in the overall model; $c' = -.0016$; 95CI: −.0623, .0591) on suicidal behavior (i.e., the 95% Confidence Interval included zero). This pattern of association (i.e., *c* versus *c′*) suggests that any indirect effects would be considered mediating effects. There was a total indirect effect ($ab = -.1187$; 95CI: −.1599, −.0813), which was comprised of specific indirect effects through depressive symptoms, only ($a_2b_2 = -.0382$; 95CI: −.0713, −.0124), psychache, only ($a_3b_3 = -.0189$; 95CI: −.0401, −.0029), alcohol problems and depressive symptoms, in sequence ($a_1a_4b_2 = -.0072$; 95CI: −.0171, −.0021), alcohol problems and psychache, in sequence ($a_1a_5b_3 = -.0061$; 95CI: −.0152, −.0019), alcohol problems, depressive symptoms, and psychache, in sequence ($a_1a_4a_6b_3 = -.0065$; 95CI: −.0137, −.0027), and depressive symptoms and psychache, in sequence ($a_2a_6b_3 = -.0349$; 95CI: −.0583, −.0177). That is, higher levels of forgiveness of self were salubriously associated with suicidal behavior through each potential mediator and combination thereof, except through alcohol problems, only

Table 3.3 Multivariable associations of multidimensional forgiveness with suicidal behavior ($N = 343$)

	Forgiveness of self				Forgiveness of others				Forgiveness of uncontrollable situations				Forgiven by God			
Path	Effect	SE	95CI		Effect	SE	95CI		Effect	SE	95CI		Effect	SE	95CI	
a_1	**−.3524**	**.0927**	**−.5349**	**−.1700**	.0333	.0885	−.1407	.2074	.0203	.1039	−.1841	.2247	.1542	.7003	−1.2233	1.5317
a_2	**−.2935**	**.0514**	**−.3946**	**−.1923**	.0641	.0501	−.0345	.1626	**−.1789**	**.0509**	**−.2791**	**−.0787**	−.6509	.3614	−1.3618	.0601
a_3	**−.2052**	**.0940**	**−.3901**	**−.0204**	.1447	.0852	−.0230	.3123	−.1802	.1086	−.3939	.0336	−.7452	.5481	−1.8235	.3330
a_4	**.1563**	**.0323**	**.0928**	**.2197**	**.1563**	**.0323**	**.0928**	**.2197**	**.1563**	**.0323**	**.0928**	**.2197**	**.1563**	**.0323**	**.0928**	**.2197**
a_5	**.1886**	**.0625**	**.0657**	**.3115**	**.1886**	**.0625**	**.0657**	**.3115**	**.1886**	**.0625**	**.0657**	**.3115**	**.1886**	**.0625**	**.0657**	**.3115**
a_6	**1.2914**	**.1205**	**1.0544**	**1.5284**	**1.2914**	**.1205**	**1.0544**	**1.5284**	**1.2914**	**.1205**	**1.0544**	**1.5284**	**1.2914**	**.1205**	**1.0544**	**1.5284**
b_1	.0198	.0174	−.0144	.0541	.0198	.0174	−.0144	.0541	.0198	.0174	−.0144	.0541	.0198	.0174	−.0144	.0541
b_2	**.1300**	**.0489**	**.0339**	**.2262**	**.1300**	**.0489**	**.0339**	**.2262**	**.1300**	**.0489**	**.0339**	**.2262**	**.1300**	**.0489**	**.0339**	**.2262**
b_3	**.0920**	**.0211**	**.0505**	**.1334**	**.0920**	**.0211**	**.0505**	**.1334**	**.0920**	**.0211**	**.0505**	**.1334**	**.0920**	**.0211**	**.0505**	**.1334**
c	**−.1203**	**.0331**	**−.1855**	**−.0551**	**.0697**	**.0290**	**.0127**	**.1267**	**−.0848**	**.0346**	**−.1528**	**−.0168**	**−.4922**	**.2169**	**−.9189**	**−.0654**
c'	−.0016	.0309	−.0623	.0591	.0379	.0281	−.0173	.0931	−.0253	.0349	−.0939	.0433	−.2734	.1922	−.6515	.1047
ab	**−.1187**	**.0201**	**−.1599**	**−.0813**	**.0318**	**.0169**	**.0005**	**.0669**	**−.0595**	**.0208**	**−.1040**	**−.0215**	−.2188	.1241	−.4920	.0004
a_1b_1	−.0070	.0064	−.0224	.0035	.0007	.0023	−.0022	.0079	.0004	.0026	−.0034	.0083	.0031	.0177	−.0238	.0543
$a_1a_4b_2$	**−.0072**	**.0036**	**−.0171**	**−.0021**	.0007	.0019	−.0028	.0052	.0004	.0023	−.0040	.0058	.0031	.0152	−.0295	.0340
$a_1a_5b_3$	**−.0061**	**.0032**	**−.0152**	**−.0019**	.0006	.0016	−.0023	.0043	.0004	.0019	−.0032	.0048	.0027	.0128	−.0222	.0312
$a_1a_4a_6b_3$	**−.0065**	**.0026**	**−.0137**	**−.0027**	.0006	.0017	−.0027	.0041	.0004	.0020	−.0035	.0046	.0029	.0131	−.0256	.0281
a_2b_2	**−.0382**	**.0151**	**−.0713**	**−.0124**	.0083	.0076	−.0025	.0284	**−.0233**	**.0112**	**−.0511**	**−.0062**	**−.0846**	**.0527**	**−.2216**	**−.0073**
$a_2a_6b_3$	**−.0349**	**.0103**	**−.0583**	**−.0177**	.0076	.0062	−.0030	.0212	**−.0212**	**.0076**	**−.0399**	**−.0091**	**−.0773**	**.0451**	**−.1857**	**−.0048**
a_3b_3	**−.0189**	**.0093**	**−.0401**	**−.0029**	**.0133**	**.0082**	**.0000**	**.0325**	−.0166	.0110	−.0425	.0010	−.0685	.0543	−.1928	.0220

Analyses controlled for: Sex, Age, Education Level, Ethnicity, Lifetime Religiousness, and Social Desirability
Initial $R^2 = .2007$, $p < .0001$; Full Model $R^2 = .4224$, $p < .0001$; R^2 change = .2217
SE standard error, *95CI* bias-corrected 95% confidence interval, 10,000 bootstrap samples

(a_1b_1 = −.0070; 95CI: −.0224, .0035). For example, regarding $a_1a_4a_6b_3$, higher levels of forgiveness of self were associated with lower levels of alcohol problems (a_1 = −.3524) which, in turn, were associated sequentially with lower levels of depressive symptoms (a_4 = .1563), lower levels of psychache (a_6 = 1.2914), and lower levels of suicidal behavior (b_3 = .0920).

For forgiveness of others, there was a total effect on suicidal behavior (c = .0697; 95CI: .0127, .1267), but not a direct effect (c' = .0379; 95CI: −.0173, .0931) on suicidal behavior, suggesting that any indirect effects would be considered mediating effects. There was a total indirect effect (ab = .0318; 95CI: .0005, .0669), which was comprised of a specific indirect effect through psychache, only (a_3b_3 = .0133; 95CI: .0000, .0325). That is, higher levels of forgiveness of others were associated with higher levels of psychache (a_3 = .1447) which, in turn, were associated with higher levels of suicidal behavior (b_3 = .0920). All other specific indirect effects were non-significant (i.e., a_1b_1, a_2b_2, $a_1a_4b_2$, $a_1a_5b_3$, $a_1a_4a_6b_3$, $a_2a_6b_3$).

For forgiveness of uncontrollable situations, there was a total effect on suicidal behavior (c = −.0848; 95CI: −.1528, −.0168), but not a direct effect (c' = −.0253; 95CI: −.0939, .0433) on suicidal behavior, suggesting that any indirect effects would be considered mediating effects. There was a total indirect effect (ab = −.0595; 95CI: −.1040, −.0215), which was comprised of specific indirect effects through depressive symptoms, only (a_2b_2 = −.0233; 95CI: −.0511, −.0062), and depressive symptoms and psychache, in sequence ($a_2a_6b_3$ = −.0212; 95CI: −.0399, −.0091). Higher levels of forgiveness of uncontrollable situations were associated with lower levels of depressive symptoms (a_2 = −.1789) which, in turn, were associated with lower levels of suicidal behavior (b_2 = .1300). Likewise, higher levels of forgiveness of uncontrollable situations were associated with lower levels of depressive symptoms (a_2 = −.1789) which, in turn, were associated sequentially with lower levels of psychache (a_6 = 1.2914) and suicidal behavior (b_3 = .0920). All other specific indirect effects were non-significant (i.e., a_1b_1, a_3b_3, $a_1a_4b_2$, $a_1a_5b_3$, $a_1a_4a_6b_3$).

For feeling forgiven by God, there was a total effect on suicidal behavior (c = −.4922; 95CI: −.9189, −.0654), but not a direct effect (c' = −.2734; 95CI: −.6515, .1047) on suicidal behavior, suggesting that any indirect effects would be considered mediating effects. There was not a total indirect effect (ab = −.2188; 95CI: −.4920, .0004), but there were specific indirect effects through depressive symptoms, only (a_2b_2 = −.0846; 95CI: −.2216, −.0073), and depressive symptoms and psychache, in sequence ($a_2a_6b_3$ = −.0773; 95CI: −.1857, −.0048). Higher levels of feeling forgiven by God were associated with lower levels of depressive symptoms (a_2 = −.6509) which, in turn, were associated with lower levels of suicidal behavior (b_2 = .1300). Likewise, higher levels of feeling forgiven by God were associated with lower levels of depressive symptoms (a_2 = −.6509) which, in turn, were associated with lower levels of psychache (a_6 = 1.2914) and suicidal behavior (b_3 = .0920). All other specific indirect effects were non-significant (i.e., a_1b_1, a_3b_3, $a_1a_4b_2$, $a_1a_5b_3$, $a_1a_4a_6b_3$).

Discussion

The guiding hypothesis for this study was largely supported. That is, self-forgiveness, forgiveness of uncontrollable situations, and feeling forgiven by God were significantly associated with less suicidal behavior among college student problematic drinkers, and these relationships were largely a function of fewer depressive symptoms and/or lower levels of psychache. However, there were two caveats. The salubrious association involving self-forgiveness was more robust, as it was associated with less suicidal behavior through beneficial associations with all possible combinations of the mediators (i.e., alcohol problems, depressive symptoms, and/or psychache), except alcohol problems alone. Also, the statistically significant association of other-forgiveness with suicidal behavior operated through psychache alone and was deleterious, such that other-forgiveness was associated with more psychache which, in turn, was associated with more suicidal behavior among college student problematic drinkers.

Clinical Implications: Treatment and Prevention

In sum, of over 50 empirical studies regarding the forgiveness–addiction/suicidal behavior association, only four have shown forgiveness to have an unfavorable effect. In the context of self-forgiveness, three studies show deleterious associations (for review, see Webb, Toussaint, & Hirsch, 2017): lower levels mediated the association between gambling problems and readiness to change, a positive association with drug/alcohol treatment dropout at 3 months, and a negative association with smoking behavior change. Also, in the current study, other-forgiveness was associated with higher levels of suicidal behavior among college student problematic drinkers. Otherwise, the extant empirical literature overwhelmingly supports beneficial associations between forgiveness and both addiction and suicide. Moreover, although self-forgiveness may be primary, as it may be more consistent and robust, *multiple* dimensions of forgiveness may be effective as: (1) points of intervention in real time, and (2) topics to facilitate prevention over time.

Forgiveness-based treatment. Forgiveness as a real-time intervention in the context of addiction and suicidal behavior can take a variety of forms and, yet, may or may not be applicable in-the-moment, particularly when in an active crisis. Webb and colleagues have urged the utilization of forgiveness as a positive psychotherapy for addiction and suicidal behavior, whether through stand-alone forgiveness modalities, infusion with pre-existing aligned modalities (e.g., 12-Step Facilitation Therapy), or integration with conceptually consistent modalities (e.g., Acceptance and Commitment Therapy, Dialectical Behavior Therapy) (see Webb et al., 2015). Although general forgiveness intervention studies support forgiveness-based treatment as an evidence-based modality (see Wade, Hoyt, Kidwell, & Worthington, 2014), few studies have been conducted in the context of addiction (e.g., Scherer,

Worthington, Hook, & Campana, 2011) and no studies have been conducted in the context of suicidal behavior.

Multiple dimensions of forgiveness are germane to the treatment of addiction and suicidal behavior. For example, given the dimensional aspects of addictive behavior (e.g., quantity, frequency, and intensity; inter- and intra-personal issues related to health, financial strain, and legal consequences; and impact on family, friends, and children), many methods and targets of forgiveness become relevant—individually and synergistically. As an example, seeking self-forgiveness, when one has offended another person, arguably requires seeking forgiveness from the victim before one can self-forgive (Webb, Bumgarner, et al., 2017). Yet, when an individual is in immediate crisis, active consideration of forgiveness may not be otherwise applicable or appropriate. For example, when, in-the-moment, an individual is highly suicidal (i.e., lethal), it is imperative to do essentially whatever is necessary to de-escalate the crisis (Joiner, Van Orden, Witte, & Rudd, 2009; Shneidman, 1993), to "mollify the psychache … no psychache, no suicide," and "when the person is no longer highly suicidal—the usual methods of psychotherapy can be usefully employed" (Shneidman, 1993, pp. 53, 56, 142).

Forgiveness-based prevention. In previous reviews of the literature, Webb and colleagues have described the potential beneficial effects of forgiveness not only for individual-level treatment, but also for public health and prevention (see Webb & Jeter, 2015). Although much of this previous work has been in the context of addiction, it is equally applicable in the context of suicidal behavior. Indeed, given its multidimensional nature (e.g., state, trait, target, and method) and its universal applicability (i.e., common across humanity; spiritually, psychologically, and philosophically), although not a panacea, forgiveness is a flexible construct and tool and can be tailored to fit diverse individual needs. For example, given the common occurrence of substance problems in college (see Webb, Hirsch, Conway-Williams, & Brewer, 2013) *and* the high levels of suicidal behavior among college students (see Drum & Denmark, 2012), forgiveness-based outreach and prevention programs could be established on college campuses, both to educate students about the benefits of forgiveness—particularly in the context of addiction and suicide—and to help inoculate against development of resentments in the first place. Likewise, facilitating awareness of forgiveness as an option can also contribute to the overall establishment and maintenance of health among the college student population at large. That is, forgiveness is salubriously related to many aspects of health and well-being, including depression, anxiety, healthy behaviors, sleep, relationship quality, and many others (see Toussaint et al., 2015; Woodyatt et al., 2017).

Application of forgiveness strategies. Whether applied to clinical treatment or self-help curricula, Worthington and colleagues have developed a stand-alone, psychoeducational, evidence-based forgiveness intervention (see Worthington & Sandage, 2016) designed *not* to require implementation by trained professionals; rather, laypersons can self-train with freely available materials (Worthington, 2006b; http://www.people.vcu.edu/~eworth/). Very briefly, Worthington's REACH

forgiveness model involves Recalling an offense, developing Empathy, choosing forgiveness as an Altruistic gift, making a public, formal Commitment to forgive, and Holding on to progress. Likewise, prevention efforts, whether among college students or among the population at large, could infuse such concepts into leadership initiatives and public service campaigns across local, national, and international levels toward the end of wide-spread recognition and dissemination of the relevant science and, thus, the likely reduction of the public crisis and burden of addiction and suicide.

Deleterious associations. Although the vast majority of the published empirical findings support the notion that forgiveness is a constructive contributor to health and well-being in the context of addiction and suicidal behavior, deleterious effects have been observed. Pseudo-forgiveness may contribute to this discrepancy; that is, attempting to engage in the process of forgiveness while condoning, excusing, or denying the transgression (e.g., Enright & The Human Development Study Group, 1996; Tangney et al., 2005). In the context of self-forgiveness, it involves narcissistic escape (Webb, Bumgarner, et al., 2017), such that the would-be self-forgiver seeks to be "let off the hook—the offense and its consequences are brushed off, minimized, excused, and/or blamed on others" (Tangney et al., 2005, p. 144). In this regard, current assessment tools likely do not adequately distinguish between pseudo and genuine self-forgiveness (see Webb, Bumgarner, et al., 2017).

In the context of other-forgiveness, as herein observed to be associated with more psychache and in turn more suicidal behavior among college student problematic drinkers, *premature* forgiveness may be occurring. When evidence-based models of genuine forgiveness are utilized (e.g., Enright & Fitzgibbons, 2015; Worthington & Sandage, 2016; see also Webb et al., 2015), at no time is the victim encouraged to overlook or minimize any negative experiences, consequences, or implications related to the offense or to being offended. Denial of offender-accountability or the unjustifiable and unnecessary nature of the offense is not required, nor is it required to view the offense or offender as now good or inconsequential. Moreover, forgiveness is a choice, not an obligation. If forgiveness ostensibly occurs in any of these circumstances, it is not only artificial, but premature. In the case of suicidal behavior, if one feels compelled to engage in other-forgiveness—for whatever reason, be it social or spiritual idealism, etc.—it may be premature and serve to exacerbate psychache and, subsequently, suicidal behavior.

Future Directions

Much of the scientific work regarding the forgiveness–addiction/suicidal behavior association, while promising, is based on self-report and, most critically, cross-sectional research designs. Although the extant research is grounded in comprehensive theoretical modeling, we can only say that there are consistent associations

between multiple dimensions of forgiveness and such outcomes. In order to build confidence in the hypothesized causality and directionality of relationships (i.e., forgiveness salubriously *leads* to better outcomes), research based in longitudinal, interventional, and experimental (as appropriate) designs is indispensably necessary. Also, self-selection bias may play a role such that it may be that only those potential participants interested in spirituality and forgiveness and willing to disclose potentially sensitive information about addictive and suicidal behavior chose to complete this study. Moreover, although college students are a distinct subset of the population uniquely vulnerable to addictive and suicidal behavior, addiction and suicide affect the entire population. Indeed, issues related to etiology, prevention, and intervention in the context of such outcomes are likely to vary based on differing subsets of the population. As addiction and suicide are world-wide public health problems, such future efforts, in order to be comprehensive *and* ethical, will need to include sufficient sociocultural diversity (e.g., gender, age, ethnicity, nationality, sexuality, spirituality). Lastly, in addition to problems associated with self-report data (e.g., honesty, self-awareness, memory), commonly used measures of forgiveness (as utilized in this study) may not adequately assess the definitional components of forgiveness (see Webb, Bumgarner, et al., 2017).

Conclusion

Although in its infancy—needing not only more quantity, but more sophisticated research design—the data-driven empirical examination of the forgiveness–addiction/suicidal behavior association overwhelmingly supports the notion that the positive psychological construct of forgiveness likely plays a salubrious role in preventing and treating addiction and suicidal behavior. Indeed, forgiveness, in its multiple dimensions, and implementable through a variety of individual-level treatment modalities and public health-oriented outreach and education, may be a powerful antidote to the ruminative stress, resentment-building, and self-condemning effects of addictive and suicidal behavior.

References

Alcoholics Anonymous. (2001). *Alcoholics anonymous* (4th ed.). New York, NY: Author.

Babor, T., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). *AUDIT: The alcohol use disorders identification test: Guidelines for use in primary health care*. Geneva, Switzerland: World Health Organization.

Cheavens, J. S., Cukrowicz, K. C., Hansen, R., & Mitchell, S. M. (2016). Incorporating resilience factors into the interpersonal theory of suicide: The role of hope and self-forgiveness in an older adult sample. *Journal of Clinical Psychology, 72*(1), 58–69. https://doi.org/10.1002/jclp.22230

Cohen, A. B. (2009). Many forms of culture. *American Psychologist, 64*(3), 194–204. https://doi.org/10.1037/a0015308

Connors, G. J., Tonigan, J. S., & Miller, W. R. (1996). A measure of religious background and behavior for use in behavior change research. *Psychology of Addictive Behaviors, 10*(2), 90–96. https://doi.org/10.1037/0893-164x.10.2.90

Corso, P. S., Mercy, J. A., Simon, T. R., Finkelstein, E. A., & Miller, T. R. (2007). Medical costs and productivity losses due to interpersonal and self-directed violence in the United States. *American Journal of Preventive Medicine, 32*(6), 474–482. https://doi.org/10.1016/j.amepre.2007.02.010

Dangel, T., Webb, J. R., & Hirsch, J. K. (2018). Forgiveness and suicidal behavior: Cynicism and psychache as serial mediators. *Journal of Psychology: Interdisciplinary and Applied, 152*(2), 77–95. https://doi.org/10.1080/00223980.2017.1408555

Drum, D. J., & Denmark, A. B. (2012). Campus suicide prevention: Bridging paradigms and forging partnerships. *Harvard Review of Psychiatry, 20*(4), 209–221. https://doi.org/10.3109/10673229.2012.712841

Enright, R. D., & Fitzgibbons, R. P. (2015). *Forgiveness therapy: An empirical guide for resolving anger and restoring hope* (2nd ed.). Washington, DC: American Psychological Association.

Enright, R. D., & The Human Development Study Group. (1996). Counseling within the forgiveness triad: On forgiving, receiving forgiveness, and self-forgiveness. *Counseling and Values, 40*(2), 107–126. https://doi.org/10.1002/j.2161-007X.1996.tb00844.x

Fetzer Institute. (1999, October). *Multidimensional measurement of religiousness/spirituality for use in health research: A report of the Fetzer Institute/National Institute on Aging working group, with additional psychometric data*. Kalamazoo, MI: Corporate.

Fincham, F. D. (2000). The kiss of the porcupines: From attributing responsibility to forgiving. *Personal Relationships, 7*(1), 1–23. https://doi.org/10.1111/j.1475-6811.2000.tb00001.x

Gallup Poll. (2016). *Religion*. Retrieved October 27, 2016, from http://www.gallup.com/poll/1690/Religion.aspx#1.

Griffin, B. J., Worthington, E. L., Jr., Lavelock, C. R., Greer, C. L., Lin, Y., Davis, D. E., & Hook, J. N. (2015). Efficacy of a self-forgiveness workbook: A randomized controlled trial with interpersonal offenders. *Journal of Counseling Psychology, 62*(2), 124–136. https://doi.org/10.1037/cou0000060

Hall, B. B., Webb, J. R., & Hirsch, J. K. (in press). Spirituality and suicidal behavior: The mediating role of selfforgivenessand psychache. *Psychology of Religion and Spirituality*. https://doi.org/10.1037/rel0000182

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford.

Hirsch, J. K., Webb, J. R., & Toussaint, L. L. (2017). Self-forgiveness, self-harm, and suicidal behavior: Understanding the role of forgiving the self in the act of hurting one's self. In L. Woodyatt, E. L. Worthington Jr., M. Wenzel, & B. J. Griffin (Eds.), *Handbook of the psychology of self-forgiveness* (pp. 249–264). New York, NY: Springer.

Holden, R. R., Mehta, K., Cunningham, E. J., & McLeod, L. D. (2001). Development and preliminary validation of a scale of psychache. *Canadian Journal of Behavioural Science/Revue Canadienne des Sciences du Comportement, 33*(4), 224–232. https://doi.org/10.1037/h0087144

Hood, R. W., Jr. (2003). The relationship between religion and spirituality. In A. L. Greil & D. Bromley (Eds.), *Defining religion: Investigating the boundaries between the sacred and secular religion and the social order* (Vol. 10, pp. 241–264). Amsterdam, The Netherlands: Elsevier Science.

ISSP Research Group. (2012). *International Social Survey programme: Religion III - ISSP 2008*. GESIS Data Archive, Cologne. ZA4950 Data file Version 2.2.0. https://doi.org/10.4232/1.11334.

Joiner, T. E., Jr., Van Orden, K. A., Witte, T. K., & Rudd, M. D. (2009). *The interpersonal theory of suicide: Guidance for working with suicidal clients*. Washington, DC: American Psychological Association.

Kelliher Rabon, J., Webb, J. R., Chang, E. C., & Hirsch, J. K. (in press). Forgiveness and suicidal behavior in primary care: Mediating role of future orientation. *Journal of Spirituality in Mental Health*. https://doi.org/10.1080/19349637.2018.1469454

Koenig, H. G., King, D. E., & Carson, V. B. (2012). *Handbook of religion and health* (2nd ed.). New York, NY: Oxford University Press.

Koenig, H. G., McCullough, M. E., & Larson, D. B. (2001). *Handbook of religion and health*. New York, NY: Oxford University Press.

Kopacz, M. S., Currier, J. M., Drescher, K. D., & Pigeon, W. R. (2016). Suicidal behavior and spiritual functioning in a sample of veterans diagnosed with PTSD. *Journal of Injury and Violence Research, 8*(1), 1–9. https://doi.org/10.5249/jivr.v8i1.728

Lavelock, C. R., Snipes, D. J., Griffin, B. J., Worthington, E. L., Jr., Davis, D. E., Hook, J. N., … Ritter, J. (2015). A conceptual model of forgiveness and health. In L. L. Toussaint, E. L. Worthington Jr., & D. R. Williams (Eds.), *Forgiveness and health: Scientific evidence and theories relating forgiveness to better health* (pp. 29–42). New York, NY: Springer.

Lopez, S. J., & Gallagher, M. W. (2009). A case for positive psychology. In C. R. Snyder & S. J. Lopez (Eds.), *Oxford handbook of positive psychology* (2nd ed.). New York, NY: Oxford University Press.

Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the depression anxiety stress scales* (2nd ed.). Sydney: Psychology Foundation Retrieved from http://www2.psy.unsw.edu.au/groups/dass/.

Maddock, J. E., Laforge, R. G., Rossi, J. S., & O'Hare, T. (2001). The College Alcohol Problems Scale. *Addictive Behaviors, 26*(3), 385–398. https://doi.org/10.1016/s0306-4603(00)00116-7

McCullough, M. E., & Worthington, E. L., Jr. (1994). Encouraging clients to forgive people who have hurt them: Review, critique, and research prospectus. *Journal of Psychology and Theology, 22*(1), 3–20.

Nagra, G. S., Lin, A., & Upthegrove, R. (2016). What bridges the gap between self-harm and suicidality? The role of forgiveness, resilience and attachment. *Psychiatry Research, 241*, 78–82. https://doi.org/10.1016/j.psychres.2016.04.103

National Drug Intelligence Center. (2011). *The economic impact of illicit drug use on American Society*. Washington, DC: United States Department of Justice Retrieved July 19, 2014, from http://www.justice.gov/archive/ndic/pubs44/44731/44731p.pdf.

Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kopper, B. A., & Barrios, F. X. (2001). The Suicidal Behaviors Questionnaire--Revised (SBQ-R): Validation with clinical and nonclinical samples. *Assessment, 8*(4), 443–454. https://doi.org/10.1177/107319110100800409

Pargament, K. I. (1997). *The psychology of religious coping: Theory, research, practice*. New York, NY: Guilford.

Pargament, K. I. (2013). Searching for the sacred: Toward a nonreductionistic theory of spirituality. In K. I. Pargament, J. J. Exline, & J. W. Jones (Eds.), *APA handbook of psychology, religion, and spirituality*, *Context, theory, and research* (Vol. 1, pp. 257–273). Washington, DC: American Psychological Association.

Pargament, K. I., Mahoney, A., Exline, J. J., Jones, J. W., & Shafranske, E. P. (2013). Envisioning an integrative paradigm for the psychology of religion and spirituality. In K. I. Pargament, J. J. Exline, & J. W. Jones (Eds.), *APA handbook of psychology, religion, and spirituality*, *Context, theory, and research* (Vol. 1, pp. 3–19). Washington, DC: American Psychological Association.

Piedmont, R. L., & Wilkins, T. A. (2013). Spirituality, religiousness, and personality: Theoretical foundations and empirical applications. In K. I. Pargament, J. J. Exline, & J. W. Jones (Eds.), *APA handbook of psychology, religion, and spirituality*, *Context, theory, and research* (Vol. 1, pp. 173–186). Washington, DC: American Psychological Association.

Quintana-Orts, C., & Rey, L. (2018). Forgiveness, depression, and suicidal behavior in adolescents: Gender differences in this relationship. *Journal of Genetic Psychology.* https://doi.org/10.1080/00221325.2018.1434478 [Epub ahead of print].

Rehm, J., Mathers, C., Popova, S., Thavorncharoensap, M., Teerawattananon, Y., & Patra, J. (2009). Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. *The Lancet, 373*(9682), 2223–2233. https://doi.org/10.1016/S0140-6736(09)60746-7

Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology, 38*(1), 119–125. https://doi.org/10.1002/1097-4679(198201)38:1<119::aid-jclp2270380118>3.0.co;2-i

Sansone, R. A., Kelley, A. R., & Forbis, J. S. (2013). The relationship between forgiveness and history of suicide attempt. *Mental Health, Religion & Culture, 16*(1), 31–37. https://doi.org/10.1080/13674676.2011.643860

Scherer, M., Worthington, E. L., Jr., Hook, J. N., & Campana, K. L. (2011). Forgiveness and the bottle: Promoting self-forgiveness in individuals who abuse alcohol. *Journal of Addictive Diseases, 30*(4), 382–395. https://doi.org/10.1080/10550887.2011.609804

Shneidman, E. S. (1993). *Suicide as psychache: A clinical approach to self-destructive behavior*. Northvale, NJ: Jason Aronson, Inc.

Snyder, C. R., & Lopez, S. J. (Eds.). (2009). *Oxford handbook of positive psychology* (2nd ed.). New York, NY: Oxford University Press.

Suicide Anonymous. (2010). *Suicide Anonymous*, *The Little Book*. Memphis, TN: Author. Retrieved July 18, 2014, from http://www.suicideanonymous.net/uploads/SA_BOOKLET_ok_copy.pdf.

Tangney, J. P., Boone, A. L., & Dearing, R. (2005). Forgiving the self: Conceptual issues and empirical findings. In E. L. Worthington Jr. (Ed.), *Handbook of forgiveness* (pp. 143–158). New York, NY: Routledge.

Thompson, L. Y., Snyder, C. R., Hoffman, L., Michael, S. T., Rasmussen, H. N., Billings, L. S., … Roberts, D. J. (2005). Dispositional forgiveness of self, others, and situations. *Journal of Personality, 73*(2), 313–359. https://doi.org/10.1111/j.1467-6494.2005.00311.x

Toussaint, L. L., & Webb, J. R. (2005). Theoretical and empirical connections between forgiveness, mental health, and well-being. In E. L. Worthington Jr. (Ed.), *Handbook of forgiveness* (pp. 349–362). New York, NY: Routledge.

Toussaint, L. L., Webb, J. R., & Hirsch, J. K. (2017). Self-forgiveness and health: A stress-and-coping model. In L. Woodyatt, E. L. Worthington Jr., M. Wenzel, & B. J. Griffin (Eds.), *Handbook of the psychology of self-forgiveness* (pp. 87–99). New York, NY: Springer.

Toussaint, L. L., Webb, J. R., & Keltner, W. (2012). Religion, spirituality, and mental health). In J. D. Aten, K. A. O'Grady, & E. L. Worthington Jr. (Eds.), *The psychology of religion and spirituality for clinicians: Using research in your practice* (pp. 331–356). New York, NY: Routledge.

Toussaint, L. L., Worthington, E. L., Jr., & Williams, D. R. (Eds.). (2015). *Forgiveness and health: Scientific evidence and theories relating forgiveness to better health*. New York, NY: Springer.

Värnik, P. (2012). Suicide in the world. *International Journal of Environmental Research and Public Health, 9*(3), 760–771. https://doi.org/10.3390/ijerph9030760

Wade, N. G., Hoyt, W. T., Kidwell, J. E. M., & Worthington, E. L., Jr. (2014). Efficacy of psychotherapeutic interventions to promote forgiveness: A meta-analysis. *Journal of Consulting and Clinical Psychology, 82*(1), 154–170. https://doi.org/10.1037/a0035268

Webb, J. R. (2007). Spiritual factors and adjustment in medical rehabilitation: Understanding forgiveness as a means of coping. In A. E. DellOrto & P. W. Power (Eds.), *The psychological and social impact of illness and disability* (5th ed., pp. 455–471). New York, NY: Springer (Reprinted from: *Journal of Applied Rehabilitation Counseling*, 34(3), 16–24: 2003).

Webb, J. R., Bumgarner, D. J., Conway-Williams, E., Dangel, T., & Hall, B. B. (2017). A consensus definition of self-forgiveness: Implications for assessment and treatment. *Spirituality in Clinical Practice, 4*(3), 216–227. https://doi.org/10.1037/scp0000138

Webb, J. R., Hirsch, J. K., Conway-Williams, E., & Brewer, K. (2013). Forgiveness and alcohol problems: Indirect associations involving mental health and social support. *Addiction Research & Theory, 21*(2), 141–153. https://doi.org/10.3109/16066359.2012.703267

Webb, J. R., Hirsch, J. K., & Toussaint, L. L. (2011). Forgiveness and alcohol problems: A review of the literature and a call for intervention-based research. *Alcoholism Treatment Quarterly, 29*(3), 245–273. https://doi.org/10.1080/07347324.2011.585922

Webb, J. R., Hirsch, J. K., & Toussaint, L. L. (2015). Forgiveness as a positive psychotherapy for addiction and suicide: Theory, research, and practice. *Spirituality in Clinical Practice, 2*(1), 48–60. https://doi.org/10.1037/scp0000054

Webb, J. R., Hirsch, J. K., Visser, P. L., & Brewer, K. G. (2013). Forgiveness and health: Assessing the mediating effect of health behavior, social support, and interpersonal functioning. *Journal of Psychology: Interdisciplinary and Applied, 147*(5), 391–414. https://doi.org/10.1080/00223980.2012.700964

Webb, J. R., & Jeter, B. R. (2015). Forgiveness and problematic substance use. In L. L. Toussaint, E. L. Worthington Jr., & D. R. Williams (Eds.), *Forgiveness and health: Scientific evidence and theories relating forgiveness to better health* (pp. 139–154). New York, NY: Springer.

Webb, J. R., & Toussaint, L. L. (2018). Self-forgiveness as a critical factor in addiction and recovery: A 12-step model perspective. *Alcoholism Treatment Quarterly, 36*(1), 15–31. https://doi.org/10.1080/07347324.2017.1391057

Webb, J. R., Toussaint, L. L., & Conway-Williams, E. (2012). Forgiveness and health: Psychospiritual integration and the promotion of better healthcare. *Journal of Health Care Chaplaincy, 18*(1-2), 57–73. https://doi.org/10.1080/08854726.2012.667317

Webb, J. R., Toussaint, L. L., & Dula, C. S. (2014). Ritualistic, theistic, and existential spirituality: Initial psychometric qualities of the RiTE measure of spirituality. *Journal of Religion & Health, 53*(4), 972–985. https://doi.org/10.1007/s10943-013-9697-y

Webb, J. R., Toussaint, L. L., & Hirsch, J. K. (2017). Self-forgiveness, addiction, and recovery. In L. Woodyatt, E. L. Worthington Jr., M. Wenzel, & B. J. Griffin (Eds.), *Handbook of the psychology of self-forgiveness* (pp. 265–277). New York, NY: Springer.

Woodyatt, L., Worthington, E. L., Jr., Wenzel, M., & Griffin, B. J. (Eds.). (2017). *Handbook of the psychology of self-forgiveness*. New York, NY: Springer.

World Health Organization. (2014). *Global status report on alcohol and health – 2014 ed*. Geneva: Author. Retrieved July 19, 2014, from http://apps.who.int/iris/bitstream/10665/112736/1/9789240692763_eng.pdf?ua=1

Worthington, E. L., Jr. (2006a). *Forgiveness and reconciliation: Theory and application*. New York, NY: Brunner-Routledge.

Worthington, E. L., Jr. (2006b). *Forgiveness intervention manuals*. Retrieved October 29, 2016, from http://www.people.vcu.edu/~eworth/.

Worthington, E. L., Jr., & Sandage, S. J. (2016). *Forgiveness and spirituality in psychotherapy: A relational approach*. Washington, DC: American Psychological Association.

Yuodelis-Flores, C., & Ries, R. K. (2015). Addiction and suicide: A review. *The American Journal on Addictions, 24*(2), 98–104. https://doi.org/10.1111/ajad.12185

Chapter 4
Reasons for Living

Raffaella Calati, Emilie Olié, Déborah Ducasse, and Philippe Courtet

Ada:
"What a death!
What a chance!
What a surprise!
My will has chosen life!
Still it has had me spooked and many others besides!"

(Campion, 1993)

Acronyms

ACT	Acceptance and Commitment Therapy
CAMS	Collaborative Assessment and Management of Suicidality
CB	Coping beliefs
CC	Child-related Concerns
CFC	College and Future-Related Concerns
CMLI	Chinese-language Motivations for Living Inventory
CS-RFLI	College Student Reasons for Living Inventory

Contributors: Raffaella Calati wrote the chapter. Emilie Olié and Déborah Ducasse contributed to the section "Preventive and therapeutic interventions." Philippe Courtet supervised the writing.

R. Calati (✉) · E. Olié · D. Ducasse · P. Courtet
INSERM, University of Montpellier, Neuropsychiatry: Epidemiological and Clinical Research, Montpellier, France

Department of Emergency Psychiatry and Acute Care, Lapeyronie Hospital, CHU Montpellier, Montpellier, France

FondaMental Foundation, Créteil, France

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*,
Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_4

DBT	Dialectical Behavior Therapy
EMIL	Experienced Meaning in Life scale
FA	Family Alliance
FD	Fear of Death
FE	Future Expectations
FMS	Family Member Support
F/O	Family/Others
FO	Future Optimism
FR	Family Relations
FrS	Friend Support
FS	Fear of Suicide
FSD	Fear of Social Disapproval
HF	Hope for the Future
LS	Life Satisfaction
MBCT	Mindfulness Based Cognitive Therapies
MIL	Meaning in Life
MO	Moral Objections
MRO	Moral/Religious Objections
NIFM	Negative Impact on Family Members
NSSI	Non-Suicidal Self-Injury
PAS	Peer-Acceptance and Support
PASTOR	Positive Appraisal Style Theory of Resilience
PP	Positive Psychology
PR	Peer Relations
PRSI	Protective Reasons against Suicide Inventory
PSE	Positive Self-Evaluation
RB	Religious Beliefs
RF	Responsibility to Family
RFD	Reasons for Dying
RFF	Responsibility to Friends and Family
RFL	Reasons for Living
RFL-A	Reasons for Living Inventory for Adolescents
RFLI	Reasons for Living Inventory
RFL-OA	Reasons for Living for Older Adults scale
RFL-YA	Reasons for Living Inventory for Young Adults
SA	Suicide Attempt
SelfA	Self-Acceptance
SD	Suicide Death
SCB	Survival and Coping Beliefs
SI	Suicidal Ideation
SRC	Suicide-Related Concerns
TMBI	Teachable Moment Brief Intervention

Introduction

Reasons for Living (RFL) are reasons that persons can find for staying alive, things that matter most in their life, and those which may prevent them from dying by suicide. They are elements of life, including beliefs and values, interpersonal relationships, and socio-cultural and religious/spiritual concerns. Hence, they are specifically linked to the concept of resilience to suicidality, that is, the individual ability to buffer against the development of suicidality despite acute or chronic stressors or risk factors. Resilience variables have also been reviewed in their role as moderators of suicidal risk (buffering hypothesis; Johnson, Wood, Gooding, Taylor, & Tarrier, 2011). Two categories of variables have been identified: (1) cognitive abilities and processes (e.g., attributional style, coping and problem solving, personality, and emotional intelligence); and (2) beliefs and attitudes (e.g., self-related, other-related, and future-related beliefs). RFL have been conceptualized as a type of self-related belief, together with self-esteem, agency (e.g., sense of self-efficacy and internal locus of control), problem-solving confidence, and satisfactory life evaluations and purpose in life. In fact, RFL correspond to the *perception* of the patient, and they are a state-dependent phenomenon, which may not always be linked to external reality (for example, they are influenced by intrapersonal depressive states).

While previous research has mainly focused on the maladaptive characteristics of suicidal individuals (i.e., why individuals may want to end their life), Marsha Linehan and her team were the first to change the approach by providing an alternative perspective. Within a cognitive and cognitive-behavioral framework for suicidal behavior, hypothesizing that the cognitive pattern represents a substantial mediator of suicidal behavior, they focused on adaptive and life-maintaining beliefs and expectations and, consequently, developed the Reasons for Living Inventory (RFLI; Linehan, Goodstein, Nielsen, & Chiles, 1983). Our team of researchers recently performed a systematic review of the literature focused on the link between RFLI domains and suicidal thoughts and behaviors, in particular suicidal ideation (SI) and suicide attempt (SA), confirming the protective role of RFL (Bakhiyi, Calati, Guillaume, & Courtet, 2016).

However, RFL have been categorized in different ways after the introduction of the RFLI. Further, instruments differently categorizing RFL have been developed to be administered to adolescents, college students, and young adults, respectively: the Reasons for Living Inventory for Adolescents (RFL-A; Osman et al., 1998), the College Student Reasons for Living Inventory (CS-RFLI; Westefeld, Cardin, & Deaton, 1992), and the Reasons for Living Inventory for Young Adults (RFL-YA; Gutierrez et al., 2002). Furthermore, the Reasons for Living for Older Adults scale (RFL-OA; Edelstein et al., 2009) has been introduced, as well as two Chinese versions of the scale developed for the elderly, the Chinese-language Motivations for Living Inventory (CMLI; Wang, Tsai, Wong, & Ku, 2013) and the Protective Reasons against Suicide Inventory (PRSI; Wang, Tsai, Lee, Chen, & Chen, 2016). Furthermore, the Reasons for Living versus Reasons for Dying Assessment has been developed, in the context of the Collaborative Assessment and Management of

Suicidality (CAMS; Jobes & Mann, 1999). It has to be underlined that the involved teams of research derived the RFL from different populations (Bagge & Linehan, 2000), including: community (Linehan et al., 1983), college students (Westefeld et al., 1992), and low-lethality suicidal patients (Jobes & Mann, 1999).

The primary aim of this chapter is to provide the reader with a broad overview of the link between RFL and suicidal thoughts and behaviors, describing the main findings related to several scales developed for assessing RFL. We did not aim to perform a systematic review of the literature, but to include the main findings, leaving to the interested reader the task of extending and deepening the topic. Since our systematic review on the association between RFLI domains and suicidal thoughts and behaviors was recently published (Bakhiyi et al., 2016), in this chapter we wanted to extend the focus, including and comparing further assessment scales and critically evaluating this growing body of literature. We decided to consider here RFL scales that, to some extent, are different from one another (i.e., they have been specifically created for different populations or by different teams of researchers) in order to cover, as much as possible, all the different types of RFL. Our secondary aim was to describe specific therapeutic strategies for suicide prevention connected to RFL enhancement. In fact, the RFL assessment is relevant not only because it allows the distinction between individuals with and without suicide risk, but also because it could be useful in illuminating potential targets of therapeutic intervention.

Methods

A literature web search was performed to identify studies focusing on the link between RFL and suicidal thoughts and behaviors. PubMed database was used to search articles published from 1983 until June 2017 using the search terms "reason* for living" OR "RFL*" AND "suicid*". Only papers in English language were included. Additionally, the reference lists of the identified studies and reviews were checked for further relevant articles.

Concerning the primary aim of this chapter, studies were included if (1) they focused on the association between RFL, measured using different scales, and suicidal thoughts and/or behaviors; and (2) they focused not only on psychiatric patients but also on college students or the general population or any other group of any age. Studies were excluded if (1) they did not consider RFL but different, even if related, constructs (e.g., resilience); or (2) they did not consider suicidal thoughts and/or behaviors as an outcome. In the paragraph describing each RFLI-related scale, we focused on RFL scales with differences between them, rather than on those which mainly overlap. For example, we did not describe here the Brief Reasons for Living Inventory for Adolescents (Osman et al., 1996), because it is very similar to RFLI. Moreover, we did not include here the validation of the RFLI in other languages for the same reason, although the interested reader may find a number of versions: the Italian (Pompili, Girardi, Tatarelli, Lester, & Rogers, 2007),

in which only three factors were identified; the Spanish (Garza & Cramer, 2011), which yielded a seven factor structure; the Swedish (Dobrov & Thorell, 2004), in which two subscales formed one common factor; the Chinese (Chan, 1995); the Korean (Lee & Oh, 2012); and the Malaysian (Aishvarya et al., 2014). Concerning the secondary aim, studies were included if (1) they focused on any kind of therapeutic intervention; (2) they included RFL in the assessment or a related construct such as Meaning in Life (MIL); or (3) they included not only suicidal patients but also non-suicidal psychiatric patients, considering the paucity of studies focused on suicidal patients.

Further, studies have been included if interesting for both the primary and the secondary aims of this chapter (e.g., Kalisch, Muller, & Tuscher, 2015). Since this is not a systematic review of the literature, only the most representative studies have been included, and, given our recent review (see Bakhiyi et al., 2016), we did not report in detail already-discussed material from this paper (only referring to it as needed), but we reported any new studies since its publication. Moreover, in this chapter we did not focus on assessment scales of constructs deeply related to RFL, such as resilience (for a systematic review focused on the psychometric rigor of resilience scales, see Windle, Bennett, & Noyes, 2011). In addition, in some points of the text we considered the construct of MIL together with RFL, even though they only partially overlap.

Reasons for Living Assessment Scales

Reasons for Living Inventory

As noted above, the most well-known and used scale for the assessment of RFL is the RFLI, developed in 1983 by Marsha Linehan et al. (1983). It has been shown to have good internal consistency between items, as well as good test-retest reliability and convergent, discriminant, and factorial validity. Initially, 65 subjects from the community were asked to list (1) reasons for not killing themselves in a moment in their lives when they had the most serious suicidal thoughts, (2) reasons for not killing themselves at the current moment, and (3) reasons why other people do not kill themselves. In this manner, a total of 343 RFL were generated, then reduced to 72 statements and, finally, a 48-item questionnaire that focused on reasons for *not* dying by suicide was obtained, yielding six primary factors: Survival and Coping Beliefs (SCB), Responsibility to Family (RF), Child-Related Concerns (CC), Fear of Suicide (FS), Fear of Social Disapproval (FSD), and Moral Objections (MO; see Table 4.1 for examples of items for each factor, across different scales).

In the RFLI, subjects are asked to rate the importance, at the current moment, of each reason for not killing themselves on a 6-point Likert scale (1: Not at all important; 6: Extremely important). A minimum of 48 and a maximum of 288 could be obtained as a total score, with higher scores corresponding to greater RFL. However,

Table 4.1 Subscales and examples of items of the Reasons for Living Inventory (Linehan et al., 1983), Reasons for Living Inventory for Adolescents (Osman et al., 1998), College Student Reasons for Living Inventory (Westefeld et al., 1992), Reasons for Living Inventory for Young Adults (Gutierrez et al., 2002), Reasons for Living for Older Adults scale (Edelstein et al., 2009), Chinese-language Motivations for Living Inventory (Wang et al., 2013), Protective Reasons against Suicide Inventory (Wang et al., 2016), and Reasons For Living of Collaborative Assessment and Management of Suicidality (Jobes & Mann, 1999)

RFLI	RFL-A	CS-RFLI	RFL-YA	RFL-OA	CMLI	PRSI	RFL (CAMS)
48 items	32 items	46 items	32 items	69 items	15 items	20 items	No items
Survival and Coping Beliefs		*Survival and Coping Beliefs*	*Coping Beliefs*	*Survival and Coping Beliefs*		*Life Satisfaction*	*Enjoyable Things*
I believe I can learn to adjust or cope with my problems.		I have confidence in my ability to deal with problems.	When faced with a problem, I work hard to understand and avoid similar problem situations.	I have learned to laugh at my troubles and not take life too seriously.		My life is better than in the past.	Any mention of activities or objects that are enjoyed.
I believe I have control over my life and destiny.		I believe I can cope with my problems.	After an argument, I prefer to focus on dealing with the situation rather than attempt to kill myself.	I have coped before and I can do it again.		My life is very smooth.	
	Future Optimism		*Future Expectations*		*Hope for the Future*	*Hope for the Future*	*Hopefulness for the Future*
I have hope that things will improve and the future will be happier.	I expect many good things to happen to me in the future.	I am looking forward to the future.	My future looks quite hopeful and promising.	Tomorrow I may feel better.	Even though I am getting older, I still have hope for the future.	Even though I am getting older, I still have hope for the future.	Future-oriented statements that deal with vague abstract yearnings, expressing a hopeful attitude or a curiosity of how the future will be.

I am curious about what will happen in the future.	I am hopeful about my plans or goals for the future.		I look forward to many fun things in the future.	I am curious about what will happen in the future.	My future is full of expectations.	I still have many plans that I intend to complete.	
		College and Future-Related Concerns					*Plans and Goals*
I still have many things left to do.	I have a lot to look forward to as I grow older.	I want to put my college degree to good use.	I have many plans I am looking forward to carrying out in the future.	I want to see my grandchildren grow up.			Statements referring to future-oriented plans, expressing a desire to see something through or left to be completed.
I want to experience all that life has to offer and there are many experiences I haven't had yet which I want to have.	I would like to accomplish my plans or goals in the future.	I have my career to look forward to.	I would like to see my plans (have a job, career, or family) for the future come true.	I still have many things left to do.			
Responsibility to Family		*Responsibility to Friends and Family*		*Responsibility to Family/Others*		*Negative Impact on Family Members*	*Responsibility to Others*
It would hurt my family too much and I would not want them to suffer.		I have a responsibility and commitment to my family.		My spouse requires care.		Suicide causes distress for family members.	Any mention of responsibilities or obligations owed to others. These responses may also refer to protecting others.

(continued)

Table 4.1 (continued)

RFLI	RFL-A	CS-RFLI	RFL-YA	RFL-OA	CMLI	PRSI	RFL (CAMS)
48 items	32 items	46 items	32 items	69 items	15 items	20 items	No items
My family depends upon me and needs me.		It would cause a lot of guilt and pain for my friends.		It would hurt my family too much, I would not want them to suffer.			
Child-Related Concerns							
The effect on my children could be harmful.				I have a responsibility to my pet.		Suicide would lead to my children being blamed by others as unfilial.	
It would not be fair to leave the children for others to take care of.						Suicide makes children sad.	
							Burdening Others
							Any mention to not be a burden for others.
	Family Alliance		*Family Relations*		*Family Member Support*	*Family Member Support*	*Family*

	Whenever I have a problem, I can turn to my family for support and advice.		My family gives me the love I need.	I have a loving family who supports me through bad times.	When I feel distress, I can get support from my family.	When I feel distress, I can get support from my family.	Any references to family such as marriage or children.
	I enjoy being with my family.		I have a close relationship with my family.		My family spends time listening to my experiences.	I enjoy hanging around with my family.	
	Peer-Acceptance and Support		*Peer Relations*		*Friend Support*	*Friend Support*	*Friends*
	My friends stand by me whenever I have a problem.		I have close friends who are willing to help in times of need.		When I feel distress, I can get support from my friends.	When I feel distress, I can get support from my friends.	Any mention of friends, including specific names.
	I feel loved and accepted by my close friends.		I have close friends who really care a lot about me.		I can feel love and acceptance from my close friends.	I believe that my friends enjoy spending time with me.	
Fear of Suicide	*Suicide-Related Concerns*	*Fear of Suicide*		*Fear of Suicide*	*Fear of Death*	*Fear of Death*	
I am afraid of the actual "act" of killing myself (the pain, blood, violence).	It would be painful and frightening to take my own life.	I'd be afraid of trying it and failing.		I am afraid that my method of killing myself would fail.	I am afraid of death, so I don't consider killing myself.	I am afraid of suicide.	

(continued)

Table 4.1 (continued)

RFLI	RFL-A	CS-RFLI	RFL-YA	RFL-OA	CMLI	PRSI	RFL (CAMS)
48 items	32 items	46 items	32 items	69 items	15 items	20 items	No items
I am a coward and do not have the guts to do it.	I am afraid to die, so I would not consider killing myself.	I'm scared of the pain that I would experience.		I am afraid of death.	Suicidal ideas make me fearful.	Suicidal ideas make me fearful.	
Fear of Social Disapproval		*Fear of Social Disapproval*					
Other people would think I am weak and selfish.		I would be afraid of what others might think.		I am concerned about what others would think of me.			
I am concerned about what others would think of me.		Killing myself would show a lack of character.					
Moral Objections		*Moral Objections*		*Moral/Religious Objections*		*Religious Beliefs*	*Beliefs*
My religious beliefs forbid it.		It is against my religious beliefs to commit suicide.		I consider it morally wrong.		Suicide will be repeated and suffered in the next life.	Statements referring to religion.
I consider it morally wrong.		I believe that only God has the right to end life.		Committing suicide would prevent me from going to heaven.		My religious beliefs stop me from killing myself.	
	Self-Acceptance		*Positive Self-Evaluation*		*Self-Acceptance*		*Self*

	I accept myself for what I am.		I am happy to be the person I am.		I accept myself.		Specific references to self or feelings or qualities about the self.
	I am satisfied with myself.		I have a great deal of respect for myself.		I feel that my health condition is ok.		

RFLI Reasons for Living Inventory, *RFL-A* Reasons for Living Inventory for Adolescents, *CS-RFLI* College Student Reasons for Living Inventory, *RFL-YA* Reasons for Living Inventory for Young Adults, *RFL-OA* Reasons for Living for Older Adults scale, *CMLI* Chinese-language Motivations for Living Inventory, *PRSI* Protective Reasons against Suicide Inventory, *RFL* Reasons for Living, *CAMS* Collaborative Assessment and Management of Suicidality

from a clinical perspective, the most important aspects are scores for each subscale, because they allow a better understanding of the subject's specific protective factors and on which factor(s) therapy should center the attention.

Regarding subscale meaning, the Survival and Coping Beliefs subscale has two parts: the first is associated with confidence in the personal ability to adequately face challenges in life; the second contains general positive expectations for the future. SCB are closely positively related to an individual's self-efficacy, or one's personal conviction to be able to succeed in specific situations or accomplish a task (Bandura, 1977), and negatively related to hopelessness (Range & Penton, 1994). Responsibility to Family includes the commitment of the individual to her/his family (e.g., spouse, siblings, parents) and an evaluation of the amount of suffering that her/his death could cause to the family. Child-Related Concerns involve the individual's concerns about the impact of her/his death on her/his children. Fear of Suicide relates to the level of fear toward death and suicide. In this context, it is interesting to briefly mention the Interpersonal Theory of Suicide by Joiner et al. (Joiner, Brown, & Wingate, 2005; Van Orden et al., 2010), which suggests that suicide is related to (1) the desire to die by suicide and (2) the capability to die by suicide. The acquired capability of suicide arises from fearlessness in relation to death: when individuals repeatedly expose themselves to physical pain (e.g., tattoos, cutting) and fear-inducing events (e.g., combat experience, previous SA), they reduce their fear of death and increase their capability for suicide. As such, we can speculate that FS might be related to this concept. Fear of Social Disapproval reflects an individual's concern about others' judgment of her/his suicidal act. Finally, Moral Objections refer to religious or moral beliefs against suicidal acts; for individuals with strong religious or moral values, particularly those related to religions forbidding suicide, this RFL can be an important protective factor (Kralovec, Kunrath, Fartacek, Pichler, & Ploderl, 2017).

As stated above, recently we systematically reviewed the literature concerning RFLI and suicidal thoughts and behaviors (39 studies; Bakhiyi et al., 2016). Overall, a high total RFLI score was found to be potentially protective against both SI and SA in clinical and non-clinical samples. We should state "potentially protective" because, despite the negative association between RFL and suicidal thoughts and behaviors, other factors might moderate the RFL protective effect (e.g., cognitive abilities and processes, attributional style, coping and problem solving, and emotional intelligence; Johnson et al., 2011). Moreover, low RFL seemed to be associated with specific characteristics of suicidality, such as suicide intent, SA lethality (Oquendo et al., 2005), and the sum of the scores for hopelessness, subjective depression, and SI (a measure of "clinical suicidality"; Malone et al., 2000). Unfortunately, in this review we were unable to find any study focused on suicide death (SD). Moreover, non-suicidal self-injury (NSSI) has not been taken into account in the review but deserves future attention, considering its connection with SI, SA, and SD (Hamza, Stewart, & Willoughby, 2012). For example, in a recent study conducted with adolescents engaging in both NSSI and repeated fire-setting, the Brief Reasons for Living Inventory for Adolescents (14 items) was administered (Tanner, Hasking, & Martin, 2015). Specifically, adolescents who had attempted

suicide reported lower SCB scores than ones with SI and ones with no suicidality. No difference in SCB was observed between adolescents with SI and those with no suicidality.

When we focused on specific RFL, SCB and MO seemed to have a specific protective role against SI and SA. The perception of personal ability to cope with or generate solutions to problems (i.e., self-efficacy), together with general positive expectations for the future and religious or moral beliefs against suicide, could offer greater protection against suicidal thoughts and behaviors, as these are self-related qualities in comparison to, for example, RF, CC, or FSD, which are subscales focused on one's relation with others. Findings on CC are promising as well, even though only a few studies have investigated it (four studies were included in our past review, three of them with significant results): individuals with high CC scores were less likely to report SI or SA (Bakhiyi et al., 2016). Results on FS are inconsistent, since the majority of published studies did not report significant results on both SI and SA (Bakhiyi et al., 2016). This could be interpreted in the context of the Interpersonal Theory of Suicide (Joiner et al., 2005; Van Orden et al., 2010), in which fearlessness alone in relation to death is not sufficient for suicide to arise, but must be jointed to suicide desire, that is, linked to the perception of being alone (thwarted belongingness) and being a burden to others (perceived burdensomeness). Another explanation could be the presence of individual heterogeneity in terms of exposure to events that increase the capability to die by suicide: subjects who have never been exposed to such events (e.g., chronic pain conditions, self-cutting) are different from those who have been (Hooley, Franklin, & Nock, 2014). Hence, future studies may assess this heterogeneity.

Results on RF and FSD are inconsistent as well. Interestingly, depressed patients with high RF reported increased hopelessness and higher SI rate and severity (Britton et al., 2008), while among individuals with substance abuse or dependence (as assessed in outpatient setting and prison), high FSD was linked to higher suicide risk (Mohammadkhani, Khanipour, Azadmehr, Mobramm, & Naseri, 2015). Hence, on the one hand, others (e.g., family and society) could be perceived as a burden, and the suicidal act in this case could represent an aggressive act against the other in the attempt to eliminate the onerousness of relationships; whereas, on the other hand, such an action may also be linked to the perception of the self as a burden (i.e., perceived burdensomeness).

Cultural differences have been reported as well. In a United States study, compared to non-Latinos, Latinos reported significantly less SI, less lethal SA, and higher SCB, RF, and MO; however, multivariate analyses showed that, while lower SI was independently associated with being Latino, other suicidal behaviors (e.g., suicide intent and lethality of SA) were more strongly associated with SCB and MO in comparison to ethnicity (Oquendo et al., 2005).

After the publication of our review, further studies have been published, substantially confirming the protective role of RFL on SI and SA in patients with depression (Luo, Wang, Wang, & Cai, 2016), with co-morbid psychopathology (Tillman et al., 2017), and in nursing students (Leal & Santos, 2016). For instance, our team of researchers focused on the interaction between life events and RFL on current SI

in a sample of patients with past SA (Laglaoui Bakhiyi et al., 2017), confirming the negative association between RFL (total scores and all the subscales with the exception of FS) and SI. However, neither interaction nor additive effect between positive life events and RFLI total score were significant for SI.

A systematic review has been recently published on religion and suicide risk (89 included articles; Lawrence, Oquendo, & Stanley, 2016), with most research focusing on two primary aspects of religion: religious affiliation and attendance at religious services. Religious affiliation seems to be protective against SA and the severity of SA and SD, but not against SI. This is in line with clinical experience, reflecting the fact that individuals may think about suicide but would never attempt suicide because of their religion, but it is also in contrast with the finding of a negative correlation between MO and SI (Bakhiyi et al., 2016). This may be because religious affiliation, or simple belonging, represents a different construct in comparison to MO, which comprises religion-related prohibitions and moral objections to suicide. Hence, we can explain this conflicting result with the limitations linked to the religious affiliation variable, which is wide-ranging. Moreover, adhering to a minority religious affiliation might also increase suicide risk through increased feelings of isolation. As an example, according to the strain theory of suicide, which requires the presence of at least two pressures (e.g., differential values, discrepancy between aspiration and reality, relative deprivation, and lack of coping skills), religiosity in China could be related to suicide since China has a traditional polytheistic religion (e.g., for some, not exactly a religion but a combination of cultural practices), and so to follow a specific religion in China is often still considered deviant (Zhang, Wieczorek, Conwell, & Tu, 2011). The attendance at religious services seemed to be associated with lower suicide risk, but this finding could be related to the fact that service attendance might create opportunities for social support, rather than to religion itself. When social support was taken into account among covariates, service attendance was found to be protective only against SA but not SI (Lawrence, Brent, 2016); however, this dimension seems more distant from MO.

In the same year of the publication of this review on religion and suicide (Lawrence, Oquendo, & Stanley, 2016), an original study was performed by the same team of researchers (Lawrence, Brent, et al., 2016). Interestingly, different results have been reported. After adjusting for sex, ethnicity, age, number of biological children, and total RFLI scores, (1) depressed patients with a religious affiliation reported a higher rate of past SA, and (2) depressed patients who considered religion more important and who attended services more frequently reported higher SI.

So, in addition to the already reported issues in the assessment of the religion role, the authors suggested that a deep understanding of the link between religion and suicide risk requires both "a sensitivity to the individual's life narrative and how he/she experiences being a member of that religious group," and information on potential "negative religious coping" strategies (e.g., to defer all the responsibility to God, to feel abandoned by him or to wish to die to be with him; Lawrence, Brent, et al., 2016). This issue may need prospective studies to understand the direction of the association; for instance, religion may become a coping strategy for suffering patients, or it may complicate coping efforts.

Summarizing, we are able to confirm the conclusion of our previous review (Bakhiyi et al., 2016), reporting that a high total score on the RFLI seems to be potentially protective against both SI and SA, and SCB and MO seem to be predominantly involved. In the future, SCB should be disentangled from further self-related beliefs (e.g., self-esteem, self-efficacy, internal locus of control, and problem-solving confidence). MO seems to be an efficacious construct for the identification of protective factors against not only SA but also SI. However, the importance of an appropriate integration between nomothetic and idiographic approaches (i.e., the study of inter-individual variations to find generalization laws versus the study of intra-individual variations that render each individual unique) should always be emphasized (Lyon et al., 2017).

Review of Additional Scales Developed from the RFLI

Numerous other instruments assessing RFL have been developed, originating from the RFLI but with different subscales: the Reasons for Living Inventory for Adolescents (RFL-A; Osman et al., 1998), the College Student Reasons for Living Inventory (CS-RFLI; Westefeld et al., 1992), the Reasons for Living Inventory for Young Adults (RFL-YA; Gutierrez et al., 2002), and the Reasons for Living for Older Adults scale (RFL-OA; Edelstein et al., 2009; see Table 4.1).

The 32-item RFL-A was developed by Osman et al. (Osman et al., 1998) by assessing a sample aged 14–18 years. It was introduced because of the problem of using an adult measure with adolescents. The scale showed convergent, discriminant, and construct validities and a high Cronbach's α coefficient (internal consistency). It is consistently different from the RFLI. Five factors were identified, only two of which were already present in the RFLI: Suicide-Related Concerns (SRC), which corresponds to FS, and Future Optimism (FO), which matches with a portion of SCB, specifically the items related to hope for the future, and plans and goals. Three factors were different: Family Alliance (FA) and Peer-Acceptance and Support (PAS), which focused on the consideration of family and friends as sources of support, and Self-Acceptance (SelfA), which is linked to acceptance and positive feelings related to the self. No further findings were reported on this scale after the publication of our review (Bakhiyi et al., 2016).

A college student version of the RFLI was developed by Westefeld et al. (1992) to investigate whether students would generate different RFL from adults. The hypothesis was that college students could have partially different RFL, considering the delicate developmental phase they are facing. A pool of 271 RFL (reasons why students would *not* die by suicide) was generated by 125 college students and then reduced to 84 items, which were subsequently administered to 384 college students; at the end, a final inventory of 46 items was created, the CS-RFLI. Four factors present in the RFLI were found in college students as well (SCB, FS, FSD, and MO) and a fifth, RF, was slightly changed into Responsibility to Friends and Family (RFF). RFF includes the commitment of the student to the family, and the evaluation of

pain caused not only to family members but also to friends. CC were not included in the measure; whereas, the College and Future-Related Concerns (CFC), a college-specific subscale, was added, which corresponds to plans and hopes for the future.

The RFL-YA is a 32-item inventory developed to be administered to young adults aged 17–30 years (Gutierrez et al., 2002). To motivate the validation of this scale, the authors mentioned two major limitations of the CS-RFL: the extensive overlap between it and the RFLI, with the consequent limit in the exploration of other dimensions, and the CS-RFL's length. Cronbach's α estimates for the subscales ranged from 0.89 to 0.94. Concurrent, convergent-discriminant, and criterion validity were obtained. The RFL-YA is similar, in some ways, to the RFL-A, including the identification of five factors: Coping Beliefs (CB), Future Expectations (FE), Family Relations (FR), Peer Relations (PR), and Positive Self-Evaluation (PSE). CB partially correspond to SRC in the other scales. FE correspond to FO, FR to FA, PR to PAS, and PSE to SelfA, in the RFL-A.

The 69-item Reasons for Living for Older Adults scale (RFL-OA) comprises four subscales, all similar to the ones in the RFLI: SCB, RF, FS, and Moral/Religious Objections (MRO; Edelstein et al., 2009). Forty-one of the 69 items differed from those in the original RFLI, with differences in items intended to reflect age-related changes (e.g., "I want to see my grandchildren grow up"). The RFL-OA was administered in a recent study on older adults (Heisel, Neufeld, & Flett, 2016). Heisel et al. (2016) reported an association between RFL-OA scores and SI, which was mediated by MIL, assessed with the 40-item Experienced Meaning In Life scale (EMIL; Heisel, 2009). EMIL consisted of four subscales: Creative (e.g., "I enjoy participating in recreational activities"); Experiential (e.g., "The beauty of nature is uplifting to me"); Attitudinal (e.g., "I try to find meaning in life even when I am suffering or in pain"); and Ultimate Meaning (e.g., "My spirituality helps me feel connected with something greater than myself").

Review of Chinese RFL Scales

Two scales have been validated independently from the Chinese version of the RFLI, the dimensions of which closely corresponded to the original RFLI dimensions (Chan, 1995), and they could be of interest for the purpose of this chapter.

A Chinese version of the scale, the Chinese-language Motivations for Living Inventory (CMLI), has been developed by Yi-Wen Wang and colleagues for older male residents of veterans' homes (Wang et al., 2013); Motivations for Living has been used by the authors, as a synonym of RFL. It includes five clusters of three items each (15 items in total): Family Member Support (FMS), Friend Support (FrS), Hope for the Future (HF), Fear of Death (FD), and Self-Acceptance (SelfA; Table 4.1). FMS corresponds to receipt of support from family and the enjoyment of being with family, so it is not linked to a sense of responsibility toward the family. Similarly, FrS is related to the perception of support, love, and acceptance from friends and, in this case, to the belief that friends enjoy staying with the subject. HF

is related to hope, plans, and expectations for the future. FD corresponds to fear of death and suicide. SelfA relates to satisfaction about the self; moreover, it evaluates, through one item ("I feel that my health condition is ok"), the satisfaction on the subject's healthiness, evidencing its important impact among older people. In fact, the link between suicidal behavior and functional disability and specific physical conditions has been quite established among older adults (Fassberg et al., 2016), as well as the relation between suicidal thoughts and behaviors and physical pain (Calati, Laglaoui Bakhiyi, Artero, Ilgen, & Courtet, 2015). In the validation study, subjects with no SA had higher CMLI scores than subjects who had attempted suicide in the previous 3 months (global score and all subscales scores), revealing good criterion validity (Wang et al., 2013). Moreover, the scale had good content validity, and both inventory reliability and intraclass correlation coefficient were satisfactory.

To overcome limitations of the previous scale (CMLI), since its validation was conducted in institutions, and considering the paucity of similar scales to assess older Chinese-speaking people, the same team of researchers developed a new scale for assessing suicidality in older people who live in the community, the 20-item Protective Reasons against Suicide Inventory (PRSI; Wang et al., 2016). Seven factors have been identified (Table 4.1): four were already present in the CMLI (FMS, FrS, HF, and FD), and an additional three factors include Life Satisfaction (LS), Negative Impact on Family Members (NIFM), and Religious Beliefs (RB; Table 4.1). In the validation study, in primary care settings, outpatients without SI had higher scores than outpatients with SI (also in this case, both total score and subscales scores), indicating good criterion validity (Wang et al., 2016). Furthermore, the scale had excellent content validity and face validity, while inventory reliability and intraclass correlation coefficient were satisfactory.

Reasons for Living Versus Reasons for Dying Assessment

The Reasons for Living (RFL) versus Reasons for Dying (RFD) Assessment has been developed by David A. Jobes and Rachel E. Mann (Jobes & Mann, 1999) in the context of the Collaborative Assessment and Management of Suicidality (CAMS) protocol (Jobes, 2012), an evidence-based clinical intervention for suicidal risk patients. CAMS relies on the use of the Suicide Status Form (SSF), which is a seven-page clinical assessment, treatment planning, tracking, and outcome tool, comprising both quantitative rating scales and qualitative open-ended items.

Embedded within the SSF qualitative assessment, there is the RFL versus RFD Assessment. The patient is required to list up to five RFL and five RFD, and to then rank them in order of importance (from 1 to 5). In their development of the instrument, Jobes and Mann organized the patient-generated RFL and RFD (from 49 low-lethality suicidal patients, mostly suicidal ideators) into categories (Jobes & Mann, 1999), including 173 responses for the RFL and 145 responses for the RFD. Nine different RFL clusters were identified (Jobes, 2012): Family, Friends,

Responsibility to Others, Burdening Others, Plans and Goals, Hopefulness for the Future, Enjoyable Things, Beliefs, and Self (Table 4.1). Similarly, nine RFD clusters were recognized: Relationships, Unburdening Others, Loneliness, Hopelessness, General Descriptors of Self, Escape in General, Escape the Past, Escape the Pain, and Escape Responsibilities.

The authors recognized that the RFL/RFD assessment reveals the "internal struggle hypothesis" of suicidal behavior as proposed by Maria Kovacs and Aaron T. Beck; that is, suicide attempters are a heterogeneous group, many of whom manifest an internal struggle and may not have a unidirectional motivation to die (Kovacs & Beck, 1977). This hypothesis has its origin in one of the basic concepts of psychoanalysis—the constant conflict during life, between death and life drives: the Freudian metaphor of the struggle between Eros (Ἔρως, the drive toward life) and Thanatos (Θάνατος, the drive toward self-destruction; Freud, 1920).

Comparison Between Different RFL Scales

In this section, and in Table 4.1, we integrate and juxtapose the factors identified in each mentioned scale. In the first version of the scale (RFLI), as well as in RFL-OA, SCB seemed to have a specific protective role against SI and SA, as we have seen. There are a number of items related to hope for the future that, in other scales (RFL-A, RFL-YA, CMLI, PRSI, and RFL of CAMS), is a separate factor. Although, in these five scales, a separate factor related to hope for the future is present: future-related plans, which are more specific than general hope, represent a separate factor in two scales only (CS-RFLI and RFL of CAMS); however, plan-related items are present in the other scales as well, except for the Chinese ones. This difference could be culturally mediated or related to the fact that the Chinese scales are for the elderly, so future planning specifically related to career or family, for instance, could be absent based on one's older age. However, although future plans are not necessarily present in the scales for the elderly, focusing on future medium- and short-term plans should still be an emphasis of treatment in older adults.

Responsibility to family and friends is not present in both versions for adolescents and young adults (RFL-A and RFL-YA); however, in the context of therapy with adolescents, it could be useful to inquire as to how family and friends might feel when facing their death. Surprisingly, in the RFLI, family and friends were only considered in terms of responsibility, whereas in all the other scales, except the CS-RFLI, family and friends were considered in terms of support, care, and feelings of acceptance.

Another difference found among the scales was the lack of fear of death/suicide in the RFL-YA and in the RFL of CAMS (Bagge & Linehan, 2000). FSD was only present in RFLI and CS-RFLI. Moral objections/religious beliefs were not present in both RFL-A and RFL-YA and in the CMLI. Concerning the Chinese scale, Wang and colleagues provided an interpretation concerning the lack of religious beliefs subscale (Wang et al., 2013): the Chinese traditional polytheistic religion could ren-

der difficult the conceptualization of religion's impact on an individual's life. The subscale related to positive feelings or qualities about the self and self-acceptance was not present in RFLI, CS-RFLI, RFL-OA, and PRSI. In this case, we believe that this factor should be better analyzed, and differentiated from the self-esteem variable: in fact, the association between low self-esteem and suicidal behaviors has been reported (Mann, Hosman, Schaalma, & de Vries, 2004) and the concepts of self-acceptance and self-esteem were found to be similar, even if they are not synonymous (MacInnes, 2006).

In contrast to Linehan et al. (1983) asking participants reasons for *not wanting to kill themselves*, Jobes and Mann asked subjects their reasons for *wanting to live* (Jobes & Mann, 1999). However, remarkably, the different questions generated similar responses, so we can speculate that reasons to not kill themselves and reasons for living could overlap.

Importantly, Jobes and Mann underlined that their combined assessment is different from the assessment of either RFL or RFD separately (Jobes & Mann, 2000). As previously stated, they grounded their measure using the "internal struggle hypothesis" (Kovacs & Beck, 1977), and argued that the focus of suicidology should not be on only what makes life worth living, but on death drives as well, to provide to the patients tools to identify, manage, and cope with death drives, beginning with recognizing them together with the patient during the sessions, and proposing to the patient alternative coping strategies.

Overview of Qualitative Research with RFL

In the field of suicide prevention, qualitative research represents a precious instrument for both researchers and clinicians to gain better access to patients' feelings and thoughts, and to better understand the meaning patients ascribe to their experiences. From a systematic review and thematic content analysis on how individuals live with suicidality or recover from it, which included 12 studies, the connection with others (i.e., having direct interpersonal relationships and sharing the same cultural and/or religious background) was associated with MIL (Lakeman & FitzGerald, 2008). We may hypothesize that this connection with others, given its ubiquity, could be linked to the recognition of them as a RFL. The reconnection with others, culture, or God was associated with recovery or resolution of crisis among suicidal individuals. In particular, in one of the analyzed studies, the relationship with caring nurses appeared to be substantially different from relationships with others (Cutcliffe, Stevenson, Jackson, & Smith, 2006). For example, in the early recovery stages, caring nurses rendered possible the reconnection of the suicidal person with humanity, in a moment in which the relations with others were otherwise too difficult. The authors described three stages in this process of reconnection, including reflecting an image of humanity, guiding the individual back to humanity, and learning to live.

In another systematic review and content analysis examining reasons why elderly have self-harmed (eight included studies), themes related to sense of alienation from others (family and society), disconnectedness from family and health care providers, and sense of invisibility and meaningless ("the perception of being no longer able to give to others or to achieve anything more in life, and a desire to feel useful and needed") emerged (Wand, Peisah, Draper, & Brodaty, 2017). In this case, the focus was more on RFD, inversely related to RFL domains such as support from others and SCB.

Furthermore, in an original qualitative study on Taiwanese elderly outpatients with SI, three themes were identified from interviews (Huang, Tsai, Liu, & Chen, 2017): SI triggers (e.g., physical discomfort, loss of respect and/or support from family, impulsive emotions due to conflicts with others, and painful memories), psychological changes contributing to SI (e.g., feelings of loneliness, a sense of helplessness, or lack of self-worth), and factors of adaptive response (e.g., support from family and friends, control of emotions, establishing a support network, comfort from religion, medication, and focusing on the family). In this case, thematic results that could be associated with RFL include connection with others and religious beliefs.

From these qualitative contributions, relations with others, receiving support from others, and sharing a common background with others emerged as fundamental RFL that can contribute to meaning in life. From clinical experience, however, we know that, in some moments of life, everyday relationships may not be sufficient and may even represent a burden, and some individuals could manifest the need to receive support from a mental health specialist. In this case, the most meaningful relation could be between patient and clinician; therefore, clinicians should be equipped to literally embody the RFL of the patient, just for a transient phase for most cases, and for extremely long periods for some others (e.g., chronically, mentally ill persons).

Concerning the sense of meaningless, we would like to briefly describe an experience with a psychotic patient who was institutionalized in a therapeutic community. Since he had motivational difficulty getting out of bed, the director of the community decided to assign him an extremely important task: every morning the patient would deliver an important document to the director, without which the director could not have started the activities of the day. The entire therapeutic staff promoted this assignment. This strategy instilled in the patient the feeling of being useful and helped him to rediscover an everyday meaning. The document was only a pretext in this case, but this was not incompatible with the Bionian[1] "truth instinctual drive" postulated by Grotstein (i.e., a need of truth, which has the quality and the power of an instinctual drive; Grotstein, 2004), because the document was truly special for the clinician, having the role of activating in the patient a daily meaning and the perception of being helpful. We recognize that this is an extreme example,

[1] Wilfred R. Bion (1897–1979) was a British psychoanalyst. According to him, truth is essential for the existence and growth of the mind and for psychic health (Bion, 1984).

but the promotion of meaning in life should always be among therapeutic targets in suicidal patients, no matter the diagnosis or the severity of symptoms.

Preventive and Therapeutic Interventions

Therapeutic strategies for suicide prevention should promote the individual discovery of RFL or MIL and increase patients' contact with them. RFL are often considered in therapeutic interventions (e.g., encouraging familial connections, teaching coping strategies) but are not always evaluated by means of specific assessment. Even if we know that a number of psychotherapies are generally efficacious in the reduction of both SA and non-suicidal self-injury and risk factors for subsequent SA (Calati & Courtet, 2016), knowledge on RFL enhancement is limited to a few types of psychotherapies.

First, Dialectical Behavior Therapy (DBT), in all its different components, was found to globally enhance RFL (according to RFLI) and decrease SA frequency and severity, SI, and use of crisis services because of suicidality (Linehan et al., 2015). Skills training (i.e., mindfulness-based emotion regulation, distress tolerance, relationship management) appears as the most effective component in DBT for suicide prevention (Linehan et al., 2015). Considering suicidal behavior as a dysfunctional experiential avoidance behavior aimed to escape suffering, the increasing of skills in psychological pain management allows the patient to connect to what is meaningful in life. Furthermore, mindfulness is a way to identify what is important in one's life by differentiating what appears as urgent from what is important, and therefore creating more space in one's life for what really matters. Finally, mindfulness redirects the search for happiness from external goals we do not have control over, leading to psychological dependence on the way the reality appears to us, to internal values that attribute more importance on the way we want to behave in the world, and less importance on external results or the way we believe reality should be.

From this perspective, Mindfulness Based Cognitive Therapies (MBCT) have shown effectiveness to reduce SI (Serpa, Taylor, & Tillisch, 2014). Being mindful means to pay attention in a specific manner, that is, in the present moment, and non-judgmentally. Mindfulness improves effective management of unpleasant psychological events (e.g., negative cognitions and emotions; Chiesa, Anselmi, & Serretti, 2014; Chiesa, Calati, & Serretti, 2011) and hedonic capacities (Thomas & Garland, 2017), aspects that could be linked to an augmented capacity to recognize RFL. A short-term intervention based on kindness mindfulness (i.e., one form of mindfulness practice) significantly improves positive mental health, perceived connection with others, and perceived MIL, even up to 6 months follow-up (Ozawa-de Silva, 2015).

In addition to mindfulness, gratitude involves the ability to appreciate little things already present in our environment and our lives. Gratitude is a social emotion that is often directed toward a person, and it is conceptualized as a virtue, a moral sentiment, a motive, a coping response, a skill, and an attitude. Minimally, gratitude

is an emotional response to a gift, or the appreciation felt after one has been the beneficiary of an altruistic act (Emmons & Crumpler, 2000). Recently, Huffman and colleagues found that practicing exercises of Positive Psychology (PP), including gratitude, was associated with increased optimism and decreased hopelessness in suicidal patients (Huffman et al., 2014). Furthermore, grateful adolescents (Li, Zhang, Li, Li, & Ye, 2012) and young adults (Kleiman & Beaver, 2013) are less likely to be suicidal. Gratitude increases affiliation feeling (Fredrickson, 2001), or connectedness to others, which is an RFL essential for human surviving. In sum, being grateful is comprised of being aware of, and satisfied for, what is already part of our life, increasing RFL in the here-and-now. As an example of a gratitude exercise, patients are asked to write, each evening, a journal in which they indicate three things having occurred in the day for which they feel grateful. Patients are encouraged to connect with all the reasons why they are grateful for these events. For example, one could write he/she is grateful for having received a text message from a friend, describing the importance of this relationship and the feeling of belongingness. Another aspect of gratitude is the social connection feeling and interdependence, which can be developed with higher attention to all the people who have contributed to the experience the subject is currently living; for example, eating something is dependent on the dealer having sold the product, which is dependent on those who have contributed to packaging the product, which is dependent on those who have cultivated the components of this product, and so on. Therefore, gratitude helps people to attribute value to what already exists in one's reality, and to connect them to human interdependence.

Acceptance and Commitment Therapy (ACT) integrates mindfulness, motivational interviewing, and existential therapy (i.e., logotherapeutic treatment). ACT helps patients to learn how (1) to accept unavoidable innate/private events, just noticing them as transient mental events different from *self*; and (2) to identify and focus on valued actions. Values represent what is important in one's life, and the way one wants to act in the meaningful areas of his/her life. Values are important to anchor patients to life, and to increase intrinsic motivation to engage in meaningful actions (Niemiec, Ryan, & Deci, 2009). It is all the more interesting as suicidal patients show decreased hedonic capacities and MIL (Heisel & Flett, 2004; Xie et al., 2014). Additionally, values may act as a buffer between stressful life events and suicidal vulnerability, being a source of resilience against hopelessness (Marco, Guillen, & Botella, 2017). Through several samples, findings support a significant negative correlation between MIL and suicidal tendency (Wilchek-Aviad & Malka, 2016). Thus, logotherapeutic strategies (including ACT) may focus on searching for meaning in one's life and, therefore, help to promote the ability to make one's life worth living despite the suffering entailed. Finally, an ACT program (7 weekly sessions) has shown effectiveness in (1) reduction of severity of SI; (2) reduction of psychological pain, hopelessness, anger, and suicidal risk factors; and (3) improvement in global functioning in patients having attempted suicide in the last year (Ducasse et al., 2014). ACT may reduce SI intensity through several factors: an increase in acceptance skills, and in MIL, through personal engagement toward value-oriented actions and a modulation of suicidal risk factors.

Moreover, the CAMS has been shown to be effective in reducing SI, increasing hope (Ellis, Rufino, & Allen, 2017), and increasing RFL even after 12 months (Comtois et al., 2011). Notably, CAMS is a structured, collaborative framework for alliance-building, risk assessment, case formulation, treatment planning, and risk reduction with suicidal patients. Interestingly, principles of the CAMS framework are used in ACT therapy, such as: (1) developing a shared understanding of the suicidal process (i.e., experiential avoidance function) and planning for stabilization between patient and therapist; (2) conceptualizing suicidality as a primary problem and treatment focus, regardless of clinical diagnosis; and (3) addressing psychological vulnerabilities to suicidality and increasing RFL. A brief intervention, the Teachable Moment Brief Intervention (TMBI), was similarly found to enhance RFL in suicide attempters in 1 month (O'Connor et al., 2015). The TMBI was based on elements of both CAMS and DBT. Specifically, it is comprised of rapport building, identification of factors related to the SA through functional assessment, short-term crisis planning, and discussion of connection to outpatient mental health services.

Furthermore, as we already underlined, the focus on future short-term plans should be present in the treatment of suicidal patients, including of the elderly. A few therapies include this aspect, such as problem-solving therapies, recently found to be effective for the decrease of depressive symptoms in elderly (Kirkham, Choi, & Seitz, 2016).

Finally, concerning antidepressant treatments, duloxetine was found to enhance RFL, in 8 weeks, in hospitalized patients with severe depression (Demyttenaere, Desaiah, Raskin, Cairns, & Brecht, 2014). This result is connected to the fact that RFL are, at least partially, state-dependent: in fact, RFL scores, low at baseline, increased during the treatment of this severely depressed sample, in parallel with symptomatology amelioration. In summary, helping individuals to find RFL and meaning in their lives shows beneficial outcomes when integrated in therapeutic intervention aiming at suicide prevention.

Discussion

The broad conceptual framework of RFL is mental health *resilience*, which characterizes a person who, despite acute or chronic social or physical stressors, would resist against or recover from mental health problems. Following the definitions used by Kalisch et al. (2015), resilience could be considered as an *outcome* (if mental health is measured one time) or a *process* (if mental health is measured more than one time), while *resilience factors* are variables (such as social support, social status, personality, coping style, genetic background, and, as we have posited, RFL) predicting a resilient outcome. So, an individual reporting a high number of RFL could be more likely to have a resilient outcome in terms of mental health. A further concept is represented by *resilience mechanisms*: a limited set of shared psychological or biological mechanisms that mediate the link between *resilience factors* and *resilience outcome/process*.

In their study, Kalisch and colleagues hypothesized the existence of a single mediating mechanism, the positive appraisal style, formulating the Positive Appraisal Style Theory of Resilience (PASTOR; Kalisch et al., 2015). According to this theory, a positive appraisal style, defined as "a generalized tendency to appraise potentially aversive stimuli or situations in a non-negative/non-averse ('positive') fashion," is the crucial protective mechanism mediating the effects of other resilience factors and producing resilience to stressors. In the words of the authors: "A positive appraisal style is the common resilience mechanism onto which all resilience factors converge and through which they exert their protective effects on mental health." Consequently, we can hypothesize that RFL could exert their protective effect, converging in this positive appraisal style. In other words, a subject may have this positive style due to several factors, among which RFL play a consistent role: the higher the number of RFL, and/or the individual capacity to recognize them, the more the subject will be able to positively appraise her/his environment and to have corresponding positive emotional responses.

It would be interesting, in the future, to better understand the unique contributions and the potential bidirectional interrelations between (1) presence and frequency of RFL, and (2) capacity to recognize them. Moreover, two main interpretations of the overall findings reported in this chapter could be traced (Mammen, George, & Tharyan, 2001) and should be deepened in the future: on the one hand, non-suicidal patients could have a more optimistic approach because they perceive, or they have, more reasons to live or because of inner restraints to suicide; whereas, on the other hand, suicidal patients could perceive less RFL because of the higher depressive symptomatology and hopelessness, so they are simply not able to perceive RFL. Longitudinal studies are necessary to substantiate these patterns of association.

Interestingly, in connection to the PASTOR model, Peter Fonagy and colleagues linked a general psychopathology factor (p factor), an underlying vulnerability for psychopathology, to the lack of resilience, resulting in the impairment of three central mechanisms of resilience: immediate positive situation appraisal, retrospective reappraisal of a traumatic event, and inhibition of re-traumatizing triggers (Fonagy, Luyten, Allison, & Campbell, 2017). Moreover, they considered personality disorders and, particularly, borderline personality disorder, as characterized by the lack of resilience, so defined. We can hypothesize that this p factor could be connected to the lack of RFL or the capacity to recognize them as well; future research is needed to test this hypothesis.

Beyond the association between RFL and the concept of resilience to suicidality and psychopathology in general, it is well established that RFL are potentially protective against both SI and SA in clinical and non-clinical samples, and, more specifically, the RFLI SCB and MO subscales. Future perspectives to be investigated include: (1) a further investigation of RFL differences among different cultures and ages; (2) further additions to the RFL list, based on societal changes since the original development of the scale, for instance a career/vocation subscale may be added; and (3) a consideration of the importance of intimate supportive relationships as RFL among adults (RFLI), including, as we mentioned above, therapeutic relationships,

as some severe patients could be able to cling to a unique relation, including the one with the therapist.

Overall, our findings support the perspective of Malone and colleagues, who encouraged researchers to develop clinical treatments enhancing RFL during depression, and then to test them on the emergence of suicidal behavior (Malone, Oquendo, Haas, Ellis, & Mann, 2001). Promising treatments specifically focusing on RFL enhancement are DBT and CAMS, but evidence concerning MBCT, PP, ACT, and problem-solving therapies are also present. Our suggestion is that it may be possible to include a focus on RFL within every therapeutic intervention aiming at suicide prevention.

Notation: The mentioned scene from "The Piano" movie (Campion, 1993) is representative of the constant conflict during everyone's life between life and death drives, the inescapable oscillation between Reasons for Living and Reasons for Dying, and patients should be made aware of and ready to face this alternation.

Acknowledgments Raffaella Calati: Thanks to P.G.M., who has represented one of my reasons for living. Dr. Raffaella Calati received a grant from FondaMental Foundation, Créteil, France (2015–2016). Dr. Emilie Olié received research grants from AstraZeneca, Servier, Institut UPSA de la Douleur and fees for presentations at congresses from Janssen, Lundbeck, Otsuka, Servier. Prof. Philippe Courtet received research grants from Servier, and fees for presentations at congresses or participation in scientific boards from Janssen, Lundbeck, Otsuka, Servier.

Conflicts of interest: None.

References

Aishvarya, S., Maniam, T., Karuthan, C., Sidi, H., Ruzyanei, N., & Oei, T. P. (2014). Psychometric properties and validation of the Reasons for Living Inventory in an outpatient clinical population in Malaysia. *Comprehensive Psychiatry, 55*(1), S107–S113. https://doi.org/10.1016/j.comppsych.2013.06.010

Bagge, C. L., & Linehan, M. M. (2000). Reasons for living versus reasons for dying. *Suicide and Life-threatening Behavior, 30*(2), 180–181, author reply 182.

Bakhiyi, C. L., Calati, R., Guillaume, S., & Courtet, P. (2016). Do reasons for living protect against suicidal thoughts and behaviors? A systematic review of the literature. *Journal of Psychiatric Research, 77*, 92–108. https://doi.org/10.1016/j.jpsychires.2016.02.019

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215.

Bion, W. R. (1984). *Elements of psychoanalysis*. London: Karnac Books.

Britton, P. C., Duberstein, P. R., Conner, K. R., Heisel, M. J., Hirsch, J. K., & Conwell, Y. (2008). Reasons for living, hopelessness, and suicide ideation among depressed adults 50 years or older. *American Journal of Geriatric Psychiatry, 16*(9), 736–741. https://doi.org/10.1097/JGP.0b013e31817b609a

Calati, R., & Courtet, P. (2016). Is psychotherapy effective for reducing suicide attempt and non-suicidal self-injury rates? Meta-analysis and meta-regression of literature data. *Journal of Psychiatric Research, 79*, 8–20. https://doi.org/10.1016/j.jpsychires.2016.04.003

Calati, R., Laglaoui Bakhiyi, C., Artero, S., Ilgen, M., & Courtet, P. (2015). The impact of physical pain on suicidal thoughts and behaviors: Meta-analyses. *Journal of Psychiatric Research, 71*, 16–32. https://doi.org/10.1016/j.jpsychires.2015.09.004

Campion, J. (Writer). (1993). *The Piano*. In Jan Chapman Productions CiBy 2000 (Producer): Miramax Films (US).

Chan, D. W. (1995). Reasons for living among Chinese adolescents in Hong Kong. *Suicide and Life-threatening Behavior, 25*(3), 347–357.

Chiesa, A., Anselmi, R., & Serretti, A. (2014). Psychological mechanisms of mindfulness-based interventions: What do we know? *Holistic Nursing Practice, 28*(2), 124–148.

Chiesa, A., Calati, R., & Serretti, A. (2011). Does mindfulness training improve cognitive abilities? A systematic review of neuropsychological findings. *Clinical Psychology Review, 31*(3), 449–464. https://doi.org/10.1016/j.cpr.2010.11.003

Comtois, K. A., Jobes, D. A., O'Connor, S. S., Atkins, D. C., Janis, K., Chessen, C. E., … Yuodelis-Flores, C. (2011). Collaborative assessment and management of suicidality (CAMS): Feasibility trial for next-day appointment services. *Depression and Anxiety, 28*(11), 963–972. https://doi.org/10.1002/da.20895

Cutcliffe, J. R., Stevenson, C., Jackson, S., & Smith, P. (2006). A modified grounded theory study of how psychiatric nurses work with suicidal people. *International Journal of Nursing Studies, 43*(7), 791–802. https://doi.org/10.1016/j.ijnurstu.2005.09.001

Demyttenaere, K., Desaiah, D., Raskin, J., Cairns, V., & Brecht, S. (2014). Suicidal thoughts and reasons for living in hospitalized patients with severe depression: Post-hoc analyses of a double-blind randomized trial of duloxetine. *Primary Care Companion to CNS Disorders, 16*(3).

Dobrov, E., & Thorell, L. H. (2004). "Reasons For Living"--Translation, psychometric evaluation and relationships to suicidal behaviour in a Swedish random sample. *Nordic Journal of Psychiatry, 58*(4), 277–285. https://doi.org/10.1080/08039480410005783

Ducasse, D., Rene, E., Beziat, S., Guillaume, S., Courtet, P., & Olie, E. (2014). Acceptance and Commitment therapy for management of suicidal patients: A pilot study. *Psychotherapy and Psychosomatics, 83*(6), 374–376. https://doi.org/10.1159/000365974

Edelstein, B. A., Heisel, M. J., McKee, D. R., Martin, R. R., Koven, L. P., Duberstein, P. R., & Britton, P. C. (2009). Development and psychometric evaluation of the Reasons for Living-Older Adults Scale: A suicide risk assessment inventory. *Gerontologist, 49*(6), 736–745. https://doi.org/10.1093/geront/gnp052

Ellis, T. E., Rufino, K. A., & Allen, J. G. (2017). A controlled comparison trial of the Collaborative Assessment and Management of Suicidality (CAMS) in an inpatient setting: Outcomes at discharge and six-month follow-up. *Psychiatry Research, 249*, 252–260. https://doi.org/10.1016/j.psychres.2017.01.032

Emmons, R. A., & Crumpler, C. A. (2000). Gratitude as a human strength: Appraising the evidence. *Journal of Social and Clinical Psychology, 19*(1), 56–69.

Fassberg, M. M., Cheung, G., Canetto, S. S., Erlangsen, A., Lapierre, S., Lindner, R., … Waern, M. (2016). A systematic review of physical illness, functional disability, and suicidal behaviour among older adults. *Aging & Mental Health, 20*(2), 166–194. https://doi.org/10.1080/13607863.2015.1083945

Fonagy, P., Luyten, P., Allison, E., & Campbell, C. (2017). What we have changed our minds about: Part 1. Borderline personality disorder as a limitation of resilience. *Borderline Personality Disorder and Emotion Dysregulation, 4*, 11.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology. The broaden-and-build theory of positive emotions. *American Psychologist, 56*(3), 218–226.

Freud, S. (1920). *Beyond the Pleasure Principle*. The Standard Edition of the Complete Psychological Works of Sigmund Freud, Volume XVIII (1920–1922): *Beyond the Pleasure Principle, Group Psychology and Other Works*, 1–64.

Garza, M. J., & Cramer, R. J. (2011). The Spanish Reasons for Living Inventory (SRFL-I): Factor structure and association with suicide risk among Spanish speaking Hispanics. *Archives of Suicide Research, 15*(4), 354–371. https://doi.org/10.1080/13811118.2011.615704

Grotstein, J. S. (2004). The seventh servant: The implications of a truth drive in Bion's theory of 'O'. *International Journal of Psycho-Analysis, 85*(Pt 5), 1081–1101.

Gutierrez, P. M., Osman, A., Barrios, F. X., Kopper, B. A., Baker, M. T., & Haraburda, C. M. (2002). Development of the reasons for living inventory for young adults. *Journal of Clinical Psychology, 58*(4), 339–357.

Hamza, C. A., Stewart, S. L., & Willoughby, T. (2012). Examining the link between nonsuicidal self-injury and suicidal behavior: A review of the literature and an integrated model. *Clinical Psychology Review, 32*(6), 482–495. https://doi.org/10.1016/j.cpr.2012.05.003

Heisel, M. J. (2009). Assessing experienced meaning in life among older adults: The development and initial validation of the EMIL. *International Psychogeriatrics, 21*(Supplement 2), S172–S173.

Heisel, M. J., & Flett, G. L. (2004). Purpose in life, satisfaction with life, and suicide ideation in a clinical sample. *Journal of Psychopathology and Behavioral Assessment, 26*(2), 127–135.

Heisel, M. J., Neufeld, E., & Flett, G. L. (2016). Reasons for living, meaning in life, and suicide ideation: Investigating the roles of key positive psychological factors in reducing suicide risk in community-residing older adults. *Aging & Mental Health, 20*(2), 195–207. https://doi.org/10.1080/13607863.2015.1078279

Hooley, J. M., Franklin, J. C., & Nock, M. K. (2014). Chronic pain and suicide: Understanding the association. *Current Pain and Headache Reports, 18*(8), 435. https://doi.org/10.1007/s11916-014-0435-2

Huang, L. B., Tsai, Y. F., Liu, C. Y., & Chen, Y. J. (2017). Influencing and protective factors of suicidal ideation among older adults. *International Journal of Mental Health Nursing, 26*(2), 191–199. https://doi.org/10.1111/inm.12247

Huffman, J. C., DuBois, C. M., Healy, B. C., Boehm, J. K., Kashdan, T. B., Celano, C. M., … Lyubomirsky, S. (2014). Feasibility and utility of positive psychology exercises for suicidal inpatients. *General Hospital Psychiatry, 36*(1), 88–94. https://doi.org/10.1016/j.genhosppsych.2013.10.006

Jobes, D. A. (2012). The Collaborative Assessment and Management of Suicidality (CAMS): An evolving evidence-based clinical approach to suicidal risk. *Suicide and Life-threatening Behavior, 42*(6), 640–653. https://doi.org/10.1111/j.1943-278X.2012.00119.x

Jobes, D. A., & Mann, R. E. (1999). Reasons for living versus reasons for dying: Examining the internal debate of suicide. *Suicide and Life-threatening Behavior, 29*(2), 97–104.

Jobes, D. A., & Mann, R. E. (2000). Letters to the editors - Reply. *Suicide and Life-threatening Behavior, 30*(2), 182.

Johnson, J., Wood, A. M., Gooding, P., Taylor, P. J., & Tarrier, N. (2011). Resilience to suicidality: The buffering hypothesis. *Clinical Psychology Review, 31*(4), 563–591. https://doi.org/10.1016/j.cpr.2010.12.007

Joiner, T. E., Brown, J. S., & Wingate, L. R. (2005). The psychology and neurobiology of suicidal behavior. *Annual Review of Psychology, 56*(1), 287–314.

Kalisch, R., Muller, M. B., & Tuscher, O. (2015). A conceptual framework for the neurobiological study of resilience. *Behavioral and Brain Sciences, 38*, e92. https://doi.org/10.1017/S0140525X1400082X

Kirkham, J. G., Choi, N., & Seitz, D. P. (2016). Meta-analysis of problem solving therapy for the treatment of major depressive disorder in older adults. *International Journal of Geriatric Psychiatry, 31*(5), 526–535. https://doi.org/10.1002/gps.4358

Kleiman, E. M., & Beaver, J. K. (2013). A meaningful life is worth living: Meaning in life as a suicide resiliency factor. *Psychiatry Research, 210*(3), 934–939. https://doi.org/10.1016/j.psychres.2013.08.002

Kovacs, M., & Beck, A. T. (1977). The wish to die and the wish to live in attempted suicides. *Journal of Clinical Psychology, 33*(2), 361–365.

Kralovec, K., Kunrath, S., Fartacek, C., Pichler, E. M., & Ploderl, M. (2017). The gender-specific associations between religion/spirituality and suicide risk in a sample of Austrian psychiatric inpatients. *Suicide and Life-Threatening Behavior*. https://doi.org/10.1111/sltb.12349

Laglaoui Bakhiyi, C., Jaussent, I., Beziat, S., Cohen, R., Genty, C., Kahn, J. P., … Courtet, P. (2017). Positive and negative life events and reasons for living modulate suicidal ideation in a

sample of patients with history of suicide attempts. *Journal of Psychiatric Research, 88*, 64–71. https://doi.org/10.1016/j.jpsychires.2016.12.022

Lakeman, R., & FitzGerald, M. (2008). How people live with or get over being suicidal: A review of qualitative studies. *Journal of Advanced Nursing, 64*(2), 114–126. https://doi.org/10.1111/j.1365-2648.2008.04773.x

Lawrence, R. E., Brent, D., Mann, J. J., Burke, A. K., Grunebaum, M. F., Galfalvy, H. C., & Oquendo, M. A. (2016). Religion as a risk factor for suicide attempt and suicide ideation among depressed patients. *Journal of Nervous and Mental Disease, 204*(11), 845–850. https://doi.org/10.1097/NMD.0000000000000484

Lawrence, R. E., Oquendo, M. A., & Stanley, B. (2016). Religion and suicide risk: A systematic review. *Archives of Suicide Research, 20*(1), 1–21. https://doi.org/10.1080/13811118.2015.1004494

Leal, S. C., & Santos, J. C. (2016). Suicidal behaviors, social support and reasons for living among nursing students. *Nurse Education Today, 36*, 434–438. https://doi.org/10.1016/j.nedt.2015.09.012

Lee, Y., & Oh, K. J. (2012). Validation of reasons for living and their relationship with suicidal ideation in Korean college students. *Death Studies, 36*(8), 712–722.

Li, D., Zhang, W., Li, X., Li, N., & Ye, B. (2012). Gratitude and suicidal ideation and suicide attempts among Chinese adolescents: Direct, mediated, and moderated effects. *Journal of Adolescence, 35*(1), 55–66. https://doi.org/10.1016/j.adolescence.2011.06.005

Linehan, M. M., Goodstein, J. L., Nielsen, S. L., & Chiles, J. A. (1983). Reasons for staying alive when you are thinking of killing yourself: The reasons for living inventory. *Journal of Consulting and Clinical Psychology, 51*(2), 276–286.

Linehan, M. M., Korslund, K. E., Harned, M. S., Gallop, R. J., Lungu, A., Neacsiu, A. D., … Murray-Gregory, A. M. (2015). Dialectical Behavior Therapy for high suicide risk in individuals with borderline personality disorder: A randomized clinical trial and component analysis. *JAMA Psychiatry*. https://doi.org/10.1001/jamapsychiatry.2014.3039

Luo, X., Wang, Q., Wang, X., & Cai, T. (2016). Reasons for living and hope as the protective factors against suicidality in Chinese patients with depression: A cross sectional study. *BMC Psychiatry, 16*, 252. https://doi.org/10.1186/s12888-016-0960-0

Lyon, A. R., Connors, E., Jensen-Doss, A., Landes, S. J., Lewis, C. C., McLeod, B. D., … Weiner, B. J. (2017). Intentional research design in implementation science: Implications for the use of nomothetic and idiographic assessment. *Translational Behavioral Medicine*. https://doi.org/10.1007/s13142-017-0464-6

MacInnes, D. L. (2006). Self-esteem and self-acceptance: An examination into their relationship and their effect on psychological health. *Journal of Psychiatric and Mental Health Nursing, 13*(5), 483–489. https://doi.org/10.1111/j.1365-2850.2006.00959.x

Malone, K. M., Oquendo, M. A., Haas, G. I., Ellis, S. P., & Mann, J. J. (2001). Questions about reasons for living. *American Journal of Psychiatry, 158*(8), 1332.

Malone, K. M., Oquendo, M. A., Haas, G. L., Ellis, S. P., Li, S., & Mann, J. J. (2000). Protective factors against suicidal acts in major depression: Reasons for living. *American Journal of Psychiatry, 157*(7), 1084–1088. https://doi.org/10.1176/appi.ajp.157.7.1084

Mammen, P., George, C., & Tharyan, P. (2001). Questions about reasons for living. *American Journal of Psychiatry, 158*(8), 1331–1332.

Mann, M., Hosman, C. M., Schaalma, H. P., & de Vries, N. K. (2004). Self-esteem in a broad-spectrum approach for mental health promotion. *Health Education Research, 19*(4), 357–372. https://doi.org/10.1093/her/cyg041

Marco, J. H., Guillen, V., & Botella, C. (2017). The buffer role of meaning in life in hopelessness in women with borderline personality disorders. *Psychiatry Research, 247*, 120–124. https://doi.org/10.1016/j.psychres.2016.11.011

Mohammadkhani, P., Khanipour, H., Azadmehr, H., Mobramm, A., & Naseri, E. (2015). Trait mindfulness, reasons for living and general symptom severity as predictors of suicide probability in males with substance abuse or dependence. *Iranian Journal of Psychiatry, 10*(1), 56–63.

Niemiec, C. P., Ryan, R. M., & Deci, E. L. (2009). The path taken: Consequences of attaining intrinsic and extrinsic aspirations in post-college life. *Journal of Research in Personality, 73*(3), 291–306. https://doi.org/10.1016/j.jrp.2008.09.001

O'Connor, S. S., Comtois, K. A., Wang, J., Russo, J., Peterson, R., Lapping-Carr, L., & Zatzick, D. (2015). The development and implementation of a brief intervention for medically admitted suicide attempt survivors. *General Hospital Psychiatry, 37*(5), 427–433.

Oquendo, M. A., Dragatsi, D., Harkavy-Friedman, J., Dervic, K., Currier, D., Burke, A. K., … Mann, J. J. (2005). Protective factors against suicidal behavior in Latinos. *Journal of Nervous and Mental Disease, 193*(7), 438–443.

Osman, A., Downs, W. R., Kopper, B. A., Barrios, F. X., Baker, M. T., Osman, J. R., … Linehan, M. M. (1998). The Reasons for Living Inventory for Adolescents (RFL-A): Development and psychometric properties. *Journal of Clinical Psychology, 54*(8), 1063–1078.

Osman, A., Kopper, B. A., Barrios, F. X., Osman, J. R., Besett, T., & Linehan, M. M. (1996). The Brief Reasons for Living Inventory for Adolescents (BRFL-A). *Journal of Abnormal Child Psychology, 24*(4), 433–443.

Ozawa-de Silva, C. (2015). Mindfulness of the kindness of others: The contemplative practice of Naikan in cultural context. *Transcultural Psychiatry, 52*(4), 524–542. https://doi.org/10.1177/1363461514562922

Pompili, M., Girardi, P., Tatarelli, R., Lester, D., & Rogers, J. R. (2007). Reasons for Living Inventory: Cross-cultural construct validity. *Psychological Reports, 100*(3 Pt 2), 1259–1262. https://doi.org/10.2466/pr0.100.4.1259-1262

Range, L. M., & Penton, S. R. (1994). Hope, hopelessness, and suicidality in college students. *Psychological Reports, 75*(1 Pt 2), 456–458. https://doi.org/10.2466/pr0.1994.75.1.456

Serpa, J. G., Taylor, S. L., & Tillisch, K. (2014). Mindfulness-based stress reduction (MBSR) reduces anxiety, depression, and suicidal ideation in veterans. *Medical Care, 52*(12 Suppl 5), S19–S24. https://doi.org/10.1097/MLR.0000000000000202

Tanner, A. K., Hasking, P., & Martin, G. (2015). Suicidality among adolescents engaging in non-suicidal self-injury (NSSI) and firesetting: The role of psychosocial characteristics and reasons for living. *Child and Adolescent Psychiatry and Mental Health, 9*, 33. https://doi.org/10.1186/s13034-015-0068-1

Thomas, E. A., & Garland, E. L. (2017). Mindfulness is associated with increased hedonic capacity among chronic pain patients receiving extended opioid pharmacotherapy. *Clinical Journal of Pain, 33*(2), 166–173. https://doi.org/10.1097/AJP.0000000000000379

Tillman, J. G., Clemence, A. J., Cree, R., Lewis, K. C., Stevens, J. L., & Reiss, D. (2017). The persistent shadow of suicide ideation and attempts in a high-risk group of psychiatric patients: A focus for intervention. *Comprehensive Psychiatry, 77*, 20–26. https://doi.org/10.1016/j.comppsych.2017.05.005

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E., Jr. (2010). The interpersonal theory of suicide. *Psychological Review, 117*(2), 575–600. https://doi.org/10.1037/a0018697

Wand, A. P., Peisah, C., Draper, B., & Brodaty, H. (2017). Understanding self-harm in older people: A systematic review of qualitative studies. *Aging & Mental Health*, 1–10. https://doi.org/10.1080/13607863.2017.1304522

Wang, Y. W., Tsai, Y. F., Lee, S. H., Chen, Y. J., & Chen, H. F. (2016). Development and psychometric testing of the Protective Reasons Against Suicide Inventory for assessing older Chinese-speaking outpatients in primary care settings. *Journal of Advanced Nursing, 72*(7), 1701–1710. https://doi.org/10.1111/jan.12971

Wang, Y. W., Tsai, Y. F., Wong, T. K., & Ku, Y. C. (2013). Development and psychometric testing of a Chinese-language instrument for assessing institutionalised older males' motivations for living. *Journal of Clinical Nursing, 22*(19–20), 2867–2875. https://doi.org/10.1111/jocn.12089

Westefeld, J. S., Cardin, D., & Deaton, W. L. (1992). Development of the College Student Reasons for Living Inventory. *Suicide and Life-threatening Behavior, 22*(4), 442–452.

Wilchek-Aviad, Y., & Malka, M. (2016). Religiosity, meaning in life and suicidal tendency among Jews. *Journal of Religion and Health, 55*(2), 480–494. https://doi.org/10.1007/s10943-014-9996-y

Windle, G., Bennett, K. M., & Noyes, J. (2011). A methodological review of resilience measurement scales. *Health and Quality of Life Outcomes, 9*, 8.

Xie, W., Li, H., Luo, X., Fu, R., Ying, X., Wang, N., … Shi, C. (2014). Anhedonia and pain avoidance in the suicidal mind: Behavioral evidence for motivational manifestations of suicidal ideation in patients with major depressive disorder. *Journal of Clinical Psychology, 70*(7), 681–692. https://doi.org/10.1002/jclp.22055

Zhang, J., Wieczorek, W. F., Conwell, Y., & Tu, X. M. (2011). Psychological strains and youth suicide in rural China. *Social Science and Medicine, 72*(12), 2003–2010. https://doi.org/10.1016/j.socscimed.2011.03.048

Chapter 5
Gratitude as a Protective Factor for Suicidal Ideation and Behaviour: The Theory and the Evidence Base

Karolina Krysinska

What Is "Gratitude"?

The concept of gratitude or "the quality of being thankful; readiness to show appreciation for and to return kindness" (from Latin *gratus*: pleasing, thankful; "Gratitude", n.d.) has traditionally been a subject of religious and philosophical studies (Emmons & McCullough, 2004; Young & Hutchinson, 2012). Psychological interest in gratitude started only in the early 2000s and "the science of gratitude is young" (Emmons & Mishra, 2011, p. 258). Nonetheless, the last two decades have witnessed a proliferation of research and clinical studies, as well as popular publications and e-mental health applications, on gratitude and related interventions based on positive psychology (Emmons, 2008; HeartMath® Institute, 2017). Gratitude is a complex phenomenon, which can be directed towards other people, such as an individual benefactor, or towards impersonal or nonhuman sources, such as nature, God, or animals (Emmons, McCullough, & Tsang, 2003).

Three major psychological conceptualizations of gratitude have been developed, and these models inspired empirical studies and clinical interventions. McCullough, Kilpatrick, Emmons, and Larson (2001) proposed a conceptualization of gratitude as a "moral affect" equivalent to other moral affects, such as empathy, guilt, and shame. According to this approach, "people ('beneficiaries') respond with gratitude when other people ('benefactors') behave in a way that promotes the beneficiaries' wellbeing. Beneficiaries also act in ways that promote the well-being of others when they themselves have been made grateful" (McCullough et al., 2001, p. 250).

K. Krysinska (✉)
Melbourne School of Population and Global Health, University of Melbourne, Melbourne, VIC, Australia

Center for Primary Health Care and Equity, University of New South Wales, Sydney, NSW, Australia
e-mail: k.krysinska@unsw.edu.au

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*, Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_5

There are three moral functions of gratitude: gratitude as a "moral barometer", as a "moral motive", and as a "moral reinforcer". The "moral barometer" function of gratitude refers to an observation that people are likely to experience gratitude when they perceive the generosity of a benefactor, that is, when they believe that someone has acted to promote their well-being. Gratitude as a "moral motive" inspires beneficiaries to behave pro-socially and, in turn, a beneficiary's expression of gratitude is likely to motivate (i.e. "morally reinforce") a benefactor to engage in prosocial behaviour in the future. According to McCullough et al. (2001), gratitude as a moral affect is positively associated to other psychological traits with a positive moral valence, such as empathy, perspective taking, and agreeableness, and negatively related to traits with a negative moral valence, such as narcissism.

Another conceptualization proposed by McCullough, Emmons, and Tsang (2002) is an understanding of gratitude as an affective trait, or as a "grateful disposition" or "disposition towards gratitude". Such "grateful disposition" is defined as a "generalized tendency to recognize and respond with grateful emotion to the roles of other people's benevolence in the positive experiences and outcomes that one obtains" (McCullough et al., 2002, p. 112). There are four co-occurring facets of the grateful disposition: intensity, frequency, span, and density. *Intensity* relates to the observation that a person with a higher level of dispositional gratitude will feel more "intensely grateful" in response to a positive event than someone with a lower level of the trait. In a similar vein, a dispositionally grateful person will experience gratitude more *frequently* in his/her everyday life, and the number (i.e. *span*) of life circumstances which elicit gratitude will be higher than for a less gratefully disposed individual. *Density* refers to the number of persons to whom gratitude is addressed, after a positive outcome. To assess dispositional gratitude, McCullough et al. (2002) constructed the Gratitude Questionnaire-Six Item Form (GQ-6), a six-item self-report tool based on the seven-point Likert-type scale (1 = strongly disagree, 7 = strongly agree), with good psychometric properties.

Wood, Froh, and Geraghty (2010) developed a "life orientation" conceptualization of gratitude. According to this model, "at the dispositional level, gratitude is part of a wider life orientation towards noticing and appreciating the positive in the world" (Wood et al., 2010, p. 891). This higher order "life orientation" gratitude factor encompasses eight lower level facets, which can also be experienced on a state level. The eight facets of gratitude as "life orientation" are: (1) individual differences in the experience of grateful affect (i.e. frequency, intensity, and density of grateful affect); (2) appreciation of other people; (3) focus on what the person has (i.e. positive tangible and intangible assets); (4) feelings of awe when encountering beauty; (5) behaviours to express gratitude; (6) focusing on the positive in the present moment and gratitude towards non-social sources; (7) appreciation rising from understanding life is short and nothing is permanent; and (8) positive social comparisons (i.e. positive feelings arising for appreciation of how life could be worse). Individuals with a stronger life orientation towards gratitude experience these eight facets more frequently, more intensely, and through a wider range of stimuli than less grateful individuals. Of interest, the life orientation model is based on results of empirical studies using three scales measuring different aspects of gratitude: the

Table 5.1 Eight facets of trait gratitude (From Wood et al., 2010, p. 892)

Facet of gratitude	Scale (or sub-scale)	Characteristic item
Individual differences in grateful affect	GQ-6	I have so much in life to be thankful for
Appreciation of other people	GRAT: appreciation of others	I'm really thankful for friends and family
	AS: interpersonal	I reflect on how important my friends are to me
Focus on what the person has	AS: have focus	I reflect on how fortunate I am to have basic things in life like food, clothing, and shelter
	GRAT: sense of abundance	I think life has handed me a short stick (reverse coded)
Awe	AS: awe	When I see natural beauty like Niagara Falls, I feel like a child who is awestruck
Behaviour	AS: ritual	I use personal or religious rituals to remind myself to be thankful for things
	AS: gratitude	I say "please" and "thank you" to indicate my appreciation
Present moment	AS: present moment	I stop and enjoy my life as it is
	GRAT: simple appreciation	I think it's really important to "stop and smell the roses"
Life is short	AS: loss/adversity	Thinking about dying reminds me to live every day to the fullest
Positive social comparisons	AS: self/social comparison	When I see someone less fortunate than myself, I realize how lucky I am

AS Appreciation Scale (Adler & Fagley, 2005), *GQ-6* Gratitude Questionnaire-Six Item Form (McCullough et al., 2002), *GRAT* Gratitude, Appreciation, and Resentment Test (Watkins et al., 2003)

one-factor GQ-6 (McCullough et al., 2002); the multifactorial Appreciation Scale (Adler & Fagley, 2005); and the multifactorial Gratitude, Appreciation, and Resentment Test (GRAT; Watkins, Woodward, Stone, & Kolts, 2003; Table 5.1). For a comprehensive review of measures of gratitude, see Emmons et al. (2003).

Gratitude and Suicidal Ideation and Attempts: The Evidence Base

There is an abundance of studies and publications on the benefits of gratitude for individuals and groups (Bono, Krakauer, & Froh, 2015; Emmons & Mishra, 2011; Lomas, Froh, Emmons, Mishra, & Bono, 2014). In general, there is strong evidence showing that gratitude is related to psychosocial and physical well-being, including boosting interpersonal relationships, health, general emotional functioning, and self-development from the humanistic perspective (Wood et al., 2010). Additionally, gratitude may have preventive effects against depression and anxiety (Petrocchi & Couyoumdjian, 2016), and post-traumatic stress disorder (Vieselmeyer, Holguin, & Mezulis, 2017), as

well as facilitate recovery from substance misuse (Chen, 2017). Nonetheless, as Stockton et al. (2016) observed, "despite literature indicating the interpersonal and emotional benefits of gratitude, it is an underused resiliency factor in suicide prevention" (p. 241). Indeed, suicide research and prevention seems to be focused mostly on identifying and targeting risk factors (Franklin et al., 2017), while the exploration of human strengths and resilience factors is lagging behind (Johnson, Wood, Gooding, Taylor, & Tarrier, 2011). This section will present studies conducted to-date on the relationship between gratitude and suicidal ideation and non-fatal suicidal behaviour, including ideation and attempts (Table 5.2).

Li, Zhang, Li, Li, and Ye (2012) studied the direct, mediated, and moderated effects between gratitude, suicidality, self-system beliefs (self-esteem and coping efficacy), and stressful life events. The study reported a complex link between gratitude and suicide-related variables. In a sample of adolescents, individuals high in gratitude had lower scores of 6-month suicidal ideation and suicide attempts than individuals with lower gratitude, and the relationship between gratitude and suicidality was mediated by self-esteem. In addition, the indirect effects were moderated by stressful life events: gratitude had statistically significant protective effects on both suicidal ideation and attempts in adolescents with fewer stressful life events during the last 12 months. However, the protective effect of gratitude was smaller for adolescents who reported more stressful life events.

In two studies, Lin (2015a, 2015b) looked at the relationships between suicidal ideation, gratitude, self-esteem, and indices of well-being (i.e. depression and flourishing) in university students. One of the studies (Lin, 2015a) showed that gratitude had direct, beneficial effects on suicidal ideation, self-esteem, and depression, as well as indirect effects on suicidal ideation via depression and self-esteem. The other study (Lin, 2015b) reported a direct association between higher levels of gratitude and higher self-esteem, as well as three indices of well-being (i.e. suicidal ideation, depression, and flourishing). In addition, self-esteem partially mediated the relationship between gratitude and well-being (i.e. suicidal ideation, depression, and flourishing). Lo, Kwok, Yeung, Low, and Tam (2017) explored children's suicidal ideation in the context of perceived parenting style (i.e. warmth/accepting, dominating, and autonomy granting) and gratitude. They found a significant association, moderated by gratitude, between perceived parental styles and suicidal ideation reported by children. Of interest, this significant relationship between parenting style and suicidal thoughts was observed in children with low and medium gratitude levels, but not in children with high gratitude levels. According to Lo et al. (2017), "this implies that children in possession of the character for gratitude, and an appreciation of their life and things around them are more resilient to the negative influence of parenting behaviour on suicidality" (p. 1676).

Kleiman and colleagues (Kleiman, Adams, Kashdan, & Riskind, 2013a, 2013b; Kleiman & Beaver, 2013) conducted a series of studies in samples of college and university students on "factors that can confer resiliency to suicide" (Kleiman & Beaver, 2013, p. 934), such as gratitude, grit, and meaning in life. In one of the studies, Kleiman et al. (2013b) examined whether gratitude moderated the relationship between suicidal ideation and two risk factors: hopelessness and depressive symp-

Table 5.2 Overview of studies on gratitude, suicidal ideation, and suicide attempts

Reference	Sample/size	Measure of gratitude	Suicide outcome	Other variables	Summary of results
Kleiman et al. (2013a) (USA)	209 college students (mean age = 20.5; SD = 4.1)	GQ-6	SI (current; BSS)	Depressive symptoms (BDI), grit (GS), meaning in life (MLQ)	Higher levels of gratitude and grit at baseline were related to the greatest reduction in SI over time Both gratitude and grit were necessary to predict low SI over time, and changes in SI, predicted by combination of high gratitude and grit, were partially mediated by increased meaning in life
Kleiman et al. (2013b) (USA)	369 undergraduate students (mean age = 22; SD = 5.8)	GQ-6	SI (current; BSS)	Hopelessness (BHS), depressive symptoms (BDI)	Gratitude buffered the effect of hopelessness and depressive symptoms, and functioned as a protective factor only in the presence of risk factors, i.e. high levels of hopelessness or SI
Kleiman and Beaver (2013) (USA)	670 undergraduate students (mean age = 21.2; SD = 5.2)	GQ-6	SI, SA (current and past; BSS, SBQ-R)	Perceived burdensomeness/ thwarted belongingness (INQ), depression/ anxiety (BSI), social support (MSPSS), meaning in life (presence and search; MLQ)	Presence of meaning in life predicted decreased SI over time and lower lifetime odds of SA, above and beyond the effects of low levels of depression/anxiety and high levels of gratitude Search for meaning in life predicted decreased SI over time, and the search for meaning (but not presence of meaning) mediated the relationship between SI, perceived burdensomeness, and thwarted belongingness
Krysinska et al. (2015) (USA)	165 college students (mean age = 20.0; SD = 2.3)	GQ-6	SI, SA, ST (past)	Social support (MSPSS), reasons for living (BRFL-A), depression (BDI), religiosity (FRS), coping (CD-RISC), stressful events (CSSEC)	Both gratitude and religiosity (along with social support, coping skills, and reasons for living) negatively correlated with SI, but not with SA After controlling for depression and stress, the impact of gratitude and religiosity was non-significant

(continued)

Table 5.2 (continued)

Reference	Sample/size	Measure of gratitude	Suicide outcome	Other variables	Summary of results
Li et al. (2012) (China)	1252 middle school students (mean age = 15; SD = 1.2)	GQ-6	SI, SA (YSR)	Social support (MSPSS), coping efficacy (CES), self-esteem (RSES), stressful life events (SLEQ)	The indirect effects of gratitude on SI and SA through self-esteem were moderated by stressful life events For adolescents low in stressful life events, gratitude had protective effects on SI and SA (both $p < .01$), through an increase in self-esteem Gratitude had smaller effects on students with high levels of stressful life events in the past year (SI and SA: $p < .01$)
Lin (2015a) (Taiwan)	814 undergraduate students (mean age = 20.1; SD = 1.1)	IUG	SI (recent; PANSI)	Self-esteem (RSES), depression (CESD-10)	Gratitude had direct effects on self-esteem, depression, and SI Gratitude had indirect effects on SI via self-esteem and depression; self-esteem had direct effects on depression
Lin (2015b) (Taiwan)	235 university students (mean age = 20; SD = .98)	GQ-6	SI (recent; PANSI)	Self-esteem (RSES), depression (CESD-10), flourishing (FS)	Higher gratitude was associated with higher self-esteem and well-being (flourishing, depression, and SI), and higher self-esteem was associated with indices of well-being Self-esteem was a partial mediator of association between gratitude and well-being
Lo et al. (2017) (China)	447 children (mean age = 10.1; SD = 1.76)	GQ-6	SI (SSI, 5 items)	Parenting style (WAS, FES, PPSP)	Three studied perceived parental styles (warmth/accepting, dominating, and autonomy granting) were significantly associated with child SI Gratitude had a significant moderating effect on SI in all the three perceived parenting styles
Stockton et al. (2016) (USA)	166 undergraduate students (mean age = 19.8; SD = 1.7)	GQ-6	SI (HDSQ-SS)	Reasons for living (CSRLI), humour styles (HSQ)	Both affiliative and self-enhancing humour were positively correlated to reasons for living and gratitude, and unrelated to SI A positive correlation between gratitude and reasons for living; a negative correlation between gratitude/reasons for living and SI Greater level of affiliative humour was indirectly related to lower SI and increased reasons for living Self-enhancing humour was not indirectly related with either SI or reasons for living

Smith et al. (2016) (USA)	2157 veterans (mean age = 60.3; SD = 15)	GQ-6 (1 item)	SI (PHQ-9; 1 item)	Prevalence and correlates of SI (Wave 1—2011 and Wave 2—2013)	Greater protective psychosocial characteristics, including gratitude, at Wave 1 were negatively related to SI onset
White et al. (2017) (USA)	552 undergraduate students (mean age = 19.9; SD = 2.7)	GQ-6	SI (HDSQ-SS)	Grit (GS), rumination (brooding and reflection; RRS)	Brooding was indirectly related to SI through gratitude, interacted with grit, predicted SI only at low levels of grit Reflection interacted with gratitude to predict levels of grit

SA suicide attempt, *SI* suicidal ideation, *ST* suicide threat, *BDI* Beck Depression Inventory-II (Beck, Steer, & Brown, 1996), *BHS* Beck Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974), *BRFL-A* Brief Reason for Living Inventory for Adolescents (Osman et al., 1996), *BSI* Brief Symptom Inventory (Derogatis, 1992), *BSS* Beck Suicide Scale (Beck & Steer, 1991), *CD-RISC* Connor–Davidson Resilience Scale (Campbell-Sills & Stein, 2007; Connor & Davidson, 2003), *CES* Coping Efficacy Scale (Sandler, Tein, Mehta, Wolchik, & Ayers, 2000), *CESD-10* Center for Epidemiologic Studies Depression Scale (Kohout, Berkman, Evans, & Cornoni-Huntley, 1993), *CSRLI* College Student Reasons for Living Inventory (Westefeld, Cardin, & Deaton, 1992), *CSSEC* College Student's Stress Event Checklist (http://www.asu.edu/wellness; Holmes & Rahe, 1967), *FES* Family Environment Scale (Moos & Moos, 1981), *FRS* Francis Religiosity Scale (Francis, 1992), *FS* Flourishing Scale (Diener et al., 2010), *GQ* Gratitude Questionnaire (McCullough et al., 2002), *GS* Grit Scale (Duckworth et al., 2007), *HDSQ-SS* Hopelessness Depression Symptom Questionnaire-Suicidality Subscale (Metalsky & Joiner, 1997), *HSQ* Humor Styles Questionnaire (Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003), *INQ* Interpersonal Needs Questionnaire (Van Orden, Witte, Gordon, Bender, & Joiner Jr, 2008), *IUG* Inventory of Undergraduates' Gratitude (Lin & Yeh, 2011), *MLQ* Meaning in Life Questionnaire (Steger, Frazier, Oishi, & Kaler, 2006), *MSPSP* Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988), *RRS* Ruminative Response Scale (Treynor, Gonzalez, & Nolen-Hoeksema, 2003), *PANSI* Positive and Negative Suicide Ideation (Osman, Gutierrez, Kopper, Barrios, & Chiros, 1998), *PHQ-9* Patient Health Questionnaire-9 (Kroenke, Spitzer, & Williams, 2003), *PPSP* Perception of Parenting Style and Practices (Stewart et al., 2000), *RSES* Rosenberg Self-Esteem Scale (Rosenberg, 1965), *SBQ-R* Suicidal Behaviour Questionnaire-Revised (Osman et al., 2001), *SLEQ* Stressful Life Events Questionnaire (Li, Zhang, Li, Zhen, & Wang, 2010), *WAS* Warmth and Acceptance Scale (Greenberger & Chen, 1996), *YSR* Youth Self-Report (Achenbach, 1991)

toms. Their results showed a weaker association between suicidal ideation and both hopelessness and depressive symptoms in more grateful individuals. In addition, Kleiman and Beaver (2013) looked at meaning in life (both search for and presence of meaning in life) as protective factors against suicidal ideation and attempt, and their relationship to two risk factors: perceived burdensomeness and thwarted belongingness. Study results indicated that presence of and search for meaning in life predicted lower suicidal ideation over time. Presence of meaning in life was also related to lower lifetime odds of a suicide attempt, while the search for meaning in life mediated the relationship between both perceived burdensomeness and thwarted belongingness and suicide ideation, even after controlling for protective factors, such as gratitude. In a 4-week longitudinal study, Kleiman et al. (2013a) found that high gratitude and grit (i.e. pursuing long-term goals with passion and perseverance) were related to low levels of suicidal ideation, and this relationship was mediated by high levels of meaning in life.

White et al. (2017) also conducted a study on grit and gratitude, in the context of suicidal ideation and rumination (brooding and reflection) in a sample of undergraduate students. Brooding (i.e. repeatedly dwelling on the consequences of suffering) was indirectly related to suicide ideation through gratitude, and predicted suicide ideation only at low levels of grit. On the other hand, reflection (i.e. seeking information to better understand suffering) did not show any significant direct effects with study variables, including suicidal ideation, although it interacted with gratitude to predict levels of grit. Stockton et al. (2016) looked at the effect of gratitude on the relationship between suicidal ideation and humour styles. In a sample of undergraduate students, they found that affiliative humour style (i.e. humour which aims to enhance social relationships and group cohesion and reduce interpersonal tension) indirectly reduced risk for suicidal ideation through gratitude. This effect was not found for self-enhancing humour (i.e. humour style aiming at reducing stress by finding funny elements in challenging situations).

Krysinska, Lester, Pyke, and Corveleyn (2015) tested a model of causal effects among gratitude, religiosity, reasons for living, coping, and social support as predictors of suicidal ideation, suicide threats, and suicide attempts after controlling for depression and stressful life events. In a sample of college students, they found that both gratitude and religiosity, along with social support, coping skills, and reasons for living, correlated negatively with prior suicidal ideation, but not with prior attempted suicide. After controlling for depression and stress, the impact of gratitude and religiosity was no longer statistically significant. Smith et al. (2016) evaluated the prevalence and correlates of suicidal ideation, including protective psychosocial characteristics, such as gratitude, resilience, and optimism, in a representative sample of over 2000 US veterans participating in the prospective National Health and Resilience Veterans Study. Greater aggregated protective psychosocial characteristics (among others, gratitude) were negatively associated with the onset of suicidal ideation; however, outcomes specifically related to gratitude were not reported.

In summary, studies presented in this section indicate that gratitude, mostly measured by the GQ-6 (McCullough et al., 2002), and operationalized as a “generalized

tendency to recognize and respond with grateful emotion to the roles of other people's benevolence in the positive experiences and outcomes that one obtains" (p. 112), is negatively correlated to suicidal thoughts and suicide attempts. This relationship is complex and moderated by a range of psychosocial variables, including self-esteem, meaning in life, rumination, reasons for living, social support, religiosity, coping, life events, depression, and/or anxiety. Although most studies were conducted in samples of adolescents and young adults, the relationship between gratitude and suicidal ideation was also reported in studies involving children and middle-aged individuals. Research in this area is relatively new and suffers from several limitations. None of the studies included a clinical population, such as individuals hospitalized after a suicide attempt, nor looked at gratitude in the context of fatal suicidal behaviour. In addition, studies were conducted only in the USA, Taiwan, and China.

Are Gratitude Interventions Effective?

There is a growing body of evidence indicating that positive psychology interventions, such as gratitude training, life review therapy, forgiveness therapy, and mindfulness, can enhance subjective and psychological well-being and alleviate depressive symptoms (Bolier et al., 2013; Sin & Lyubomirsky, 2009). In general, gratitude interventions involve regular brief activities which cultivate a sense of being grateful, and such interventions fall into three broad categories: gratitude lists or other journaling activities, behavioural expressions of gratitude, and psychoeducational group activities (Davis et al., 2016; Wood et al., 2010).

The most popular gratitude interventions are "gratitude lists", such as regularly writing down a list of people, objects, or events that one is grateful for. Usually the activity involves listing a specific number of things one is grateful for, such as listing, daily or weekly, up to five things eliciting gratitude. Other journaling activities include grateful contemplation, such as writing in a less structured manner about people, events, or objects one is grateful for. In this type of activity, individuals may keep a diary or use online resources, such as a website (e.g. a 21-Day Gratitude Challenge at Thnx4 http://www.thnx4.org/about-thnx4) or a mobile phone application (e.g. the Gratitude garden, http://www.izzymcrae.com/gratitude/). One may also write a letter addressed to someone he/she feels grateful towards, and in some cases even deliver it in person (a "gratitude visit"). Gratitude interventions can also be conducted in group settings, such as schools. For instance, Froh et al. (2014) piloted a week-long structured daily curriculum intended to educate elementary school students about the social-cognitive appraisals involved in receiving benefits from others (i.e. grateful thinking). The study showed that the group intervention was effective: the curriculum induced gratitude and increased levels of positive affect among students for up to 5 months after the end of the activity (Froh et al., 2014).

Gratitude activities seem very appealing to clinicians, researchers, patients, study participants, and the general public. Davis et al. (2016) identified many reasons for this general "enthusiasm". Gratitude interventions are easy to understand and enjoyable, and they are practical from a clinical point of view as they fit into various modalities of psychotherapy. For instance, psychological mechanisms involved in gratitude interventions, such as attributions and perspective taking, fit well the cognitive approach to psychotherapy and may support the targeted cognitive changes (Bono & McCullough, 2006). Gratitude as an adjunctive intervention was found to increase well-being and life functioning and decrease clinical symptoms in clients seeking psychotherapy and counselling based on an integrative/eclectic approach, which incorporated elements of psychodynamic family systems and cognitive-behavioural psychotherapy (Wong et al., 2016). Activities cultivating gratitude elicit deeply meaningful memories, which are often embedded in social contexts and interpersonal relations and enhance personal well-being through focusing on benefits received from others. In addition, such activities may actually lead to long-term increases in life satisfaction and help to counter the effects of the "hedonic treadmill" (i.e. return to a baseline level of happiness following a negative or a positive event; Brickman & Campbell, 1971). As such, "gratitude interventions were touted as one of the first fruits of positive psychology" (Davis et al., 2016, p. 20).

Nonetheless, systematic reviews of the effectiveness of gratitude interventions (Davis et al., 2016; Wood et al., 2010) yielded mixed results, called for caution in application of these techniques, and indicated the need for more high-quality research. In a review of 12 published evaluations, Wood et al. (2010) found that gratitude interventions were effective in improving well-being and clinically relevant outcomes, such as depression, worry, and positive and negative affect, when compared to a hassle condition (e.g. listing and writing about daily hassles). They were not effective, however, when compared against a measurement-only control condition (e.g. writing about a typical day). An update on Wood et al.'s (2010) work was carried out by Davis et al. (2016), who conducted a meta-analysis of gratitude interventions including 26 studies. Their review provided weak evidence regarding the efficacy of gratitude activities, leading the authors to the conclusion that "the first fruits of gratitude interventions are in, and they show positive but limited promise" (p. 29). Nonetheless, "enthusiasm for gratitude interventions should be tempered until longer, more-powerful interventions… have demonstrated stronger evidence of efficacy" (Davis et al., 2016, p. 29).

More specifically, the meta-analysis showed that gratitude interventions were more effective than measurement-only control conditions (i.e. no activities except for assessment procedures) on measures of psychological well-being, but not gratitude (Davis et al., 2016). They also outperformed an alternative-activity condition (i.e. activities to alter a daily or weekly routine) on measures of gratitude and psychological well-being (i.e. aggregated measures of life satisfaction and depression), but not anxiety. Regarding psychological well-being, gratitude interventions were more effective than activity-matched comparisons (e.g. listing five daily activities), and performed equally well as, but did not outperform, psychologically active con-

trol conditions (e.g. engaging in acts of kindness or progressive muscle relaxation).

Two studies to-date evaluated gratitude activities specifically in clinical populations at risk for suicide (Celano et al., 2017; Huffman et al., 2014). Huffman et al. (2014) looked at the feasibility, acceptability, and relative impact of nine positive psychology exercises, including writing a gratitude letter, with an option of sending the letter, and counting blessings (three gratitude-evoking events in the past week) in patients hospitalized for suicidal thoughts or behaviours. Among the nine interventions, counting blessings and a gratitude letter, along with personal strengths exercises, were related to the highest pre-/post-changes in optimism (52.4% and 93.8% improvement, respectively) and hopelessness (57.1% and 87.5% improvement, respectively). In addition, a gratitude letter was ranked the highest by participants, with respect to ease of completion, along with exercises focused on acts of kindness; on important, enjoyable, and meaningful activities; and on personal strengths. Celano et al. (2017) conducted a randomized controlled trial (RCT; the Happiness, Optimism, and Positive Emotions—HOPE Study) to test the efficacy of a positive psychology intervention (e.g. writing a gratitude letter, leveraging past success) versus a cognition-focused intervention (e.g. recalling daily events, interactions with others), in a sample of patients recently hospitalized for depression and suicidal ideation or behaviour. Both interventions were carried out in addition to treatment as usual, involved weekly one-on-one telephone sessions over 6 weeks, and were based on a treatment manual. The study showed that the cognition-focused intervention was more effective than the positive psychology exercises in reducing hopelessness, suicidal ideation, and depressive symptoms, and was related to greater improvements in optimism and gratitude in the post-discharge period of 6 and 12 weeks.

Celano et al. (2017) identified several factors which might have contributed to the (unexpected) lower effectiveness of the positive psychology intervention versus the control cognitive intervention. It may be difficult for depressed and/or suicidal individuals to engage in positive psychology activities, which require initiative and organization skills, as well as interpersonal engagement. Individuals in crisis may not be able to identify positive aspects of self or positive life events, and being asked to focus on positive feelings, such as gratitude, may result in painful discrepancy between currently non-existent positive feelings and a present negative psychological state. Also, given the numerous challenges of the immediate post-discharge period, such as ongoing family, work, and treatment-related commitments, patients may not have the time and resources required to successfully engage in an adjunctive positive psychology intervention, requiring more personal investment than the control intervention. It is also possible that both tested interventions were more effective than no treatment; however, the study design did not allow testing this hypothesis. There is accumulating evidence that psychosocial and behavioural interventions which directly address suicidal thoughts and behaviour, mostly cognitive-behavioural therapy (CBT), are more effective in reducing repetition of self-harm than indirect approaches focusing on depression, quality of life, or hopelessness (Hawton et al., 2016; Meerwijk et al., 2016). It is possible that gratitude

interventions, if applied at the right time and tailored to the needs and capacities of people at risk for suicide, could be a valuable, or at least an enjoyable, addition to other interventions, such as CBT. Gratitude may also be a pre-existing resource or an emotional capacity that some clients, including clients at risk for suicide or after a suicide attempt, may bring into therapy (Emmons & Stern, 2013). It may also emerge in a therapeutic relationship between therapist and the client. In such situations gratitude may "spontaneously catalyse healing processes" (Emmons & Stern, 2013), and inclusion of gratitude interventions may further strengthen the positive effects of psychotherapy.

In summary, numerous gratitude-based psychological interventions have been developed over the last two decades. Most of these activities are based on listing things one is grateful for and/or promoting behavioural expressions of gratitude. Many interventions have been subject to rigorous evaluation studies, which have yielded promising results. Nonetheless, there remains a methodological challenge related to the choice of activities in control conditions, and to the possible ceiling effect in gratitude levels before starting the intervention (Davis et al., 2016; Wood et al., 2010). Another limitation relates to the fact that most of the studies recruit college students, and there is still only limited knowledge regarding the effectiveness of gratitude interventions in clinical samples, including individuals at risk for suicide. To-date, only a couple of studies (Celano et al., 2017; Huffman et al., 2014) examined the feasibility and effects of gratitude interventions in people with depression and recent suicidal ideation and behaviour. Their results point out possible strengths of these approaches, such as ease of completion, as well as limitations, such as lack of motivation and participants' negative affect, both of which deserve further exploration.

Possible Mechanisms for the Positive Effects of Gratitude

Several hypotheses have been proposed and partly empirically verified (Emmons & Mishra, 2011; Wood et al., 2010) to reflect the accumulating evidence indicating the positive association of trait gratitude with indices of psychological and physical well-being and adjustment. The *coping hypothesis* links gratitude and well-being through positive coping strategies (Wood, Joseph, & Linley, 2007). On the one hand, grateful individuals are more likely to use both instrumental and emotional social support, and to be active and positive when coping with stress. This may include planning and positively interpreting the current situation, as well as seeking opportunities for personal and interpersonal growth. On the other hand, grateful people are less prone to engage in denial, be passive, or use maladaptive coping strategies, such as substance misuse and focus on loss. According to the *schematic hypothesis*, gratitude is evoked by having received help that is "appraised as costly to provide, valuable, and altruistically offered (rather than provided through ulterior motives)" (Wood et al., 2010, p. 209). Grateful individuals may even have a "gratitude schema", that is, an interpretive bias towards making benevolent appraisals,

making them more likely to see help received from others as more valuable, genuine, and costly (Wood, Maltby, Stewart, Linley, & Joseph's, 2008), and making them more likely to harvest the personal and interpersonal benefits of gratitude.

According to Fredrickson (2004), positive emotions such as gratitude support and enhance people's psychological well-being via two complementary processes: *"broadening"* and *"building"*. The former relates to the broadening of attention, cognition, and behavioural and interpersonal reactions that accompany the experience of positive emotions and, thereby, allow people to discover creative and novel ways of perceiving the world and solving problems. These valuable resources can accumulate over time and an individual can "build" a repository of effective coping skills, social support, and other intra- and interpersonal skills that help them deal with life's problems and enhance life satisfaction. This, in turn, can result in experiencing more positive emotions, maintaining the "broaden-and-build" mechanism, and leading to an "upward spiral" towards enhanced emotional well-being (Fredrickson & Joiner, 2002).

The *positive affect* hypothesis points out that grateful individuals may habitually experience the positive emotion of gratitude, and positive emotions are protective against psychosocial ill-being and contribute to life satisfaction (Watkins, 2014; Watson & Naragon-Gainey, 2014). Gratitude has been found to enhance accessibility to positive autobiographical memories (i.e. a *positive memory bias*; Watkins, 2014). In addition, the positive relationship between gratitude and well-being may be related to an observation that gratitude reduces negative emotions resulting from upward *social comparisons*, such as envy and resentment, or from *self-comparisons* with alternative outcomes, such as regret (Emmons & Mishra, 2011). Gratitude has also been found to reduce *materialistic strivings* and perception of personal success in terms of material possessions and accomplishments (Roberts, Tsang, & Manolis, 2015). According to the model of gratitude as a "*moral affect*" (McCullough et al., 2001), gratitude motivates action undertaken in order to benefit others and, thus, contributes to creating and sustaining positive social relationships. In addition, there is initial empirical evidence that gratitude is positively related to *self-esteem and self-respect* although the direction of the association is not clear (Emmons & Mishra, 2011): "it may be that high self-esteem leads to more feelings of gratitude because it makes it more likely that the person will respond positively to the benevolence of others. Conversely, it may be that feelings of gratitude produce more positive self-construals" (p. 252).

Religion and spirituality are additional possible links between gratitude and positive psychosocial-outcomes. Studies show a positive correlation between trait gratitude and spiritual and religious tendencies, as well as a protective impact of both gratitude and spirituality against psychopathology (Kendler et al., 2003; McCullough et al., 2002; Rosmarin, Krumrei, & Pargament, 2010). For instance, Kendler et al. (2003) found that thankfulness as a dimension of religiosity, along with social religiosity, was associated with a lower lifetime risk for both internalizing disorders (e.g. major depression, phobias, generalized anxiety disorder, panic disorder, and bulimia nervosa) and externalizing disorders (e.g. substance abuse and adult antisocial behaviour). Nonetheless, the strength of the relationship between religiosity

and gratitude depends on the particular dimension of religiosity (Kraus, Desmond, & Palmer, 2014; Rosmarin et al., 2010), and some measures may tap into dimensions less strongly associated with gratitude (Krysinska et al., 2015). Gratitude may also promote *physical well-being*, including fewer physical complaints, increased sleep hours, and better sleep quality (Emmons & McCullough, 2003; Wood, Joseph, Lloyd, & Atkins, 2009). The positive link between sleep quality and gratitude is possibly mediated through positive pre-sleep cognitions (Wood et al., 2009). In addition, the experience of gratitude may have a positive impact on parasympathetic myocardial control, known as the "coherence" phenomenon (McCraty & Childre, 2004). According to McCraty and Childre (2004), "coherence" reflects "a physiological mode that encompasses entrainment, resonance, and synchronization—distinct but related phenomena, all of which emerge from the harmonious interactions of the body's subsystems", and "individuals can produce extended periods of physiological coherence by actively generating and sustaining a feeling of appreciation" (p. 240).

In summary, many mechanisms, most likely interlinked, can be responsible for the beneficial effects of gratitude. At this stage it is too early to indicate which of these pathways are applicable to the gratitude–suicidality link reported in studies reviewed in the previous section. Nonetheless, some of the variables presented here reflect well-established suicide risk factors, such as deficits in problem solving; overgeneralized autobiographical memories and rumination (O'Connor & Nock, 2014); and mental health and physical health complaints (Franklin et al., 2017), including insomnia (McCall & Black, 2013). Also, religiosity and spirituality (Kleiman & Liu, 2014) and social support (Bell et al., 2018) can play an important role in prevention of suicide. Further studies should clarify which of the proposed mechanisms are helpful in designing effective interventions for at-risk individuals. In addition, of interest may be an analysis of gratitude as a potential buffer against suicidal ideation and behaviour across the lifespan, as the protective effect of gratitude seems to appear quite early in life (Lo et al., 2017).

What Are the Stumbling Blocks and Facilitators for Gratitude?

Despite the many studies showing the positive outcomes and correlates of gratitude and the still relatively unfounded enthusiasm regarding the effectiveness of gratitude interventions, Wood et al. (2010) noticed that "no research has examined whether there might be a negative side associated with gratitude. It could be the case that gratitude is always an adaptive emotion.…Alternatively, there could be costs associated with gratitude, which prevent it becoming completely wide spread.… The conditions under which gratitude becomes maladaptive should be examined" (p. 902). This section will review what we know about the gratitude stumbling blocks and factors which could facilitate or counteract the effectiveness of activities designed to cultivate a sense of being grateful.

In the Happiness, Optimism, and Positive Emotions (HOPE) study, reported in the previous section, Celano et al. (2017) identified several weaknesses in applying adjunctive positive psychology interventions in clinical populations. Recently discharged patients with depression and a history of suicidal ideation and behaviour may not have enough energy, initiative, and psychosocial resources to engage in ancillary exercises such as writing gratitude letters. They also may not be able to find positives in the current situation and things to be "grateful for". In addition, an expectation to recall and focus on positive feelings may lead to a painful realization of a discrepancy between the current negative emotional state and the potential joys of life one is lacking. Although further studies are needed to explore these potential mechanisms in clinical samples, Sergeant and Mongrain (2011) examined the helpfulness of gratitude exercises in individuals with depressive self-critical and depressive needy personality type, recruited from the general population. They found that the daily gratitude exercise of recalling five things to be grateful for was beneficial in terms of self-esteem and lower physical symptoms for self-critical individuals who regularly experience intense feelings of unworthiness, hopelessness, and incompetence. Conversely, needy individuals, who rely on others to meet their needs and who feel helpless, reported lower happiness and higher physical symptomology in the gratitude intervention condition.

Other psychological factors that may prevent gratitude and lower the effectiveness of interventions include personality traits, such as narcissism, cynicism, materialism (Solom, Watkins, McCurrach, & Scheibe, 2017), perfectionism or low agreeableness (Davis et al., 2016), and depressive symptoms (Kaczmarek et al., 2013). For instance, a sense of entitlement in individuals with narcissistic tendencies, and their belief that they deserve special privileges and rights without any assumed reciprocity, can result in their reluctance towards gratitude. In other words, "if one feels entitled to everything, then one is thankful for nothing" (Bono et al., 2015, p. 565). In individuals high in perfectionism or low in agreeableness and trust, benefits received from others may elicit neutral or even negative reactions (Davis et al., 2016). In this case, feelings of indebtedness may trigger adverse emotional reactions, such as anxiety or guilt. There are also strong links between self-oriented and socially prescribed perfectionism and suicide ideation and behaviour (Smith et al., 2018), and between narcissism and levels of suicide risk (Coleman et al., 2017), and it is possible that these personality traits affect effectiveness of gratitude interventions in suicide prevention.

Conversely, people with strong intentions to change their lifestyle and with greater trait curiosity were more likely to engage in a voluntary gratitude intervention (Kaczmarek et al., 2013). Of interest, Frias, Watkins, Webber, and Froh (2011) found that enhancing awareness of one's own death can significantly enhance gratitude. In their study, participants who were engaged in death reflection, by vividly imagining their own death, and participants who engaged in a more traditional mortality salience activity, such as writing about one's own death, reported higher levels of gratitude than individuals in the control condition. Study results led Frias et al. (2011) to conclude that "when one is pushed past their defences of denying their own death, people tend to recognize 'what might not be' and become more grateful

for the life they now experience. Fully recognizing one's own mortality may be an important aspect of the humble and grateful person" (p. 161). In addition, habituation can contribute to thwarting the effectiveness of gratitude-related activities. Introducing diversity into gratitude exercises (e.g. via instructions to choose a different letter from the alphabet each day as a trigger when making a daily gratitude list) may prevent habituation to positive life circumstances (Young & Hutchinson, 2012).

Gender and culture may also influence the experience of gratitude and its application in populations at risk for suicide. There are studies that demonstrate significant gender differences in gratitude (Kashdan, Mishra, Breen, & Froh, 2009), and gratitude interventions, with their strong focus on interpersonal and interdependent social interactions, may be more beneficial for women than for men (Emmons & Mishra, 2011). Given that existing psychosocial interventions for suicidal ideation and behaviour tend to be more effective for women than for men (Krysinska, Batterham, & Christensen, 2017), consideration of gender differences in application of gratitude interventions in suicide prevention seems prudent. Cultural norms may also influence the acceptability and effectiveness of gratitude activities. For instance, interventions that focus on family and other people may be more effective in populations with a collectivist orientation than activities that focus on the individual and his/her personal happiness (Boehm, Lyubomirsky, & Sheldon, 2011). Regarding the diversity of existing positive psychology interventions, Sin and Lyubomirsky (2009) recommended that, in terms of well-being, individuals from collectivist cultures may reap more benefits from prosocial and other-focused activities, such as writing a gratitude letter or performing acts of kindness, than from individual-focused activities, such as reflecting on personal strengths. As the relationship between culture and suicide prevention remains a relatively unexplored territory (Joe, Canetto, & Romer, 2008), much remains to be learned about applications of positive psychology interventions in different cultural contexts.

Conclusions and Clinical Applications

The scientific exploration of gratitude commenced less than two decades ago, and the interest in the protective mechanisms of gratitude and gratitude interventions in suicide prevention and treatment is even more recent. Studies conducted mostly in young adult populations have shown that gratitude may be linked to reduced risk of suicidal ideation and attempts. Psychosocial variables such as meaning in life, reasons for living, grit, self-esteem, social support, religiosity, humour style, coping, life events, depression, and/or anxiety mediate the complex relationship between gratitude and suicidality. Nonetheless, there is no data indicating that gratitude may have a direct protective effect against suicidality. In addition, none of the studies looked at death by suicide, and there are no studies on possible mechanisms linking gratitude and suicidality in clinical populations. The developmental trajectory of

gratitude, as an indirect buffer against suicidality, across the lifespan, is an additional area of interest.

There is much interest and enthusiasm regarding using gratitude interventions to support psychosocial and physical well-being. Still, the evidence regarding their effectiveness is limited and plagued by methodological challenges, including predominance of research in college students and a relative neglect of clinical samples. Application of positive psychology interventions, including gratitude activities, to suicide prevention and intervening with individuals at risk for suicide, has just begun. Results of studies conducted thus far show the intricacy of applying such techniques in the post-discharge period, and it can be hypothesized that adjunctive gratitude intervention could complement treatments with established evidence of effectiveness, such as cognitive-behavioural therapy.

References

Achenbach, T. M. (1991). *Child behavior checklist: Youth self-report (YSR)*. University of Vermont.

Adler, M. G., & Fagley, N. S. (2005). Appreciation: Individual differences in finding value and meaning as a unique predictor of subjective well-being. *Journal of Personality, 73*(1), 79–114.

Beck, A. T., & Steer, R. A. (1991). *Manual for Beck scale for suicidal ideation*. New York, NY: Psychological Corporation.

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Beck depression inventory manual* (2nd ed.). San Antonio, TX: Psychological Corporation.

Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The hopelessness scale. *Journal of Consulting and Clinical Psychology, 42*, 861.

Bell, C. M., Ridley, J. A., Overholser, J. C., Young, K., Athey, A., Lehmann, J., & Phillips, K. (2018). The role of perceived burden and social support in suicide and depression. *Suicide and Life-Threatening Behavior, 48*(1), 87–94.

Boehm, J. K., Lyubomirsky, S., & Sheldon, K. M. (2011). A longitudinal experimental study comparing the effectiveness of happiness-enhancing strategies in Anglo Americans and Asian Americans. *Cognition & Emotion, 25*(7), 1263–1272.

Bolier, L., Haverman, M., Westerhof, G. J., Riper, H., Smit, F., & Bohlmeijer, E. (2013). Positive psychology interventions: A meta-analysis of randomized controlled studies. *BMC Public Health, 13*(1), 119.

Bono, G., Krakauer, M., & Froh, J. J. (2015). The power and practice of gratitude. In S. Joseph (Ed.), *Positive psychology in practice: Promoting human flourishing in work, health, education, and everyday life* (2nd ed., pp. 559–576). Hoboken, NJ: Wiley.

Bono, G., & McCullough, M. E. (2006). Positive responses to benefit and harm: Bringing forgiveness and gratitude into cognitive psychotherapy. *Journal of Cognitive Psychotherapy, 20*(2), 147–158.

Brickman, P., & Campbell, D. T. (1971). Hedonic relativism and planning the good society. In M. H. Appley (Ed.), *Adaptation level theory: A symposium* (pp. 287–302). New York: Academic.

Campbell-Sills, L., & Stein, M. B. (2007). Psychometric analysis and refinement of the Connor–Davidson resilience scale (CD-RISC): Validation of a 10-item measure of resilience. *Journal of Traumatic Stress, 20*(6), 1019–1028.

Celano, C. M., Beale, E. E., Mastromauro, C. A., Stewart, J. G., Millstein, R. A., Auerbach, R. P., … Huffman, J. C. (2017). Psychological interventions to reduce suicidality in high-risk patients with major depression: A randomized controlled trial. *Psychological Medicine, 47*(5), 810–821.

Chen, G. (2017). Does gratitude promote recovery from substance misuse? *Addiction Research & Theory, 25*(2), 121–128.
Coleman, D., Lawrence, R., Parekh, A., Galfalvy, H., Blasco-Fontecilla, H., Brent, D. A., … Oquendo, M. A. (2017). Narcissistic Personality Disorder and suicidal behavior in mood disorders. *Journal of Psychiatric Research, 85*, 24–28.
Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale. The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety, 18*(2), 76–82.
Davis, D. E., Choe, E., Meyers, J., Wade, N., Varjas, K., Gifford, A., … Worthington, E. L., Jr. (2016). Thankful for the little things: A meta-analysis of gratitude interventions. *Journal of Counseling Psychology, 63*(1), 20–31.
Derogatis, L. R. (1992). *The Brief Symptom Inventory (BSI): Administration, scoring & procedures manual-II*. Towson, MD: Clinical Psychometric Research.
Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D. W., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research, 97*(2), 143–156.
Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for longtermgoals. *Journal of Personality and Social Psychology, 92*(6), 1087.
Emmons, R. A. (2008). *Thanks! How practicing gratitude can make you happier*. Boston: Houghton Mifflin Company.
Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology, 84*(2), 377.
Emmons, R. A., & McCullough, M. E. (Eds.). (2004). *The psychology of gratitude*. Oxford: Oxford University Press.
Emmons, R. A., McCullough, M. E., & Tsang, J. (2003). The assessment of gratitude. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 327–341). Washington, DC: American Psychological Association.
Emmons, R. A., & Mishra, A. (2011). Why gratitude enhances well-being: What we know, what we need to know. In K. M. Sheldon, T. B. Kashdan, & M. F. Steger (Eds.), *Designing positive psychology: Taking stock and moving forward* (pp. 248–262). Oxford: Oxford University Press.
Emmons, R. A., & Stern, R. (2013). Gratitude as a psychotherapeutic intervention. *Journal of Clinical Psychology: In Session, 69*(8), 846–855.
Francis, L. J. (1992). Reliability and validity of the Francis scale of attitude towards Christianity. *Panorama, 4*(1), 17–19.
Franklin, J. C., Ribeiro, J. D., Fox, K. R., Bentley, K. H., Kleiman, E. M., Huang, X., … Nock, M. K. (2017). Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychological Bulletin, 143*(2), 187–232.
Fredrickson, B. (2004). Gratitude, like other positive emotions, broadens and builds. In R. A. Emmons & M. E. McCullough (Eds.), *Psychology of gratitude* (pp. 145–165). Oxford: Oxford University Press.
Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science, 13*(2), 172–175.
Frias, A., Watkins, P. C., Webber, A. C., & Froh, J. J. (2011). Death and gratitude: Death reflection enhances gratitude. *Journal of Positive Psychology, 6*(2), 154–162.
Froh, J. J., Bono, G., Fan, J., Emmons, R. A., Henderson, K., Harris, C., … Wood, A. M. (2014). Nice thinking! An educational intervention that teaches children to think gratefully. *School Psychology Review, 43*(2), 132.
Gratitude. (n.d.). In *English Oxford Living Dictionaries online*. Retrieved from https://en.oxforddictionaries.com/definition/gratitude
Greenberger, E., & Chen, C. (1996). Perceived family relationships and depressed mood in early and late adolescence: A comparison of European and Asian Americans. *Developmental Psychology, 32*, 707–716.

Hawton, K., Witt, K. G., Salisbury, T. L. T., Arensman, E., Gunnell, D., Hazell, P., … van Heeringen, K. (2016). Psychosocial interventions following self-harm in adults: A systematic review and meta-analysis. *The Lancet Psychiatry, 3*(8), 740–750.

HeartMath® Institute. (2017). *The Quick Coherence® technique for adults*. Retrieved from https://www.heartmath.org/resources/heartmath-tools/quick-coherence-technique-for-adults/

Holmes, T. H., & Rahe, R. H. (1967). The social readjustment scale. *Journal of Psychosomatic Research, 11*(2), 213–218.

Huffman, J. C., DuBois, C. M., Healy, B. C., Boehm, J. K., Kashdan, T. B., Celano, C. M., … Lyubomirsky, S. (2014). Feasibility and utility of positive psychology exercises for suicidal inpatients. *General Hospital Psychiatry, 36*(1), 88–94.

Joe, S., Canetto, S. S., & Romer, D. (2008). Advancing prevention research on the role of culture in suicide prevention. *Suicide and Life-Threatening Behavior, 38*(3), 354–362.

Johnson, J., Wood, A. M., Gooding, P., Taylor, P. J., & Tarrier, N. (2011). Resilience to suicidality: The buffering hypothesis. *Clinical Psychology Review, 31*(4), 563–591.

Kaczmarek, L. D., Kashdan, T. B., Kleiman, E. M., Baczkowski, B., Enko, J., Siebers, A., … Baran, B. (2013). Who self-initiates gratitude interventions in daily life? An examination of intentions, curiosity, depressive symptoms, and life satisfaction. *Personality and Individual Differences, 55*(7), 805–810.

Kashdan, T. B., Mishra, A., Breen, W. E., & Froh, J. J. (2009). Gender differences in gratitude: Examining appraisals, narratives, the willingness to express emotions, and changes in psychological needs. *Journal of Personality, 77*(3), 691–730.

Kendler, K. S., Liu, X. Q., Gardner, C. O., McCullough, M. E., Larson, D., & Prescott, C. A. (2003). Dimensions of religiosity and their relationship to lifetime psychiatric and substance use disorders. *American Journal of Psychiatry, 160*(3), 496–503.

Kleiman, E. M., Adams, L. M., Kashdan, T. B., & Riskind, J. H. (2013a). Gratitude and grit indirectly reduce risk of suicidal ideations by enhancing meaning in life: Evidence for a mediated moderation model. *Journal of Research in Personality, 47*(5), 539–546.

Kleiman, E. M., Adams, L. M., Kashdan, T. B., & Riskind, J. H. (2013b). Grateful individuals are not suicidal: Buffering risks associated with hopelessness and depressive symptoms. *Personality and Individual Differences, 55*(5), 595–599.

Kleiman, E. M., & Beaver, J. K. (2013). A meaningful life is worth living: Meaning in life as a suicide resiliency factor. *Psychiatry Research, 210*(3), 934–939.

Kleiman, E. M., & Liu, R. T. (2014). Prospective prediction of suicide in a nationally representative sample: Religious service attendance as a protective factor. *British Journal of Psychiatry, 204*(4), 262–266.

Kohout, F. J., Berkman, L. F., Evans, D. A., & Cornoni-Huntley, J. (1993). Two shorter forms of the CES-D depression symptoms index. *Journal of Aging and Health, 5*(2), 179–193.

Kraus, R., Desmond, S. A., & Palmer, Z. D. (2014). Being thankful: Examining the relationship between young adult religiosity and gratitude. *Journal of Religion and Health, 54*(4), 1331–1344.

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2003). The Patient Health Questionnaire-2: Validity of a two-item depression screener. *Medical Care, 41*(11), 1284–1292.

Krysinska, K., Batterham, P. J., & Christensen, H. (2017). Differences in the effectiveness of psychosocial interventions for suicidal ideation and behaviour in women and men: A systematic review of randomised controlled trials. *Archives of Suicide Research, 21*(1), 12–32.

Krysinska, K., Lester, D., Pyke, J., & Corveleyn, J. (2015). Trait gratitude and suicidal ideation and behavior: An exploratory study. *Crisis, 36*, 291–296.

Li, D., Zhang, W., Li, X., Li, N., & Ye, B. (2012). Gratitude and suicidal ideation and suicide attempts among Chinese adolescents: Direct, mediated, and moderated effects. *Journal of Adolescence, 35*(1), 55–66.

Li, D., Zhang, W., Li, X., Zhen, S., & Wang, Y. (2010). Stressful life events and problematic internet use by adolescent females and males: A mediated moderation model. *Computers in Human Behavior, 26*, 1199–1207.

Lin, C. C. (2015a). The relationships among gratitude, self-esteem, depression, and suicidal ideation among undergraduate students. *Scandinavian Journal of Psychology, 56*(6), 700–707.
Lin, C. C. (2015b). Self-esteem mediates the relationship between dispositional gratitude and well-being. *Personality and Individual Differences, 85*, 145–148.
Lin, C. C., & Yeh, Y. C. (2011). The development of the inventory of undergraduates' gratitude. *Psychological Testing, 58*(S), 2–33.
Lo, H. H., Kwok, S. Y., Yeung, J. W., Low, A. Y., & Tam, C. H. (2017). The moderating effects of gratitude on the association between perceived parenting styles and suicidal ideation. *Journal of Child and Family Studies, 26*(6), 1671–1680.
Lomas, T., Froh, J. J., Emmons, R. A., Mishra, A., & Bono, G. (2014). Gratitude interventions: A review and future agenda. In A. C. Parks & S. M. Schueller (Eds.), *The Wiley Blackwell handbook of positive psychological interventions* (pp. 3–19). Chichester: Wiley.
Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles Questionnaire. *Journal of Research in Personality, 37*(1), 48–75.
McCall, W. V., & Black, C. G. (2013). The link between suicide and insomnia: Theoretical mechanisms. *Current Psychiatry Reports, 15*(9), 389.
McCraty, R., & Childre, D. (2004). The grateful heart: The psychophysiology of appreciation. In R. A. Emmons & M. E. McCullough (Eds.), *The psychology of gratitude* (pp. 230–255). Oxford: Oxford University Press.
McCullough, M. E., Emmons, R. A., & Tsang, J. A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology, 82*(1), 112.
McCullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin, 127*(2), 249.
Meerwijk, E. L., Parekh, A., Oquendo, M. A., Allen, I. E., Franck, L. S., & Lee, K. A. (2016). Direct versus indirect psychosocial and behavioural interventions to prevent suicide and suicide attempts: A systematic review and meta-analysis. *The Lancet Psychiatry, 3*(6), 544–554.
Metalsky, G. I., & Joiner, T. E. (1997). The hopelessness depression symptom questionnaire. *Cognitive Therapy and Research, 21*(3), 359–384.
Moos, R. H., & Moos, B. S. (1981). *Manual for the family environment scale*. Palo Alto, CA: Consulting Psychology Press.
O'Connor, R. C., & Nock, M. K. (2014). The psychology of suicidal behaviour. *The Lancet Psychiatry, 1*(1), 73–85.
Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kopper, B. A., & Barrios, F. X. (2001). The Suicidal Behaviors Questionnaire-Revised (SBQ-R): Validation with clinical and nonclinical samples. *Assessment, 8*(4), 443–454.
Osman, A., Gutierrez, P. M., Kopper, B. A., Barrios, F. X., & Chiros, C. E. (1998). The positive and negative suicide ideation inventory: Development and validation. *Psychological Reports, 82*(3), 783–793.
Osman, A., Kopper, B. A., Barrios, F. X., Osman, J. R., Besett, T., & Linehan, M. M. (1996). The brief reasons for living inventory for adolescents (BRFL-A). *Journal of Abnormal Child Psychology, 24*(4), 433–443.
Petrocchi, N., & Couyoumdjian, A. (2016). The impact of gratitude on depression and anxiety: The mediating role of criticizing, attacking, and reassuring the self. *Self and Identity, 15*(2), 191–205.
Roberts, J. A., Tsang, J. A., & Manolis, C. (2015). Looking for happiness in all the wrong places: The moderating role of gratitude and affect in the materialism–life satisfaction relationship. *Journal of Positive Psychology, 10*(6), 489–498.
Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton: Princeton University Press.
Rosmarin, D. H., Krumrei, E. J., & Pargament, K. I. (2010). Do gratitude and spirituality predict psychological distress? *International Journal of Existential Psychology and Psychotherapy, 3*(1), 1–5.

Sandler, I. N., Tein, J., Mehta, P., Wolchik, S., & Ayers, T. (2000). Coping efficacy and psychological problems of children of divorce. *Child Development, 71*, 1099–1118.

Sergeant, S., & Mongrain, M. (2011). Are positive psychology exercises helpful for people with depressivepersonality styles?. *Journal of Positive Psychology, 6*(4), 260–272.

Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology, 65*(5), 467–487.

Smith, N. B., Mota, N., Tsai, J., Monteith, L., Harpaz-Rotem, I., Southwick, S. M., & Pietrzak, R. H. (2016). Nature and determinants of suicidal ideation among US veterans: Results from the national health and resilience in veterans study. *Journal of Affective Disorders, 197*, 66–73.

Smith, M. M., Sherry, S. B., Chen, S., Saklofske, D. H., Mushquash, C., Flett, G. L., & Hewitt, P. L. (2018). The perniciousness of perfectionism: A meta-analytic review of the perfectionism-suicide relationship. *Journal of Personality, 86*(3), 522–542.

Solom, R., Watkins, P. C., McCurrach, D., & Scheibe, D. (2017). Thieves of thankfulness: Traits that inhibit gratitude. *The Journal of Positive Psychology, 12*(2), 120–129.

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*(1), 80.

Stewart, S. M., Bond, M. H., Ho, L. M., Zaman, R. M., Dar, R., & Anwar, M. (2000). Perceptions of parents and adolescent outcomes in Pakistan. *British Journal of Developmental Psychology, 18*, 335–352.

Stockton, et al. (2016). How does gratitude affect the relationship between positive humor styles and suicide-related outcomes? *Personality and Individual Differences, 102*, 240–244.

Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research, 27*(3), 247–259.

Van Orden, K. A., Witte, T. K., Gordon, K. H., Bender, T. W., & Joiner, T. E., Jr. (2008). Suicidal desire and the capability for suicide: Tests of the interpersonal-psychological theory of suicidal behavior among adults. *Journal of Consulting and Clinical Psychology, 76*(1), 72.

Vieselmeyer, J., Holguin, J., & Mezulis, A. (2017). The role of resilience and gratitude in post-traumatic stress and growth following a campus shooting. *Psychological Trauma: Theory, Research, Practice, and Policy, 9*(1), 62.

Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. L. (2003). Gratitude and happiness: Development of ameasure of gratitude, and relationships with subjective well-being. *Social Behavior and Personality, 31*(5), 431–451.

Watkins, P. C. (2014). *Gratitude and the good life*. Dordrecht: Springer Watkins, P.C.

Watson, D., & Naragon-Gainey, K. (2014). Personality, emotions, and the emotional disorders. *Clinical Psychological Science, 2*(4), 422–442.

Westefeld, J. S., Cardin, D., & Deaton, W. L. (1992). Development of the college student reasons for living inventory. *Suicide and Life-Threatening Behavior, 22*(4), 442–453.

White, E. J., et al. (2017). Rumination's effect on suicide ideation through grit and gratitude: A path analysis study. *Psychiatry Research, 251*, 97–102.

Wong, Y. J., Owen, J., Gabana, N. T., Brown, J. W., Mcinis, S., Toth, P., & Gilman, L. (2016). Does gratitude writing improve the mental health of psychotherapy clients? Evidence from as randomised controlled trial. *Psychotherapy Research, 28*(2), 192–202.

Wood, A. M., Froh, J. J., & Geraghty, A. W. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review, 30*(7), 890–899.

Wood, A. M., Joseph, S., & Linley, P. A. (2007). Coping style as a psychological resource of grateful people. *Journal of Social and Clinical Psychology, 26*, 1076–1093.

Wood, A. M., Joseph, S., Lloyd, J., & Atkins, S. (2009). Gratitude influences sleep through the mechanism of pre-sleep cognitions. *Journal of Psychosomatic Research, 66*, 43–48.

Wood, A. M., Maltby, J., Stewart, N., Linley, P. A., & Joseph, S. (2008). A social-cognitive model of trait and state levels of gratitude. *Emotion, 8*(2), 281.

Young, M. E., & Hutchinson, T. S. (2012). The rediscovery of gratitude: Implications for counseling practice. *Journal of Humanistic Counseling, 51*(1), 99–113.
Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment, 52*, 30–41.

Chapter 6
Considering Race and Ethnicity Using Positive Psychological Approaches to Suicide

Ashley B. Cole and LaRicka R. Wingate

It is estimated that by 2050, more than half of the US population will be of a racial and/or ethnic minority background (Passel & Cohn, 2008). Along with growing rates of racial and ethnic diversity, suicide rates in the USA have also escalated in the past 30 years (Curtin, Warner, & Hedegaard, 2016). In suicidology, as well as in the behavioral sciences and psychology, in general, less is known about cultural differences in risk and protective factors, among and between racial and ethnic minority group members. Positive psychology is a relatively young field, which we argue is optimally positioned to study differential protective factors for suicide among diverse racial and ethnic minority populations. Thus, the focus of this chapter is to merge three literatures: suicidology, positive psychology, and minority studies.

According to a special issue of *Cultural Diversity and Ethnic Minority Psychology* (CDEMP) in collaboration with the *American Psychological Association* (APA), the five main racial and ethnic minority groups in the USA include (1) African Americans; (2) American Indians; (3) Asian Americans; (4) Hispanic Americans; and (5) Native Hawaiians, who are a distinct racial/ethnic group and are often misclassified as Asian Americans due to their shared geographical location (Leong, 2009). Racial and ethnic minority group members also include individuals who identify as biracial, bicultural, or as members of multiple minority groups. It is also important to consider the intersections of racial and ethnic minority status with other marginalized/disadvantaged statuses (e.g., sex, sexual orientation, gender identity). It is important to note that members of underrepresented groups are frequently excluded from mainstream psychological research, including within the fields of positive psychology and suicidology. Historically, by not allowing representation of certain racial and ethnic groups in study samples, researchers are likely missing key information. For example, mainstream suicide theories and treatments

A. B. Cole (✉) · L. R. Wingate
Department of Psychology, Oklahoma State University, Stillwater, OK, USA
e-mail: abcole@okstate.edu

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*,
Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_6

may be culturally inaccurate or inapplicable to certain ethnocultural groups and, as well, studying culture-specific protective factors may have broader implications for the development and implementation of interventions for suicide in diversity groups. Therefore, this chapter seeks to bridge this important gap in the literature by integrating existing research and theories, discussing what is missing, and by providing recommendations for future directions in the fields of positive psychology and suicidology with underrepresented groups. Our focus in this chapter is consistent with APA's (2017) *Multicultural Guidelines*, which calls for the field of psychology to reconsider diversity and multicultural practice in order to improve understanding of identity (as it relates to within-group differences and self-identity) and to acknowledge, address, and engender more effective models of professional engagement (APA, 2017). Along with an increased focus of multiculturalism in psychological practice, we believe that now is a pivotal time for increased research with diverse populations to improve our understanding of how culture affects psychological well-being, and to examine whether culture-specific strengths may provide critical insights for suicide prevention and intervention.

This chapter begins with a debate of whether positive psychological constructs are transcendent across different racial and ethnic minority groups. An overview of the extant mainstream research on protective factors for suicide conducted with racial and ethnic minority populations will follow. Then, a discussion of unique, and proposed, cultural risk and protective factors for suicide among diverse populations will be presented. Following this discussion, we present a rationale for the importance of increased research with racial and ethnic minority groups in the context of suicide resilience. Additionally, this chapter will conclude with future directions for research and clinical practices with diverse populations in the prevention and intervention of suicide, including guidelines and proposed methodologies, as well as recruitment and retention techniques, for increased suicide-related research with minority populations.

Importance of Including Racially and Ethnically Diverse Groups in Suicidology

A historical and problematic issue within psychology is that most research is conducted utilizing convenience samples of young adults, mostly college students (Sears, 1986), and these college students are predominantly White and middle-class (Graham, 1992). Henrich et al. (2010) argued that behavioral science is largely focused on a specific demographic of individuals who are characterized as Western, educated, industrialized, rich, and democratic (termed "WEIRD"). Examination of the prominent published work in psychology over the past several decades reveals that most studies continue to reflect this specific demographic of privileged individuals of White or European descent (e.g., Hartmann et al., 2013; Nagayama, Hall, & Maramba, 2001). This narrow focus and, perhaps more importantly, the exclusion

of diverse samples and cultural differences is scientifically problematic in psychological research, resulting in low external validity and mirroring the challenging societal and political issues experienced in the real world (i.e., bias, invisibility, discrimination; Sue, 1999). This narrow focus on privileged individuals of European descent is found both within the positive psychology and suicidology literatures.

Cha et al. (2017) conducted a meta-analysis of longitudinal studies on suicidal thoughts and behaviors (STBs) published over the past 50 years to examine the methodological practices of sampling and sample characteristics reporting in suicidology. Out of 158 published studies, the majority of studies reported sample characteristics of age and sex; however, fewer studies reported race and ethnicity. When articles were compared over time, the rate of reporting race dramatically increased from before 1985 to the period of 1985 to 1994, but then plateaued and has not significantly increased in more recent eras; for example, less than half of studies in the most recent era reported sample ethnicity. Additionally, the authors found that among these suicide-specific studies that reported sample characteristics, the average sample was relatively young (i.e., *M* age = 30.0 years), slightly more likely to be female (53.6%), and was predominantly White (70.2%) and non-Hispanic (89.6%), and none of these sample characteristics changed significantly over time (Cha et al., 2017). These findings illustrate that even basic demographic characteristics (i.e., race and ethnicity) are not always reported in suicide research and, when they are reported, tend to reflect similar trends seen in the broader behavioral science fields. Collectively, these findings further support the claim that knowledge of suicide resiliency factors in racial and ethnic minority populations is largely understudied.

When empirical research that focuses on racial and ethnic minority groups and cultural differences is published, it is often heavily criticized. For instance, it has been recently debated whether racial microaggressions (RMs) exist and whether these interactions are detrimental (Lilienfeld, 2017). This debate has occurred despite numerous empirical quantitative and qualitative studies conducted with diverse samples that demonstrate these constructs are real and harmful for People of Color (POC), with several studies suggesting that RMs may lead to increased suicide risk (i.e., Hollingsworth et al., 2017; O'Keefe, Wingate, Cole, Hollingsworth, & Tucker, 2015). Thus, in addition to being understudied, mental health research on diverse samples may also be excessively critiqued or dismissed. We provide general recommendations for future research with diverse populations at the end of this chapter but note that, in addition to the complexity of these scientific issues, we know even less about how positive psychology and resilience are construed cross-culturally.

Do Positive Psychological Constructs Universally Transcend Across Race and Ethnicity?

Early writings by positive psychology pioneers, including Martin Seligman and his colleagues, suggest that the basic principles of positive psychology (i.e., resiliency factors that allow people to flourish) universally apply to all humans (Seligman &

Csikszentmihalyi, 2000). Peterson and Seligman (2004) later published *Character Strengths and Virtues: A Handbook and Classification*, which was a positive classification system to identify globally recognized character strengths and virtues that made people happy, strong, and resilient. This volume was developed in contrast to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM), which focuses on psychological pathology. Although Peterson and Seligman's (2004) virtue classification system referenced works from around the world and across historical eras, it has been critiqued for not describing this research in depth (i.e., Chang, Downey, Hirsch, & Lin, 2016). Moreover, Chang et al. (2016) posed two relevant challenges for the field of positive psychology to consider, in the context of culture. First, the authors suggested that positive psychologists have continued to take an essentialist view of human behavior by excluding cultural variations of what positive psychology may mean for individuals of different racial and ethnic backgrounds. Secondly, the authors suggested that the field of positive psychology has been slow to identify and validate positive psychological interventions that are culturally sensitive to diverse groups (Chang et al., 2016). We reference these challenges posed by Chang et al. (2016) because they are relevant to both suicide prevention and intervention work with culturally diverse populations.

Culture influences many aspects of mental health and likely impacts the interpretation of positive psychological concepts, such as flourishing, hope, and optimism. Some research has suggested that cultural variability in positive psychological concepts may be accounted for by certain cultural dimensions, such as belonging to an individualistic versus a collectivistic culture. Individualism may be measured by concepts such as independence, self-reliance, and emotional detachment from ingroups (Triandis, McCusker, & Hui, 1990), and levels of individualism vary across cultures and even within cultures (Zhang, Norvilitis, & Ingersoll, 2007). High levels of individualism tend to be expressed in countries such as the United States, Britain, Australia, and many other Western societies. In contrast, members of collectivistic societies may view themselves as fundamentally connected with others of their same cultural group (e.g., Markus & Kitayama, 1991). Collectivism tends to be prominent in many societies in Africa, Asia, and Latin America (Zhang et al., 2007). For instance, complete independence may be an ultimate goal and may result in happiness/contentment for someone who belongs to an individualistic culture; whereas, it may be particularly important to have a certain degree of dependence and interconnectedness for someone who belongs to a collectivistic culture (e.g., Markus & Kitayama, 1991). Thus, for instance, research linking social networking and support, or interpersonal needs, to suicide in individualistic cultures (e.g., the United States) may not be applicable to collectivistic cultures (e.g., Japan).

The study of positive psychological constructs as transcendent across cultures likely results in neglected information about unique well-being and resilience factors experienced by racial and ethnic minority group members. Congruent with previous work that denigrates the "color-blind" perspective (Bonilla-Silva, 2001), we argue that the field of positive psychology could benefit from focusing on cultural strengths rather than overlooking them. This could be implemented, initially, by acknowledging that cultural differences exist and that racial and ethnic minority

group members may rely on unique protective/resilience factors. The transcendence of positive psychology may also allow the omission of unique risk factors (e.g., discrimination and racism) experienced by historically marginalized groups. In addition, the global perspective of positive psychological constructs may preclude important information to be learned from unique culture-specific strengths, such as ethnic identity, biculturalism, familism, and religiosity/spirituality.

Minority Well-Being Is Likely Impacted by Historical and Ongoing Sociopolitical Contexts

In the current discussion of inclusion of race, ethnicity, and culture, it would be remiss to fail to acknowledge the considerable historic and ongoing negative experiences faced by racial and ethnic minority group members in the United States (U.S.), as these experiences may place these individuals at elevated risk for suicide. Several significant historical examples include the slavery of African Americans, and the genocide and forced relocation of American Indian/Alaska Natives (AI/ANs). These experiences have been termed "historical trauma," "historical loss," and "historical grief," which encompass the intergenerational transmission of culture-related trauma (e.g., Brave Heart, 1998; Brave Heart, Chase, Elkins, & Altschul, 2011; Whitbeck, Adams, Hoyt, & Chen, 2004). Although these terminologies have been largely empirically studied in AI/AN populations, similar intergenerational trauma processes may be applied to other racial and ethnic groups. For instance, the intergenerational traumas experienced by both AI/ANs and African American groups in the U.S. have been described as analogous to the Jewish Holocaust (Duran, 2006; Poussaint & Alexander, 2000).

The longstanding hypothesis that historical loss would be related to increased suicide risk has recently been empirically studied. Tucker, Wingate, O'Keefe, Hollingsworth, and Cole (2016) examined the relation between historical loss thinking and suicide ideation through brooding and reflective rumination in a sample of American Indian (AI) young adults. Results demonstrated that the frequency of historical loss thinking had an indirect effect on suicide ideation through both brooding and reflection. These findings suggest that AIs who frequently think about historical losses may be more likely to engage in brooding and reflection, which, in turn, may lead to increased thoughts of suicide (Tucker et al., 2016). In a similar study conducted with a sample of young adult AIs on six different Plains reservation-based communities, historical loss was significantly associated with increased depression symptoms, PTSD symptoms, and poly-substance use; however, historical loss was not directly associated with suicide attempts (Brockie, Dana-Sacco, Wallen, Wilcox, & Campbell, 2015). Additionally, several qualitative studies have revealed the negative impacts of historical traumas/losses on suicide rates in Indigenous communities (e.g., Walls, Hautala, & Hurley, 2014). Collectively, these findings indicate that, for certain AI/AN communities, experiences of historical

traumas/losses may be indirectly related to increased suicide risk. In addition, although the terminologies of "historical trauma," "historical loss," and "historical grief," are frequently associated with AI/AN populations, other racial and ethnic groups (e.g., African Americans) have parallel historical and contemporary experiences in the United States, and elsewhere throughout the world.

Ongoing differential treatment and negative experiences faced by racial and ethnic minority group members in the U.S., including discrimination and racism, negatively impact minority well-being. Ethnic discrimination is conceptualized as a distinct type of stressful event that comes from one's environment, necessitates psychosocial adjustment, and has been found to negatively impact those people who are targets of these injustices (e.g., Brondolo, ver Halen, Pencille, Beatty, & Contrada, 2009; Clark, Anderson, Clark, & Williams, 1999; Meyer, 2003).

In a review of 53 population-based studies on ethnic/racial discrimination and mental health, 25 (47.17%) studies examined the link between ethnic/racial discrimination and psychological distress (Williams, Neighbors, & Jackson, 2003). Out of these 25 studies, 20 studies (80%) found a positive association between discrimination and psychological distress, 3 (12%) reported a conditional association, and 2 (8%) reported no association. In addition, 3 out of 4 (25%) studies that examined the relation between perceived discrimination and a diagnosis of major depressive disorder indicated a positive association. This review paper also included one study each that found a positive association between ethnic/racial discrimination and generalized anxiety disorder, early initiation of substance use, psychosis, and anger (Williams et al., 2003). In addition to its impact on general mental health, major depressive disorder, and other disorders, ethnic discrimination also deleteriously impacts suicide risk. Specifically, previous studies demonstrated positive linkages between ethnic discrimination and suicide ideation and/or suicide attempts among African Americans (Chao, Mallinckrodt, & Wei, 2012; Walker, Salami, Carter, & Flowers, 2014), American Indians (Freedenthal & Stiffman, 2004; Yoder, Whitbeck, Hoyt, & LaFromboise, 2006), Asians and Asian Americans (Cheng et al., 2010; Wang, Wong, & Fu, 2013), and Hispanic/Latino(a) Americans (Hwang & Goto, 2008; Perez-Rodriguez et al., 2014).

In an expansion of Williams et al. (2003) review of the association between ethnic/racial discrimination and mental health, Paradies (2006) identified 138 epidemiological studies that examined the relation between self-reported experiences of racism and health. Out of the studies that focused on negative mental health outcomes, 72% of examined outcomes were significantly associated with racism in the expected direction (i.e., more self-reported racism was associated with worse mental health). Seven studies examined general health outcomes in relation to both racism and racism-related stress. In three out of the seven studies, both racism and racism-related stress had positive associations with general health-related outcomes. In the remaining four studies, racism-related stress, but not racism itself, was associated with increased systolic blood pressure, smoking, somatization, psychological distress, and symptoms of depression, anxiety, and psychoticism. Previous findings of moderating and mediating variables of the relation between racism and health were also discussed. Significant moderating variables, such as having a strong sense

of ethnic identity or concept, participation in traditional activities (e.g., participation in traditional powwows for AIs, such as attendance, dancing, singing, and drumming; Whitbeck, McMorris, Hoyt, Stubben, & LaFromboise, 2002), spirituality, religious support, seeking/instrumental social support, and having certain personality traits (e.g., hardiness), were found to attenuate the adverse effects of self-reported racism on depressive symptoms, psychological distress, and self-assessed health status. Having high self-esteem (i.e., for African Americans; Fischer & Shaw, 1999), experiencing stressful events, and substance misuse were all found to have detrimental/intensifying effects on the relations between self-reported racism on mental health, life satisfaction, and anxiety/depression (Fischer & Shaw, 1999; Morgan, Beale, Mattis, Stovall, & White, 2000; Utsey & Payne, 2000). Stress was shown to be a significant mediator between self-reported racism and health; whereas, self-esteem was found to mediate the relationship between self-reported racism and blood pressure, psychological distress, and depression/anxiety for male but not female adolescents. In addition, the relations between self-reported racism and substance use, alcohol abuse, self-assessed health, and impaired fasting glucose are also mediated by psychological distress, depression, and historical loss (Paradies, 2006).

Scholars generally agree that blatant forms of racial discrimination have decreased since the 1960s (e.g., Dovidio & Gaertner, 2004; McConahay, 1986; Steele, 1997; Sue & Sue, 2012); however, there have been many recent events in the current sociopolitical climate that demonstrate the contrary. These recent events have largely involved individuals in positions of power (e.g., political figures; and famous actors/actresses, TV show hosts, musical artists, and athletes) making blatant racist remarks or being dismissive of the experiences of racial discrimination among People of Color (POC). Given that well-known individuals deliver the aforementioned acts, these events are often highly publicized and further perpetuate racial discrimination and injustice for POC. Other recent, nationally recognized events surrounding racial discrimination involve incidents of wrongful accusation (e.g., trespassing or appearing "suspect"), arrest, injury, and even death of POC by law enforcement, as well as by civilians who attempt to justify their acts by claiming self-defense; such instances demonstrate the existence of implicit biases.

In addition to the presence of blatant racial discrimination, contemporary discriminatory practices that appear in more subtle forms are rampant. For example, racial microaggressions (RMAS) are prejudicial messages expressed through verbal, behavioral, and environmental slights, such as snubs and dismissive looks. Although these communications may appear superficially "harmless," the underlying intention is often to deliver denigrating, hostile, or negative messages about a person or group based on their racial and/or ethnic identity (Sue et al., 2007). Sue et al. (2007) identified the following nine specific themes related to different forms of microaggressions, including (a) assumptions that a Person of Color (POC) is a foreigner or alien in their own land and not a "true" American; (b) assumptions of lesser intelligence; (c) statements that convey colorblindness or denial that one "sees" race; (d) assumptions of criminality; (e) denial of individual racism; (f) assumptions regarding the myth of meritocracy, which is the belief that life

opportunities (e.g., securing a job, college enrollment, scholarship, or healthcare aid) are due solely to individual effort and race should pose no obstacles; (g) assumptions that one's cultural background and style of communication are dysfunctional, pathological, or valued less than those of White/Caucasian background; (h) assumptions of being treated as a second-class citizen; and (i) observing a relative lack of POC from settings (e.g., employment, collegiate), thus receiving underlying messages that one is less welcomed or valued (Sue et al., 2007; Wong et al., 2014).

Racial microaggressions have been studied in the context of suicide risk. Specifically, in a diverse sample of POC, O'Keefe et al. (2015) found positive associations with RMAS and both depression and suicidal ideation. They also found that African American/Blacks reported experiencing more RMAS compared to Hispanic/Latinos, Asian/Asian Americans, and AI/ANs. In addition, AI/AN participants reported significantly less RMAS than Asian/Asian Americans, African American/Blacks, and Hispanic/Latinos, and there was no difference in frequency of RMAS when comparing Hispanic/Latinos and Asian/Asian Americans. Furthermore, they found that depression symptoms mediated the relation between RMAS and suicidal ideation in the total sample of POC. Hollingsworth et al. (2017) conducted a similar study that examined RMAS and suicide ideation in the context of the Interpersonal Theory of Suicide (Joiner, 2005) and with an exclusively African American sample. The authors examined whether perceived burdensomeness and thwarted belongingness from the ITS would mediate the relations between the six different RMAS dimensions and suicide ideation, finding that perceived burdensomeness, but not thwarted belongingness, mediated the relation between three RMAS dimensions (i.e., invisibility, low-achievement/undesirable culture, and environmental invalidations) and suicide ideation. Collectively, these two aforementioned studies by O'Keefe et al. (2015) and by Hollingsworth et al. (2017) demonstrate that racial microaggressions are real, lived experiences for POC and are associated with maladaptive mental health outcomes, including depression symptoms and suicidal thinking. Although the frequency and content (i.e., dimensions) of RMAS likely differ across racial and ethnic minority groups, the pervasiveness of RMAS and their deleterious consequences are aspects that should be brought to the attention of others, including researchers, clinicians, and policymakers, as well as the general society.

The evidence is robust—experiences of ethnic and racial discrimination and racism significantly impact the mental health of POC and, accordingly, minority well-being. There is still much knowledge to be gained about cultural differences in positive psychological constructs, as well as about unique cultural strengths, and how these factors may be protective against suicide. Therefore, we shift our focus to positive psychological constructs and resilience for the remainder of this chapter to highlight cultural strengths. We will provide an overview of the extant empirical work, both quantitative and qualitative, conducted with racial and ethnic minority samples; present several culturally grounded theoretical frameworks drawn from strengths-based approaches; and provide suggestions for future research. Of note, these areas of theory and research may have broader implications for the develop-

ment and implementation of prevention and intervention efforts across a variety of different ethnocultural populations.

Mainstream Positive Psychological Suicide Research with Racial/Ethnic Minorities

The study of cultural differences in positive psychological constructs is important because it may inform culture-specific coping strategies that protect against suicidal thoughts and behaviors (STBs) for racial and ethnic minority group members. This line of research could have significant clinical contributions for suicide intervention and prevention efforts with racial and ethnic minority clients. Although the literature on positive psychological/protective factors and suicide with racial and ethnic minority groups is relatively limited, we provide an overview of the current existing literature and suggestions for future research, and we note possible clinical implications that warrant further investigation.

Hope, a positive and future-oriented cognitive emotional factor, and positive problem orientation, a pro-active and adaptive problem-solving approach, has been studied in relation to suicide risk with various racial and ethnic minority adults (Chesin & Jeglic, 2012; Grewal & Porter, 2007). In a sample of Latino/a American college students, hope negatively and significantly predicted suicidal behavior (Chang, Yu, Kahle, Jeglic, & Hirsch, 2013), and positive problem orientation negatively predicted suicidal behavior. Additionally, the interaction between hope and positive problem orientation negatively predicted suicidal behavior (Chang et al., 2013), such that those with both more hope and a positive approach to problem-solving reported less suicide risk.

In a similar study with African American college students, hope negatively and significantly predicted suicide ideation (Davidson, Wingate, Slish, & Rasmussen, 2010). The authors also examined hope in the context of the Interpersonal Psychological Theory of Suicide (IPTS; Joiner, 2005). The IPTS is a well-established theory of suicide that consists of two interpersonal constructs: perceived burdensomeness (feelings of self-hatred and perception of being a burden on close others) and thwarted belongingness (feelings of loneliness and absence of reciprocally caring relationships). The IPTS theory posits that when these two interpersonal constructs are experienced simultaneously, the strongest desire for suicide is present (Joiner, 2005; Van Orden et al., 2010). Results of the study by Davidson et al. (2010) indicated that hope and its subcomponents (goals, pathways, and agency) each negatively predicted perceived burdensomeness and thwarted belongingness among African American college students. To extend this research, Hollingsworth, Wingate, Tucker, O'Keefe, and Cole (2016) examined hope as a moderator of the associations between perceived burdensomeness and suicide ideation, and between thwarted belongingness and suicide ideation, among African Americans. They found that for African Americans low in hope, as levels of perceived burdensomeness increased,

thoughts of suicide increased. However, for those with high hope, there was no relation between perceptions of being a burden and suicide ideation. Findings were similar in respect to thwarted belongingness, such that for those low in hope, as levels of thwarted belongingness increased, so did thoughts of suicide; yet, for those with high hope, there was no relation between feelings of not belonging and suicide ideation (Hollingsworth et al., 2016). Collectively, these studies suggest that hope may be a particularly salient protective factor against suicide for African Americans.

Optimism is another future-oriented cognition that has been studied in relation to suicide risk among diverse populations. Hope and optimism each negatively predicted perceived burdensomeness, thwarted belongingness, and suicide ideation in a sample of American Indian/Alaska Natives (O'Keefe & Wingate, 2013). In a study that compared Ghanaian college students with American college students on levels of hopelessness, optimism, and suicidal ideation, Ghanaian students had lower levels of hopelessness and suicidal ideation, and higher levels of optimism compared to American counterparts (Eshun, 1999).

In addition, grit has been conceptualized as a future-oriented cognition and has received recent attention in the context of suicide and with ethnic minority groups. In a sample of elderly Korean adults, grit significantly moderated the relation between depressive symptoms and suicide ideation, such that those high in grit had lower levels of suicide ideation and those low in grit and high in depressive symptoms had increased levels of suicide ideation (Kim, 2015). However, for those with low depression symptoms, there was almost no difference in their level of suicide ideation regardless of their level of grit. Grit also had a significant indirect effect on the linkage between depression and suicide ideation, such that grit decreased the impact of depression symptoms on suicide ideation (Kim, 2015).

Social support is a well-identified protective factor for suicide that has been examined in a number of racial and ethnic minority groups. Consistent with theoretical perspectives, having increased social support may buffer negative cognitions (e.g., feelings of thwarted belongingness from the Interpersonal Psychological Theory of Suicide; Joiner, 2005) that place one at increased risk for suicide. In general, research has indicated that increased social support is protective against suicide ideation and behaviors among African Americans, American Indian/Alaska Natives, Asian/Asian Americans, and Hispanic/Latino(a)s (e.g., Allen, Mohatt, Fok, Henry, & Burkett, 2014; Bennett & Joe, 2015; De Luca, Wyman, & Warren, 2012; Howard-Pitney, LaFromboise, Basil, September, & Johnson, 1992; Kaslow et al., 2005; Park et al., 2015; Tran et al., 2015; Wingate et al., 2005). For example, Tran et al. (2015) conducted a qualitative analysis with Asian American college students who had seriously considered suicide in the past year. Phenomenological analysis of participants' stories revealed the following protective factors: social support, desire to not hurt or burden others, fear (e.g., of the physical pain of self-injury), self-reliance (e.g., to enable perseverance during a suicidal crisis), and insight (e.g., into realization of a purpose for living; Tran et al., 2015).

Although the culmination of findings generally suggest that social support is protective against suicide across different populations, the meaning, composition, and settings where social support is received (e.g., Tribal communities, families

with multigenerational households, churches/religious communities) likely vary across different racial and ethnic groups and cultures. Future researchers may consider conducting focus groups and qualitative analyses to elucidate potential differences, across racial and ethnic groups, in the protective role of social support against suicidal thoughts and behaviors.

Religiosity and spirituality have also been examined as mainstream protective factors against suicide, and both theory and evidence suggest that these factors may be particularly protective for certain racial and ethnic groups. For example, many contemporary African American communities place a strong emphasis on religious and spiritual beliefs, which trace back to traditional practices that originated in West and Central Africa (e.g., Ani, 1990; Hollaway, 1990; Sutherland, 1993). Religiosity and spirituality have been empirically studied in relation to suicide prevention for African Americans. Molock, Matlin, Barksdale, Puri, and Lyles (2008) developed a youth suicide prevention program for African Americans within African American churches, which aimed to improve mental health services and decrease suicide by increasing help-seeking within the African American church community. The intervention focuses on reducing risk factors while enhancing protective factors through community alliances, sermons, workshops, and annual conferences, as well as increasing and accepting appropriate referral services within the congregation (Molock et al., 2008). African American youth who used religious coping to manage adversity reported a greater number of reasons for living, when suicide might otherwise be considered (Molock, Puri, Matlin, & Barksdale, 2006). Future research should explore whether there are culture-specific differences, both quantitative and qualitative, in the protective function of religiousness or spirituality against suicidal thoughts and behaviors, across differing ethnic/racial (e.g., African Americans versus Caucasians) and cultural groups (e.g., LGBTQ versus heterosexual).

In another example, a suicide prevention model focused on help-seeking has been developed with American Indians. Specifically, the *Zuni Life Skills Development Curriculum: A School/Community Based Suicide Prevention Intervention*, targets specific skills to reduce risks for suicidal behavior, while increasing ability to talk about suicide and seek help (LaFromboise & Howard-Pitney, 1994). This program was developed from the empirically supported American Indian Life Skills Development Curriculum and evaluated in collaboration with the Zuni Pueblo in New Mexico. The intervention has initially been shown to be effective for reducing several risk factors for depression and increasing peer support skills (LaFromboise & Howard-Pitney, 1994), and is being further developed to increase cultural identity, resilience, and community empowerment (Shropshire, Pearson, Joe, Romer, & Canetto, 2008).

In a sample of racially and ethnically diverse college students who had previously attempted suicide, Chesin and Jeglic (2016) found that mindfulness, specifically the ability to non-judgmentally observe experiences, was inversely related to suicide ideation severity. Interestingly, contrary to the study hypotheses, no significant relations were found between unique minority factors (e.g., recent discrimination, ethnic identity, acculturation stress, and level of acculturation) and current suicide ideation. Implications of these results suggest that mindfulness, particularly

the ability to observe experiences, may be protective against suicidal behavior in high-risk ethnically and racially diverse groups (Chesin & Jeglic, 2016).

Collectively, these empirical studies provide support to the notion that there are cultural differences in levels of traditional, mainstream positive psychological factors, including hope, positive problem orientation, optimism, grit, social support, religiosity/spirituality, and help-seeking, which must be considered. These studies also provide evidence to suggest that these resilience factors are protective against suicide risk and behaviors for racial and ethnic minority groups. Additionally, these studies highlight initial, yet promising, results for the clinical utility of resilience factors as protective against suicidal behavior among diverse populations.

Minority People Thrive In Spite of Risk: Unique Culture-Specific Protective Factors

In addition to mainstream positive psychological factors that have been applied to racial and ethnic minority groups, there are unique, culture-specific factors that may serve a protective function against suicidal thoughts and behaviors (STBs). Certain racial and ethnic minority groups experience significantly lower suicide rates in comparison to White/European Americans, but the reasons why are largely unknown. Suicidology could benefit from studying the unique strengths of racial and ethnic minority individuals to better inform suicide resilience. Several examples of cultural-specific protective factors against suicide include Afrocentric worldview, ethnic identity, and bicultural identity, and are discussed in more detail below.

Research within the stress coping literature suggests that the repertoire of culturally specific coping behaviors for African Americans is not fully captured by the traditional ethnocentric European/Western worldview (e.g., Utsey, Adams, & Bolden, 2000). This disconnect led researchers to shift their focus to an African-centered approach (e.g., Afrocentric worldview), which reflects the traditional values, attitudes, beliefs, and customs of people of African descent (e.g., Asante, 1998). Although African Americans exist in different environmental, economic, and sociopolitical conditions than their predecessors, there is evidence that many specific practices and beliefs (e.g., spirituality) that originated in West and Central Africa have been preserved and persist in contemporary populations (e.g., African Americans) despite enduring 300 years of slavery (e.g., Kambon & Baldwin, 1992). Afrocentric worldview has been empirically applied to suicide among African Americans. In a Black American college student sample, Afrocentric worldview, social support from family, and reasons for living were indirectly protective against STBs through their respective negative associations with depressive symptoms (Wang, Wong, Tran, Nyutu, & Spears, 2013). To date, this is the only study to examine the protective role of an Afrocentric worldview, as it relates to suicide for African Americans. However, for African Americans, an Afrocentric worldview may be a specific indicator of ethnic identity.

Ethnic identity refers to one's level of association with their ethnic group, and includes having positive attitudes about one's ethnic group, as well as participation in culturally related behaviors and practices within their ethnic group (e.g., Phinney, 1992). Research has largely suggested a protective role of ethnic identity for POC in relation to STBs (e.g., Cheref, Talavera, & Walker, 2018; Polanco-Roman & Miranda, 2013; Walker, Wingate, Obasi, & Joiner, 2008). Specifically, Walker et al. (2008) demonstrated that ethnic identity significantly buffered the relation between symptoms of depression and suicide ideation among African American college students. Similarly, in a diverse sample of ethnic minority group members, Polanco-Roman and Miranda (2013) found that the relation between perceived discrimination and suicide ideation through hopelessness was significant only for those low in ethnic identity. Likewise, in a sample of Hispanic American emerging adults, Cheref et al. (2018) demonstrated that having a strong ethnic identity buffered the interactive effects of perceived discrimination and anxiety on suicide ideation. Notably, a few studies have revealed nonsignificant effects for the ethnic identity–suicide link when direct associations were examined, including in African American women (Perry, Stevens-Watkins, & Oser, 2013) and among Hispanic women (Ai, Weiss, & Fincham, 2014; Chesin & Jeglic, 2012). Collectively, these findings suggest that although ethnic identity may not function as a direct protective factor, it may serve indirectly as a protective factor against STBs for racial and ethnic minority group members, particularly in the context of other psychosocial stressors (e.g., discrimination).

Consistent with research on ethnic identity, it has also been suggested that having a bicultural identity (i.e., identifying with two cultures) is advantageous (e.g., Nguyen & Benet-Martínez, 2013). This is in stark contrast to earlier sociological underpinnings, which largely portrayed bicultural individuals as marginalized and stuck between two worlds (e.g., Rudmin, 2003; Vivero & Jenkins, 1999). More recently, Nguyen and Benet-Martínez (2013) conducted a meta-analysis on the association between biculturalism and adjustment, including psychological and sociocultural adjustment. In this meta-analytic review, psychological adjustment included life satisfaction, self-esteem, and positive affect, as well as (low) alienation, loneliness, negative affect, anxiety, and depression. Sociocultural adjustment was indicative of academic achievement, career success, and social skills, as well as (low levels of) behavioral problems (e.g., delinquency and risky sexual behaviors). Results indicated a significant, strong, and positive relation between biculturalism and adjustment (both psychological and sociocultural; Nguyen & Benet-Martínez, 2013). The benefits of biculturalism can be traced to the advantageous model, which suggests that membership in multiple minority groups is beneficial because bicultural individuals are provided with a broader repertoire of coping resources to draw upon when confronted with life stress (Ramos, Jaccard, & Guilamo-Ramos, 2003). Other researchers contend that biculturalism is the most ideal acculturation strategy because it leads to competency in navigating both dominant and heritage cultures (LaFromboise, Coleman, & Gerton, 1993), and to increased social support from both cultures (Mok, Morris, Benet-Martínez, & Karakitapoğlu-Aygün, 2007). Moreover, the process of navigating two cultures may translate to greater integrative

complexity, intellectual flexibility, and creativity (e.g., Benet-Martínez, Lee, & Leu, 2006). Although these studies addressing biculturalism focused on outcomes related to coping and general adjustment, suicide-related outcomes were not explored; therefore, future research should empirically investigate the association between biculturalism and suicidality.

Along a similar vein of thought, scholars have begun to recognize the importance of positive reinterpretation of negative events (e.g., historical trauma) experienced by racial and ethnic minority group members. Instead of focusing solely on negative outcomes following trauma, researchers can purposefully examine the accomplishments and resilience of minority groups *in spite of* these negative historical events. For example, Kirmayer, Gone, and Moses (2014) posited that taking a trauma-focused approach for AI/AN populations using analogies of the Holocaust might lead to distortions and blind spots. These researchers also suggested that each historical wrong requires its own set of understanding and moral imperatives (Kirmayer et al., 2014). Furthermore, while histories of violence, colonization, and slavery should be acknowledged, this must be coupled with recognition of individual and collective strengths of those who have survived and thrived (e.g., Denham, 2008; Kirmayer et al., 2014; Kirmayer, Dandeneau, Marshall, Phillips, & Williamson, 2011). While these studies are specific to AI/ANs, we believe that this resilience-based approach has broader implications for many other racial and ethnic minority populations, and potentially for other vulnerable groups, such as sexual minorities.

Positive Psychology: A Well-Positioned Field for Inclusivity

The U.S. demographic composition has experienced substantial and rapid growth in cultural diversity since the late 1800s, when the field of American psychology emerged. Diversity rates continue to increase, and it has been estimated that more than half of the U.S. population will be of a racial and ethnic minority background by 2050 (Passel & Cohn, 2008). Consequently, now is an ideal time to promote the growth and synthesis of positive psychology, suicide prevention, and minority work, to adapt to and better understand the growing U.S. minority population. Furthermore, positive psychology is optimally positioned to lead the behavioral sciences in the active pursuit of inclusion, including with a focus on racial and ethnic minority individuals. As a relatively new discipline, positive psychology is free from the longstanding burden of an arguably flawed and, at the very least, non-inclusive foundation of theory and research. Positive psychology is also not overly saturated with long-established Westernized approaches and philosophies as a foundation of key constructs. Although a relatively young field, positive psychology has gained support for, and initial integration with, the fields of psychopathology and suicidology. Both fields, however, require ongoing study to ensure the incorporation of culturally relevant factors into prevention and intervention strategies. We provide suggestions for future areas of research with diverse populations to increase an understanding of cross-cultural strengths and resilience in the prevention and intervention of suicide.

Considerations for Future Research

Future research approaches to studying suicide should incorporate both positive psychology and cultural inclusivity. Specifically, one proposed approach includes studying racial and ethnic minority individuals who are uniquely at low risk for suicide based on self-report assessment scores. For example, researchers could identify racial and ethnic minority groups and individuals who score particularly low on measures of lifetime suicide risk (e.g., low scores on the Beck Scale for Suicide Ideation; Beck & Steer, 1991), and/or those who score high on measures that contraindicate suicide risk (e.g., high scores on the Reasons For Living Inventory; Linehan, Goodstein, Nielsen, & Chiles, 1983). This work could include individuals both within a particular minority group and across several different minority groups, including intersections of minority statuses (e.g., racial/ethnic minority and LGBTQ). Once identified, researchers could follow up with this resilient group (henceforth *flourishers*) by conducting qualitative interviews to gain knowledge about unique resiliency factors within their cultural group (as opposed to the between-group approach). Researchers could then examine similarities and standout qualities across flourishers regarding, among other resiliency-based constructs, mental health, physical health, genetics, personality, environment, and problem-solving, and could examine unique culture-specific combinations of factors, or mediating and/or moderating factors, that account for the level of variability of these factors within flourishers. Additionally, researchers could study ratings of cultural flourishers on well-established positive psychological constructs (e.g., hope, optimism, grit, and gratitude). The use of nuanced methodological approaches, such as mixed methods and both within-group and between-group designs, could help to identify salient, culturally specific protective factors for suicide. Culturally grounded methodological approaches, such as community based participatory research (CBPR; See Chap. 12 on community empowerment strategies), should also be incorporated when working with vulnerable communities to insure stakeholder participation and to contribute to community health.

A complementary strategy to studying samples of individuals at particularly low risk for suicide (as identified by self-report assessment scores) is to empirically examine the strengths of group populations (e.g., cultural groups) previously deemed to have low likelihood of death by suicide (i.e., low group suicide death rates), from a positive psychological and culturally competent perspective. Similar to our noted individual-level approaches, group populations could be examined in detail with the explicit purpose of gaining knowledge about risk and protective factors unique to the target population. Researchers can examine the most robust factors contributing to mental health and physical health, including socio-environmental and positive psychological constructs. As described above, ideally, such investigations should utilize a variety of methodologies, and adhere to culturally informed practices.

Cultural groups at low risk for suicide may include specific racial and ethnic minority groups, as well as varying combinations of race/ethnicity, gender, sexual

orientation, and age. Elders within both African American and American Indian/Alaska Native communities tend to have lower rates of suicide and, thus, are examples of possible populations that warrant increased study to identify potentially unique resiliency and protective factors. The low rates of death by suicide among elders in these communities are in stark contrast to the particularly high rates of death by suicide among older White males.

Black/African American women are another demographic who warrant further study from positive suicidology framework. African Americans have consistently experienced low rates of suicide deaths compared to other racial and ethnic groups, with recent statistics estimating that African Americans die by suicide at a rate of 6.35 deaths per every 100,000 people (compared to 18.15/100,000 for non-Hispanic Whites; CDC, 2016). Gibbs (1997) describes the phenomenon of Black suicide as a "cultural paradox," in which Black people generally have lower rates of suicide despite experiencing generations of discrimination, persistent poverty, and lack of resources. Black women, in particular, have the lowest rates of deaths by suicide when compared to men and women of all other races and ethnicities in the U.S. (i.e., 2.45/100,000; CDC, 2016). Adding to the complexity of this cultural paradox, Black women are particularly unique because, according to cultural stress theories (e.g., Minority Stress Theory; Meyer, 2003), members of multiple marginalized groups generally experience increased psychological risk factors and, thus, lower well-being, compared to other groups. Therefore, perhaps increasing research on African American females, particularly those without a history of STBs, will advance the field of suicidology. Of note, this suggestion is not intended to stereotype Black women as people who do not struggle with mental health concerns or to add to the existing stigma of help-seeking for suicide and related problems. Additionally, these suggestions are not intended to minimize the importance of research with populations at high risk for suicide (e.g., psychiatric inpatients, older White males, military personnel/veterans); rather, these are humble suggestions to help broaden and advance the field of suicidology by identifying and elucidating differences in culture-specific strengths. By increasing knowledge of largely unstudied constructs, the fields of positive psychology and suicidology can capitalize on, and potentially adapt, these resiliency factors into suicide prevention and intervention strategies for multiple populations, including those at high risk for suicide.

For example, suicide rates among military personnel are the highest in U.S. history, at approximately 29.7 deaths per 100,000, well above the rate of 13.2 per 100,000 among the general population (Luxton et al., 2010). With increasing rates of suicide deaths in active military/veteran populations, the Veterans Administration and other military agencies (e.g., Department of Defense) have taken interest in this concern and have provided financial investments in suicide prevention and intervention efforts. Military/veteran suicide work is relevant to this chapter for several reasons. First, perhaps the general fields of suicidology and positive psychology can learn from military agencies in terms of increasing resources and funding to support suicide intervention and prevention research. Second, racial and ethnic minority Americans serve in the military at disproportionately higher rates, compared to the general population (Heady, 2011). Because of this clear intersection of military and

racial and ethnic minority cultures, perhaps experts in military suicide and experts in minority suicide should develop increased collaborations, as they likely have similar goals to decrease suicide deaths and increase mental health and well-being, and they can also learn from each other's fields of expertise.

Another area that necessitates further study involves clinical intervention research (e.g., randomized controlled trials; RCTs) with culturally diverse groups in the treatment of suicide. Racial and ethnic minority group members are more likely to experience negative environmental stressors (e.g., discrimination, racism), and positive psychological interventions may serve as a particularly helpful mechanism to disrupt the linkages between external stressors (e.g., negative life events and poor health) and negative outcomes (i.e., suicidal thoughts and behaviors; Wingate et al., 2006). For example, previous research has suggested incorporating the use of social problem-solving therapy (Nezu & D'Zurilla, 2006) with hope-based interventions (i.e., Hope Therapy; Cheavens et al., 2006) to reduce suicide in Latinos (Chang et al., 2013). Similarly, Davidson et al. (2010) and Hollingsworth et al. (2014) recommended the use of Hope Therapy with African American clients to foster levels of hope that may protect against suicidal thoughts, as well as to facilitate decreased interpersonal risk factors for suicide. However, increased positive psychological intervention research is needed with diverse samples to empirically determine whether these interventions are effective and generalizable for other ethnic and racial minority populations.

Another proposed research methodology is the use of case studies, which could be used to inform prevention and intervention techniques for those who may be likely to consider suicide. For illustrative purposes, consider a retired combat veteran, who is familiar with guns and loss of life (including by suicide), is a person of color, single, and identifies as transgender, yet who is, by all accounts, living well, and arguably thriving. Based on well-known risk factors and experience with stigma and discrimination, this person should be considered at high risk for suicide. If they are not, however, such a person would make an ideal case study subject for a positive psychological and culturally informed approach to the study of suicide. Knowledge about what cognitive-emotional or psychosocial resources this person has, behaviors they engage in, and which innate characteristics about this person keeps them from ideating, attempting, or dying from suicide can inform hypothesis generation regarding positive psychological protective factors. Clinicians working with resilient minority patients might consider sharing discovery of such attributes with the larger scientific community via a case study methodological approach.

Suggestions for Increasing Racial and Ethnic Minority Research in Positive Suicidology

As a final point, we propose that now is an ideal time for the fields of positive psychology and suicidology to address the relative lack of racial and ethnic minority research found within the current body of social sciences literature. To address these

gaps, the sub-fields of psychology should cultivate additional researchers, both those who belong to underrepresented groups and to majority groups, to study diverse individuals and populations. This could be accomplished by increasing educational pipeline opportunities for minority students, into psychology, with encouragement toward "research track" training and careers. One current example of such efforts can be seen through recent initiatives by the National Institute on Minority Health and Health Disparities (NIMHD), aiming to recruit and retain members of historically underrepresented groups for academic positions with the goal of bringing unique culturally diverse perspectives into higher education. These aims could be furthered through increased incentives to hire and retain diverse PhD-level faculty members (e.g., diversity hiring committees). As well, federal funding incentives might be harnessed, such as by increasing the current requirements to include diversity in grant supported research samples, and by requiring grant application review criteria to more-stringently insure that projects are sufficiently inclusive and representative of different cultural groups.

Chapter Summary

Wingate et al. (2006) were the first to suggest that the field of suicidology be expanded to include individuals without a history of suicidal thoughts and behaviors (STBs), as this focus on resilience could enhance greater understanding of why certain individuals are protected against STBs. This shift in focus on what is "right" or adaptive about a person, rather than on what is "wrong" or maladaptive about a person, could have many implications for suicide prevention and intervention strategies. Despite the presence of multiple risk factors, or even a conglomeration of risk factors, many people never attempt suicide. Furthermore, at any given time, the number of people at low risk for suicide outweighs the number of people at acute risk of dying by suicide. On one hand, studying acute risk factors for suicide is an important approach; yet, on the other hand, researchers have not significantly improved in ability to predict who will subsequently attempt suicide (e.g., Franklin et al., 2017). In this chapter, we suggest an alternative approach to most suicide research by focusing on well-being and resilience and, further, we extend Chang et al.' (2016) important discussion on positive psychology with racial and ethnic minority groups by applying similar principles to the field of suicidology. We suggest that positive psychology is optimally positioned to lead the field with an active pursuit of inclusion of racial and ethnic minority individuals. Moving forward, we propose increased positive psychological research regarding suicide resilience that incorporates participation by understudied racial and ethnic minority groups, and we have provided specific recommendations and considerations for future research, including the investigation of populations who represent intersections of minority statuses (e.g., race, ethnicity, sexual orientation, biological sex, and gender identity). It is our thought, and hope, that the beneficial principles of positive psychology can be harnessed to prevent suicide, but with the additional goal of making this

approach inclusive of, and applicable to, a wide array of racial, ethnic and culturally diverse individuals and groups.

References

Ai, A. L., Weiss, S. I., & Fincham, F. D. (2014). Family factors contribute to general anxiety disorder and suicidal ideation among Latina Americans. *Women's Health Issues, 24*(3), e345–e352. https://doi.org/10.1016/j.whi.2014.02.008

Allen, J., Mohatt, G. V., Fok, C. T., Henry, D., & Burkett, R. (2014). A protective factors model for alcohol abuse and suicide prevention among Alaska Native youth. *American Journal of Community Psychology, 54*(1–2), 125–139. https://doi.org/10.1007/s10464-014-9661-3

American Psychological Association. (2017). *Multicultural guidelines: An ecological approach to context, identity, and intersectionality*. Retrieved from http://www.apa.org/about/policy/multicultural-guidelines.pdf

Asante, M. K. (1998). *The Afrocentric idea* (rev. ed.). Philadelphia, PA: Temple University.

Ani, M. (1990). The implications of African-American spirituality. In M. K. Asante & K. W. Asante (Eds.), African culture: The rhythms of African unity (pp. 207–231). Trenton, NJ: African World Press.

Beck, A. T., & Steer, R. A. (1991). *Manual for the Beck scale for suicide ideation*. San Antonio, TX: Psychological Corporation.

Benet-Martínez, V., Lee, F., & Leu, J. (2006). Biculturalism and cognitive complexity: Expertise in cultural representations. *Journal of Cross-Cultural Psychology, 37*(4), 386–407. https://doi.org/10.1177/0022022106288476

Bennett, M. J., & Joe, S. (2015). Exposure to community violence, suicidality, and psychological distress among African American and Latino youths: Findings from the CDC Youth Violence Survey. *Journal of Human Behavior in the Social Environment, 25*(8), 775–789. https://doi.org/10.1080/10911359.2014.922795

Bonilla-Silva, E. (2001). *White supremacy and racism in the post-civil rights era*. Boulder, CO: Lynne Rienner Publishers.

Brave Heart, M. (1998). The return to the sacred path: Healing the historical trauma and historical unresolved grief response among the Lakota through a psychoeducational group intervention. *Smith College Studies in Social Work, 68*(3), 287–305.

Brave Heart, M., Chase, J., Elkins, J., & Altschul, D. B. (2011). Historical trauma among indigenous peoples of the Americas: Concepts, research, and clinical considerations. *Journal of Psychoactive Drugs, 43*(4), 282–290. https://doi.org/10.1080/02791072.2011.628913

Brockie, T. N., Dana-Sacco, G., Wallen, G. R., Wilcox, H. C., & Campbell, J. C. (2015). The relationship of adverse childhood experiences to PTSD, depression, poly-drug use and suicide attempt in reservation-based Native American adolescents and young adults. *American Journal of Community Psychology, 55*(3–4), 411–421. https://doi.org/10.1007/s10464-015-9721-3

Brondolo, E., ver Halen, N. B., Pencille, M., Beatty, D., & Contrada, R. J. (2009). Coping with racism: A selective review of the literature and a theoretical and methodological critique. *Journal of Behavioral Medicine, 32*(1), 64–88. https://doi.org/10.1007/s10865-008-9193-0

Centers for Disease Control and Prevention. (2016). *Mortality data from the National Vital Statistics System (NVSS) 2001-2016*. Retrieved from https://wisqars-viz.cdc.gov/

Cha, C. B., Tezanos, K. M., Peros, O. M., Ng, M. Y., Ribeiro, J. D., Nock, M. K., & Franklin, J. C. (2017). Accounting for diversity in suicide research: Sampling and sample reporting practices in the united states. *Suicide and Life-Threatening Behavior*. https://doi.org/10.1111/sltb.12344.

Chang, E. C., Downey, C. A., Hirsch, J. K., & Lin, N. J. (2016). *Positive psychology in racial and ethnic minority groups: Theory, research, and practice*. American Psychological Association.

Chang, E. C., Yu, E. A., Kahle, E. R., Jeglic, E. L., & Hirsch, J. K. (2013). Is doubling up on positive future cognitions associated with lower suicidal risk in Latinos?: A look at hope and positive problem orientation. *Cognitive Therapy and Research, 37*(6), 1285–1293. https://doi.org/10.1007/s10608-013-9572-x

Chao, R. C., Mallinckrodt, B., & Wei, M. (2012). Co-occurring presenting problems in African American college clients reporting racial discrimination distress. *Professional Psychology: Research and Practice, 43*(3), 199–207. https://doi.org/10.1037/a0027861

Cheng, J. Y., Fancher, T. L., Ratanasen, M., Conner, K. R., Duberstein, P. R., Sue, S., & Takeuchi, D. (2010). Lifetime suicidal ideation and suicide attempts in Asian Americans. *Asian American Journal of Psychology, 1*(1), 18–30. https://doi.org/10.1037/a0018799

Cheref, S., Talavera, D., & Walker, R. L. (2018). Perceived discrimination and suicide ideation: Moderating roles of anxiety symptoms and ethnic identity among Asian American, African American, and Hispanic emerging adults. *Suicide and Life-Threatening Behavior*. https://doi.org/10.1111/sltb.12467.

Chesin, M. S., & Jeglic, E. L. (2012). Suicidal behavior among Latina college students. *Hispanic Journal of Behavioral Sciences, 34*(3), 421–436. https://doi.org/10.1177/0739986312445271

Chesin, M. S., & Jeglic, E. L. (2016). Factors associated with recurrent suicidal ideation among racially and ethnically diverse college students with a history of suicide attempt: The role of mindfulness. *Archives of Suicide Research, 20*(1), 29–44. https://doi.org/10.1080/13811118.2015.1004488

Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist, 54*(10), 805–816. https://doi.org/10.1037/0003-066X.54.10.805

Curtin, S. C., Warner, M., & Hedegaard, H. (2016). *Increase in suicide in the United States, 1999–2014. NCHS data brief, no 241*. Hyattsville, MD: National Center for Health Statistics.

Davidson, C. L., Wingate, L. R., Slish, M. L., & Rasmussen, K. A. (2010). The great black hope: Hope and its relation to suicide risk among African Americans. *Suicide and Life-Threatening Behavior, 40*(2), 170–180. https://doi.org/10.1521/suli.2010.40.2.170

De Luca, S. M., Wyman, P., & Warren, K. (2012). Latina adolescent suicide ideations and attempts: Associations with connectedness to parents, peers, and teachers. *Suicide and Life-Threatening Behavior, 42*(6), 672–683. https://doi.org/10.1111/j.1943-278X.2012.00121.x

Denham, A. R. (2008). Rethinking historical trauma: Narratives of resilience. *Transcultural Psychiatry, 45*(3), 391–414. https://doi.org/10.1177/1363461508094673

Dovidio, J. F., & Gaertner, S. L. (2004). Aversive racism. In M. Zanna (Series Ed.), *Advances in experimental social psychology* (pp. 1–52). https://doi.org/10.1016/S0065-2601(04)36001-6.

Duran, E. (2006). *Healing the soul wound: Counseling with American Indians and other native peoples*. New York, NY: Teachers College Press.

Eshun, S. (1999). Cultural variations in hopelessness, optimism, and suicidal ideation: A study of Ghana and U. S. college samples. *Cross-Cultural Research: The Journal of Comparative Social Science, 33*(3), 227–238. https://doi.org/10.1177/106939719903300301

Fischer, A. R., & Shaw, C. M. (1999). African Americans' mental health and perceptions of racist discrimination: The moderating effects of racial socialization experiences and self-esteem. *Journal of Counseling Psychology, 46*(3), 395–407. https://doi.org/10.1037/0022-0167.46.3.395

Franklin, J. C., Ribeiro, J. D., Fox, K. R., Bentley, K. H., Kleiman, E. M., Huang, X., … Nock, M. K. (2017). Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychological Bulletin, 143*(2), 187–232. https://doi.org/10.1037/bul0000084

Freedenthal, S., & Stiffman, A. R. (2004). Suicidal behavior in urban American Indian adolescents: A comparison with reservation youth in a southwestern state. *Suicide and Life-Threatening Behavior, 34*(2), 160–171. https://doi.org/10.1521/suli.34.2.160.32789

Gibbs, J. T. (1997). African-American suicide: A cultural paradox. *Suicide and Life-Threatening Behavior, 27*(1), 68–79. https://doi.org/10.1111/j.1943-278X.1997.tb00504.x

Graham, S. (1992). "Most of the subjects were White and middle class": Trends in published research on AfricanAmericans in selected APA journals, 1970–1989. *American Psychologist, 47*(5), 629.

Grewal, P. K., & Porter, J. E. (2007). Hope Theory: A Framework for Understanding Suicidal Action. *Death Studies, 31*(2), 131–154. https://doi.org/10.1080/07481180601100491

Hartmann, W. E., Kim, E. S., Kim, J. H. J., Nguyen, T. U., Wendt, D. C., Nagata, D. K., & Gone, J. P. (2013). In search of cultural diversity, revisited: Recent publication trends in cross-cultural and ethnic minority psychology. *Review of General Psychology, 17*(3), 243–254. https://doi.org/10.1037/a0032260

Heady, H. R. (2011). Rural veterans: Invisible heroes, special people, special issues. *Journal of Rural Social Sciences, 26*(3), 1.

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Beyond WEIRD: Towards a broad-based behavioral science. *Behavioral and Brain Sciences, 33*(2–3), 111–135. https://doi.org/10.1017/S0140525X10000725

Hollingsworth, D. W., Wingate, L. R., Tucker, R. P., O'Keefe, V. M., & Cole, A. B. (2014). Hope as a Moderator of the Relationship Between Interpersonal Predictors of Suicide and Suicidal Thinking in African Americans. *Journal Of Black Psychology, 42*(2), 175–190. https://doi.org/10.1177/0095798414563748

Hollingsworth, D. W., Wingate, L. R., Tucker, R. P., O'Keefe, V. M., & Cole, A. B. (2016). Hope as a moderator of the relationship between interpersonal predictors of suicide and suicidal thinking in African Americans. *Journal of Black Psychology, 42*(2), 175–190. https://doi.org/10.1177/0095798414563748

Hollingsworth, D. W., Cole, A. B., O'Keefe, V. M., Tucker, R. P., Story, C. R., & Wingate, L. R. (2017). Experiencing racial microaggressions influences suicide ideation through perceived burdensomeness in African Americans. *Journal of Counseling Psychology, 64*(1), 104–111. https://doi.org/10.1037/cou0000177

Hollaway, J. E. (1990). The origins of African American culture. In J. E. Hollaway (Ed.), Africanisms in American culture (pp. 1–18). Bloomington, IN: Indiana University Press.

Howard-Pitney, B., LaFromboise, T. D., Basil, M., September, B., & Johnson, M. (1992). Psychological and social indicators of suicide ideation and suicide attempts in Zuni adolescents. *Journal of Consulting and Clinical Psychology, 60*(3), 473–476. https://doi.org/10.1037/0022-006X.60.3.473

Hwang, W., & Goto, S. (2008). The impact of perceived racial discrimination on the mental health of Asian American and Latino college students. *Cultural Diversity and Ethnic Minority Psychology, 14*(4), 326–335. https://doi.org/10.1037/1099-9809.14.4.326

Joiner, T. (2005). *Why people die by suicide*. Harvard University Press.

Kambon, K. K., & Baldwin, J. A. (1992). *The African personality in America: An African-centered framework*. Tallahassee, FL: Nubian Nation Publications.

Kaslow, N. J., Sherry, A., Bethea, K., Wyckoff, S., Compton, M. T., Grall, M., … Parker, R. (2005). Social risk and protective factors for suicide attempts in low income African American men and women. *Suicide and Life-Threatening Behavior, 35*, 400–412. https://doi.org/10.1521/suli.2005.35.4.400

Kim, Y. J. (2015). Study on the role of grit in Korean elderly suicide ideation. *Advanced Science and Technology Letters, 91*, 67–70. https://doi.org/10.14257/astl.2015.91.14

Kirmayer, L. J., Dandeneau, S., Marshall, E., Phillips, M. K., & Williamson, K. J. (2011). Rethinking resilience from indigenous perspectives. *The Canadian Journal of Psychiatry, 56*(2), 84–91.

Kirmayer, L. J., Gone, J. P., & Moses, J. (2014). Rethinking historical trauma. *Transcultural Psychiatry, 51*(3), 299–319. https://doi.org/10.1177/1363461514536358

LaFromboise, T., Coleman, H. K., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin, 114*(3), 395–412. https://doi.org/10.1037/0033-2909.114.3.395

LaFromboise, T. D., & Howard-Pitney, B. (1994). The Zuni Life Skills Development curriculum: A collaborative approach to curriculum development. *American Indian and Alaska Native Mental Health Research, 4*(Mono), 98–121. https://doi.org/10.5820/aian.mono04.1994.98

Leong, F. L. (2009). Guest editor's introduction: History of racial and ethnic minority psychology. *Cultural Diversity and Ethnic Minority Psychology, 15*(4), 315–316. https://doi.org/10.1037/a0017556

Lilienfeld, S. O. (2017). Microaggressions: Strong claims, inadequate evidence. *Perspectives on Psychological Science, 12*(1), 138–169. https://doi.org/10.1177/1745691616659391

Linehan, M. M., Goodstein, J. L., Nielsen, S. L., & Chiles, J. A. (1983). Reasons for staying alive when you are thinking of killing yourself: The Reasons for Living Inventory. *Journal of Consulting and Clinical Psychology, 51*(2), 276–286. https://doi.org/10.1037/0022-006X.51.2.276

Luxton, D. D., Skopp, N. A., Kinn, J., Bush, N. E., Reger, M. A., & Gahm, G. A. (2010). *DoD suicide event report: Calendar year 2009 annual report*. National Center for Telehealth and Teletechnology, Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, Joint Base Lewis-McChord, WA.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological review, 98*(2), 224.

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin, 129*(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

McConahay, J. B. (1986). Modern racism, ambivalence, and the Modern Racism Scale. In J. F. Dovidio & S. L. Gaertner (Eds.), Prejudice, discrimination, and racism. (pp. 91–125). San Diego, CA: Academic Press. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=1986-98698-004&site=ehost-live

Mok, A., Morris, M. W., Benet-Martínez, V., & Karakitapoğlu-Aygün, Z. (2007). Embracing American culture: Structures of social identity and social networks among first-generation biculturals. *Journal of Cross-Cultural Psychology, 38*(5), 629–635. https://doi.org/10.1177/0022022107305243

Molock, S. D., Matlin, S., Barksdale, C., Puri, R., & Lyles, J. (2008). Developing suicide prevention programs for African American youth in African American churches. *Suicide and Life-Threatening Behavior, 38*(3), 323–333. https://doi.org/10.1521/suli.2008.38.3.323

Molock, S. D., Puri, R., Matlin, S., & Barksdale, C. (2006). Relationship between religious coping and suicidal behaviors among African American adolescents. *Journal of Black Psychology, 32*(3), 366–389. https://doi.org/10.1177/0095798406290466

Morgan, L. M., Beale, R. L., Mattis, J. S., Stovall, E. L., & White, D. L. (2000). The combined impact of racism at work, non-racial work stress, and financial stress on Black women's psychological well-being. *African American Research Perspectives, 6*(1), 41–50.

Nagayama Hall, G. C., & Maramba, G. G. (2001). In search of cultural diversity: Recent literature in cross-culturaland ethnic minority psychology. *Cultural Diversity and Ethnic Minority Psychology, 7*(1), 12–26. https://doi.org/10.1037/1099-9809.7.1.12

Nezu, A. M., & D'Zurilla, T. J. (2006). Problem-solving therapy: A positive approach to clinical intervention. Springer Publishing Company.

Nguyen, A. D., & Benet-Martínez, V. (2013). Biculturalism and adjustment: A meta-analysis. *Journal of Cross-Cultural Psychology, 44*(1), 122–159. https://doi.org/10.1177/0022022111435097

O'Keefe, V. M., & Wingate, L. R. (2013). The role of hope and optimism in suicide risk for American Indians/Alaska Natives. *Suicide and Life-Threatening Behavior, 43*(6), 621–633. https://doi.org/10.1111/sltb.12044

O'Keefe, V. M., Wingate, L. R., Cole, A. B., Hollingsworth, D. W., & Tucker, R. P. (2015). Seemingly harmless racial communications are not so harmless: Racial microaggressions lead to suicidal ideation by way of depression symptoms. *Suicide and Life-Threatening Behavior, 45*(5), 567–576. https://doi.org/10.1111/sltb.12150

Paradies, Y. (2006). A systematic review of empirical research on self-reported racism and health. *International Journal of Epidemiology, 35*(4), 888–901. https://doi.org/10.1093/ije/dyl056

Park, S., Sulaiman, A. H., Srisurapanont, M., Chang, S., Liu, C., Bautista, D., … Hong, J. P. (2015). The association of suicide risk with negative life events and social support according to gender in Asian patients with major depressive disorder. *Psychiatry Research, 228*(3), 277–282. https://doi.org/10.1016/j.psychres.2015.06.032

Passel, J. S., & Cohn, D. (2008). *U.S. population projections: 2005-2050*. Retrieved from http://www.pewhispanic.org/2008/02/11/us-population-projections-2005-2050/

Perez-Rodriguez, M., Baca-Garcia, E., Oquendo, M. A., Wang, S., Wall, M. M., Liu, S., & Blanco, C. (2014). Relationship between acculturation, discrimination, and suicidal ideation and attempts among US Hispanics in the national epidemiologic survey of alcohol and related conditions. *Journal of Clinical Psychiatry, 75*(4), 399–407. https://doi.org/10.4088/JCP.13m08548

Perry, B. L., Stevens-Watkins, D., & Oser, C. B. (2013). The moderating effects of skin color and ethnic identity affirmation on suicide risk among low-SES African American women. *Race and Social Problems, 5*(1), 1–14. https://doi.org/10.1007/s12552-012-9080-8

Peterson, C., & Seligman, M. P. (2004). *Character strengths and virtues: A handbook and classification*. Washington, DC; New York, NY: American Psychological Association.

Phinney, J. S. (1992). The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research, 7*(2), 156–176. https://doi.org/10.1177/074355489272003

Polanco-Roman, L., & Miranda, R. (2013). Culturally related stress, hopelessness, and vulnerability to depressive symptoms and suicidal ideation in emerging adulthood. *Behavior Therapy, 44*(1), 75–87. https://doi.org/10.1016/j.beth.2012.07.002

Poussaint, A. F., & Alexander, A. (2000). *Lay my burden down: Unraveling suicide and the mental health crisis among African-Americans*. Boston, MA: Beacon Press.

Ramos, B., Jaccard, J., & Guilamo-Ramos, V. (2003). Dual ethnicity and depressive symptoms: Implications of being Black and Latino in the United States. *Hispanic Journal of Behavioral Sciences, 25*(2), 147–173. https://doi.org/10.1177/0739986303025002002

Rudmin, F. W. (2003). Critical history of the acculturation psychology of assimilation, separation, integration, and marginalization. *Review of General Psychology, 7*(1), 3–37. https://doi.org/10.1037/1089-2680.7.1.3

Sears, D. O. (1986). College sophomores in the laboratory: Influences of a narrow data base on socialpsychology's view of human nature. *Journal of personality and social psychology, 51*(3), 515.

Seligman, M. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*(1), 5–14. https://doi.org/10.1037/0003-066X.55.1.5

Shropshire, K. L., Pearson, J., Joe, S., Romer, D., & Canetto, S. S. (2008). Advancing prevention research on the role of culture in suicide prevention: An introduction. *Suicide and Life-Threatening Behavior, 38*(3), 321–322. https://doi.org/10.1521/suli.2008.38.3.321

Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist, 52*(6), 613–629. https://doi.org/10.1037/0003-066X.52.6.613

Sue, S. (1999). Science, ethnicity, and bias: Where have we gone wrong? *American Psychologist, 54*(12), 1070–1077. https://doi.org/10.1037/0003-066X.54.12.1070

Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A., Nadal, K. L., & Esquilin, M. (2007). Racial microaggressions in everyday life: implications for clinical practice. *American psychologist, 62*(4), 271–286. https://doi.org/10.1037/0003-066X.62.4.271

Sue, D. W., & Sue, D. (2012). Counseling the culturally diverse: Theory and practice. John Wiley & Sons.

Sutherland, M. (1993). Black authenticity: A psychology for liberating people of African descent. Chicago: Third World Press.

Tran, K. K., Wong, Y. J., Cokley, K. O., Brownson, C., Drum, D., Awad, G., & Wang, M. (2015). Suicidal Asian American college students' perceptions of protective factors: A qualitative study. *Death Studies, 39*(8), 500–507. https://doi.org/10.1080/07481187.2014.970299

Triandis, H. C., McCusker, C., & Hui, C. H. (1990). Multimethod probes of individualism and collectivism. *Journal of personality and social psychology, 59*(5), 1006.

Tucker, R. P., Wingate, L. R., O'Keefe, V. M., Hollingsworth, D. W., & Cole, A. B. (2016). An examination of historical loss thinking frequency and rumination on suicide ideation in American Indian young adults. *Suicide and Life-Threatening Behavior, 46*(2), 213–222. https://doi.org/10.1111/sltb.12185

Utsey, S. O., Adams, E. P., & Bolden, M. (2000). Development and initial validation of the Africultural Coping Systems Inventory. *Journal of Black Psychology, 26*(2), 194–215. https://doi.org/10.1177/0095798400026002005

Utsey, S. O., & Payne, Y. (2000). Psychological impacts of racism in a clinical versus normal sample of African American men. *Journal of African American Men, 5*(3), 57–72.

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. J. (2010). The interpersonal theory of suicide. *Psychological Review, 117*(2), 575–600. https://doi.org/10.1037/a0018697

Vivero, V. N., & Jenkins, S. R. (1999). Existential hazards of the multicultural individual: Defining and understanding 'cultural homelessness'. *Cultural Diversity and Ethnic Minority Psychology, 5*(1), 6–26. https://doi.org/10.1037/1099-9809.5.1.6

Walker, R. L., Salami, T. K., Carter, S. E., & Flowers, K. (2014). Perceived racism and suicide ideation: Mediating role of depression but moderating role of religiosity among African American adults. *Suicide and Life-Threatening Behavior, 44*(5), 548. https://doi.org/10.1111/sltb.12089

Walker, R. L., Wingate, L. R., Obasi, E. M., & Joiner, T. J. (2008). An empirical investigation of acculturative stress and ethnic identity as moderators for depression and suicidal ideation in college students. *Cultural Diversity and Ethnic Minority Psychology, 14*(1), 75–82. https://doi.org/10.1037/1099-9809.14.1.75

Walls, M. L., Hautala, D., & Hurley, J. (2014). 'Rebuilding our community': Hearing silenced voices on Aboriginal youth suicide. *Transcultural Psychiatry, 51*(1), 47–72. https://doi.org/10.1177/1363461513506458

Wang, K. T., Wong, Y. J., & Fu, C. (2013). Moderation effects of perfectionism and discrimination on interpersonal factors and suicide ideation. *Journal of Counseling Psychology, 60*(3), 367–378. https://doi.org/10.1037/a0032551

Wang, M., Wong, Y. J., Tran, K. K., Nyutu, P. N., & Spears, A. (2013). Reasons for living, social support, and Afrocentric worldview: Assessing buffering factors related to Black Americans' suicidal behavior. *Archives of Suicide Research, 17*(2), 136–147. https://doi.org/10.1080/13811118.2013.776454

Whitbeck, L. B., Adams, G. W., Hoyt, D. R., & Chen, X. (2004). Conceptualizing and measuring historical trauma among American Indian people. *American Journal of Community Psychology, 33*(3–4), 119–130. https://doi.org/10.1023/B:AJCP.0000027000.77357.31

Whitbeck, L. B., McMorris, B. J., Hoyt, D. R., Stubben, J. D., & LaFromboise, T. (2002). Perceived discrimination, traditional practices, and depressive symptoms among American Indians in the upper Midwest. *Journal of Health and Social Behavior, 43*(4), 400–418. https://doi.org/10.2307/3090234

Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2003). Racial/ethnic discrimination and health: Findings from community studies. *American Journal of Public Health, 93*(2), 200–208.

Wingate, L. R., Bobadilla, L., Burns, A. B., Cukrowicz, K. C., Hernandez, A., Ketterman, R. L., … Joiner, T. E. (2005). Suicidality in African American men: The roles of southern residence, religiosity, and social support. *Suicide and Life-Threatening Behavior, 35*, 615–629. https://doi.org/10.1521/suli.2005.35.6.615

Wingate, L. R., Burns, A. B., Gordon, K. H., Perez, M., Walker, R. L., Williams, F. M., & Joiner, T. J. (2006). Suicide and positive cognitions: Positive psychology applied to the understanding and treatment of suicidal behavior. In T. E. Ellis & T. E. Ellis (Eds.), *Cognition and suicide: Theory, research, and therapy* (pp. 261–283). Washington, DC: American Psychological Association. https://doi.org/10.1037/11377-012

Wong, Y. J., Maffini, C. S., & Shin, M. (2014). The racial-cultural framework: A framework for addressing suicide related outcomes in communities of color. *The Counseling Psychologist, 42*(1), 13–54. https://doi.org/10.1177/0011000012470568

Yoder, K. A., Whitbeck, L. B., Hoyt, D. R., & LaFromboise, T. (2006). Suicide ideation among American Indian youths. *Archives of Suicide Research, 10*(2), 177–190. https://doi.org/10.1080/13811110600558240

Zhang, J., Norvilitis, J. M., & Ingersoll, T. S. (2007). Idiocentrism, allocentrism, psychological well-being and suicidal ideation: A cross cultural study. *Omega: Journal of Death and Dying, 55*(2), 131–144. https://doi.org/10.2190/OM.55.2.c

Chapter 7
Interpersonal Needs and Social Support

Evan M. Kleiman, Daniel D. L. Coppersmith, and Charlene A. Deming

The social nature of suicide has been understood for well over 100 years, since Durkheim (1897) first posited that suicide might be caused by a sense of disconnection from a community. Since that time, a considerable trove of research on the social nature of suicide has been published (a quick search of PsycInfo shows over 14,000 manuscripts contain the words "suicide" and "social"). In recent years, the interest in the social nature of suicide has been especially re-ignited with the introduction of the interpersonal theory of suicide (Joiner, 2005), a theory which centrally places the role of social connections as key in determining suicide risk. Accordingly, the current state of the research literature presents an excellent time to step back and review what we know about the social and interpersonal nature of suicide. Thus, the goal of this chapter is to give a broad review of social factors that relate to suicide. The chapter is organized by risk and protective factors and before going further, it is important to first define *risk factor* versus *protective factor*.

A *risk factor* is any factor that, at high levels, is positively associated with an unwanted outcome, such as suicidal thoughts and behaviors (STBs; Kraemer et al., 1997). Risk factors are important to the positive psychological understanding of suicide because, although suicide is a problem of great concern that cannot be overstated, most individuals will not have suicidal thoughts or engage in suicidal behaviors in their lifetime. Indeed, only about 9% of people will ever have suicidal thoughts, and fewer than a third of these individuals will ever act on these thoughts (Nock et al., 2008). Accordingly, understanding risk factors helps us identify which individuals are the most likely to have suicidal thoughts and behaviors and are thus the most likely to benefit from positive psychological interventions.

A *protective factor* is any factor that, at high levels, is negatively associated with an unwanted outcome, such as STBs. Beyond these bivariate relationships,

E. M. Kleiman (✉) · D. D. L. Coppersmith · C. A. Deming
Harvard University, Cambridge, MA, USA
e-mail: ekleiman@fas.harvard.edu

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*,
Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_7

some protective factors (also called resilience factors; Rutter, 1987) can work in combination with a risk factor to offset, moderate, or buffer, the negative effect that risk factor has. Accordingly, where appropriate, we also discuss these buffering effects. In this chapter, we take a broad view of what constitutes a "positive psychological" protective or resilience factor. Many of the factors we discuss (e.g., social support, self-esteem) have been studied outside of the realm of positive psychology, largely because these topics have been of interest to psychologists and other social scientists for more than 60 years (i.e., before the study of positive psychology). Nevertheless, many of these interpersonal topics are inherently highly compatible with positive psychology. Indeed, every topic discussed in this chapter fits well with the "relationships" component of the PERMA (Positive Emotion, Relationships, Meaning, Accomplishment) Model of positive psychology (Seligman, 2012). Finally, we also note that the risk versus protective factor determination is rarely so binary, with some characteristics serving as either a risk or protective factor, based on context. For example, factors like self-esteem are often viewed as a bipolar factor, with low self-esteem viewed as detrimental and high self-esteem viewed as beneficial; however, previous research indicates that this is dependent on type of self-esteem, with high levels of "contingent" self-esteem (that is based upon the opinions of others) conferring risk and high levels of non-contingent self-esteem (that is based upon one's own internal acceptance) conferring resilience (Baldwin & Sinclair, 1996).

Risk Factors

In this section, we begin by detailing the interpersonal theory of suicide. This theory is unique because, although other theories of suicide have interpersonal components (e.g., the Integrated Motivational-Volitional Model; O'Connor, 2011), the interpersonal theory of suicide is strongly rooted in the social domain with nearly all facets having to do with social factors. After our discussion of the interpersonal theory of suicide, we expand on additional social factors that have been associated with risk for STBs: loneliness, social isolation, and conflict with others. Throughout this section, we also discuss available treatments that can be used to address these risk factors.

Interpersonal Theory of Suicide

One of the most heavily studied suicide theories in recent years is Joiner's (2005) interpersonal theory of suicide. This theory proposes that two interpersonal factors interact to lead to the development of passive suicidal ideation, including: (1) beliefs that one is a burden to those around them (i.e., *perceived burdensomeness*) and (2) beliefs that one does not belong to a social group (i.e., *thwarted belongingness*).

Within the theory, these two interpersonal factors combine with hopelessness to predict the change from *passive ideation* (i.e., a desire to die) to *active ideation* (i.e., the intention to act on those desires). Less relevant to the current chapter, but still important to acknowledge here, the theory also proposes that the ability to die by suicide is the result of non-interpersonal factors: (1) increasing one's ability to tolerate lethal injury and (2) overcoming the fear of lethal injury. The interpersonal components of this theory are compatible with a rich history of research. This is especially true for the thwarted belongingness component, which has been identified as a fundamental human need (Baumeister & Leary, 1995) that can lead to many negative outcomes when unmet.

There is growing support for the application of this theory to adolescents (Barzilay et al., 2015; Horton et al., 2016) and adults (Anestis & Joiner, 2011). For example, among a sample of college students, rates of suicidal ideation were highest during the summer semester—a finding partially accounted for by feelings of lower belongingness that occur during the summer when college campuses are less populated (Van Orden et al., 2008). Not all research fully supports the theory as proposed, however. There is mixed evidence on whether perceived burdensomeness and thwarted belongingness are synergistic—meaning that suicidal ideation is the result of high levels of both perceived burdensomeness and thwarted belongingness, or if each factor predicts suicidal ideation independently. Indeed, one recent review found that one-third of studies that test the interaction did not find any significant interaction effects (Ma, Batterham, Calear, & Han, 2016). Moreover, it is also unclear how stable these factors are and how well they predict short-term changes in suicidal ideation (Kleiman et al., in press).

Despite the theory's relatively young age, there have been a few attempts at creating interventions that can reduce perceived burdensomeness and thwarted belongingness (Joiner, Van Orden, Witte, & Rudd, 2009). One intervention (Stellrecht et al., 2006) suggests targeting the distorted cognitions that might be associated with perceived burdensomeness and thwarted belongingness (e.g., by having people challenge the evidence that one is a burden to others). Research also suggests that perceived burdensomeness and thwarted belongingness are treatment-modifiable targets that account for reduction of suicidal ideation among adolescents in treatment (King et al., 2017). Additionally, some experimental work shows that experimentally induced burdensomeness and thwarted belongingness can be offset by the introduction of positive psychological factors like mindfulness and zest for life (Collins, Best, Stritzke, & Page, 2016).

Beyond interventions explicitly aimed at addressing perceived burdensomeness and thwarted belongingness, targeting several other positive psychological factors might help to address these risk factors. One key component of self-compassion is the idea of kindness towards oneself in a time of pain (Neff, 2003). Accordingly, increasing self-compassion might serve to temper a patient's feelings that they are a burden to others in times when they are in [psychological] pain and require support from others. There exists a variety of empirically validated interventions for self-compassion, including the 8-week Mindful Self-Compassion program (Neff & Germer, 2013). Briefer interventions exist as well, such as Shapira and Mongrain's

(2010) 1-week, 15-min per day, online-administered intervention that involves writing a letter to oneself expressing compassion about a distressing event that occurred that day. Relatedly, if a patient is in distress because they believe they are a burden to others on whom they rely for social support, encouraging patients to provide social support to others may also help reduce perceived burdensomeness and thwarted belongingness (Inagaki & Orehek, 2017). This is especially true when an individual freely gives social support (i.e., clinicians should take care to make sure that the patient does not feel forced to give social support; Weinstein & Ryan, 2010).

Loneliness

Loneliness is a broad construct that occurs when one's current social situation falls short of their desired social situation (Cacioppo & Patrick, 2008). The social situation can fall short of what is desired when someone perceives an absence in three dimensions (Weiss, 1973): an absence of a significant other (i.e., *intimate loneliness*), an absence of a group of close friends or family members (i.e., *relational loneliness*), or the absence of a social network altogether (i.e., *collective loneliness*). Although feeling lonely may co-occur with being alone, they are not completely overlapping constructs and it is important to understand their distinction (Cacioppo, Fowler, & Christakis, 2009). For example, someone may feel lonely when they are still physically with others, but their current social situation still falls short of their desired social situation (e.g., they are at a party and perceive an absence of close friends).

There is mixed support for the idea that loneliness acts to confer risk for STB. Several studies across the age spectrum find that loneliness has a positive association with STBs (Lebret, Perret-Vaille, Mulliez, Gerbaud, & Jalenques, 2006; Roberts, Roberts, & Chen, 1998). Other studies, however, that go beyond bivariate models, find that the relationship between loneliness and STBs is less straightforward than simpler models may belie. Lasgaard, Goossens, and Elklit (2011) found that the relationship between loneliness and suicidal ideation falls out of significance when controlling for depressive symptoms. Joiner and Rudd (1996) found that loneliness does not lead to suicidal ideation, but rather is only a correlate of it, with both loneliness and suicidal ideation stemming from hopelessness. These mixed findings could mean several things: first, it may be that loneliness is only a correlate of STB risk, while other factors (e.g., hopelessness) are more relevant direct predictors. Second, it may be that loneliness does not directly confer risk for STB but rather acts in synergistic combination with other risk factors like negative life events (Rich & Bonner, 1987).

In many therapies, reducing loneliness is seen as a key target for intervention (Heinrich & Gullone, 2006). Given this, and given that loneliness is a non-specific risk factor (i.e., it predicts risk for other disorders like depression; Cacioppo, Hughes, Waite, Hawkley, & Thisted, 2006), there have been many attempts to

reduce loneliness that have seen generally small to medium effects (Masi, Chen, Hawkley, & Cacioppo, 2011), albeit usually not within the context of suicidal individuals (For reviews, see Cacioppo, Grippo, London, Goossens, & Cacioppo, 2015; Masi et al., 2011). One such category of interventions, called *befriending*, works by pairing together potentially compatible individuals (e.g., people who have the same interests), and then monitoring the relationship and providing support to ensure that the relationship is maintained over time (Mead, Lester, Chew-Graham, Gask, & Bower, 2010). Other interventions attempt to reduce loneliness by increasing social contact with others through therapy groups (e.g., Cattan, White, Bond, & Learmouth, 2005). These interventions are generally similar to other therapy groups (e.g., cognitive behavioral group therapy) but place a strong emphasis on encouraging and helping the group members maintain contact with each other between sessions and after the group ends. Still others attempt to reduce loneliness by providing social skills training to help individuals who lack these skills, allowing them to create social networks of their own (e.g., Kolko, Loar, & Sturnick, 1990).

Social Isolation

Although related to loneliness, as noted earlier, social isolation can be thought of as a negative feeling occurring due to being physically alone, as opposed to loneliness, which can occur when one is not alone. Social isolation refers to a "state in which interpersonal contacts and relationships are disrupted or nonexistent" (Trout, 1980, p. 10); for example, living alone. Over the past six decades, beginning with Sainsbury (1955), an interesting body of literature has formed examining physical social isolation as a STB risk factor. Some of this research has been focused on actual physical location and thus examined the concordance between some metric of isolation and rate of STBs (typically suicide deaths) in a given area (e.g., city, state, country). For example, research finds that rural areas tend to have higher suicide rates than urban areas (although this may be due to factors beyond isolation; e.g., gun ownership or poverty; for review, see Hirsch & Cukrowicz, 2014). Related work finds that psychiatric inpatient units in areas that are more socially fragmented (i.e., have more single-person homes, rented homes, and turnover in tenants) have higher rates of admission than in less socially fragmented areas (Evans, Middleton, & Gunnell, 2004).

Several different metrics of social isolation studied at the individual level have been explored. One study found that college students who tended to binge drink alone were at greater risk for suicidal ideation than those who would only binge drink socially (Gonzalez, 2012). This study is especially relevant to the idea of social isolation because, although alcohol consumption is strongly associated with STB risk, this work suggests that binge drinking is especially troublesome when individuals tend to do it alone. There is also individual-level research, suggesting that individuals who are unmarried (Denney, Rogers, Krueger, & Wadsworth, 2009; Kreitman, 1988), divorced (Stack, 1990), widowed (Luoma & Pearson, 2002), or who otherwise live alone are at greater risk for suicide (Barraclough & Pallis, 1975;

Chung, Caine, Barron, & Badaracco, 2015; Purcell et al., 2012; You, Van Orden, & Conner, 2011). Other studies have sought to measure social isolation through the novel approach of analyzing social media posts for phrases related to isolation and STBs (Jashinsky et al., 2014; Robinson et al., 2016).

Social isolation might help explain why suicide rates are so high in two groups of typically isolated people: the elderly, where rates of suicide among people 85 and older are more than 25% higher than many lower age groups (Centers for Disease Control and Prevention, 2017) and incarcerated individuals, where the suicide rate in local jails is anywhere from two to ten times the rate of any other group other than veterans, where it is nearly equal (Noonan, 2016). Further supporting the importance of the role of social isolation among incarcerated individuals, research finds that suicide rates are highest among those in single-cell housing (whether in the general population or segregated housing; Reeves & Tamburello, 2014).

Although social isolation and loneliness are related but distinct constructs, it is reasonable to assume that many of the interventions that can reduce loneliness might also reduce social isolation. This overlap in intervention efficacy is probably clearest among interventions that work to reduce loneliness (and likely social isolation) by encouraging social contact. For example, one study found that weekly calls to depressed elderly individuals over a 4-month period served to reduce social isolation and increase social contact (Morrow-Howell, Becker-Kemppainen, & Judy, 1998). Beyond specific interventions for social isolation, easily modifiable factors such as routine religious service attendance are associated with lower levels of social isolation (Rote, Hill, & Ellison, 2013). Thus, encouraging clients who are socially isolated to attend religious services might help reduce social isolation. Of course, not all clients may be equally willing to attend religious services (e.g., they might not be religious). It may be that the social interaction and support provided by attending church (rather than religion itself) is the reason religious service attendance is useful to reduce social isolation. This would suggest that involvement in other organized community events (e.g., local clubs) might also serve to reduce social isolation, which would be especially useful for people who might not consider regularly attending religious services.

Conflict with Others

Given the strong social nature of suicide, it is not surprising that negative events involving others—especially interpersonal conflict—are strongly related to suicide risk. Several studies demonstrate that stressful interpersonal events (Cavanagh, Owens, & Johnstone, 1999; Hirsch & Barton, 2011; Johnson et al., 2002; Joiner & Rudd, 1995; Stepp et al., 2008), especially interpersonal conflict (Brent et al., 1993; Burón et al., 2016; Overholser, Braden, & Dieter, 2012) are tied to risk for STBs. One reason interpersonal conflict is of interest regarding the prediction of STBs is that several studies find that interpersonal conflict is a short-term predictor of STB risk. Specifically, studies find that interpersonal conflict over the past 2 days is a

predictor of suicide attempts (Bagge, Glenn, & Lee, 2013) and suicide death (Martin et al., 2013; Phillips et al., 2002). Moreover, these negative interpersonal events can activate pre-existing cognitive vulnerabilities (e.g., negative attributional style; Joiner & Rudd, 1995) to exacerbate pre-existing symptoms or create new ones.

In terms of interventions to reduce conflict with others, there are some interventions that directly reduce interpersonal conflict through role playing high-emotion situations (Bohart, 1977). Others work by teaching individuals social skills, which serves to help avoid interpersonal conflict as well as increase other protective factors like social support (Brand, Lakey, & Berman, 1995). Most notably, however, although not solely focused on interpersonal conflict reduction, Dialectical Behavior Therapy (Linehan, 1993) is effective at reducing suicide risk (Glenn, Franklin, & Nock, 2015) and has a strong focus on interpersonal effectiveness skills, which serve to reduce interpersonal conflict (Linehan, Tutek, Heard, & Armstrong, 1994). Other easily modifiable factors, such as forgiveness, might help reduce both the occurrence of interpersonal conflict and its negative impact. Individuals who forgive more easily are more likely to repair damaged relationships after interpersonal conflict (Aquino, Grover, Goldman, & Folger, 2003; McCullough et al., 1998). Process-based group therapies that target forgiveness are effective at improving interpersonal relationships, including some treatments that can be conducted in an hour-long session with small groups of 7–14 people (Mccullough & Worthington, 1995). There are also longer, individual therapy interventions for forgiveness that might be more useful to use with patients for whom a lack of forgiveness towards others is a key continuing theme in their conflict with others (Freedman & Enright, 1996).

Protective Factors

In this section, we discuss STB protective factors, which is a relatively understudied area compared to research on STB risk factors (Franklin et al., 2017). Unlike the research on risk factors, there is not a strong theory that explicitly unifies STB protective factors. Rather, there is a considerable amount of research on various independent protective factors. We discuss the following here: social networks, connectedness, social support, attachment to others, and self-esteem. These independent protective factors are compatible, however, with general models of suicide buffering effects (Johnson, Wood, Gooding, Taylor, & Tarrier, 2011) and with general models of positive psychology, such as Smith's mind map of positive psychology (as cited in Hefferon & Boniwell, 2011), which emphasizes the role of positive subjective experiences (presumably with others) as a way to improve human flourishing.

Before we further discuss these topics, it is important to first spend some time clarifying two important distinctions between related terms in this literature. First is the distinction between social support and social networks. Social networks, broadly defined, refer to individuals interconnected by interpersonal relationships. This differs from social support, which refers more to what psychological and physical resources a social network can provide to an individual in a time of need.

In other words, social networks are more about the structure of one's interpersonal relationship, whereas social support is more about the function of that network. Second is the distinction between social support and loneliness. As noted before, loneliness occurs when someone's current social situation falls short of their ideal social situation. This differs from social support, which is neither a feeling nor a construct confined to a well-defined situation, as is loneliness. Now that we have clarified the distinction between these terms, we first discuss social networks and then discuss social support, followed by other interpersonal protective factors.

Social Networks

The importance of social networks and integration into them was first raised by Durkheim (1897) and has been studied thoroughly since. Given the breadth of literature on the topic, there are several important aspects to social networks that should be discussed. Specifically, this includes the size and density of a social network and an individual's integration into the network. The simplest metric to describe a social network is the number of friend and family members that an individual has. Studies have found that individuals who have more friends (Bearman & Moody, 2004) and larger families (Denney et al., 2009) are at lower risk for STBs. Studies have also found that people who are married, and thus have at least one person in their social network, are also at lower risk for suicide (Masocco et al., 2010; Tsai, Lucas, & Kawachi, 2015). A more complex metric to describe a social network refers to its density, or the degree to which individual people within a social network are connected. Studies have found that individuals who have denser networks are at lower risk for suicide (Bearman & Moody, 2004; Kuramoto, Wilcox, & Latkin, 2013). Other studies have explored one's subjective perception of integration into a social network and found that feeling more included or integrated into a social group is associated with decreased risk for STBs (Grossman, Milligan, & Deyo, 1991).

There is some overlap between interventions to improve social networks, decrease loneliness, and increase social support. Moreover, it may be that improving one's social network is a distal factor that works to also increase perceptions of social support and decrease loneliness. Some interventions such as those that involve giving people computers to access the internet and connect with others (Fokkema & Knipscheer, 2007; Kraut et al., 1998) directly target social networks among suicidal individuals and have been shown to be popular and efficacious at reducing suicide risk (Barak, 2007; Webb, Burns, & Collin, 2008). These suicide risk reduction interventions might be particularly useful for the elderly who have been much slower to adopt new technology and thus may not already have access to the valuable social resources available online (Perrin & Duggan, 2015). It may be that access to the internet is effective at improving social networks because it provides an easy path to begin to establish more social contact. However, online interactions alone are not enough to experience the benefits of an improved social network (e.g., better social

support). Recent research indicates that the combination of high levels of in-person interactions and moderate levels of online interactions may be most beneficial (Hobbs, Burke, Christakis, & Fowler, 2016). Thus, therapists should not encourage patients to rely solely on online social networks but rather to think of them as supplements to in-person social networks. One way to explicitly carry out this suggestion would be to encourage patients to establish online ties with people in their area who have similar interests (e.g., local Facebook groups, meetup groups) that could serve as a platform for establishing in-person social networks.

Social Support

Social support has been one of the most heavily researched topics in psychology, with popular research dating back more than 40 years (Cobb, 1976). Given that there has been so much work on social support, there are many ways to define this multifaceted construct. We begin with a brief discussion of these multiple definitions before discussing the research on social support and suicide. First, social support can be defined in terms of the perception of social support or the actual availability of social support. In this section, we will focus on perceived social support, given that objective social support maps closely to other topics already discussed here (e.g., size of social network). Moreover, it seems that perceived social support may be a stronger buffer to STB risk than the objective presence of others to provide social support (Johnson et al., 2011). Second, social support can be defined by its sources (e.g., friends, family members, significant others) or as a unitary construct containing all sources. In this section, we primarily focus on social support as a unitary construct because there is a lack of research on how the sources of social support differ. Third, social support can be defined more specifically by the type: instrumental social support (i.e., the real or perceived availability of others to provide material resources or other physical help); emotional social support (i.e., the real or perceived availability of others to provide help coping through emotional crises); informational social support (i.e., provision of information to facilitate problem-solving); and appraisal social support (i.e., provision of information to facilitate self-evaluation; House, 1981; Langford et al., 1997). In this section, we focus where appropriate on the distinct types of social support. It is important to note, however, that only some measures of social support contain separate scales of instrumental and emotional support.

Social support is associated with decreased risk for STB among adolescent (Prinstein, Boergers, Spirito, Little, & Grapentine, 2000), adult (Kleiman & Liu, 2013; Nisbet, 1996), and elderly (Yen et al., 2005) samples. Social support has also been found to be protective against STBs in a variety of samples of people at elevated risk for suicide, including sexual minorities (Blosnich, Bossarte, & Silenzio, 2012; Moody & Smith, 2013), adolescent inpatients (Grøholt, Ekeberg, Wichstrøm, & Haldorsen, 2000), veterans (Pietrzak et al., 2010), individuals with bipolar disorder (Studart et al., 2016), and individuals in residential substance use treatment

(You et al., 2011). Beyond the main effects just described, research has amassed on the role of social support as a buffer of risk factors. Social support is found to buffer the STB risk conferred by impulsivity (Kleiman, Riskind, Schaefer, & Weingarden, 2012; Zhang & Lin, 2015), negative life events (Kleiman, Riskind, & Schaefer, 2014; Yang & Clum, 1994), emotional distress (Bryan & Hernandez, 2013), and intimate partner violence (Esposito & Clum, 2002; Kaslow et al., 1998).

There are several important unanswered questions in this area of literature. First, the specific mechanisms through which social support affects STBs are unclear. It could be through the reduction of factors associated with the interpersonal theory of suicide, although the overlap between social support and the interpersonal theory of suicide constructs could make this determination difficult. It could also be that social support acts as a distal protective factor that leads to increases in proximal positive psychological protective factors, such as self-esteem (Kleiman & Riskind, 2013) and optimism (Karademas, 2006). Relatedly, high social support might be a proxy for better overall social functioning (Seeman, Lusignolo, Albert, & Berkman, 2001). Second, and as noted earlier, there is a paucity of research comparing the effects of sources of support. There is some research, however, that suggests among adolescents, support from adults (e.g., teachers and parents) is a stronger protective factor than support from peers (Kerr, Preuss, & King, 2006; Miller, Esposito-Smythers, & Leichtweis, 2015), although other studies find that various sources of support independently confer protection from STBs (Pettit, Green, Grover, Schatte, & Morgan, 2011).

Although there are no social support interventions specifically designed for suicidal individuals, as we describe below, several interventions specifically for suicidal individuals likely target social support, and other social support interventions for general populations likely work well with suicidal individuals.

Safety planning involves creating a "safety plan" for suicidal individuals to use during times of intense crisis. Although these plans do not explicitly require social contact, social contact (e.g., calling a trusted friend) is often included in the plan (Stanley & Brown, 2012). Relatedly, brief social contact (e.g., through text messaging or post cards) has also been found to be effective at reducing suicide risk among suicidal inpatients after they are discharged from inpatient psychiatric care (Fleischmann, 2008; Milner, Carter, Pirkis, Robinson, & Spittal, 2015). One reason these social contact interventions are effective may be that they work to increase social support, or at least work to make someone's social support more salient to them by providing tangible evidence that someone cares for them.

Many general social support interventions exist in both group and individual formats (for reviews see Hogan, Linden, & Najarian, 2002; Masi et al., 2011; Stewart, 1989). Group interventions can be structured, such as those that teach social skills (and possibly skills for how to better utilize social support; Brand et al., 1995), or unstructured, such as those that bring together people with similar stressors in the hopes that it builds a network of individuals to provide social support (Kelly et al., 1993). Individual interventions follow a similar format but focus more on either providing an example of a positive, supportive relationship for the patient in the hopes that they can generalize that experience to others or on providing

explicit social skills training to help the patient better utilize social support (Renaud et al., 1998). These interventions can be targeted towards special populations such as suicide survivors (Jordan & McMenamy, 2004) or be more generally oriented. Group interventions can be led by peers or can be led by a mental health professional (blurring the lines between a supportive therapy group and something specific to social support).

Connectedness to Others

The CDC has defined *connectedness* as, "the degree to which a person or group is socially close, interrelated, or shares resources with other persons or groups" (Centers for Disease Control and Prevention, 2011, p. 3). Others have defined social *connectedness* as, "the degree of positive involvement with family, friends, and social groups" (Fässberg et al., 2012, p. 723) or "the relationships people have with family friends and others" (Buckley & McCarthy, 2009, p. 390). Connectedness, although related to the idea of a social network, differs in the sense that connectedness focuses more on the interactions with others, whereas social networks refer more to the size of the social networks. There is research to suggest that connectedness to others is protective against STBs, especially for adolescents (Resnick et al., 1997) and older adults (Fässberg et al., 2012). Examples of connectedness include participating in social activities (Mazza & Eggert, 2001; Saïas, Beck, Bodard, Guignard, & du Roscoät, 2012) and attending religious services (Kleiman & Liu, 2014; VanderWeele, Li, Tsai, & Kawachi, 2016). The work on religious service attendance is especially interesting because it appears that the social aspect of attending religious services is more protective against STBs than the religious aspect of how strongly people affiliate with a religion (Rushing, Corsentino, Hames, Sachs-Ericsson, & Steffens, 2013). Relatedly, group membership, especially when that group is doing well, may be associated with decreased risk for STBs. One particularly creative study conducted by Joiner, Hollar, and Van Orden (2006) examined suicide rates in counties where two college football teams with a large and fervent fan base were located. They found that suicide rates in those counties were lower on years when the team was ranked higher, attributing this reduction in suicides to a sense of pride and belonging that came from being a fan of the winning team.

The CDC has highlighted enhancing individual, family, and community connectedness as a specific direction to pursue in decreasing suicidal behavior (CDC, 2011). In line with this, several interventions directly address connectedness. These interventions tend to involve providing people with information about community recreation opportunities, with the hopes that this information will reduce barriers to engaging in these activities (Petryshen, Hawkins, & Fronchak, 2001). One very relevant intervention (Van Orden, Conwell, & Arean, 2016) had elderly individuals generate goals for social contact (e.g., getting ice cream with a friend) along with a plan for achieving those goals. The intervention evinced small but meaningful decreases in suicidal ideation and in perceived burdensomeness.

Another line of research works by encouraging individuals at risk for suicide to help others. One such intervention found that actively engaging in helping others online led to reductions in depressive symptoms and increased happiness (Doré, Morris, Burr, Picard, & Ochsner, 2017). Thus, interventions that provide individuals with opportunities to engage with and contribute to communities (e.g., volunteering) may be especially beneficial for suicidal persons because they provide opportunities to express compassion or altruism. This is also congruent with research showing that providing support to others also has beneficial effects on reducing all-cause mortality among the elderly (Brown, Nesse, Vinokur, & Smith, 2003).

Although not explicitly targeting social connectedness, the well-known positive psychology "gratitude letter" exercise may serve to increase social connectedness. This exercise involves writing a letter to express gratitude towards someone to whom the patient is grateful but has not had the opportunity to explicitly express gratitude towards. Versions of this exercise that involve delivering the letter may be especially effective for increasing social connectedness in suicidal individuals, because doing so may serve as a springboard into enriched social connections that may continue beyond the gratitude letter exercise. Accordingly, therapists trying to use this exercise should work with the patients to plan how the patient might deliver the letter and how they could use the exercise to continue to enrich the relationship.

Attachment to Others

A long line of research has shown that those who have more secure attachments (i.e., those who feel close to others and can rely on them; Ainsworth, Blehar, Waters, & Wall, 1978) are less likely to suffer from most forms of psychopathology (Dozier, Chase, & Albus, 2008).

Thus, it is not surprising that those who have more secure attachment patterns are also less likely to be at risk for STBs. This includes early adolescents (Sheftall, Schoppe-Sullivan, & Bridge, 2014), late adolescents (de Jong, 1992), and adults (Smith et al., 2016). More secure attachment styles may confer protection from STBs because individuals with less secure attachment styles are more likely to experience other STB risk factors, including interpersonal problems (Horowitz, Rosenberg, & Bartholomew, 1993). Individuals with more secure attachment styles are more likely to experience other STB protective factors, including social support (Ognibene & Collins, 1998; Priel & Shamai, 1995) and self-esteem (Roberts, Gotlib, & Kassel, 1996).

Although seen as relatively permanent and indeed may not change without intervention, attachment styles are still amenable to change through intervention (Davila, Burge, & Hammen, 1997). Interventions that address attachment styles through building alliances, reframing relationships, and promoting autonomy are thought to be efficacious in reducing suicide risk (Ewing, Diamond, & Levy, 2015).

Within Self-Determination Theory, autonomy is one of the three basic needs (along with competence and relatedness) that must be satisfied to achieve eudemonic

wellbeing (Deci, 1971). Thus, because of its wide reach across positive psychology and related areas, autonomy may be an especially useful therapeutic target that might serve to improve attachment styles and other areas of positive psychological functioning. Several effective options to increase autonomy exist, which generally involve helping the client see how their own autonomy (compared to an overreliance on others) is important in reaching their goals (for review of interventions for autonomy, see Su & Reeve, 2011).

Social Communication and Community Involvement

Social communication and self-disclosure play an important role in suicide and present a unique opportunity for prevention and intervention. Data suggest that adolescents who disclose past suicidal thoughts report less present suicidal thinking, compared to adolescents who do not disclose these thoughts (Eskin, 2003). Further, lower engagement in communication and self-disclosure (e.g., relevant to attitudes/positions, personality, study/work, finances, interests, and body) has been found to distinguish medically serious suicide attempters from both non-medically serious attempters and suicide ideators (Gvion et al., 2014). In fact, difficulties with self-disclosure represent a stronger risk factor for high lethality suicide attempts than mental pain (e.g., hopelessness, depression) or psychiatric illness (Levi et al., 2008). Difficulties with disclosure may come from a vareity of sources, such as embarassment and stigma. If this is the case, although not previously examined, it may be that interventions targeting self-compassion may encourage indivduals to disclose suicidal thoughts, as they may recognize they are not alone in their feelings (i.e., common humanity). Moreover, previously discussed risk factors, including social isolation and loneliness, likely play important roles when considering communication and self-disclosure difficulties.

Although individuals making higher lethality attempts may be less likely to engage in self-disclosure, data suggest that before attempting suicide roughly 70–80% of individuals will communicate (directly or indirectly) their suicidal thinking to people within their social networks (Robins, Gassner, Kayes, Wilkinson, & Murphy, 1959). Communication about suicidal thinking is most likely to be disclosed to partners, followed by relatives, friends, medical professionals, work colleagues, and "others" (e.g., church leaders; Robins et al., 1959). Along these lines, there has been a push for community-level involvement in suicide prevention; for instance, some countries (e.g., New Zealand) are now involving the whole community in suicide prevention efforts, and international outreach such as the 2005 World Suicide Prevention Day and the 2006 International Suicide Awareness Week used the motto, "Suicide prevention is everybody's business" (Owens et al., 2011). In sum, on a population-level, training community members to be gatekeepers, such that they are aware of and can appropriately react to warning signs for suicidal behavior, is an important suicide prevention strategy.

Self-Esteem

Self-esteem is one's evaluation of their value to others (Rosenberg, 1965). Self-esteem is social in nature because it is hypothesized to act as a "sociometer," that is, as an indicator of perceived social inclusion (Leary, Tambor, Terdal, & Downs, 1995). There is research supporting the idea that high self-esteem is associated with lower risk for suicidal thoughts and behaviors in both adolescent (Kidd & Shahar, 2008; Lewinsohn, Rohde, & Seeley, 1994; Wild, Flisher, & Lombard, 2004) and adult populations (De Man & Gutiérrez, 2002). Research also suggests that the risk or protective effects of self-esteem, when measured in early adolescence, seem to persist throughout early adulthood (McGee, Williams, & Nada-Raja, 2001).

Several dozen interventions designed to increase self-esteem currently exist (for reviews, see Bos, Muris, Mulkens, & Schaalma, 2006; Haney & Durlak, 1998). The mechanism of efficacy of these interactions spans a wide range. One intervention based on classical conditioning increased self-esteem by paring self-referent information (e.g., the participant's name) with smiling faces (Baccus, Baldwin, & Packer, 2004). More traditional cognitive therapies also exist, however, that primarily target the irrational beliefs that are associated with low self-esteem (Daly & Burton, 1983).

Conclusion

It is clear from over 100 years of research that suicide is highly social in nature. In this chapter, we reviewed some of the work demonstrating the different social facets that are involved in risk for and protection from suicidal thoughts and behaviors. The evidence presented here ranged from classical and contemporary interpersonal theories of suicide (Durkheim, 1897; Joiner, 2005) to studies of individual risk and protective factors, such as loneliness and social support. There are many interventions that address the social roots of suicide, several of which function by increasing social contact, social support, social skills, or some combination of these factors (Riblet, Shiner, Young-Xu, & Watts, 2017). Although many of the interventions for suicide risk reduction are not explicitly rooted in positive psychology, their functions can be easily understood through the lens of positive psychology. For example, interventions that provide coping plans function through increasing positive coping skills. Interventions that increase social contact may function through providing positive relationships and by increasing positive psychological strengths such as love and humanity, hope, and gratitude (i.e., by allowing suicidal individuals the opportunity to express gratitude towards others). Interventions that increase social support, especially those that do so by encouraging others to provide social support, may also function by allowing individuals to establish positive relationships, to become the recipient of gratitude, and to experience self-efficacy relating to their ability to help others.

References

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. N. (1978). *Patterns of attachment: A psychological study of the strange situation*. New York: Psychology Press.

Anestis, M. D., & Joiner, T. E. (2011). Examining the role of emotion in suicidality: Negative urgency as an amplifier of the relationship between components of the interpersonal–psychological theory of suicidal behavior and lifetime number of suicide attempts. *Journal of Affective Disorders, 129*(1–3), 261–269. https://doi.org/10.1016/j.jad.2010.08.006

Aquino, K., Grover, S. L., Goldman, B., & Folger, R. (2003). When push doesn't come to shove: Interpersonal forgiveness in workplace relationships. *Journal of Management Inquiry, 12*(3), 209–216. https://doi.org/10.1177/1056492603256337

Baccus, J. R., Baldwin, M. W., & Packer, D. J. (2004). Increasing implicit self-esteem through classical conditioning. *Psychological Science, 15*(7), 498–502. https://doi.org/10.1111/j.0956-7976.2004.00708.x

Bagge, C. L., Glenn, C. R., & Lee, H.-J. (2013). Quantifying the impact of recent negative life events on suicide attempts. *Journal of Abnormal Psychology, 122*(2), 359–368. https://doi.org/10.1037/a0030371

Baldwin, M. W., & Sinclair, L. (1996). Self-esteem and "if…then" contingencies of interpersonal acceptance. *Journal of Personality and Social Psychology, 71*(6), 1130–1141. https://doi.org/10.1037/0022-3514.71.6.1130

Barak, A. (2007). Emotional support and suicide prevention through the internet: A field project report. *Computers in Human Behavior, 23*(2), 971–984. https://doi.org/10.1016/j.chb.2005.08.001

Barraclough, B. M., & Pallis, D. J. (1975). Depression followed by suicide: A comparison of depressed suicides with living depressives. *Psychological Medicine, 5*(1), 55–61. https://doi.org/10.1017/S0033291700007212

Barzilay, S., Feldman, D., Snir, A., Apter, A., Carli, V., Hoven, C. W., … Wasserman, D. (2015). The interpersonal theory of suicide and adolescent suicidal behavior. *Journal of Affective Disorders, 183*, 68–74. https://doi.org/10.1016/j.jad.2015.04.047

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497–529.

Bearman, P. S., & Moody, J. (2004). Suicide and friendships among American adolescents. *American Journal of Public Health, 94*(1), 89–95. https://doi.org/10.2105/AJPH.94.1.89

Blosnich, J. R., Bossarte, R. M., & Silenzio, V. M. B. (2012). Suicidal ideation among sexual minority veterans: Results from the 2005–2010 Massachusetts Behavioral Risk Factor Surveillance Survey. *American Journal of Public Health, 102*(Suppl 1), S44–S47. https://doi.org/10.2105/AJPH.2011.300565

Bohart, A. C. (1977). Role playing and interpersonal-conflict reduction. *Journal of Counseling Psychology, 24*(1), 15–24. https://doi.org/10.1037/0022-0167.24.1.15

Bos, A. E. R., Muris, P., Mulkens, S., & Schaalma, H. P. (2006). Changing self-esteem in children and adolescents: A roadmap for future interventions. *Netherlands Journal of Psychology, 62*(1), 26–33. https://doi.org/10.1007/BF03061048

Brand, E. F., Lakey, B., & Berman, S. (1995). A preventive, psychoeducational approach to increase perceived social support. *American Journal of Community Psychology, 23*(1), 117–135.

Brent, D. A., Perper, J. A., Moritz, G., Baugher, M., Roth, C., Balach, L., & Schweers, J. (1993). Stressful life events, psychopathology, and adolescent suicide: A case control study. *Suicide & Life-Threatening Behavior, 23*(3), 179–187.

Brown, S. L., Nesse, R. M., Vinokur, A. D., & Smith, D. M. (2003). Providing social support may be more beneficial than receiving it: Results from a prospective study of mortality. *Psychological Science, 14*(4), 320–327. https://doi.org/10.1111/1467-9280.14461

Bryan, C. J., & Hernandez, A. M. (2013). The functions of social support as protective factors for suicidal ideation in a sample of Air Force personnel. *Suicide and Life-Threatening Behavior, 43*(5), 562–573.

Buckley, C., & McCarthy, G. (2009). An exploration of social connectedness as perceived by older adults in a long-term care setting in Ireland. *Geriatric Nursing, 30*(6), 390–396. https://doi.org/10.1016/j.gerinurse.2009.09.001

Burón, P., Jimenez-Trevino, L., Saiz, P. A., García-Portilla, M. P., Corcoran, P., Carli, V., … Bobes, J. (2016). Reasons for attempted suicide in Europe: Prevalence, associated factors, and risk of repetition. *Archives of Suicide Research, 20*(1), 45–58. https://doi.org/10.1080/13811118.2015.1004481

Cacioppo, J. T., Fowler, J. H., & Christakis, N. A. (2009). Alone in the crowd: The structure and spread of loneliness in a large social network. *Journal of Personality and Social Psychology, 97*(6), 977–991. https://doi.org/10.1037/a0016076

Cacioppo, J. T., Hughes, M. E., Waite, L. J., Hawkley, L. C., & Thisted, R. A. (2006). Loneliness as a specific risk factor for depressive symptoms: Cross-sectional and longitudinal analyses. *Psychology and Aging, 21*(1), 140–151. https://doi.org/10.1037/0882-7974.21.1.140

Cacioppo, J. T., & Patrick, W. (2008). *Loneliness: Human nature and the need for social connection* (1st ed.). New York: Norton.

Cacioppo, S., Grippo, A. J., London, S., Goossens, L., & Cacioppo, J. T. (2015). Loneliness: Clinical import and interventions. *Perspectives on Psychological Science, 10*(2), 238–249. https://doi.org/10.1177/1745691615570616

Cattan, M., White, M., Bond, J., & Learmouth, A. (2005). Preventing social isolation and loneliness among older people: A systematic review of health promotion interventions. *Ageing and Society, 25*(1), 41–67. https://doi.org/10.1017/S0144686X04002594

Cavanagh, J. T. O., Owens, D. G. C., & Johnstone, E. C. (1999). Life events in suicide and undetermined death in south-east Scotland: A case-control study using the method of psychological autopsy. *Social Psychiatry and Psychiatric Epidemiology, 34*(12), 645–650. https://doi.org/10.1007/s001270050187

Centers for Disease Control and Prevention. (2011). *Promoting individual, family, and community connectedness to prevent suicidal behavior* (Strategic Direction for the Prevention of Suicidal Behavior). Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from https://www.cdc.gov/violenceprevention/pdf/Suicide_Strategic_Direction_Full_Version-a.pdf.

Centers for Disease Control and Prevention. (2017). *Web-based Injury Statistics Query and Reporting System (WISQARS)*. Retrieved September 22, 2017, from www.cdc.gov/ncipc/wisqars.

Chung, I. W., Caine, E. D., Barron, C. T., & Badaracco, M. A. (2015). Clinical and psychosocial profiles of Asian immigrants who repeatedly attempt suicide: A mixed-method study of risk and protective factors. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 36*(5), 353–362. https://doi.org/10.1027/0227-5910/a000334

Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine, 38*(5), 300–314. https://doi.org/10.1097/00006842-197609000-00003

Collins, K. R. L., Best, I., Stritzke, W. G. K., & Page, A. C. (2016). Mindfulness and zest for life buffer the negative effects of experimentally-induced perceived burdensomeness and thwarted belongingness: Implications for theories of suicide. *Journal of Abnormal Psychology, 125*(5), 704–714. https://doi.org/10.1037/abn0000167

Daly, M. J., & Burton, R. L. (1983). Self-esteem and irrational beliefs: An exploratory investigation with implications for counseling. *Journal of Counseling Psychology, 30*(3), 361–366. https://doi.org/10.1037/0022-0167.30.3.361

Davila, J., Burge, D., & Hammen, C. (1997). Why does attachment style change? *Journal of Personality and Social Psychology, 73*(4), 826–838.

de Jong, M. L. (1992). Attachment, individuation, and risk of suicide in late adolescence. *Journal of Youth and Adolescence, 21*(3), 357–373. https://doi.org/10.1007/BF01537023

De Man, A. F., & Gutiérrez, B. I. B. (2002). The relationship between level of self-esteem and suicidal ideation with stability of self-esteem as moderator. *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement, 34*(4), 235–238. https://doi.org/10.1037/h0087176

Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology, 18*(1), 105–115. https://doi.org/10.1037/h0030644

Denney, J. T., Rogers, R. G., Krueger, P. M., & Wadsworth, T. (2009). Adult suicide mortality in the United States: Marital status, family size, socioeconomic status, and differences by sex. *Social Science Quarterly, 90*(5), 1167–1185. https://doi.org/10.1111/j.1540-6237.2009.00652.x

Doré, B. P., Morris, R. R., Burr, D. A., Picard, R. W., & Ochsner, K. N. (2017). Helping others regulate emotion predicts increased regulation of one's own emotions and decreased symptoms of depression. *Personality and Social Psychology Bulletin, 43*(5), 729–739. https://doi.org/10.1177/0146167217695558

Dozier, M., Chase, K., & Albus, K. E. (2008). Attachment and psychopathology in adulthood. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (2nd ed., pp. 718–744). New York: Guilford Press.

Durkheim, É. (1897). *Suicide, a study in sociology*. Glencoe, IL: Free Press.

Eskin, M. (2003). A cross-cultural investigation of the communication of suicidal intent in Swedish and Turkish adolescents. *Scandinavian Journal of Psychology, 44*(1), 1–6.

Esposito, C. L., & Clum, G. A. (2002). Social support and problem-solving as moderators of the relationship between childhood abuse and suicidality: Applications to a delinquent population. *Journal of Traumatic Stress, 15*(2), 137–146. https://doi.org/10.1023/A:1014860024980

Evans, J., Middleton, N., & Gunnell, D. (2004). Social fragmentation, severe mental illness and suicide. *Social Psychiatry and Psychiatric Epidemiology, 39*(3), 165–170. https://doi.org/10.1007/s00127-004-0733-9

Ewing, E. S. K., Diamond, G., & Levy, S. (2015). Attachment-based family therapy for depressed and suicidal adolescents: Theory, clinical model and empirical support. *Attachment & Human Development, 17*(2), 136–156. https://doi.org/10.1080/14616734.2015.1006384

Fässberg, M. M., Van Orden, K., Duberstein, P., Erlangsen, A., Lapierre, S., Bodner, E., … Waern, M. (2012). A systematic review of social factors and suicidal behavior in older adulthood. *International Journal of Environmental Research and Public Health, 9*(12), 722–745. https://doi.org/10.3390/ijerph9030722

Fleischmann, A. (2008). Effectiveness of brief intervention and contact for suicide attempters: A randomized controlled trial in five countries. *Bulletin of the World Health Organization, 86*(9), 703–709. https://doi.org/10.2471/BLT.07.046995

Fokkema, T., & Knipscheer, K. (2007). Escape loneliness by going digital: A quantitative and qualitative evaluation of a Dutch experiment in using ECT to overcome loneliness among older adults. *Aging & Mental Health, 11*(5), 496–504. https://doi.org/10.1080/13607860701366129

Franklin, J. C., Ribeiro, J. D., Fox, K. R., Bentley, K. H., Kleiman, E. M., Huang, X., … Nock, M. K. (2017). Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychological Bulletin, 143*, 187–232. https://doi.org/10.1037/bul0000084

Freedman, S. R., & Enright, R. D. (1996). Forgiveness as an intervention goal with incest survivors. *Journal of Consulting and Clinical Psychology, 64*(5), 983–992.

Glenn, C. R., Franklin, J. C., & Nock, M. K. (2015). Evidence-based psychosocial treatments for self-injurious thoughts and behaviors in youth. *Journal of Clinical Child and Adolescent Psychology, 44*(1), 1–29. https://doi.org/10.1080/15374416.2014.945211

Gonzalez, V. M. (2012). Association of solitary binge drinking and suicidal behavior among emerging adult college students. *Psychology of Addictive Behaviors, 26*(3), 609–614. https://doi.org/10.1037/a0026916

Grøholt, B., Ekeberg, O., Wichstrøm, L., & Haldorsen, T. (2000). Young suicide attempters: A comparison between a clinical and an epidemiological sample. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*(7), 868–875. https://doi.org/10.1097/00004583-200007000-00015

Grossman, D. C., Milligan, B. C., & Deyo, R. A. (1991). Risk factors for suicide attempts among Navajo adolescents. *American Journal of Public Health, 81*(7), 870–874. https://doi.org/10.2105/AJPH.81.7.870

Gvion, Y., Horresh, N., Levi-Belz, Y., Fischel, T., Treves, I., Weiser, M., … Apter, A. (2014). Aggression–impulsivity, mental pain, and communication difficulties in medically serious and

medically non-serious suicide attempters. *Comprehensive Psychiatry, 55*(1), 40–50. https://doi.org/10.1016/j.comppsych.2013.09.003

Haney, P., & Durlak, J. A. (1998). Changing self-esteem in children and adolescents: A meta-analytical review. *Journal of Clinical Child Psychology, 27*(4), 423–433. https://doi.org/10.1207/s15374424jccp2704_6

Hefferon, K., & Boniwell, I. (2011). *Positive psychology theory, research, and applications*. New York: Open University Press.

Heinrich, L. M., & Gullone, E. (2006). The clinical significance of loneliness: A literature review. *Clinical Psychology Review, 26*(6), 695–718. https://doi.org/10.1016/j.cpr.2006.04.002

Hirsch, J. K., & Barton, A. L. (2011). Positive social support, negative social exchanges, and suicidal behavior in college students. *Journal of American College Health, 59*(5), 393–398. https://doi.org/10.1080/07448481.2010.515635

Hirsch, J. K., & Cukrowicz, K. C. (2014). Suicide in rural areas: An updated review of the literature. *Journal of Rural Mental Health, 38*(2), 65–78. https://doi.org/10.1037/rmh0000018

Hobbs, W. R., Burke, M., Christakis, N. A., & Fowler, J. H. (2016). Online social integration is associated with reduced mortality risk. *Proceedings of the National Academy of Sciences, 113*(46), 12980–12984. https://doi.org/10.1073/pnas.1605554113

Hogan, B. E., Linden, W., & Najarian, B. (2002). Social support interventions: Do they work? *Clinical Psychology Review, 22*(3), 381–440. https://doi.org/10.1016/S0272-7358(01)00102-7

Horowitz, L. M., Rosenberg, S. E., & Bartholomew, K. (1993). Interpersonal problems, attachment styles, and outcome in brief dynamic psychotherapy. *Journal of Consulting and Clinical Psychology, 61*(4), 549–560.

Horton, S. E., Hughes, J. L., King, J. D., Kennard, B. D., Westers, N. J., Mayes, T. L., & Stewart, S. M. (2016). Preliminary examination of the interpersonal psychological theory of suicide in an adolescent clinical sample. *Journal of Abnormal Child Psychology, 44*(6), 1133–1144. https://doi.org/10.1007/s10802-015-0109-5

House, J. S. (1981). Work Stress and Social Support. Reading, Mass: Addison-Wesley

Inagaki, T. K., & Orehek, E. (2017). On the benefits of giving social support: When, why, and how support providers gain by caring for others. *Current Directions in Psychological Science, 26*(2), 109–113. https://doi.org/10.1177/0963721416686212

Jashinsky, J., Burton, S. H., Hanson, C. L., West, J., Giraud-Carrier, C., Barnes, M. D., & Argyle, T. (2014). Tracking suicide risk factors through Twitter in the US. *Crisis, 35*(1), 51–59. https://doi.org/10.1027/0227-5910/a000234

Johnson, J., Wood, A. M., Gooding, P., Taylor, P. J., & Tarrier, N. (2011). Resilience to suicidality: The buffering hypothesis. *Clinical Psychology Review, 31*(4), 563–591. https://doi.org/10.1016/j.cpr.2010.12.007

Johnson, J. G., Cohen, P., Gould, M. S., Kasen, S., Brown, J., & Brook, J. S. (2002). Childhood adversities, interpersonal difficulties, and risk for suicide attempts during late adolescence and early adulthood. *Archives of General Psychiatry, 59*(8), 741–749.

Joiner, T. E. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.

Joiner, T. E., Hollar, D., & Van Orden, K. (2006). On Buckeyes, Gators, Super Bowl Sunday, and the Miracle on Ice: "Pulling together" is associated with lower suicide rates. *Journal of Social and Clinical Psychology, 25*(2), 179–195. https://doi.org/10.1521/jscp.2006.25.2.179

Joiner, T. E., & Rudd, M. D. (1995). Negative attributional style for interpersonal events and the occurrence of severe interpersonal disruptions as predictors of self-reported suicidal ideation. *Suicide and Life-threatening Behavior, 25*(2), 297–304. https://doi.org/10.1111/j.1943-278X.1995.tb00927.x

Joiner, T. E., & Rudd, M. D. (1996). Disentangling the interrelations between hopelessness, loneliness, and suicidal ideation. *Suicide and Life-Threatening Behavior, 26*(1), 19–26. https://doi.org/10.1111/j.1943-278X.1996.tb00253.x

Joiner, T. E., Van Orden, K. A., Witte, T. K., & Rudd, M. D. (2009). *The interpersonal* theory *of* suicide*: Guidance for working with suicidal clients* (Vol. x). Washington, DC: American Psychological Association. https://doi.org/10.1037/11869-000

Jordan, J. R., & McMenamy, J. (2004). Interventions for suicide survivors: A review of the literature. *Suicide and Life-Threatening Behavior, 34*(4), 337–349. https://doi.org/10.1521/suli.34.4.337.53742

Karademas, E. C. (2006). Self-efficacy, social support and well-being: The mediating role of optimism. *Personality and Individual Differences, 40*(6), 1281–1290. https://doi.org/10.1016/j.paid.2005.10.019

Kaslow, N. J., Thompson, M. P., Meadows, L. A., Jacobs, D., Chance, S., Gibb, B., … Phillips, K. (1998). Factors that mediate and moderate the link between partner abuse and suicidal behavior in African American women. *Journal of Consulting and Clinical Psychology, 66*(3), 533–540. https://doi.org/10.1037/0022-006X.66.3.533

Kelly, J. A., Murphy, D. A., Bahr, G. R., Kalichman, S. C., Morgan, M. G., Stevenson, L. Y., … Bernstein, B. M. (1993). Outcome of cognitive-behavioral and support group brief therapies for depressed, HIV-infected persons. *The American Journal of Psychiatry, 150*(11), 1679–1686. https://doi.org/10.1176/ajp.150.11.1679

Kerr, D. C. R., Preuss, L. J., & King, C. A. (2006). Suicidal adolescents' social support from family and peers: Gender-specific associations with psychopathology. *Journal of Abnormal Child Psychology, 34*(1), 103–114. https://doi.org/10.1007/s10802-005-9005-8

Kidd, S., & Shahar, G. (2008). Resilience in homeless youth: The key role of self-esteem. *American Journal of Orthopsychiatry, 78*(2), 163–172. https://doi.org/10.1037/0002-9432.78.2.163

King, J. D., Horton, S. E., Hughes, J. L., Eaddy, M., Kennard, B. D., Emslie, G. J., & Stewart, S. M. (2017). The interpersonal-psychological theory of suicide in adolescents: A preliminary report of changes following treatment. *Suicide and Life-Threatening Behavior., 48*, 294. https://doi.org/10.1111/sltb.12352

Kleiman, E. M., & Liu, R. T. (2013). Social support as a protective factor in suicide: Findings from two nationally representative samples. *Journal of Affective Disorders, 150*(2), 540–545. https://doi.org/10.1016/j.jad.2013.01.033

Kleiman, E. M., & Liu, R. T. (2014). Prospective prediction of suicide in a nationally representative sample: Religious service attendance as a protective factor. *The British Journal of Psychiatry, 204*, 262–266. https://doi.org/10.1192/bjp.bp.113.128900

Kleiman, E. M., & Riskind, J. H. (2013). Utilized social support and self-esteem mediate the relationship between perceived social support and suicide ideation. A test of a multiple mediator model. *Crisis, 34*(1), 42–49. https://doi.org/10.1027/0227-5910/a000159

Kleiman, E. M., Riskind, J. H., & Schaefer, K. E. (2014). Social support and positive events as suicide resiliency factors: Examination of synergistic buffering effects. *Archives of Suicide Research, 18*(2), 144–155. https://doi.org/10.1080/13811118.2013.826155

Kleiman, E. M., Riskind, J. H., Schaefer, K. E., & Weingarden, H. (2012). The moderating role of social support on the relationship between impulsivity and suicide risk. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 33*(5), 273–279. https://doi.org/10.1027/0227-5910/a000136

Kleiman, E. M., Turner, B. J., Fedor, S., Beale, E. E., Huffman, J. C., & Nock, M. K. (2017). Examination of real-time fluctuations in suicidal ideation and its risk factors: Results from two ecological momentary assessment studies. *Journal of Abnormal Psychology., 126*, 726. https://doi.org/10.1037/abn0000273

Kolko, D. J., Loar, L. L., & Sturnick, D. (1990). Inpatient social–cognitive skills training groups with conduct disordered and attention deficit disordered children. *Journal of Child Psychology and Psychiatry, 31*(5), 737–748. https://doi.org/10.1111/j.1469-7610.1990.tb00814.x

Kraemer, H. C., Kazdin, A. E., Offord, D. R., Kessler, R. C., Jensen, P. S., & Kupfer, D. J. (1997). Coming to terms with the terms of risk. *Archives of General Psychiatry, 54*(4), 337–343.

Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukopadhyay, T., & Scherlis, W. (1998). Internet paradox. A social technology that reduces social involvement and psychological well-being? *The American Psychologist, 53*(9), 1017–1031.

Kreitman, N. (1988). Suicide, age and marital status. *Psychological Medicine, 18*(1), 121–128. https://doi.org/10.1017/S0033291700001951

Kuramoto, S. J., Wilcox, H. C., & Latkin, C. A. (2013). Social integration and suicide-related ideation from a social network perspective: A longitudinal study among inner-city African Americans. *Suicide and Life-threatening Behavior, 43*(4), 366–378. https://doi.org/10.1111/sltb.12023

Langford, C. P. H., Bowsher, J., Maloney, J. P., & Lillis, P. P. (1997). Social support: a conceptual analysis. *Journal of advanced nursing, 25*(1), 95–100

Lasgaard, M., Goossens, L., & Elklit, A. (2011). Loneliness, depressive symptomatology, and suicide ideation in adolescence: Cross-sectional and longitudinal analyses. *Journal of Abnormal Child Psychology, 39*(1), 137–150. https://doi.org/10.1007/s10802-010-9442-x

Leary, M. R., Tambor, E. S., Terdal, S. K., & Downs, D. L. (1995). Self-esteem as an interpersonal monitor: The sociometer hypothesis. *Journal of Personality and Social Psychology, 68*(3), 518–530. https://doi.org/10.1037/0022-3514.68.3.518

Lebret, S., Perret-Vaille, E., Mulliez, A., Gerbaud, L., & Jalenques, I. (2006). Elderly suicide attempters: Characteristics and outcome. *International Journal of Geriatric Psychiatry, 21*(11), 1052–1059. https://doi.org/10.1002/gps.1605

Levi, Y., Horesh, N., Fischel, T., Treves, I., Or, E., & Apter, A. (2008). Mental pain and its communication in medically serious suicide attempts: An "impossible situation". *Journal of Affective Disorders, 111*(2–3), 244–250. https://doi.org/10.1016/j.jad.2008.02.022

Lewinsohn, P. M., Rohde, P., & Seeley, J. R. (1994). Psychosocial risk factors for future adolescent suicide attempts. *Journal of Consulting and Clinical Psychology, 62*(2), 297–305. https://doi.org/10.1037/0022-006X.62.2.297

Linehan, M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York: Guilford Press.

Linehan, M., Tutek, D. A., Heard, H. L., & Armstrong, H. E. (1994). Interpersonal outcome of cognitive behavioral treatment for chronically suicidal borderline patients. *The American Journal of Psychiatry; Washington, 151*(12), 1771–1776.

Luoma, J. B., & Pearson, J. L. (2002). Suicide and marital status in the United States, 1991-1996: Is widowhood a risk factor? *American Journal of Public Health, 92*(9), 1518–1522. https://doi.org/10.2105/AJPH.92.9.1518

Ma, J., Batterham, P. J., Calear, A. L., & Han, J. (2016). A systematic review of the predictions of the interpersonal-psychological theory of suicidal behavior. *Clinical Psychology Review, 46*, 34–45. https://doi.org/10.1016/j.cpr.2016.04.008

Martin, J. S., Ghahramanlou-Holloway, M., Englert, D. R., Bakalar, J. L., Olsen, C., Nademin, E. M., … Branlund, S. (2013). Marital status, life stressor precipitants, and communications of distress and suicide intent in a sample of United States Air Force suicide decedents. *Archives of Suicide Research, 17*(2), 148–160. https://doi.org/10.1080/13811118.2013.776456

Masi, C. M., Chen, H.-Y., Hawkley, L. C., & Cacioppo, J. T. (2011). A meta-analysis of interventions to reduce loneliness. *Personality and Social Psychology Review, 15*(3), 219–266. https://doi.org/10.1177/1088868310377394

Masocco, M., Pompili, M., Vanacore, N., Innamorati, M., Lester, D., Girardi, P., … Vichi, M. (2010). Completed suicide and marital status according to the Italian region of origin. *Psychiatric Quarterly, 81*(1), 57–71. https://doi.org/10.1007/s11126-009-9118-2

Mazza, J. J., & Eggert, L. L. (2001). Activity involvement among suicidal and nonsuicidal high-risk and typical adolescents. *Suicide and Life-threatening Behavior, 31*(3), 265–281. https://doi.org/10.1521/suli.31.3.265.24251

McCullough, M. E., Rachal, K. C., Sandage, S. J., Worthington, E. L., Brown, S. W., & Hight, T. L. (1998). Interpersonal forgiving in close relationships: II. Theoretical elaboration and measurement. *Journal of Personality and Social Psychology, 75*(6), 1586–1603. https://doi.org/10.1037/0022-3514.75.6.1586

Mccullough, M. E., & Worthington, E. L. (1995). Promoting forgiveness: A comparison of two brief psychoeducational group interventions with a waiting-list control. *Counseling and Values, 40*(1), 55–68. https://doi.org/10.1002/j.2161-007X.1995.tb00387.x

McGee, R., Williams, S., & Nada-Raja, S. (2001). Low self-esteem and hopelessness in childhood and suicidal ideation in early adulthood. *Journal of Abnormal Child Psychology, 29*(4), 281–291. https://doi.org/10.1023/A:1010353711369

Mead, N., Lester, H., Chew-Graham, C., Gask, L., & Bower, P. (2010). Effects of befriending on depressive symptoms and distress: Systematic review and meta-analysis. *The British Journal of Psychiatry, 196*(2), 96–101. https://doi.org/10.1192/bjp.bp.109.064089

Miller, A. B., Esposito-Smythers, C., & Leichtweis, R. N. (2015). Role of social support in adolescent suicidal ideation and suicide attempts. *Journal of Adolescent Health, 56*(3), 286–292. https://doi.org/10.1016/j.jadohealth.2014.10.265

Milner, A. J., Carter, G., Pirkis, J., Robinson, J., & Spittal, M. J. (2015). Letters, green cards, telephone calls and postcards: Systematic and meta-analytic review of brief contact interventions for reducing self-harm, suicide attempts and suicide. *The British Journal of Psychiatry: the Journal of Mental Science, 206*(3), 184–190. https://doi.org/10.1192/bjp.bp.114.147819

Moody, C., & Smith, N. G. (2013). Suicide protective factors among trans adults. *Archives of Sexual Behavior, 42*(5), 739–752. https://doi.org/10.1007/s10508-013-0099-8

Morrow-Howell, N., Becker-Kemppainen, S., & Judy, L. (1998). Evaluating an intervention for the elderly at increased risk of suicide. *Research on Social Work Practice, 8*(1), 28–46. https://doi.org/10.1177/104973159800800104

Neff, K. D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity, 2*(3), 223–250. https://doi.org/10.1080/15298860309027

Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the Mindful Self-Compassion Program. *Journal of Clinical Psychology, 69*(1), 28–44. https://doi.org/10.1002/jclp.21923

Nisbet, P. A. (1996). Protective factors for suicidal black females. *Suicide and Life-Threatening Behavior, 26*(4), 325–341.

Nock, M. K., Borges, G., Bromet, E. J., Alonso, J., Angermeyer, M., Beautrais, A., … Williams, D. R. (2008). Cross-national prevalence and risk factors for suicidal ideation, plans, and attempts. *British Journal of Psychiatry, 192*, 98–105. https://doi.org/10.1192/bjp.bp.107.040113

Noonan, M. E. (2016). *Mortality in local jails, 2000-2014-statistical tables* (No. NCJ 250169). Washington, DC: Bureau of Justice Statistics. Retrieved from https://www.bjs.gov/index.cfm?ty=pbdetail&iid=5865.

O'Connor, R. C. (2011). Towards an integrated motivational–volitional model of suicidal behaviour. In R. C. O'Connor, S. Platt, & J. Gordon (Eds.), *International handbook of suicide prevention* (pp. 181–198). Hoboken, NJ: Wiley.

Ognibene, T. C., & Collins, N. L. (1998). Adult attachment styles, perceived social support and coping strategies. *Journal of Social and Personal Relationships, 15*(3), 323–345. https://doi.org/10.1177/0265407598153002

Overholser, J. C., Braden, A., & Dieter, L. (2012). Understanding suicide risk: Identification of high risk groups during high risk times. *Journal of Clinical Psychology, 68*(3), 349–361. https://doi.org/10.1002/jclp.20859

Owens, C., Owen, G., Belam, J., Lloyd, K., Rapport, F., Donovan, J., & Lambert, H. (2011). Recognising and responding to suicidal crisis within family and social networks: Qualitative study. *British Medical Journal, 343*, d5801. https://doi.org/10.1136/bmj.d5801

Perrin, A., & Duggan, M. (2015). *Americans' internet access: 2000–2015*. Washington, DC: Pew Research Center.

Petryshen, P. M., Hawkins, J. D., & Fronchak, T. A. (2001). An evaluation of the social recreation component of a community mental health program. *Psychiatric Rehabilitation Journal, 24*(3), 293–298.

Pettit, J. W., Green, K. L., Grover, K. E., Schatte, D. J., & Morgan, S. T. (2011). Domains of chronic stress and suicidal behaviors among inpatient adolescents. *Journal of Clinical Child & Adolescent Psychology, 40*(3), 494–499. https://doi.org/10.1080/15374416.2011.563466

Phillips, M. R., Yang, G., Zhang, Y., Wang, L., Ji, H., & Zhou, M. (2002). Risk factors for suicide in China: A national case-control psychological autopsy study. *The Lancet, 360*(9347), 1728–1736. https://doi.org/10.1016/S0140-6736(02)11681-3

Pietrzak, R. H., Goldstein, M. B., Malley, J. C., Rivers, A. J., Johnson, D. C., & Southwick, S. M. (2010). Risk and protective factors associated with suicidal ideation in veterans of Operations Enduring Freedom and Iraqi Freedom. *Journal of Affective Disorders, 123*(1–3), 102–107. https://doi.org/10.1016/j.jad.2009.08.001

Priel, B., & Shamai, D. (1995). Attachment style and perceived social support: Effects on affect regulation. *Personality and Individual Differences, 19*(2), 235–241. https://doi.org/10.1016/0191-8869(95)91936-T

Prinstein, M. J., Boergers, J., Spirito, A., Little, T. D., & Grapentine, W. L. (2000). Peer functioning, family dysfunction, and psychological symptoms in a risk factor model for adolescent inpatients' suicidal ideation severity. *Journal of Clinical Child Psychology, 29*(3), 392–405. https://doi.org/10.1207/S15374424JCCP2903_10

Purcell, B., Heisel, M. J., Speice, J., Franus, N., Conwell, Y., & Duberstein, P. R. (2012). Family connectedness moderates the association between living alone and suicide ideation in a clinical sample of adults 50 years and older. *The American Journal of Geriatric Psychiatry, 20*(8), 717–723. https://doi.org/10.1097/JGP.0b013e31822ccd79

Reeves, R., & Tamburello, A. (2014). Single cells, segregated housing, and suicide in the New Jersey Department of Corrections. *Journal of the American Academy of Psychiatry and the Law, 42*(4), 484–488.

Renaud, J., Brent, D. A., Baugher, M., Birmaher, B., Kolko, D. J., & Bridge, J. A. (1998). Rapid response to psychosocial treatment for adolescent depression: A two-year follow-up. *Journal of the American Academy of Child & Adolescent Psychiatry, 37*(11), 1184–1190. https://doi.org/10.1097/00004583-199811000-00019

Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., … Udry, J. R. (1997). Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *Journal of the American Medical Association, 278*(10), 823–832.

Riblet, N. B. V., Shiner, B., Young-Xu, Y., & Watts, B. V. (2017). Strategies to prevent death by suicide: Meta-analysis of randomised controlled trials. *The British Journal of Psychiatry, 210*(6), 396–402. https://doi.org/10.1192/bjp.bp.116.187799

Rich, A. R., & Bonner, R. L. (1987). Concurrent validity of a stress–vulnerability model of suicidal ideation and behavior: A follow-up study. *Suicide and Life-Threatening Behavior, 17*(4), 265–270. https://doi.org/10.1111/j.1943-278X.1987.tb00067.x

Roberts, J. E., Gotlib, I. H., & Kassel, J. D. (1996). Adult attachment security and symptoms of depression: The mediating roles of dysfunctional attitudes and low self-esteem. *Journal of Personality and Social Psychology, 70*(2), 310–320. https://doi.org/10.1037/0022-3514.70.2.310

Roberts, R. K., Roberts, C. R., & Chen, Y. R. (1998). Suicidal thinking among adolescents with a history of attempted suicide. *Journal of the American Academy of Child & Adolescent Psychiatry, 37*(12), 1294–1300. https://doi.org/10.1097/00004583-199812000-00013

Robins, E., Gassner, S., Kayes, J., Wilkinson, R. H., & Murphy, G. E. (1959). The communication of suicidal intent: A study of 134 consecutive cases of successful (completed) suicide. *American Journal of Psychiatry, 115*(8), 724–733. https://doi.org/10.1176/ajp.115.8.724

Robinson, J., Cox, G., Bailey, E., Hetrick, S., Rodrigues, M., Fisher, S., & Herrman, H. (2016). Social media and suicide prevention: A systematic review. *Early Intervention in Psychiatry, 10*(2), 103–121. https://doi.org/10.1111/eip.12229

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Rote, S., Hill, T. D., & Ellison, C. G. (2013). Religious attendance and loneliness in later life. *The Gerontologist, 53*(1), 39–50. https://doi.org/10.1093/geront/gns063

Rushing, N. C., Corsentino, E., Hames, J. L., Sachs-Ericsson, N., & Steffens, D. C. (2013). The relationship of religious involvement indicators and social support to current and past suicidality among depressed older adults. *Aging & Mental Health, 17*(3), 366–374. https://doi.org/10.1080/13607863.2012.738414

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry, 57*(3), 316–331. https://doi.org/10.1111/j.1939-0025.1987.tb03541.x

Saïas, T., Beck, F., Bodard, J., Guignard, R., & du Roscoät, E. (2012). Social participation, social environment and death ideations in later life. *PLoS One, 7*(10), e46723. https://doi.org/10.1371/journal.pone.0046723

Sainsbury, P. (1955). *Suicide in London: An ecological study*. Published for the Institute of Psychiatry by Chapman & Hall.

Seeman, T. E., Lusignolo, T. M., Albert, M., & Berkman, L. (2001). Social relationships, social support, and patterns of cognitive aging in healthy, high-functioning older adults: MacArthur studies of successful aging. *Health Psychology, 20*(4), 243–255. https://doi.org/10.1037/0278-6133.20.4.243

Seligman, M. E. P. (2012). *Flourish: A visionary new understanding of happiness and well-being*. New York: Simon and Schuster.

Shapira, L. B., & Mongrain, M. (2010). The benefits of self-compassion and optimism exercises for individuals vulnerable to depression. *The Journal of Positive Psychology, 5*(5), 377–389. https://doi.org/10.1080/17439760.2010.516763

Sheftall, A. H., Schoppe-Sullivan, S. J., & Bridge, J. A. (2014). Insecure attachment and suicidal behavior in adolescents. *Crisis, 35*(6), 426–430. https://doi.org/10.1027/0227-5910/a000273

Smith, N. B., Mota, N., Tsai, J., Monteith, L., Harpaz-Rotem, I., Southwick, S. M., & Pietrzak, R. H. (2016). Nature and determinants of suicidal ideation among U.S. veterans: Results from the national health and resilience in veterans study. *Journal of Affective Disorders, 197*, 66–73. https://doi.org/10.1016/j.jad.2016.02.069

Stack, S. (1990). The effect of divorce on suicide in Denmark, 1951–1980. *The Sociological Quarterly, 31*(3), 359–370. https://doi.org/10.1111/j.1533-8525.1990.tb00333.x

Stanley, B., & Brown, G. K. (2012). Safety planning intervention: A brief intervention to mitigate suicide risk. *Cognitive and Behavioral Practice, 19*(2), 256–264. https://doi.org/10.1016/j.cbpra.2011.01.001

Stellrecht, N. E., Gordon, K. H., Van Orden, K., Witte, T. K., Wingate, L. R., Cukrowicz, K. C., … Joiner, T. E., Jr. (2006). Clinical applications of the interpersonal-psychological theory of attempted and completed suicide. *Journal of Clinical Psychology, 62*(2), 211–222. https://doi.org/10.1002/jclp.20224

Stepp, S. D., Morse, J. Q., Yaggi, K. E., Reynolds, S. K., Reed, L. I., & Pilkonis, P. A. (2008). The role of attachment styles and interpersonal problems in suicide-related behaviors. *Suicide & Life-Threatening Behavior, 38*(5), 592. https://doi.org/10.1521/suli.2008.38.5.592

Stewart, M. J. (1989). Social support intervention studies: A review and prospectus of nursing contributions. *International Journal of Nursing Studies, 26*(2), 93–114. https://doi.org/10.1016/0020-7489(89)90027-8

Studart, P., Galvão-de Almeida, A., Bezerra-Filho, S., Caribé, A., Reis Afonso, N., Daltro, C., & Miranda-Scippa, A. Â. (2016). Is history of suicidal behavior related to social support and quality of life in outpatients with bipolar I disorder? *Psychiatry Research, 246*, 796–802. https://doi.org/10.1016/j.psychres.2016.10.045

Su, Y.-L., & Reeve, J. (2011). A meta-analysis of the effectiveness of intervention programs designed to support autonomy. *Educational Psychology Review, 23*(1), 159–188. https://doi.org/10.1007/s10648-010-9142-7

Trout, D. L. (1980). The role of social isolation in suicide. *Suicide & Life-Threatening Behavior, 10*(1), 10–23.

Tsai, A. C., Lucas, M., & Kawachi, I. (2015). Association between social integration and suicide among women in the United States. *JAMA Psychiatry, 72*(10), 987–993. https://doi.org/10.1001/jamapsychiatry.2015.1002

Van Orden, K. A., Conwell, Y., & Arean, P. (2016). Socially ENGAGE: Pilot trial to demonstrate feasibility of an intervention for social engagement. *The American Journal of Geriatric Psychiatry, 24*(3), S145–S146. https://doi.org/10.1016/j.jagp.2016.02.017

Van Orden, K. A., Witte, T. K., James, L. M., Castro, Y., Gordon, K. H., Braithwaite, S. R., … Joiner, T. E. (2008). Suicidal ideation in college students varies across semesters: The mediating role of belongingness. *Suicide and Life-threatening Behavior, 38*(4), 427–435. https://doi.org/10.1521/suli.2008.38.4.427

VanderWeele, T. J., Li, S., Tsai, A. C., & Kawachi, I. (2016). Association between religious service attendance and lower suicide rates among US women. *JAMA Psychiatry, 73*(8), 845–851. https://doi.org/10.1001/jamapsychiatry.2016.1243

Webb, M., Burns, J., & Collin, P. (2008). Providing online support for young people with mental health difficulties: Challenges and opportunities explored. *Early Intervention in Psychiatry, 2*(2), 108–113. https://doi.org/10.1111/j.1751-7893.2008.00066.x

Weinstein, N., & Ryan, R. M. (2010). When helping helps: Autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient. *Journal of Personality and Social Psychology, 98*(2), 222–244. https://doi.org/10.1037/a0016984

Weiss, R. S. (1973). *Loneliness: The experience of emotional and social isolation*. Cambridge, MA: MIT Press.

Wild, L. G., Flisher, A. J., & Lombard, C. (2004). Suicidal ideation and attempts in adolescents: Associations with depression and six domains of self-esteem. *Journal of Adolescence, 27*(6), 611–624. https://doi.org/10.1016/j.adolescence.2004.03.001

Yang, B., & Clum, G. A. (1994). Life stress, social support, and problem-solving skills predictive of depressive symptoms, hopelessness, and suicide ideation in an Asian student population: A test of a model. *Suicide & Life-Threatening Behavior, 24*(2), 127–139.

Yen, Y.-C., Yang, M.-J., Yang, M.-S., Lung, F.-W., Shih, C.-H., Hahn, C.-Y., & Lo, H.-Y. (2005). Suicidal ideation and associated factors among community-dwelling elders in Taiwan. *Psychiatry and Clinical Neurosciences, 59*(4), 365–371. https://doi.org/10.1111/j.1440-1819.2005.01387.x

You, S., Van Orden, K. A., & Conner, K. R. (2011). Social connections and suicidal thoughts and behavior. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors, 25*(1), 180–184. https://doi.org/10.1037/a0020936

Zhang, J., & Lin, L. (2015). The moderating effect of social support on the relationship between impulsivity and suicide in rural China. *Community Mental Health Journal, 51*(5), 585–590. https://doi.org/10.1007/s10597-014-9811-y

Chapter 8
Encouraging Health-Promoting Behaviors in Primary Care to Reduce Suicide Rates

Collin L. Davidson, Meredith L. Slish, Sarah Rhoades-Kerswill, Victoria M. O'Keefe, and Raymond P. Tucker

For decades, researchers have investigated the significant, deleterious impact of suicide on public health. There has been an imbalance in these investigations, however, given that most suicide interventions with empirical support (e.g., Dialectical Behavior Therapy [DBT], Cognitive Behavioral Therapy for Suicide Prevention [CBT-SP], Problem-Solving Therapy [PST]) have been limited to a focus on individuals at high risk for suicide. This high-risk approach mirrors the historical deficit-oriented approach of the larger field of psychology (Seligman & Csikszentmihalyi, 2000) to the exclusion of a focus on strengths and flourishing as advocated by positive psychology. Such an approach to treatment, as we discuss below, also omits many individuals who are not at imminent suicide risk or who manifest subclinical symptoms, but who would also benefit from mental health services. In this chapter, our goal is to investigate broad-based health promotion strategies, such as physical activity, that employ a preventive approach to suicide risk reduction, and which can be implemented independently by patients or proscriptively by healthcare providers to improve well-being and assuage suicidality.

A primary problem with a high-risk approach to suicide intervention is the lack of available specialized treatments. To benefit from an effective treatment, one must have access to a provider who is trained in the desired approach. Unfortunately,

C. L. Davidson (✉)
Hennepin County Medical Center, Minneapolis, MN, USA
e-mail: collin.davidson@ucmd.org

M. L. Slish · S. Rhoades-Kerswill
Oklahoma City VA Health Care System, Oklahoma City, OK, USA

V. M. O'Keefe
Department of International Health and Center for American Indian Health, Johns Hopkins University, Bloomberg School of Public Health, Baltimore, MD, USA

R. P. Tucker
Louisiana State University, Baton Rouge, LA, USA

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*,
Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_8

research has demonstrated that having access to a mental health professional who can provide psychotherapy is a luxury for many. It has been estimated that 75 million Americans could benefit from psychotherapy, but approximately 700,000 mental health workers are available to provide services, leaving a large gap between supply and demand (Kazdin & Blase, 2011). The access problem is only compounded when specific empirically supported therapies are indicated, considering that these treatments are specialized and require extensive training by mental health professionals.

Another major problem with the high-risk approach is that many people who require an intervention to reduce suicide risk do not engage in mental health treatment. However, 45% of individuals who died by suicide met with a primary care (PC) provider within 1 month of their death (see Luoma, Martin, & Pearson, 2002). To have a substantial impact on population-level suicide rates, these individuals who would not otherwise engage with mental health services must be targeted. A potential avenue to appeal to such consumers would be the strengths-based approach advocated by positive psychology. For instance, those who are averse to standard mental health treatment may be more attracted to interventions which specifically highlight personal strengths and health-promoting behaviors.

A third problem with the high-risk approach is that it is not cost effective. Indeed, the resources required to educate, train, and employ a provider competent in an empirically supported treatment for suicide prevention are staggering (Kazdin & Blase, 2011). This problem is compounded when one considers that the "dose" is typically delivered to one individual at a time in 50-min increments. In contrast, health-promoting and positive psychological interventions (e.g., physical activity, stress reduction phone/computer applications, and activities) are often free, and available at any time, for any duration needed by that individual.

The impossibility of predicting an individual's level of suicide risk presents further difficulty for a high-risk approach. For example, a recent meta-analysis on longitudinal risk factors showed weak and non-specific associations between risk factors and future suicidal ideation and attempts (Franklin et al., 2017). The authors highlight that the practical benefit of risk factors would only slightly increase the identification of at-risk individuals (e.g., from 2 to 3 people per 100 who experience suicidal ideation *per year*). These results are even less encouraging for predicting suicide attempts and deaths given lower base rates. In clinical practice, this means even the most sophisticated suicide risk assessment and formulation may not provide much benefit. This inability to predict future suicide-related thoughts and behaviors further suggests that a public health approach targeting a large group of individuals is vital. Indeed, if we cannot predict who will progress to suicidal ideation and attempts, a broad-based approach that aims to help many people who are potentially at risk to actively engage in their strengths may produce the most benefit.

A final and, perhaps, most crucial problem is that calculations have demonstrated that relying on a high-risk approach has little impact on population-level incidences of suicidal behavior (Lewis, Hawton, & Jones, 1997). For instance, to prevent one death by suicide, it was estimated that nearly 400 individuals would have to be

treated with a high-risk approach. Therefore, a high-risk approach requires maximal effort, but provides minimal yield, as evidenced by number of suicides prevented. On the other hand, providing preventive treatment to patients with non-acute risk or subclinical symptoms, although it may still require treatment provision to many patients, has the potential to make a greater impact on suicide risk. As several researchers have astutely noted (Sanddal, Sanddal, Berman, & Silverman, 2003; Yip, 2005), medical providers across specialties have a range of interventions, of different intensities, at their disposal for a given medical problem. Take, for example, a cardiologist who can provide an intensive intervention, such as cardiac bypass surgery, which is expensive and limited to the most severe cases, but who may also encourage proactive, preventive and inexpensive interventions such as regular physical activity, a healthy diet, and tobacco cessation, to stave off the former scenario. Suicidologists and mental health professionals must proceed in a similar vein, promoting wellness behaviors at all levels of suicide risk intensity and, indeed, even in the absence of risk, as a reservoir of energy and coping ability to be used in times of distress. This broad-based approach to intervention can reach the most people and, hopefully, can do so before they manifest full signs of psychopathology and suicide risk.

To better understand this distinction, researchers in the field of public health have classified interventions for a given behavior into three groups: universal, selective, and indicated. Universal strategies are aimed at the population at large, without consideration of symptomatic or asymptomatic individuals. Selective strategies slightly narrow the focus to intervene with individuals at higher risk for a given behavior or condition. Finally, indicated strategies create a fine-grained focus on people who already demonstrate symptoms of a condition, with the purpose of preventing further deterioration (Gordon, 1983). As applied to suicide, a universal intervention could aim to reduce suicide risk factors in the population at large; a selective intervention could target those with identified risk factors for suicide, such as psychiatric symptoms; and an indicated intervention could specialize in the treatment of individuals who have already demonstrated suicidal ideation or behavior. Approaching suicide prevention and health promotion from a *preventive* standpoint may allow for a more effective point of intervention to increase a person's inherent strengths. Because people with significant mental or physical health problems may be focused on what is "wrong," they may have difficulty connecting with strengths, or what is "right."

The current chapter aims to review several interventions that are promising as broad-based strategies (universal and selective) to target people *before* they reach the level of indicated intervention. Each of the interventions reviewed can be employed within one of the most general medical settings, primary care (PC). This setting is ideal given it is the entry point into the medical system and provides the broadest array of services. This chapter highlights health-promoting behaviors, given the research supporting their use and the relative ease with which these interventions can be employed. Indeed, many PC providers may currently utilize some of these interventions as part of their clinical practice. It is also argued that health-promoting behaviors can be classified within the domain of positive psychology,

given they are easily conceptualized as areas of strength. Further, research has suggested that health-promoting behaviors are influenced by positive psychological constructs such as self-regulation and self-compassion (Sirois, Kitner, & Hirsch, 2015), underscoring the interconnectedness between such behaviors and strengths. Each section will review the link between intervention and the known risk factors for suicide (e.g., psychiatric and substance use disorders; Nock et al., 2008, 2009), as well as the literature examining the relationship between the given factor and suicidal ideation and behavior. Connections between each health-promoting behavior and positive psychological constructs will also be highlighted. The health-promoting behaviors that will be discussed include physical activity, behavioral activation, nutrition, health-related quality of life (HRQL), stress reduction, and reduction of substance use.

Physical Activity

Research has consistently demonstrated that physical activity is associated with lower levels of depression (e.g., Mackenzie et al., 2011) and is effective for treating subclinical depression (Conn, 2010; Lawlor & Hopker, 2001) and major depressive disorder (e.g., Blumenthal et al., 2007). Physical activity has been shown to improve quality of life (Rosenbaum, Tiedemann, Sherrington, Curtis, & Ward, 2014), symptoms of schizophrenia (Rosenbaum et al., 2014), and symptoms of anxiety with mixed findings (Bartley, Hay, & Bloch, 2013; Wipfli, Rethorst, & Landers, 2008). The goal setting, pathways, and agency (i.e., hope subcomponents; see Snyder, 2002) that regular physical activity requires can be seen as a strength that an individual can cultivate. The possible connection between hope and its subcomponents and the promotion of physical activity aligns well within positive psychology (Hefferon & Mutrie, 2012). Widely disseminated physical activity interventions have the potential to reduce the development of mental health symptoms, buffer the effects of existing symptoms, and thus decrease risk for developing suicidal ideation and suicide attempts.

The literature examining a potential link between physical activity and suicidal ideation or attempts is nascent and more mixed. Specifically, a retrospective case-control study observed significantly less physical activity among people who attempt suicide relative to controls (Simon, Powell, & Swann, 2004). Other studies examined Veterans in residential Post-Traumatic Stress Disorder (PTSD) treatment and found that physical activity was negatively associated with suicide risk (Davidson, Babson, Bonnmiller, Souter, & Vannoy, 2013). This relationship was both direct and mediated by depression levels and sleep disturbance. Other studies indicate that low levels of physical activity are negatively associated with suicidal ideation and attempts (Brown & Blanton, 2002), and depression and hopelessness (Taliaferro, Rienzo, Pigg, Miller, & Dodd, 2009). Finally, Sturm et al. (2012) reported on a physical activity intervention (mountain hiking) for participants with a history of one or more suicide attempts and current hopelessness. Results indicated

those in the mountain hiking condition had lower levels of hopelessness and depression, and there was a significant change in suicidal ideation, such that suicidal ideation reduced over time during participation in the mountain hiking intervention. Importantly, those in the control condition also evidenced a significant reduction in suicidal ideation, suggesting that this change may have been a function of time.

Taken together, these studies indicate that physically active people tend to be at lower risk for suicidal ideation and behavior than those who are inactive; however, such results are not universal (e.g., Gutierrez, Davidson, Friese, & Forster, 2016). Frequent vigorous activity has been shown to have a potentially iatrogenic effect on suicide risk (e.g., Brown & Blanton, 2002; Lee, Cho, & Yoo, 2013), highlighting that over-exercise may actually increase risk. Specific recommendations for daily exercise range from 90 to 150 min (Sharma, Madaan, & Petty, 2006; World Health Organization [WHO], 2010a, 2010b) at a moderate intensity level. Within the PC setting, PC providers can integrate positive psychology principles by encouraging patients to increase motivation and physical activity, a venture that may also increase hope (via goals, pathways, agency), and promote general health. Such an increase in hope could result from a patient successfully achieving physical activity goals, which could then increase agency to pursue other goals.

Behavioral Activation

One of the most widely recognized suicide risk factors is a diagnosis of depression (e.g., Kessler, Berglund, Borges, Nock, & Wang, 2005). There are many evidence-based treatments for depression, including behavioral activation treatment for depression (BATD). BATD aims to alleviate depression by decreasing maladaptive behaviors and increasing healthy behaviors (Lejuez, Hopko, Acierno, Daughters, & Pagoto, 2011). Treatment includes self-monitoring of current daily activities, identifying values and goals in important life areas, and building an activity hierarchy of "easiest" to "most difficult" to achieve. The emphasis on values and achievement of important life goals is a bedrock area within positive psychology, as such a focus results in patients increasing engagement in areas that bring meaning to their life. The provider and patient additionally engage in goal setting, an activity which draws upon positive psychological constructs such as hope (i.e., goal setting, pathways to achieve goals, and belief in self to achieve goals; see Snyder, 2002)

BATD has been shown to be an effective treatment for depression with patients of various backgrounds (e.g., Spanish-speakers) and of co-occurring disorders, such as depression and substance use disorders (Collado, Calderón, MacPherson, & Lejuez, 2016; Ross et al., 2016). Additionally, BATD has shown some promise in PC settings with both Veterans and cancer patients (Hopko, Bell, Armento, Lejuez, & Hunt, 2005; Jakupcak, Wagner, Paulson, Varra, & McFall, 2010); yet, little research has been conducted examining the impact of behavioral activation on suicidal ideation and behavior.

While reduction of suicidal ideation and behavior is not a direct target of behavioral activation, it is possible that the mechanisms inherent in behavioral activation may indirectly impact these symptoms. Hopko et al. (2013) found that an 8-week course of BATD increased hopefulness and decreased suicidal ideation for breast cancer patients up to 1 year after treatment ended. BATD has also been explored in a case study as a potential therapy to reduce suicidal behaviors for individuals diagnosed with Borderline Personality Disorder (BPD; Hopko, Sanchez, Hopko, Dvir, & Lejuez, 2003). The authors posit that BATD can be adapted to help reduce suicidal behaviors often experienced by individuals diagnosed with BPD by using identified values and goals as reasons for living, and by engaging in activities that provide potential distraction and relief from suicidal thoughts. The unhealthy behaviors targeted for replacement also include activities that consistently trigger suicidal/self-harm behaviors, and these may be replaced by activities incorporating reasons for living and value-based behaviors.

Despite these promising suicide prevention applications of BATD, there is little empirical evidence on this topic to date. Many studies on behavioral activation exclude individuals experiencing suicidal ideation and behavior. Even without this direct evidence, it is likely that the implementation of BATD for depression symptoms could reduce the likelihood that people deteriorate and experience suicidal ideation or behavior. A lower dose version of BATD could involve providers briefly educating patients on the link between activity and decreased depression and encouraging physical activity and enjoyable events in depressed individuals. A prominent, positive psychological model, the Broaden and Build Theory (Fredrickson, 2001), specifies that positive emotions support approach behavior, which then increases people's exposure to new experiences and facilitates the development of new perspectives and skills. The scheduling portion of BATD increases the chances a patient will engage in activities that promote positive emotions and begin a virtuous cycle of approach behavior, positive emotions, and skill development.

Nutrition

Like physical activity, healthy eating draws on several strengths within the field of positive psychology. Positive eating habits can be viewed as a form of self-compassion and an exercise in gratitude as it entails recognizing the importance of and treating the body with care and respect (Berry, Kowalski, Ferguson, & McHugh, 2010). Research has demonstrated improved eating habits when participants are trained in self-compassion (Adams & Leary, 2007). Therefore, the research over the past decade on the impact of nutrition on mental health may be fruitful for the field of positive psychology.

Nutritional lifestyle changes, such as food choices and vitamin/mineral supplements, can impact mental health (Walsh, 2011) and promote overall well-being. The results of longitudinal and cross-sectional epidemiological studies have illustrated

the association between diet and risk for psychiatric symptoms (Rucklidge & Kaplan, 2016). Overall, the results of many studies have linked the consumption of a "Mediterranean-style" diet to lower rates of mental health symptoms (e.g., Jacka et al., 2011; Sánchez-Villegas, Ruiź-Canela, Gea, Lahortiga, & Martínez-González, 2016). Conversely, a "Western-style" diet high in processed foods (Rucklidge & Kaplan, 2016), diets low in fruits and vegetables (Bishwajit et al., 2017), or diets low in essential amino acids and micronutrients (van Hees, Giltay, Geleijnse, Janssen, & van der Does, 2014) have been associated with increased risk for mood and anxiety disorders.

A Mediterranean diet includes higher consumption of fruits and vegetables and a higher consumption of foods containing healthy fats such as fish and nuts (Rucklidge & Kaplan, 2016). However, a Mediterranean lifestyle also includes social activities, physical activity and, when taken in combination with diet, individuals at high levels of all three variables evidence a 50% reduction in risk for depression (Sánchez-Villegas et al., 2016). Within this lifestyle, it may be more likely for individuals to engage in value-based activities and goal setting (e.g., see physical activity section above). Importantly, similar effects on reduced rates of depression have been shown in other populations worldwide when higher intake of fruits and vegetables are present (e.g., Aline, Sabine, Caroline, Meichun, & Monika, 2015). Higher intake of fish rich in essential fatty acids has been shown to buffer against symptoms of depression and suicidal ideation (Turunen et al., 2008), whereas deficiency in omega-3 fatty acids has been associated with increased suicide risk (Hibbeln & Gow, 2014). Both single nutrient and multi-nutrient supplement treatments containing essential minerals, vitamins, and amino acids have shown either significant impact on mental health symptoms or have shown promising results that require future replication (see Kaplan, Rucklidge, Romijn, & McLeod, 2015; Rucklidge & Kaplan, 2013). Importantly, these results have been shown in samples both with and without chronic health conditions. Multi-nutrient supplementation and psychoeducation on food choices are cost effective and within the scope of practice for PC providers.

Further, sedentary lifestyle and poor diet are risk factors for obesity (Jacka, Sacks, Berk, & Allender, 2014). Obesity is a well-known risk factor for many non-communicable diseases and shares a bidirectional relationship with depression (Roca et al., 2016; Williams et al., 2009). Variables such as environment, emotional distress which triggers food cues, cooking ability, and exposure to and access to food, play a role in an individual's positive or negative dietary patterns (Ouwens, van Strien, & van Leeuwe, 2009; Roca et al., 2016). Both public policy changes and intervention programs aimed at improving dietary behaviors and mental health outcomes have been called for by researchers based on the growing literature and clear economic and societal impact (Jacka et al., 2014; Kaplan et al., 2015; Roca et al., 2016).

Researchers have begun to investigate nutrition interventions that may improve psychiatric symptoms and reduce suicide risk. For example, The MooDFOOD Prevention Trial (Roca et al., 2016) is a proposed intervention program that seeks to use both multi-nutrient supplements and diet and behavioral change strategies to prevent symptoms of depression among obese individuals with current sub-threshold

symptoms of depression. Several clinical trials for military personnel are actively targeting nutrition through modification of diet and supplementation, to bring military diets more in line with the Mediterranean nutrition model, with hopes to lower risk for mental health disorders and suicide. These trials include the Optimal Omega-3 Study (2017) and the Better Resilience Among Veterans on Omega-3's (BRAVO, 2016) study. Administration of probiotic supplements and nonsteroidal anti-inflammatory drugs (NSAIDs) have also shown promising results on mental health symptoms due to reduction of inflammation and increase of gastrointestinal tract functioning for optimal absorption of vital nutrients (Kaplan et al., 2015).

Simply eating higher quantities of fruits and vegetables has been linked to increased happiness, "flourishing," and life satisfaction (Conner, Brookie, Carr, Mainvil, & Vissers, 2017), and each of these concepts has been key areas of investigation in positive psychology. Kaplan et al. (2015) also hypothesized that addition of micronutrients in conjunction to psychotherapy might enhance blood flow and brain functioning, helping individuals to optimize their treatment.

Increasing nutritional knowledge, improving access to healthy nutritional options, and providing low-cost dietary supplementation are just some of the ways individuals can be empowered to increase their personal wellness and mental health functioning. Healthy eating can be a form of self-compassion towards the body, and those who are higher in self-compassion may be more likely to continue healthy nutritional changes over time, though future research should aim to investigate this possibility. Overall, the research points to prevention and intervention approaches, which often involve lifestyle changes such as modifying diet and supplementing diet, both of which are within the scope of practice for PC providers and mental health professionals alike (Jacka et al., 2014; Walsh, 2011).

Health-Related Quality of Life

Another burgeoning vein of research has linked suicide risk to Health-Related Quality of Life (HRQL). HRQL refers to an individual's subjective view of his or her own wellness within multiple life domains (e.g., physical, mental, and social; Hays & Morales, 2001). This explicit focus on holistic wellness, as contrasted with illness, fits neatly with the aim of investigating strengths. It implies that wellness is not simply the absence of illness, but a state that requires active effort and maintenance. Indices of HRQL may include the ability to attend to physical and emotional functioning and to perform work-related tasks and social activities. HRQL is not illness specific, which allows for the comparison of the impact of a variety of illnesses (Cook & Harman, 2008). The Centers for Disease Control and Prevention's (CDC) Division of Population Health has deemed HRQL an essential metric of health and has developed the HRQL Surveillance Program to collect national- and state-level data regarding population subjective wellness (CDC, 2016).

The most widely used generic measure of HRQL is the Short Form health survey Version 2 (SF-36v2; Maruish, 2011). The SF-36v2 provides (1) data regarding gen-

eral perception of health; (2) how one's health has changed over the last year; and (3) the extent to which physical and emotional concerns have impacted daily, occupational, and social functioning. Although the SF-36v2 and other self-report measures of HRQL are widely used, less comprehensive but potentially more objective measures of HRQL exist. For instance, a simple count of days of work missed due to physical or emotional health concerns is a limited, yet useful, way of determining how an individual's subjective perception of health (or health related to a specific disease of concern) has impacted occupational functioning. Such an approach may be well suited for busy PC settings.

Although multiple methods of assessing HRQL exist, there is limited literature regarding the relationship between HRQL and suicide. In illness-specific populations, lower SF-36 scores have been correlated to higher levels of suicidal ideation in Spanish adults with diabetes mellitus (Pompili et al., 2009). Past suicide attempt(s) have also been shown to be related to significantly poorer HRQL in South American adults diagnosed with Bipolar I disorder (de Abreu et al., 2012). A consistent relationship between HRQL and suicidal ideation and suicide attempts has been seen in adults with schizophrenia from multiple countries (e.g., Kao, Liu, Cheng, & Chou, 2012; Yan et al., 2013).

Cross-sectional evidence also exists for the relationship between suicide and HRQL in general community samples. Results of Kwon and Kim (2012) demonstrated that Korean adults with a history of suicide attempt(s) scored lower on a metric of HRQL compared to those with a history of suicidal ideation. Those with a history of suicidal ideation but not suicide attempt(s) scored lower on the HRQL measure compared to those without a history of suicidal ideation or attempt(s). In addition, Korean older adults with a history of suicidal ideation and suicide attempts demonstrated substantially lower scores on the same HRQL measure as compared to those without suicide-related thoughts and behaviors (Kwon & Kim, 2012). Suicidal ideation experienced in the last 2 weeks has also been associated with lower scores on the SF-36 and a quality of life measure in South Australian individuals above the age of 15 (Goldney, Fisher, Wilson, & Cheok, 2001).

Most recently, longitudinal evidence has accumulated for the relationship between HRQL and suicide. Results of Fairweather-Schmidt, Batterham, Butterworth, and Nada-Raja (2016) demonstrated that mental HRQL in Australian adults was significantly lower in those who reported suicidal ideation or suicide attempt(s) in the last year compared to those absent of these concerns. Longitudinal analyses (controlling for anxiety and depression) over 4 years revealed that those with suicidal ideation or past suicide attempts continued to demonstrate poorer mental HRQL over time compared to their counterparts. Additionally, poorer mental HRQL at baseline in those who *did not* report suicidal ideation or past suicide attempts predicted suicidal ideation and suicide attempts 4 years later.

In this same study, poorer physical HRQL was significantly related to suicidal ideation and past suicide attempt(s) at baseline. Additionally, physical HRQL declined over time in those who endorsed suicidal ideation or past suicide attempt(s) at baseline. However, low physical HRQL at baseline in those who did not endorse suicidal ideation at baseline did not predict suicidal ideation or suicide attempt(s) at

future time points, suggesting a unidirectional relationship between physical HRQL and suicidality. Specifically, physical HRQL continued to decline in those suicidal at baseline, but low levels of HRQL in those not suicidal at baseline did not predict subsequent suicidal ideation. This contrasts with the bidirectional longitudinal relationship between suicidal ideation and behavior and mental HRQL found in this study.

A somewhat similar pattern of results was seen in young adults from New Zealand but without the use of a standardized self-report metric of HRQL (Goldman-Mellor et al., 2014). In a population-representative birth cohort study, young adults who attempted suicide prior to the age of 24 ($N = 91$) endorsed poorer mental and physical health functioning, as well as decreased quality of life at later assessments (between 26 and 38), when controlling for socioeconomic status. Unfortunately, the unidirectional relationship linking suicide attempts with poorer physical health later in life means there is little a clinician could do to impact suicide risk from the perspective of HRQL. Therefore, it may prove more beneficial to focus on the other health-related factors highlighted in the current chapter.

While no direct evidence has looked at positive psychological variables that could mediate the relationship between suicidal ideation or attempt and HRQL, it is plausible that people with various strengths, such as greater psychological flexibility (A-Tjak et al., 2015), an ability to reframe difficult health experiences (Moorey & Greer, 2002), or a higher level of optimism (Rasmussen, Scheier, & Greenhouse, 2010) could adapt more effectively to worsening physical health. For instance, a resilient individual may be able to view an accident resulting in paraplegia as an opportunity to invest more energy in relationships, creative pursuits, or new methods of engaging in physical activity, if such an injury foreclosed traditional avenues (e.g., Serpa, Holovaytyk, & Nierenberg, 2015).

These data depict a need for a selective intervention for suicide prevention, that is, the increase of HRQL, particularly mental HRQL. A continued view of health as simply the absence of disease may cause this prevention target to be overlooked. Highly scalable interventions such as smartphone applications (e.g., MyFitnessPal to track calorie intake and physical activity) and psychoeducation regarding holistic wellness may be particularly effective at promoting awareness of the importance of HRQL and increasing simple everyday behaviors to enhance HRQL (e.g., physical activity, taking medications as prescribed, and connecting with close others). Additionally, some of these interventions are well within the scope of PC providers and can be implemented within the PC setting with relative ease (Grandes, Sanchez, & Sanchez-Pinilla, 2009; Greenlund, Giles, Keenan, Croft, & Mensah, 2002).

Stress Reduction

Stress is typically described as developing due to a combination of biological, psychological, and social or environmental factors (Mercer, 2008). Due to high levels of stress within the general population and its well-established effects on both

mental and physical health, reduction of stress is often a target of intervention within healthcare treatment settings (American Psychological Association, 2013; Chrousos, 2009).

Psychological disorders such as anxiety (Levine, 2016) and depression (e.g., Hauschildt, Peters, Moritz, & Jelinek, 2011) have been associated with higher heart rate and decreased heart rate variability (HRV), which have been conceptualized as biological indicators of stress reactivity (Lewis et al., 2015). HRV provides a biological indicator for activity in the autonomic nervous system (sympathetic and parasympathetic branches). Balance in the activation of the sympathetic and parasympathetic nervous systems has been linked to psychological resilience (Porges, 2011) and other positive psychological states (Mansfield, Oddson, Turcotte, & Couture, 2012). Mindfulness-Based Stress Reduction (Kabat-Zinn, 2013), an intervention aimed at increasing an individual's ability to attend to the present moment in a non-judgmental way, has demonstrated impressive effects of stress reduction and increases in emotion regulation, self-compassion, and attention (e.g., Robins, Keng, Ekblad, & Brantley, 2012). Further, arousal reduction training that increases parasympathetic control of heart rate has been hypothesized to decrease psychological reactance and protect against future psychological stressors (Porges, 2011).

Increased heart rate and decreased HRV have also been associated with suicide-related outcomes. The results of a large cohort study by Lemogne et al. (2011) showed that every 10-beat increase per minute in resting heart rate was associated with a 24–37% increased risk for suicide when controlling for demographic variables. Chang et al. (2016) found similar rates (24% increased suicide risk) in a Norwegian sample after controlling for demographic variables, depression and anxiety symptoms, and the use of hypertensive drugs. However, the authors found only an 8% increase in suicide risk for every 10-beat increase in resting heart rate per minute in a sample of Taiwanese adults. Wilson et al. (2016) found that those with a history of suicide attempt had decreased HRV compared to those without a history of attempt, concluding that individuals with a history of suicide attempt evidenced a reduced capacity to regulate their responses to stress. Forkmann et al. (2016) also found a significant association between decreased HRV and suicide after controlling for depression.

For individuals experiencing stress and intense affect, a variety of coping skills have been shown to reduce arousal. Such proactive coping styles (i.e., using coping skills before emotions become overwhelming) are strengths that can be fostered and that fit well within the positive psychological framework. Arousal reduction strategies and emotion-focused coping skills such as controlled or "deep" breathing, progressive or passive muscle relaxation, meditation and mindfulness-meditation, and self-soothing serve to help individuals reduce acute distress and decrease the likelihood of engaging in negative behaviors, including self-harm (Linehan, 1993; Mercer, 2008). These skills have been shown to reduce stress reactivity and lower arousal as measured by HRV (Creswell, Pacillo, Lindsay, & Brown, 2014; Hourani et al., 2011). Other skills such as problem-focused coping (e.g., time-management, assertiveness training, self-monitoring of stress, problem-solving) have also been shown to reduce subjective stress (Ong, Linden, & Young, 2004).

Such coping skills are often used in the treatment of a wide variety of psychological disorders and can be employed either individually, as a supplement, or as part of cognitive behavioral based treatments such as Stress Inoculation Training (SIT; Meichenbaum, 2008) and DBT (Linehan, 1993). Importantly, SIT has been demonstrated to increase HRV, further validating its effect on the stress response (Hourani et al., 2011; Lewis et al., 2015). Specific interventions for suicide, such as CBT-SP (Brown, Wenzel, & Rudd, 2011) and Collaborative Assessment and Management of Suicidality (CAMS; Jobes, 2006), include problem-solving and goal setting as skills to help individuals decrease susceptibility to suicide. CBT-SP also employs emotion-focused coping skills, such as progressive muscle relaxation, deep breathing, guided imagery, and self-soothing as appropriate (Brown et al., 2011).

Many of the therapeutic interventions aimed at reducing mental health symptoms or suicidal ideation and behavior are techniques aimed at reducing stress and physiological reactivity. Individuals who have dysregulation in autonomic nervous system activity appear to be less able to regulate stress reactions and, as a result, may be more vulnerable to the development and maintenance of mental health symptoms and suicidal ideation and behavior. Further, greater regulation of the stress response may allow people to engage in more positive approach behaviors, consistent with the Broaden and Build theory (Fredrickson, 2001). Mastery of skills to reduce autonomic arousal (e.g., breathing, mindfulness, relaxation) and enhanced emotion-regulation skills and problem-focused coping may buffer individuals from future psychological distress and suicidal ideation and behavior. Given that such skills can be taught individually and relatively quickly and can be aided by free mobile applications (e.g., Breathe2Relax) and internet resources, it is conceivable that PC providers could provide brief instruction in such skills during a visit or with psychoeducational handouts provided at discharge.

Reduction of Substance Use

The relationship between substance use, particularly alcohol, and suicide mortality is well documented, and substance use disorders (along with other psychiatric disorders) are associated with the highest risk for suicidal behavior and death (see Nock et al., 2008). Substance use may increase fearlessness towards self-harm, as well as feelings of social disconnectedness or burdensomeness to others (Joiner, 2005). This view is in line with models of suicide that categorize substance use as a warning sign that may increase suicide risk (American Association of Suicidology, 2007). In addition, it has been suggested that heavy (i.e., binge) substance use may be a type of self-directed violence in certain cultural groups (e.g., American Indians, see Barlow et al., 2012). This conforms to data showing that ingesting poison (e.g., alcohol or illicit drug use/overdose) constitutes approximately 15% of suicide deaths (Drapeau & McIntosh, 2016). It should be noted that this statistic reflects all types of poisonings, not only alcohol and drug overdose. This may indicate that

current rates of suicide deaths related to substance use may be underestimates, since they may be misclassified as accidental poisonings (e.g., Bohnert et al., 2013). Given the well-established relationship between substance use and suicide-related outcomes (e.g., Conner, Gunzler, Tang, Tu, & Maisto, 2011), and the potential for misclassification of suicide deaths due to poisoning (Donaldson, Larsen, Fullerton-Gleason, & Olson, 2006), it is vital to discuss reduction of substance use as an avenue of preventing suicide.

An approach to suicide prevention should include the promotion of moderate use or abstinence from substances. Leveraging positive psychological constructs in substance use treatment may prove beneficial in achieving moderation or abstinence. For example, forgiveness has been shown to play a protective role for both substance use and suicide (see chapter on forgiveness, addiction, and suicide in current volume; and, Webb, Hirsch, & Toussaint, 2015, for a review). Encouragingly, Alcoholics Anonymous (AA) promotes forgiveness of self and others, especially during the nineth step amends-seeking process (Alcoholics Anonymous, 1981). Religious importance and attendance has also been shown to influence substance use and suicidal ideation. Specifically, among African American adolescents, females' religious importance was associated with lower suicidal ideation, and religious attendance was related to less suicidal ideation and substance use. Among males, religious importance was related to less marijuana use, and those with greater attendance evidenced lower rates of binge drinking (Rasic, Kisely, & Langille, 2011). Further, a longitudinal study revealed that religious attendance predicted fewer suicide attempts, and those who sought spiritual comfort had lower levels of suicidal ideation (Rasic, Robinson, Bolton, Bienvenu, & Sareen, 2011).

There are various approaches targeting substance use (e.g., AA, Behavioral Self-Control Training, Mindfulness-Based Relapse Prevention; see Witkiewitz & Marlatt, 2006) that may lend themselves to the pursuit of suicide prevention. On an individual level, early initiation of substance use treatment has been recognized as a strategy for suicide prevention; for instance, increasing amount of time abstinent from alcohol predicted decreased suicidal ideation in those with an alcohol use disorder (e.g., Conner et al., 2011). Another approach towards decreasing substance use is harm reduction, and empirical research supports the effectiveness of such approaches for reducing alcohol use (see Witkiewitz & Marlatt, 2006 for a review). As an example, harm reduction therapy may consist of a brief intervention (i.e., 10–30 min of structured advice or motivational interviewing) conducted by a PC provider or a mental healthcare provider and such brief interventions have shown reductions in harm (e.g., future injury) related to alcohol use (Witkiewitz & Marlatt, 2006). In the context of suicide prevention, one setting that may be particularly important for implementing brief substance use harm reduction interventions is the primary care setting, given the research about patient contact with PC cited earlier (Luoma et al., 2002). Importantly, guidelines for alcohol-based harm reduction techniques provide instruction for physicians to assist patients in reducing alcohol consumption (Fleming et al., 2002), as well as alcohol use screening and motivational treatment approaches for mental health providers to administer within PC settings (Gentilello, Donovan, Dunn, & Rivara, 1995).

In sum, substance use is associated with risk for suicide, and research has shown that substance use reduction or abstinence is related to decreased risk for suicide-related outcomes. Reducing substance use is a promising health-promoting avenue targeting suicide prevention, and it represents another topic that PC providers frequently discuss with their patients. Well-established approaches to substance use treatment incorporate positive psychological constructs (such as forgiveness in AA), and it can be argued that continued integration of positive approaches in substance use treatment within PC settings could further improve outcomes. It is hoped that a more comprehensive approach to decreasing substance use outcomes leads to a global reduction in suicide mortality.

Conclusions and Future Directions

Much of the suicide prevention literature has focused on interventions for those at the greatest risk (indicated interventions) for suicidal ideation, attempts, and death. In this chapter, we have broadened this focus by highlighting several areas that are ripe for intervention in the PC setting, or that can be performed independently by people at home, and by discussing links between health-promoting behaviors and other areas of positive psychology. Physical activity, behavioral activation, nutrition, HRQL, stress reduction, and reduction of substance use have initial support as health-related targets to prevent progression to greater levels of suicide risk. All these targets are related to other positive psychological constructs, and interventions for suicide could be enhanced by taking a strengths-based approach.

Further, these health-related domains are areas that PC providers often target as part of their typical practice. If PC providers are aware of the potential positive impact of such interventions on mental health and reduced suicide risk, they may be even more motivated to intervene in these domains with their patients. A recent meeting of experts in integrating behavioral health and PC, from nine countries, demonstrates the existing interest in an integrated approach (American Psychological Association, 2016). Such integration offers structure for additional support for health-related interventions. While these health-related domains are often not conceptualized within the realm of positive psychology, we have argued they fit with the strengths-based approach that positive psychology advocates.

Certainly, additional research is required to establish firm conclusions about the previously discussed interventions resulting in concrete reductions in suicidal ideation, attempts, and behaviors. This is especially true regarding the link between health-promoting behaviors and death by suicide, given the dearth of investigations in most of the domains discussed. Further, longitudinal studies are necessary to determine temporal relationships between these health-promoting behaviors and suicide-related variables, as much of the reviewed research was cross-sectional. Similarly, further research is necessary to firmly link health-promoting behaviors to other positive psychological constructs, to inform how to improve interventions that promote holistic health. However, the research reviewed suggests that mental health

outcomes can be improved if these universal and selective interventions are encouraged in PC and other medical settings. Beyond the scope of this chapter, yet also vital to health promotion efforts, are other public health interventions to encourage adaptive health behaviors, such as educational campaigns, economic contingencies, and public policy through legislation, which may also encourage people to engage in health promotion, improve upon existing strengths, and thus reduce the population-level rates of suicide.

References

Adams, C. E., & Leary, M. R. (2007). Promoting self-compassionate attitudes toward eating among restrictive and guilty eaters. *Journal of Social and Clinical Psychology, 26*, 1120–1144. https://doi.org/10.1521/jscp.2007.26.10.1120

Alcoholics Anonymous (AA). (1981). *Twelve steps and twelve traditions*. New York, NY: Author.

Aline, R., Sabine, R., Caroline, L. V., Meichun, M., & Monika, E. (2015). Associations between fruit and vegetable consumption and psychological distress: Results from a population-based study. *BMC Psychiatry, 15*, 213. https://doi.org/10.1186/s12888-015-0597-4

American Association of Suicidology. (2007). *Know the warning signs of suicide*. Retrieved from http://www.suicidology.org/resources/warning-signs.

American Psychological Association. (2013). *Stress in America.* Retrieved from http://www.apa.org/news/press/releases/stress/2012/full-report.pdf.

American Psychological Association. (2016). A worldwide push for integrated care. *Monitor on Psychology, 47*, 8. Retrieved from http://www.apa.org/monitor/2016/01/integrated-care.aspx.

A-Tjak, J. G. L., Davis, M. L., Morina, N., Powers, M. B., Smits, J. A. J., & Emmelkamp, P. M. G. (2015). A meta-analysis of the efficacy of acceptance and commitment therapy for clinically relevant mental and physical health problems. *Psychotherapy and Psychosomatics, 84*, 30–36. https://doi.org/10.1159/000365764

Barlow, A., Tingey, L., Cwik, M., Goklish, N., Larzelere-Hinton, F., Lee, A., & Walkup, J. T. (2012). Understanding the relationship between substance use and self-injury in American Indian youth. *American Journal of Drug and Alcohol Abuse, 38*, 403–408. https://doi.org/10.3109/00952990.2012.696757

Bartley, C. A., Hay, M., & Bloch, M. H. (2013). Meta-analysis: Aerobic exercise for the treatment of anxiety disorders. *Progress in Neuro-Psychopharmacology and Biological Psychiatry, 45*, 34–39. https://doi.org/10.1016/j.pnpbp.2013.04.016

Berry, K. A., Kowalski, K. C., Ferguson, L. J., & McHugh, T. L. F. (2010). An empirical phenomenology of young adult women exercisers' body self-compassion. *Qualitative Research in Sport, Exercise and Health, 2*, 293–312. https://doi.org/10.1080/19398441.2010.517035

Bishwajit, G., O'Leary, D. P., Ghosh, S., Sanni, Y., Shangfeng, T., & Zhanchun, F. (2017). Association between depression and fruit and vegetable consumption among adults in South Asia. *BMC Psychiatry, 17*, 15. https://doi.org/10.1186/s12888-017-1198-1

Blumenthal, J. A., Babyak, M. A., Doraiswamy, P. M., Watkins, L., Hoffman, B. M., & Barbour, K. A. (2007). Exercise and pharmacotherapy in the treatment of major depressive disorder. *Psychosomatic Medicine, 69*, 587–596. https://doi.org/10.1097/PSY.0b013e318148c19a

Bohnert, A. B., McCarthy, J. F., Ignacio, R. V., Ilgen, M. A., Eisenberg, A., & Blow, F. C. (2013). Misclassification of suicide deaths: Examining the psychiatric history of overdose decedents. *Injury Prevention, 19*, 326–330. https://doi.org/10.1136/injuryprev-2012-040631

Brown, D. R., & Blanton, C. J. (2002). Physical activity, sports participation, and suicidal behavior among college students. *Medicine and Science in Sports and Exercise, 34*, 1087–1096. https://doi.org/10.1097/00005768-200207000-00006

Brown, G. K., Wenzel, A., & Rudd, M. D. (2011). Cognitive therapy for suicidal patients. In K. Michael & D. A. Jobes (Eds.), *Building a therapeutic alliance with the suicidal patient*. Washington, DC: American Psychological Association. https://doi.org/10.1037/12303-015

Centers for Disease Control and Prevention. (2016, March 21). *Health-related quality of life (HRQOL) surveillance overview*. Retrieved from https://www.cdc.gov/hrqol/overview.htm.

Chang, S. S., Bjørngaard, J. H., Tsai, M. K., Bjerkeset, O., Wen, C. P., Yip, P. S. F., … Gunnell, D. (2016). Heart rate and suicide: Findings from two cohorts of 533,000 Taiwanese and 75,000 Norwegian adults. *Acta Psychiatrica Scandinavica, 133*, 277–288. https://doi.org/10.1111/acps.12513

Chrousos, G. P. (2009). Stress and disorders of the stress system. *Nature Reviews Endocrinology, 5*, 374–381. https://doi.org/10.1038/nrendo.2009.106

Collado, A., Calderón, M., MacPherson, L., & Lejuez, C. (2016). The efficacy of behavioral activation treatment among depressed Spanish-speaking Latinos. *Journal of Consulting and Clinical Psychology, 84*(7), 651–657. https://doi.org/10.1037/ccp0000103

Conn, V. S. (2010). Depressive symptom outcomes of physical activity interventions: Meta-analysis findings. *Annals of Behavioral Medicine, 39*, 128–138. https://doi.org/10.1007/s12160-010-9172-x

Conner, T. S., Brookie, K. L., Carr, A. C., Mainvil, L. A., & Vissers, M. C. M. (2017). Let them eat fruit! The effect of fruit and vegetable consumption on psychological well-being in young adults: A randomized controlled trial. *PLoS One, 12*, e0171206. https://doi.org/10.1371/journal.pone.0171206

Conner, K. R., Gunzler, D., Tang, W., Tu, X. M., & Maisto, S. A. (2011). Test of a clinical model of drinking and suicidal risk. *Alcoholism: Clinical and Experimental Research, 35*, 60–68. https://doi.org/10.1111/j.1530-0277.2010.01322.x

Cook, E. L., & Harman, J. S. (2008). A comparison of health-related quality of life for individuals with mental health disorders and common chronic medical conditions. *Public Health Reports, 123*, 45–51. https://doi.org/10.1177/003335490812300107

Creswell, J. D., Pacillo, L. E., Lindsay, E. K., & Brown, K. W. (2014). Brief mindfulness meditation training alters psychological and neuroendocrine responses to social evaluative stress. *Psychoneuroendocrinology, 44*, 1–12. https://doi.org/10.1016/j.psyneuen.2014.02.007

Davidson, C. L., Babson, K. A., Bonnmiller, M. O., Souter, T., & Vannoy, S. (2013). The impact of exercise on suicide risk: Examining pathways through depression, PTSD, and sleep in an inpatient sample of veterans. *Suicide and Life-Threatening Behavior, 43*, 279–289. https://doi.org/10.1111/sltb.12014

de Abreu, L. N., Nery, F. G., Harkavy-Friedman, J. M., de Almeida, K. M., Gomes, B. C., Oquendo, M. A., & Lafer, B. (2012). Suicide attempts are associated with worse quality of life in patients with bipolar disorder type I. *Comprehensive Psychiatry, 53*, 125–129. https://doi.org/10.1016/j.comppsych.2011.03.003

Donaldson, A. E., Larsen, G. Y., Fullerton-Gleason, L., & Olson, L. M. (2006). Classifying undetermined poisoning deaths. *Injury Prevention, 12*, 338–343. https://doi.org/10.1136/ip.2005.011171

Drapeau, C. W., & McIntosh, J. L. (for the American Association of Suicidology). (2016). *U.S.A. suicide 2015: Official final data.* Washington, DC: American Association of Suicidology, dated December 23, 2016, downloaded from http://www.suicidology.org

Fairweather-Schmidt, A. K., Batterham, P. J., Butterworth, P., & Nada-Raja, S. (2016). The impact of suicidality on health-related quality of life: A latent growth curve analysis of community-based data. *Journal of Affective Disorders, 203*, 14–21. https://doi.org/10.1016/j.jad.2016.05.067

Fleming, M. F., Mundt, M. P., French, M. T., Manwell, L. B., Stauffacher, E. A., & Barry, K. L. (2002). Brief physician advice for problem drinkers: Long-term efficacy and benefit-cost analysis. *Alcoholism: Clinical and Experimental Research, 26*, 36–43. https://doi.org/10.1111/j.1530-0277.2002.tb02429.x

Forkmann, T., Meessen, J., Teismann, T., Sütterlin, S., Gauggel, S., & Mainz, V. (2016). Resting vagal tone is negatively associated with suicide ideation. *Journal of Affective Disorders, 194*, 30–32. https://doi.org/10.1016/j.jad.2016.01.032

Franklin, J. C., Ribeiro, J. D., Fox, K. R., Bentley, K. H., Kleiman, E. M., Huang, X., … Nock, M. K. (2017). Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychological Bulletin, 143*, 187–232. https://doi.org/10.1037/bul0000084

Fredrickson, B. (2001). The role of positive emotions in positive psychology: The broaden and build theory of positive emotions. *American Psychologist, 56*, 218–226. https://doi.org/10.1037/0003-066X.56.3.218

Gentilello, L. M., Donovan, D. M., Dunn, C. W., & Rivara, F. P. (1995). Alcohol interventions in trauma centers: Current practice and future directions. *Journal of the American Medical Association, 274*, 1043–1048. https://doi.org/10.1001/jama.1995.03530130049027

Goldman-Mellor, S. J., Caspi, A., Harrington, H., Hogan, S., Nada-Raja, S., Poulton, R., & Moffitt, T. E. (2014). Suicide attempt in young people: A signal for long-term health care and social needs. *JAMA Psychiatry, 71*, 119–127. https://doi.org/10.1001/jamapsychiatry.2013.2803

Goldney, R. D., Fisher, L. J., Wilson, D. H., & Cheok, F. (2001). Suicidal ideation and health-related quality of life in the community. *The Medical Journal of Australia, 175*, 546–549. Retrieved from https://www.ncbi.nlm.nih.gov/labs/articles/11795547/.

Gordon, R. S., Jr. (1983). An operational classification of disease prevention. *Public Health Reports, 98*, 107. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1424415/.

Grandes, G., Sanchez, A., & Sanchez-Pinilla, R. O. (2009). Effectiveness of physical activity advice and prescription by physicians in routine primary care: A cluster randomized trial. *Archives of Internal Medicine, 169*, 694–701. https://doi.org/10.1001/archinternmed.2009.23

Greenlund, K. J., Giles, W. H., Keenan, N. L., Croft, J. B., & Mensah, G. A. (2002). Physician advice, patient actions, and health-related quality of life in secondary prevention of stroke through diet and exercise. *Stroke, 33*, 565–571. https://doi.org/10.1161/hs0202.102882

Gutierrez, P. M., Davidson, C. L., Friese, A. H., & Forster, J. E. (2016). Physical activity, suicide risk factors, and suicidal ideation in a Veteran sample. *Suicide & Life-Threatening Behavior, 46*, 284–292. https://doi.org/10.1111/sltb.12190

Hauschildt, M., Peters, M. J. V., Moritz, S., & Jelinek, L. (2011). Heart rate variability in response to affective scenes in posttraumatic stress disorder. *Biological Psychology, 88*, 215–222. https://doi.org/10.1016/j.biopsycho.2011.08.004

Hays, R. D., & Morales, L. S. (2001). The RAND-36 measure of health-related quality of life. *Annals of Medicine, 33*, 350–357. https://doi.org/10.3109/07853890109002089

Hefferon, K., & Mutrie, N. (2012). Physical activity as a "stellar" positive psychology intervention. In E. O. Acevedo (Ed.), *The Oxford handbook of exercise psychology* (pp. 117–130). Oxford: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780195394313.013.0007

Hibbeln, J. R., & Gow, R. V. (2014). The potential for military diets to reduce depression, suicide, and impulsive aggression: A review of current evidence of omega-3 and omega-6 fatty acids. *Military Medicine, 179*, 117–128. https://doi.org/10.7205/MILMED-D-14-00153

Hopko, D. R., Bell, J. R., Armento, M. E. A., Lejuez, C. W., & Hunt, M. K. (2005). Behavior therapy for depressed cancer patients in primary care. *Psychotherapy: Theory, Research, Practice, Training, 42*, 236–243. https://doi.org/10.1037/0033-3204.42.2.236

Hopko, D., Funderburk, J., Shorey, R., McIndoo, C., Ryba, M., File, A., … Vitulano, M. (2013). Behavioral activation and problem-solving therapy for depressed breast cancer patients. *Behavior Modification, 37*, 747–767. https://doi.org/10.1177/0145445513501512

Hopko, D., Sanchez, L., Hopko, S., Dvir, S., & Lejuez, C. (2003). Behavioral activation and the prevention of suicidal behaviors in patients with borderline personality disorder. *Journal of Personality Disorders, 17*(5), 460–478. https://doi.org/10.1521/pedi.17.5.460.22970

Hourani, L. L., Kizakevich, P. N., Hubal, R., Spira, J., Strange, L. B., Holiday, D. B., … McLean, A. N. (2011). Predeployment stress inoculation training for primary prevention of combat-related stress disorders. *Journal of CyberTherapy & Rehabilitation, 4*, 101–116. Retrieved from https://www.rti.org/publication/predeployment-stress-inoculation-training-primary-prevention-combat-related-stress.

Jacka, F. N., Kremer, P. J., Berk, M., de Silva-Sanigorski, A. M., Moodie, M., Leslie, E. R., … Swinburn, B. A. (2011). A prospective study of diet quality and mental health in adolescents. *PLoS One, 6*, e24805. https://doi.org/10.1371/journal.pone.0024805

Jacka, J. R., Sacks, G., Berk, M., & Allender, S. (2014). Food policies for physical and mental health. *BMC Psychiatry, 14*, 132. https://doi.org/10.1186/1471-244X-14-132

Jakupcak, M., Wagner, A., Paulson, A., Varra, A., & McFall, M. (2010). Behavioral activation as a primary care-based treatment for PTSD and depression among returning veterans. *Journal of Traumatic Stress, 23*, 491–495. https://doi.org/10.1002/jts.20543

Jobes, D. A. (2006). *Managing suicidal risk: A collaborative approach*. New York, NY: The Guilford Press.

Joiner, T. E. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.

Kabat-Zinn, J. (2013). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. New York, NY: Bantam.

Kao, Y. C., Liu, Y. P., Cheng, T. H., & Chou, M. K. (2012). Subjective quality of life and suicidal behavior among Taiwanese schizophrenia patients. *Social Psychiatry and Psychiatric Epidemiology, 47*, 523–532. https://doi.org/10.1007/s00127-011-0361-0

Kaplan, B. J., Rucklidge, J. J., Romijn, A., & McLeod, K. (2015). The emerging field of nutritional mental health: Inflammation, the microbiome, oxidative stress, and mitochondrial function. *Clinical Psychological Science, 3*, 964–980. https://doi.org/10.1177/2167702614555413

Kazdin, A. E., & Blase, S. L. (2011). Rebooting psychotherapy research and practice to reduce the burden of mental illness. *Perspectives on Psychological Science, 6*, 21–37. https://doi.org/10.1177/1745691610393527

Kessler, R., Berglund, P., Borges, G., Nock, M., & Wang, P. (2005). Trends in suicide ideation, plans, gestures, and attempts in the United States, 1990-1992 to 2001-2003. *JAMA, 293*, 2487. https://doi.org/10.1001/jama.293.20.2487

Kwon, J. W., & Kim, J. H. (2012). The impact of health-related quality of life on suicidal ideation and suicide attempts among Korean older adults. *Journal of Gerontological Nursing, 38*, 48–59. https://doi.org/10.3928/00989134-20121003-01

Lawlor, D. A., & Hopker, S. W. (2001). The effectiveness of exercise as an intervention in the management of depression: Systematic review and meta-regression analysis of randomised controlled trials. *British Medical Journal, 322*, 763–771. https://doi.org/10.1136/bmj.322.7289.763

Lee, C. G., Cho, Y., & Yoo, S. (2013). The relations of suicidal ideation and attempts with physical activity among Korean adolescents. *Journal of Physical Activity and Health, 10*, 716–726. https://doi.org/10.1123/jpah.10.5.716

Lejuez, C., Hopko, D., Acierno, R., Daughters, S., & Pagoto, S. (2011). Ten year revision of the Brief Behavioral Activation Treatment for Depression: Revised treatment manual. *Behavior Modification, 35*, 111–161. https://doi.org/10.1177/0145445510390929

Lemogne, C., Thomas, F., Consoli, S. M., Pannier, B., Jego, B., & Danchin, N. (2011). Heart rate and completed suicide: Evidence from the IPC cohort study. *Psychosomatic Medicine, 73*, 731–736. https://doi.org/10.1097/PSY.0b013e3182365dc7

Levine, J. C. (2016). Heart rate variability and generalized anxiety disorder during laboratory-induced worry and aversive imagery. *Journal of Affective Disorders, 15*, 207–215. https://doi.org/10.1016/j.jad.2016.07.019

Lewis, G., Hawton, K., & Jones, P. (1997). Strategies for preventing suicide. *British Journal of Psychiatry, 171*, 351–354. https://doi.org/10.1192/bjp.171.4.351

Lewis, G. F., Hourani, L., Tueller, S., Kizakevich, P., Bryant, S., Weimer, B., & Strange, L. (2015). Relaxation training assisted by heart rate variability biofeedback: Implication for a military predeployment stress inoculation protocol. *Psychophysiology, 52*, 1167–1174. https://doi.org/10.1111/psyp.12455

Linehan, M. M. (1993). *Skills training manual for treating borderline personality disorder*. New York, NY: Guilford.

Luoma, J. B., Martin, C. E., & Pearson, J. L. (2002). Contact with mental health and primary care providers before suicide: A review of the evidence. *The American Journal of Psychiatry, 159*, 909–916. https://doi.org/10.1176/appi.ajp.159.6.909

Mackenzie, S., Wiegel, J. R., Mundt, M., Brown, D., Saewyc, E., & Heiligenstein, E. (2011). Depression and suicide ideation among students accessing campus health care. *American Journal of Orthopsychiatry, 81*, 101–107. https://doi.org/10.1111/j.1939-0025.2010.01077.x

Mansfield, B. E., Oddson, B. E., Turcotte, R. T., & Couture, R. (2012). A possible physiological correlate of mental flow. *The Journal of Positive Psychology, 7*, 327–333. https://doi.org/10.1080/17439760.2012.691982

Maruish, M. E. (2011). *User's manual for the SF-36v2 health survey* (3rd ed.). Lincoln, RI: QualityMetric Incorporated.

Meichenbaum, D. (2008). Stress inoculation training. In W. O'Donohue & J. E. Fisher (Eds.), *Cognitive behavior therapy: Applying empirically supported techniques in your practice* (2nd ed., pp. 529–532). Hoboken, NJ: Wiley.

Mercer, V. E. (2008). Stress management intervention. In W. O'Donohue & J. E. Fisher (Eds.), *Cognitive behavior therapy: Applying empirically supported techniques in your practice* (2nd ed., pp. 533–541). Hoboken, NJ: Wiley.

Moorey, S., & Greer, S. (2002). *Cognitive behaviour therapy for people with cancer*. Oxford: Oxford University Press.

Nock, M. K., Borges, B., Evelyn, J., Bromet, E. J., Cha, C. B., Kessler, R. C., & Lee, S. (2008). Suicide and suicidal behavior. *Epidemiologic Reviews, 30*, 133–154. https://doi.org/10.1093/epirev/mxn002

Nock, M. K., Hwang, I., Sampson, N., Kessler, R. C., Angermeyer, M., Beautrais, A., … Williams, D. R. (2009). Cross-national analysis of the associations among mental disorders and suicidal behavior: Findings from the WHO World Mental Health Surveys. *PLoS Medicine, 6*, e1000123. https://doi.org/10.1371/journal.pmed.1000123

Ong, L., Linden, W., & Young, S. (2004). Stress management. What is it? *Journal of Psychosomatic Research, 56*, 133–137. https://doi.org/10.1016/S0022-3999(03)00128-4

Ouwens, M. A., van Strien, T., & van Leeuwe, J. F. J. (2009). Possible pathways between depression, emotional and external eating. A structural equation model. *Appetite, 53*, 245–248. https://doi.org/10.1016/j.appet.2009.06.001

Pompili, M., Lester, D., Innamorati, M., De Pisa, E., Amore, M., Ferrara, C., … Girardi, P. (2009). Quality of life and suicide risk in patients with diabetes mellitus. *Psychosomatics, 50*, 16–23. https://doi.org/10.1176/appi.psy.50.1.16

Porges, S. W. (2011). *The polyvagal theory: Neurophysiological foundations of emotions, attachment, communication, and self-regulation*. New York, NY: Norton.

Rasic, D., Kisely, S., & Langille, D. B. (2011). Protective associations of importance of religion and frequency of service attendance with depression risk, suicidal behaviours and substance use in adolescents in Nova Scotia, Canada. *Journal of Affective Disorders, 132*, 389–395. https://doi.org/10.1016/j.jad.2011.03.007

Rasic, R., Robinson, J. A., Bolton, J., Bienvenu, O. J., & Sareen, J. (2011). Longitudinal relationships of religious worship attendance and spirituality with major depression, anxiety disorders, and suicidal ideation and attempts: Findings from the Baltimore epidemiologic catchment area study. *Journal of Psychiatric Research, 45*, 848–854. https://doi.org/10.1016/j.jpsychires.2010.11.014

Rasmussen, H. N., Scheier, M. F., & Greenhouse, J. B. (2010). Optimism and physical health: A meta-analytic review. *Annuals of Behavioral Medicine, 37*, 239–256. https://doi.org/10.1007/s12160-009-9111-x

Robins, C. J., Keng, S. L., Ekblad, A. G., & Brantley, J. G. (2012). Effects of mindfulness-based stress reduction on emotional experience and expression: A randomized controlled trial. *Journal of Clinical Psychology, 68*, 117–131. https://doi.org/10.1002/jclp.20857

Roca, M., Kohls, E., Gili, M., Watkins, E., Owens, M., Hegerl, U., … Pennix, B. W. (2016). Prevention of depression through nutritional strategies in high-risk persons: Rationale and design of the MooDFOOD prevention trial. *BMC Psychiatry, 16*, 192. https://doi.org/10.1186/s12888-016-0900-z

Rosenbaum, S., Tiedemann, A., Sherrington, C., Curtis, J., & Ward, P. B. (2014). Physical activity interventions for people with mental illness: A systematic review and meta-analysis. *Journal of Clinical Psychiatry, 75*, 964–974.

Ross, J., Teesson, M., Lejuez, C., Mills, K., Kaye, S., Brady, K., … Masters, S. L. (2016). The efficacy of behavioural activation treatment for co-occurring depression and substance use disorder (the activate study): A randomized controlled trial. *BMC Psychiatry, 16*, 221. https://doi.org/10.1186/s12888-016-0943-1

Rucklidge, J. J., & Kaplan, B. J. (2013). Broad-spectrum micronutrient formulas for the treatment of psychiatric symptoms: A systematic review. *Expert Review of Neurotherapeutics, 13*, 49–73. https://doi.org/10.1586/ERN.12.143

Rucklidge, J. J., & Kaplan, B. J. (2016). Nutrition and mental health. *Clinical Psychological Science, 4*, 1082–1084. https://doi.org/10.1177/2167702616641050

Sánchez-Villegas, A., Ruiź-Canela, M., Gea, A., Lahortiga, F., & Martínez-González, M. A. (2016). The association between the Mediterranean lifestyle and depression. *Clinical Psychological Science, 4*, 1085–1093. https://doi.org/10.1177/2167702616638651

Sanddal, N. D., Sanddal, T. L., Berman, A. L., & Silverman, M. M. (2003). A general systems approach to suicide prevention: Lessons from cardiac prevention and control. *Suicide and Life-Threatening Behavior, 33*, 341–352. https://doi.org/10.1521/suli.33.4.341.25227

Seligman, M. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*, 5–14. https://doi.org/10.1037/0003-066X.55.1.5

Serpa, S., Holovaytyk, A. & Nierenberg, B. (2015, June). *An acceptance and commitment therapy approach to increase well-being in spinal cord injury survivors.* Poster presented at the 13th Annual World Conference of the Association of Contextual Behavioral Science. Berlin, Germany.

Sharma, A., Madaan, V., & Petty, F. D. (2006). Exercise for mental health. *The Primary Care Companion to the Journal of Clinical Psychiatry, 8*, 106. https://doi.org/10.4088/PCC.v08n0208a

Simon, T. R., Powell, K. E., & Swann, A. C. (2004). Involvement in physical activity and risk for nearly lethal suicide attempts. *American Journal of Preventive Medicine, 27*, 310–315. https://doi.org/10.1016/j.amepre.2004.07.003

Sirois, F. M., Kitner, R., & Hirsch, J. K. (2015). Self-compassion, affect, and health-promoting behaviors. *Health Psychology, 34*, 661–669. https://doi.org/10.1037/hea0000158

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*, 249–275. https://doi.org/10.1207/S15327965PLI1304_01

Sturm, J., Plöderl, M., Fartacek, C., Kralovec, K., Neunhäuserer, D., & Niederseer, D. (2012). Physical exercise through mountain hiking in high-risk suicide patients: A randomized crossover trial. *Acta Psychiatrica Scandinavica, 126*, 467–475. https://doi.org/10.1111/j.1600-0447.2012.01860.x

Taliaferro, L. A., Rienzo, B. A., Pigg, R. M., Miller, M. D., & Dodd, V. J. (2009). Associations between physical activity and reduced rates of hopelessness, depression, and suicidal behavior among college students. *Journal of American College Health, 57*, 427–436. https://doi.org/10.3200/JACH.57.4.427-436

The Better Resiliency Among Veterans With Omega-3's (BRAVO) Study (BRAVO). (2016). Retrieved from https://clinicaltrials.gov/ct2/show/NCT01901887?term=BRAVO&rank=2 (Identification No. NCT01901887).

The Optimum Omega-3 (003) Diet Study. (2017). Retrieved from https://clinicaltrials.gov/ct2/show/NCT01642368?term=Optmal+Omega+-3+Study&rank=1 (Identification No. NCT01642368).

Turunen, A. W., Verkasalo, P. K., Kiviranta, H., Pukkala, E., Jula, A., Männistö, S., … Vartiainen, T. (2008). Mortality in a cohort with high fish consumption. *International Journal of Epidemiology, 37*, 1008–1017. https://doi.org/10.1093/ije/dyn117

van Hees, N. J. M., Giltay, E. J., Geleijnse, J. M., Janssen, N., & van der Does, W. (2014). DHA serum levels were significantly higher in celiac disease patients compared to healthy con-

trols and were unrelated to depression. *PLoS One, 9*, e97778. https://doi.org/10.1371/journal.pone.0097778

Walsh, R. (2011). Lifestyle and mental health. *American Psychologist, 66*, 579–592. https://doi.org/10.1037/a0021769

Webb, J. R., Hirsch, J. K., & Toussaint, L. (2015). Forgiveness as a positive psychotherapy for addiction and suicide: Theory, research, and practice. *Spirituality in Clinical Practice, 2*, 48–60. https://doi.org/10.1037/scp0000054

Williams, L. J., Pasco, J. A., Henry, M. J., Jacka, F. N., Dodd, S., Nicholson, G. C., … Berk, M. (2009). Lifetime psychiatric disorders and body composition: A population-based study. *Journal of Affective Disorders, 118*, 173–179. https://doi.org/10.1016/j.jad.2009.02.001

Wilson, S. T., Chesin, M., Fertuck, E., Keilp, J., Brodsky, B., Mann, J. J., … Stanley, B. (2016). Heart rate variability and suicidal behavior. *Psychiatry Research, 240*, 241–247. https://doi.org/10.1016/j.psychres.2016.04.033

Wipfli, B. M., Rethorst, C. D., & Landers, D. M. (2008). The anxiolytic effects of exercise: A metaanalysis of randomized trials and dose–response analysis. *Journal of Sport and Exercise Psychology, 30*, 392–410. https://doi.org/10.1123/jsep.30.4.392

Witkiewitz, K., & Marlatt, G. A. (2006). Overview of harm reduction treatments for alcohol problems. *International Journal of Drug Policy, 17*, 285–294. https://doi.org/10.1016/j.drugpo.2006.03.005

World Health Organization. (2010a). *Global recommendations on physical activity for health*. Retrieved from http://www.who.int/dietphysicalactivity/publications/9789241599979/en/.

World Health Organization. (2010b). *Global strategy to reduce harmful use of alcohol*. Retrieved from http://www.who.int/substance_abuse/activities/gsrhua/en/.

Yan, F., Xiang, Y. T., Hou, Y. Z., Ungvari, G. S., Dixon, L. B., Chan, S. S., … Chiu, H. F. (2013). Suicide attempt and suicidal ideation and their associations with demographic and clinical correlates and quality of life in Chinese schizophrenia patients. *Social Psychiatry and Psychiatric Epidemiology, 48*, 447–454. https://doi.org/10.1007/s00127-012-0555-0

Yip, P. (2005). A public health approach to suicide prevention. *Hong Kong Journal of Psychiatry, 15*, 29. Retrieved from http://hub.hku.hk/handle/10722/87776.

Chapter 9
Future-Oriented Treatments for Suicide: An Overview of Three Modern Approaches

Elizabeth Yu, Jennifer Cheavens, Jennice Vilhauer, and Wessel van Beek

Suicide leads to over 800,000 deaths a year worldwide (World Health Organization, 2014). As an important public health concern, it is not surprising that researchers have sought to identify constructs, including protective factors, which are related to suicide risk. Future-oriented cognitions, as either potential risk or protective factors for suicide, may be important targets for interventions. Indeed, the role of future thinking has long played a role in theories of depression and suicide. Negative views of the future, lack of control of future events, negative expectancies, helplessness, and hopelessness have all been theorized to be positively related to depression and suicide risk (Abramson, Metalsky, & Alloy, 1989; Beck, 1972; Beck, Steer, Kovacs, & Garrison, 1985; Seligman, 1975). More recently, greater attention has been paid to the role of positive future cognitions in relation to suicide. Findings have indicated that positive future thinking, such as optimism, hope, and future orientation, may serve as important protective factors against suicide and are inversely related to suicide risk (e.g., Chang et al., 2017; Chang, Yu, Kahle, Jeglic, & Hirsch, 2013a; Cheavens, Cukrowicz, Hansen, & Mitchell, 2016; Hirsch, Conner, & Duberstein, 2007; Hirsch & Kelliher Rabon, 2015; Hirsch, Nsamenang, Chang, & Kaslow, 2014; Huffman et al., 2016).

E. Yu (✉)
University of Michigan, Ann Arbor, MI, USA
e-mail: aunying@umich.edu

J. Cheavens
The Ohio State University, Columbus, OH, USA

J. Vilhauer
Emory University, Atlanta, GA, USA

W. van Beek
Symfora Groep, Hilversum, Netherlands

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*,
Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_9

In this chapter, treatments that focus on future-oriented cognitions for suicidal behavior are discussed. Specifically, three individual treatments for suicidal behavior and suicide-related correlates (e.g., depression) are highlighted, including the theoretical background, model, application, and future directions of each treatment intervention. Hope Therapy is an intervention designed to increase hopeful thought without regard to specific diagnoses or type of presenting problem. Future-Directed Therapy is an intervention developed for the treatment of depression, focusing on increasing positive expectations about the future. Given the utility of this intervention for depression, a common precursor and a risk factor for suicide, it may help to inform development of future-oriented therapies specific to suicide. Finally, Future-Oriented Group Training for Suicidal Patients is an adjunctive intervention to supplement traditional therapies and is used to address suicidal ideation or risk.

Hope Therapy

Theoretical Background

Snyder and colleagues (Snyder et al., 1991) defined hope as the synthesis of pathways thinking, the belief that one can generate various routes that successfully connect the present to a desired future, and agency, the perception that one can successfully use said routes to reach goals. Goals are central in this conceptualization of hope (Snyder, 1994, 2002; Snyder, Cheavens, & Sympson, 1997); goals are the mental endpoints of hopeful thought and, according to these theorists, account for the variability in within-person hope. In the context of Hope Theory (Snyder, 2002), emotions are outcomes of the goal pursuits; successful goal pursuits result in positive emotions, and unsuccessful goal pursuits lead to negative emotions (Snyder et al., 1996; Snyder, Rand, & Sigmon, 2018). One's trait level of hope develops over time as the individual generates a history of goal successes and failures and develops thoughts about his or her role in these goal outcomes (Snyder, 1994, 2002). A history of goal pursuit successes should lead to beliefs that one can attain goals by using multiple clear routes to those goals and by maintaining the determination to complete the goal process. Additionally, this pattern, over time, should lead to the frequent experience of joy, happiness, and pride. Alternatively, a history of failure to meet important goals likely results in doubts about one's ability to successfully maneuver through challenges that are relevant to goal pursuits. Such a pattern is likely associated with the frequent experience of negative emotions, including frustration, sadness and, eventually, shame, despair, and hopelessness. In this way, goal pursuit outcomes and the associated emotional experiences interact with one another and forge individual differences in hope (Cheavens & Ritschel, 2014).

In the context of Hope Theory, suicide and the associated behaviors could be conceptualized as either goal or pathway. In terms of conceptualizing suicide as a goal, someone who has had a history of hopelessness, depression or other forms of

psychopathology, trauma, or other psychological or physical stressors might come to believe that suicide is a reasonable goal and move suicide to the top of one's goal hierarchy. Many investigators have demonstrated that hope is inversely associated with suicidal ideation such that at lower levels of hope, participants report higher levels of suicidal ideation (e.g., Cheavens et al., 2016; Davidson, Wingate, Rasmussen, & Slish, 2009). If suicide is the specified goal, the person would engage in pathways thinking to generate a suicide plan and acquire lethal means, while simultaneously engaging in agentic thinking to shore up determination to use the developed pathways. In this model, pathways thinking maps onto suicide plans and the lethality of the method, while agency thinking would be most relevant to intent. In early writings, Snyder (1994) suggested that suicide could be considered one's "last act of hope," as death by suicide requires a goal as well as sufficient amounts of both pathways and agency thinking. Several recent investigations show that while hope is negatively associated with suicidal ideation (e.g., Cheavens et al., 2016; Davidson et al., 2009), it is positively associated with acquired capability for suicide (e.g., Anestis, Moberg, & Arnau, 2014; Mitchell, Cukcrowicz, Van Allen, & Seegan, 2015). This pattern of findings suggests that hope might be a protective factor associated with reduced risk of setting suicide as a goal, but once an individual with high hope engages in suicidal ideation or sets suicide as a goal, they may be more likely to generate and commit to viable pathways toward that goal.

It is also possible to conceptualize suicide and related behaviors as pathways to other goals. Nock and Prinstein (2004) posited that non-suicidal self-injury (NSSI) primarily functions to regulate emotions (either increase or decrease the experience of emotion) or regulate social environments (either escape from an aversive task/punishment or gain attention or support). Each of these functions can be conceptualized as a desired goal, and NSSI and other suicide-relevant behaviors as pathways that, albeit ineffective in the long-term, could bring an individual closer to each of these goals. For example, telling others about suicidal ideation and plans might be a pathway to communicating pain, distress, and a need for support. Similarly, given that individuals who engage in NSSI often report emotional relief following NSSI (Klonsky & Glenn, 2009), it might be considered a pathway for that goal. Theoretically, within the context of Hope Theory, when considering intervention strategies, it is important to determine whether suicide and suicide-relevant behaviors are best classified as a goal or pathway, and to determine the best means of substituting adaptive, life-affirming goals for suicidal goals.

Application of Hope Therapy

Hope Therapy was designed to increase hopeful thought, without regard to specific diagnoses or type of presenting problem. Hope Therapy interventions include targets in three domains: (1) pathways generation, (2) agency enhancement and maintenance, and (3) goal-setting. Goal-setting, although not directly measured in the

Hope Scale (Snyder et al., 1991), is an important component of Hope Theory and Hope Therapy. Pathways and agency interventions are easier to enact and tend to be more successful when they are in the context of well-specified goals (Snyder, 2002). With Hope Theory, Snyder (1994) posited that the most hopeful goals are those that are approach oriented, have measurable endpoints, and include sub-goals. These goal characteristics allow for celebration of progress across the course of a goal pursuit as the person gets feedback (from measurable endpoints) along the way (sub-goals) for intrinsically and extrinsically rewarding goals that capitalize on forward movement (approach oriented). Thus, Hope Therapy interventions are designed to help people set and meet these types of goals. Additionally, attending to whether goals are in concordance with one's values is an important part of goal-setting lessons in Hope Therapy.

In terms of pathways interventions, the primary goal in Hope Therapy is to teach participants to generate multiple, workable routes to their non-suicidal goals while anticipating potential obstacles and set-backs. Evidence suggests that higher hope is associated with generating more pathways in response to both personal (Snyder et al., 1991) and standardized (Heiy, Feldman, Rand, & Cheavens, 2015) goals. Relatedly, the first pathways skill addressed in Hope Therapy is generation of pathways. This is typically accomplished through brain-storming techniques that allow participants to be open to myriad possibilities for goal solutions without judgment of any particular possibility. After several pathways have been generated, the focus moves to selecting primary pathways, such that the participant is able to focus attention on the route(s) most likely to lead to goal completion. Another critical component of the pathways interventions is the identification of potential obstacles or difficulties for any given pathway to a goal. Individuals with low hope often stop at the pathway generation phase and fail to plan for difficulties that may arise during goal pursuit, and therapeutic efforts are made to change this pattern. The cumulative objective of developing pathways skills is a goal-mapping exercise in which participants create a visual display of their goals, including the identification of pathways most likely to lead to successful goal completion, and addressing, pro-actively, potential obstacles and responses to obstacles for each pathway.

Agency interventions in Hope Therapy, which are aimed at igniting and sustaining determination and motivation, are adapted from Cognitive Behavioral Therapy (Beck, Rush, Shaw, & Emery, 1979). Agency is required to use the pathways that have been generated and maintain effort through goal completion, even when progress is slow. One agency enhancement intervention is targeting goal-relevant self-talk that undermines progress. For example, individuals with low agency may be in the habit of saying things to themselves such as, "I won't be able to do this," or "This will be too hard." To build agency, participants are asked to examine the evidence for these thoughts, recall successful past goal pursuits (even as small as making it to the Hope Therapy sessions), and turn their minds toward agency-enhancing thoughts such as "Although it may be difficult, I know I can accomplish this goal." In addition to targeting self-talk, agency-relevant interventions also aim to increase overall energy levels, via promotion of physical self-care (e.g., sleep, exercise, eating).

Hope Therapy was initially tested as a group therapy delivered over several weeks (8 weeks, Cheavens, Feldman, Gum, Michael, & Snyder, 2006; 11 weeks, Klausner et al., 1998); however, since that time, many variations have been tested, including brief one-session interventions (e.g., Feldman & Dreher, 2012). Tests of Hope Therapy in community (Cheavens et al., 2006), college-student (Feldman & Dreher, 2012), older adult (Klausner et al., 1998), and medically compromised (Thornton et al., 2014) samples suggest that hope interventions result in changes of self-reported levels of hope although these changes are, at times, limited to changes in either pathways (Thornton et al., 2014) or agency (Cheavens et al., 2006). For a more comprehensive review of Hope Therapy, see Cheavens and Guter (2018).

Adapting Hope Therapy to Target Suicide Behaviors

It is important to start this section by acknowledging that Hope Therapy has not been tested specifically with individuals struggling with suicide and associated behaviors. Thus, while it is tempting to assume that Hope Therapy might be useful for these targets, based on evidence that hope is inversely associated with suicidal ideation (e.g., Cheavens et al., 2016) and Hope Therapy results in increases in hope (e.g., Cheavens et al., 2006; Feldman & Dreher, 2012; Thornton et al., 2014), this needs to be tested in future work. Here, we provide thoughts on the ways in which Hope Therapy might be useful in decreasing NSSI, as well as suicidal ideation, plans, and intent, with the hope that these suppositions will be tested in future work.

People tend to have several goals at any given time. Suicide may become a primary goal when progress on other important goals has been unsuccessful or impeded in some way. For example, Joiner (2005) proposed that suicidal ideation (i.e., suicide as a goal) emerges when someone experiences blockages in the goals to belong (i.e., thwarted belongingness) and live in ways that contribute as much to others as they receive (i.e., perceived burdensomeness). Sustained blockages in these goals may lead an individual to develop thoughts about suicide and, eventually, come to set suicide as a goal with specific plans and acquired capabilities for enacting these plans. In this example, a health service professional providing Hope Therapy would likely want to shift patient focus from the goal of suicide to other valued goals.

Six life domains involving hope have been outlined, namely social relationships, academics, romantic relationships, family life, work, and leisure activities (see Lopez, Ciartelli, Coffman, Stone, & Wyatt, 2000). Increasing belongingness, social activity, contributions to one's environment, and competence are all hopeful goals that may be used to replace suicide-related goals. If the perceived blockage of hopeful goals is associated with the individual moving to another goal (i.e., suicide), one way to intervene would be to reframe lack of progress on non-suicidal goals as an addressable challenge (i.e., positive problem orientation; D'Zurilla & Nezu, 2006). Indeed, Chang et al. (2013b) found that positive problem solving buffered the inverse association between low levels of hope and suicidal ideation and behaviors. Efforts could also be made to promote skills related to goal-setting, pathways

generation, and agency enhancement, which may enhance ability to engage in positive problem orientation and view perceived goal blockages as challenges. For example, someone who has experienced a thwarted need for belongingness might benefit from revisiting the goal of belongingness and working to characterize that goal within the hope framework. This person might work with the therapist to set measurable endpoints, develop sub-goals, and elucidate ways in which this goal fits into one's larger network of goals and values (Cheavens & Guter, 2018). Further, the therapist (and other group members, if in group) could help this person generate many pathways to move toward the goal of increased belongingness. Narrowing down to approximately three viable pathways would allow for anticipating obstacles along the way and developing responses to potential obstacles that permit continued use of the primary pathways. Finally, the therapist would want to address agency enhancement and maintenance. Particularly, for goals that have been experienced as thwarted or blocked in some way, it can be difficult for someone to maintain determination to keep trying and moving forward. It is important for therapists to maintain their own sense of agency for a client's goals and avoid joining the clients in thoughts that sap agency.

If suicidal ideation or other suicide-relevant behaviors (e.g., NSSI) are functioning as a pathway to another goal (e.g., escape from pain, communication to others), then the focus of the intervention might be more heavily weighted toward pathway generation and choice. Presumably, someone has selected the suicide-relevant pathways for one of several reasons. First, thinking of suicide as a means to escape difficult circumstances or engaging in NSSI can provide immediate relief from psychological distress (Klonsky & Glenn, 2009). Thus, as a pathway for the goal of reducing distress, these behaviors are likely strongly negatively reinforced. Second, it can be difficult to engage in pathways thinking while experiencing strong emotions. Decades of research suggests that intense negative emotion narrows attentional focus (Caccioppo, Berntson, & Crites, 1996), which works against the broad and flexible cognitive processing required for pathways thinking. Third, particularly if suicidal ideation and/or NSSI are chronic, engaging in pathways thinking is likely more difficult than engaging in habitual behavior. Thus, a therapist working in the context of Hope Therapy could, along with the aid of other group members as appropriate, assist in generating and narrowing (e.g., pros/cons) alternative pathways, identifying several primary, non-suicidal pathways to which the individual could commit in the upcoming weeks. Attention should be paid to potential obstacles to these pathways and viable work-arounds of those obstacles, as disruptions in progress may be associated with returning to suicide as a pathway. Although the focus in these interventions may be primarily on pathways, it would still likely be important to address agency and goal-setting skills to increase the likelihood of successfully using the generated pathways. Indeed, in Hope Therapy, cognitive-behavioral skills and strategies are utilized to increase self-care, and goal-related self-talk (e.g., positive statements like "I believe I can do this") and motivation (Cheavens & Guter, 2018). Taken together, Hope Therapy provides a foundation for interventions focused on increasing future-oriented cognitions and has strong potential benefits for use with suicidal individuals. Further work is needed to adapt Hope

Therapy for specific usage in addressing suicidality and its psychopathological correlates, including depression.

Future-Directed Therapy for Depression

Theoretical Background

The role of future thinking has long played a role in theories of depression. Beck's theory of the cognitive triad of depression posited that people with depression have a negative view of the future (Beck, 1972). Seligman (1975) believed depression resulted when people felt they did not have control over the negative events in their future; and, Abramson hypothesized that depression was the result of a combined negative and helpless expectancy (Abramson et al., 1989). These theories were unified by the view that depression was the result of negative expectations. This view was challenged in the mid-1990s, when Andrew MacLeod at Royal Holloway University delineated positive and negative thinking about the future as orthogonal constructs and not polarities of the same dimension. He demonstrated that people with depression did not think more negatively about the future than people without depression but, rather, they produced fewer positive expectations. MacLeod and colleagues concluded that this is not due to an inability of people with depression to anticipate pleasure in general but, rather, a reduced ability to generate positive expectancies about the future (MacLeod & Salaminiou, 2001). Having been replicated many times, this finding has emerged as one of the most robust cognitive indicators in people with depression (e.g., Bjarehed, Sarkohl, & Andersson, 2010; MacLeod & Byrne, 1996; MacLeod & Cropley, 1995; MacLeod & Salaminiou, 2001; MacLeod, Tata, Kentish, & Jacobsen, 1997b; Miranda & Mennin, 2007; Stöber, 2000). The revelation that people with depression think less positively about the future maps to biological models that have also emerged over the past several decades, implicating an impairment in reward processing as a marker of depression. Specifically, fMRI imaging of the brain has repeatedly demonstrated that people with depression appear to have reduced functioning in the striatal system during the anticipatory processing of rewards (e.g., Beck et al., 2009; Bermpohl et al., 2009; Juckel et al., 2006; Schlagenhauf et al., 2008, 2009; Stoy et al., 2012; Ströhle et al., 2008; Wrase et al., 2007). In other words, people with depression have an impaired ability to view future events as rewarding and, thus, have less positive expectations about the future.

The ability to engage in behavior directed at positive future outcomes is viewed as an acquired skill (Reading, 2004). Research shows that people with depression tend to have fewer skills that are critical components of future thinking, such as goal-setting, planning, and problem solving, and that those who are skillful in these areas demonstrate a greater sense of well-being (Diener & Emmons, 1984; Emmons, 1992; MacLeod, 2012; MacLeod, Coates, & Heatherton, 2008; Schmuck & Sheldon,

2001). Studies with clinical and non-clinical samples have also shown that teaching goal-setting and planning skills can increase positive future thinking and self-reported subjective well-being and can reduce negative affect and hopelessness (Cheavens et al., 2006; Lyubomirsky, 2008; MacLeod et al., 2004, 2008).

The theoretical premise behind Future-Directed Therapy (FDT) is based on Humanistic models of behavior and has three primary concepts: (1) the desire to thrive is the primary drive of all human beings because it promotes the evolutionary process, (2) thought and behavior are limited resources that humans utilize to promote their thriving, and (3) our emotions provide feedback on our perceived state of thriving.

The concept of thriving is best represented as a part of a continuum that ranges from survival to thriving, similar to that described by Maslow in his Hierarchy of Needs (Maslow, 1999). What humans perceive to be a state of thriving is hypothesized to be subjective and relative. At its most basic level, it begins with physical survival and can eventually progress across the continuum to the development of complex psychological processes, such as self-actualization and self-transcendence. In FDT, increases in thriving are believed to be achieved by actions taken that are born from a desire to close the gap between where one presently is and where one wants to be in the future. In FDT, this desire is viewed as a fundamental drive referred to as the "need to want." Everything that is wanted is in the future. It is the "'need to want" that promotes thriving and the continued evolution of the human experience. No matter how much anyone has, there is always the desire for continuous movement forward toward an increased state of thriving. No one ever reaches a state where the desire to thrive stops. Thought and behavior, from the FDT perspective, are the most powerful resources that humans have, to promote their own thriving. However, due to time constraints (i.e., you can only think and do a certain number of things concurrently), thought and behavior are limited resources. In FDT, the premise is that the more resources that are spent on activities that promote thriving, the better one will feel.

In FDT, it is hypothesized that when people feel they have the power to thrive, by creating a desired future state and obtaining what is wanted, they feel a sense of well-being that leads to emotions such as hope and optimism. When the ability to move forward into a desired future state is hindered in some way, however, the perception is that thriving is being inhibited, and people experience psychological distress, which, if not corrected, can evolve into pathological disorders.

Several unique cognitive models were developed to conceptualize the anticipatory process of human behavior and the cognitive process of reward achievement. In the FDT Anticipatory Cognitive Model of Human Experience (Fig. 9.1), a distinction is made between anticipatory beliefs and the present or past beliefs on which anticipatory assessments are based. It also highlights the anticipatory response process of choice calculation, in which people decide what actions they will take based on what they anticipate will happen in any given situation. Unlike traditional cognitive therapy, in FDT, the focus is on the anticipatory part of the human experience, in understanding both the patient's problem and where primary interventions occur. If a patient is aware of his/her faulty thoughts about a future situation, then they can be changed before the situation occurs and, potentially, a different outcome can be created.

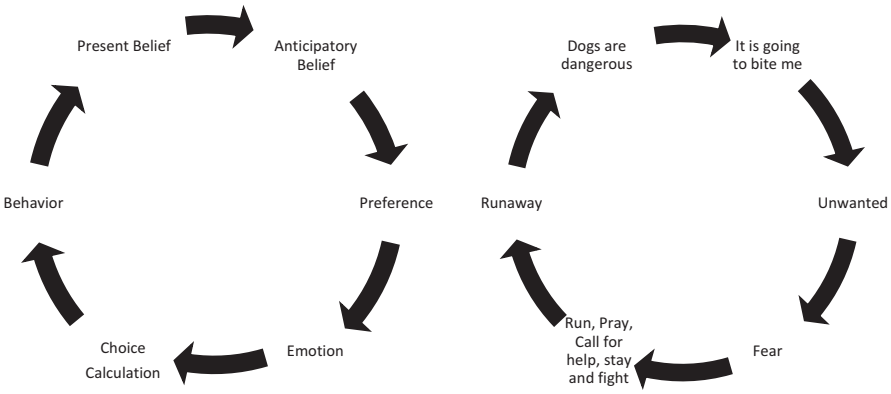

Fig. 9.1 FDT anticipatory cognitive model of human experience

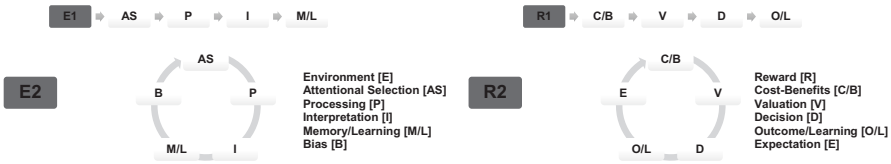

Fig. 9.2 FDT cognitive bias model of reward processing

As faulty reward processing is an identified component of depression, a primary goal of FDT is to help patients identify impaired cognitions related to goal or reward-related behavior. The FDT Cognitive Bias Model of Reward Processing (Fig. 9.2), which represents the cognitive process of reward achievement, is adapted from the combined cognitive biases model (CCBM) of depression (Everaert, Duyck, & Koster, 2014; Everaert, Tierens, Uzieblo, & Koster, 2013). Research has supported the CCBM, showing that diminished attentional control plays a significant role in the maintenance of negative affect, and that people with depression and dysphoria have a negative attentional selection bias and difficulty disengaging from a negative stimulus once they have selected it (i.e., they spend longer processing it; Everaert et al., 2014; De Raedt & Koster, 2010). This model maps to research on reward processing, which shows that during the attentional selection phase, those with dysphoria focus more on the risks and cost associated with the reward. Unlike people without depression, who tend to be biased toward focusing their attention on rewarding and/or positive elements in their environment, people with dysphoria do not develop this positive attentional bias (Brailean, Koster, Hoorelbeke, & De Raedt, 2014). This influences the valuation process in a negative way (e.g., overestimate costs) and can lead to decisions to avoid taking action or exerting effort, which increases the likelihood of a negative outcome (e.g., does not get reward). As negative outcomes are learned, an expectation develops through which attainment of future same or similar potential rewards are processed, and which then guides attention selection toward risks and costs.

Treadway and colleagues have suggested that anergic and anhedonic behavioral patterns commonly observed in the course of a major depressive episode (MDE) may result from a core deficit in cost/benefit decision-making, such that individuals fail to engage in rewarding behaviors because they either overestimate the costs of obtaining rewards, under-estimate the anticipated benefits, or simply fail to integrate cost/benefit information in an optimal manner (Treadway, Bossaller, Shelton, & Zald, 2012; Treadway & Zald, 2011). This model uniquely allows the clinician to conceptualize the cost/benefit decision-making process of the patient involved in reward-related behavior and to develop interventions accordingly. For example, when talking about whether to go to a social event (a potentially rewarding future experience), someone with depression may focus on all the things that would go wrong, such as the anxiety of not knowing what to say and appearing awkward to others. The more attention the individual gives to the possibility of a negative experience, the greater the magnitude of the anticipatory anxiety, which is perceived to be a high emotional cost. This focus on the emotional cost may cause the individual to decide that the cost exceeds the potential of the reward and may, ultimately, affect the individual's decision to attend. By being able to conceptualize a patient's emotional experience of future events as a function of attention to cost versus reward, a clinician can guide the patient's attention away from costs by instead focusing their attention on reward using structured exercises such as positive process and outcome visualizations, and by generating solution-oriented tasks that will help an individual influence a situation to achieve a desired outcome, as opposed to exerting mental resources expecting it to turn out badly.

The FDT Cognitive Bias model is consistent with decades of research on goal achievement and motivation, which has demonstrated that reward effort (i.e., behavioral action) is mediated by the cognitive appraisals of reward anticipation, which has two primary components: expectancy regarding the possible outcomes of behaviors or performance (i.e., expectation), and perception of a goal or reward value (i.e., valuation; Berridge, 2004; Clithero, Reeck, Carter, Smith, & Huettel, 2011; Salamone, Correa, Farrar, Nunes, & Pardo, 2009; Sun, Vancouver, & Weinhardt, 2014). Demeyer and De Raedt (2014) recently demonstrated that training dysphoric individuals to have a more expansive future time perspective results in those individuals allocating less of their attentional resources to negative stimulus. They also showed that dysphoric individuals with an enhanced attentional bias for reward have a higher expectation that they can control reward outcomes.

These core models are incorporated into what is referred to as the 4-A achievement model (i.e., Anticipate, Activate, Assess, Act), to conceptualize the relations between valuation, expectation, knowledge, attention, and reward effort, and to promote an understanding of what is preventing action toward goals and where to intervene. In the *anticipation* phase, the individual identifies what they want and how much they want to achieve the goal (valuation), what steps are necessary to achieve the goal and what the obstacles are (knowledge), and what their current beliefs are about their ability to achieve their goal (expectations). Then, the patient *activates* attention to benefits (e.g., journal exercises, worksheets) to increase goal value and attention to obstacles, and to generate implementation plans to overcome perceived

barriers, which has been shown to facilitate action and increase the expectation of success (Oettingen, 2012). In the third phase, the patient *assesses* the planned steps toward their goal, along with their plan to overcome obstacles, and they also determine whether they perceive the *action* necessary to be worth the effort and, if so, they engage in planned actions.

Another unique component of FDT is that it uses affect-biased attention as a direct emotion regulation strategy (Todd, Cunningham, Anderson, & Thompson, 2012), by training patients to self-monitor attentional process and to redirect attention to rewards. Anhedonia, for instance, has been linked to difficulty with sustaining engagement in structures involved in positive affect and reward (i.e., result of impaired attentional control; Heller et al., 2009), and cognitive control over reward processing impacts not only the expectation period but also the reward signals in the outcome period (Staudinger, Erk, Abler, & Walter, 2009). People with depression tend to have difficulty redirecting their attention away from negative stimuli, relative to positive stimuli (De Raedt & Koster, 2010). Recent work has demonstrated that attentional biases may be retrained with instruction, and depressed patients can learn to develop a positive attentional bias that not only improves mood but reduces risk of relapse (Browning, Holmes, & Harmer, 2010; Browning, Holmes, Charles, Cowen, and Hamer, 2012).

FDT is distinct from CBT, in that it does not focus on changing irrational thinking but, rather, focuses on anticipatory thoughts and building effective thought patterns that will maximize likelihood of effort toward achieving a desired future state. The FDT approach is also distinct from Behavioral Activation (BA), which does not incorporate training on cognitive components of expectation and motivation that research has indicated as precursors to decision-making and facilitation of successful reward effort. Finally, FDT is also distinct from these treatments, in that it considers attentional and perceptual processing to be a means of understanding cognitive assessments made by an individual and acknowledges their potential use as a tool in change and emotion regulation processes.

Application of Future-Directed Therapy

Future-Directed Therapy (FDT) was developed as an evolved form of cognitive therapy to map more closely onto the cognitive and biological knowledge that has emerged regarding future thinking and depression. The “future” in Future-Directed Therapy is not necessarily far off in time; it can refer to any point in time beyond the present moment, near or far. Rather, FDT is about understanding that because we can only move forward, most of our thinking and behavior is anticipatory or future oriented. We constantly speculate about what will happen, whether it is in the very next moment, tomorrow, or 5 years from now, and that speculation has a huge impact on how we process information, how we feel about different situations and, ultimately, how we create our lives.

FDT is designed as a full clinical intervention intended to reduce symptoms of depression and improve well-being by promoting a paradigm shift from dwelling on the past, or highlighting one's limitations in the present, toward creating more positive expectancies about the future, by developing and employing a comprehensive and well-defined set of skills. To address the social isolation associated with depression, as well as to employ a format that was conductive to teaching the skill-based nature of material, FDT was originally conceptualized as a group-based intervention, taught in twice-weekly, 90-min sessions, over a 10-week period, in a classroom style setting.

The FDT intervention was developed over a 5-year period, utilizing workshops and focus groups with patients in an outpatient clinical setting at a large urban hospital center. Patients with depression were involved in all aspects of the development, providing feedback on the content and the utility of the material. Two non-randomized clinical studies have been completed using FDT. The first study involved comparing 16 patients in an FDT group with 17 patients treated simultaneously in traditional Cognitive Behavioral Therapy groups. All patients had a confirmed diagnosis of DSM-IV Major Depressive Disorder and were compared pre- and post-treatment (10 weeks) on The Quick Inventory of Depressive Symptoms (QIDS), the Beck Anxiety Inventory (BAI), and the Quality-of-Life Enjoyment and Satisfaction Questionnaire (QLES-Q) short form. Patients treated with FDT demonstrated significant improvements from baseline to post-treatment, with a reduction of symptoms of depression ($p = .001$) and anxiety ($p = .021$), and reported improvement in quality of life ($p = .035$). Additionally, they also reported high satisfaction with the therapy. Both CBT and FDT were found to be effective at treating depression; compared to the CBT group, the FDT group showed greater improvements in depressive symptoms ($p = .049$; Vilhauer et al., 2012).

In a follow-up study that again compared FDT to group-based CBT, the Beck Hopelessness Scale (BHS) was added to assess positive and negative anticipation. In 1 year, 42 patients completed a 10-week, 20-session group therapy program (FDT [$n = 22$], and CBT [$n = 20$]). The controlled factors included the number of sessions (2/week × 10 weeks /condition), the amount of training and supervision provided to the clinicians on each treatment, and adherence to protocols, which were assessed through periodic observation through a one-way mirror. Key findings were: from baseline to post-treatment showed that FDT improved depression ($p = .001$), positive anticipation (BHS-subfactor; $p = .001$), and quality of life ($p = .001$). In a between-group comparison, consistent with our pilot study, both treatments were effective at improving depression; however, there was suggestive evidence at 10 weeks that FDT improved depression ($p = .011$), positive anticipation ($p = .049$), and quality of life better than the CBT group ($p = .051$; Vilhauer et al., 2013). FDT was significantly better than CBT at reducing anhedonia (pre-post on item 13 of QIDS: $p = .01$). Regression analysis indicated that change in positive anticipation (BHS) predicted change in anhedonia ($p = .038$) and overall depression ($p = .008$) in the FDT group, but not the CBT control group. Even with small samples sizes and non-randomized assignment to condition, these findings

suggest that FDT is uniquely changing depressive symptoms via alteration of cognitions regarding positive expectations.

Can FDT Help Suicidal Patients?

FDT has the potential to help individuals decrease suicidal thinking by reducing hopelessness through the process of helping them to develop a more positive view of the future. Hopelessness is the best consistent predictor of the risk for suicidal behavior (O'Connor, Armitage, & Gray, 2006) and the cornerstone of many theories of suicidal thinking (e.g., Beck, Brown, & Steer, 1989; Beck, Kovacs, & Weissman, 1975). Hopelessness was originally posited, by Beck, to be a cognitive/motivational state characterized by negative expectancies, and a core feature of depression (e.g., Brown & Beck, 1989; Clark, Beck, & Brown, 1989; Young et al., 1996) that plays a significant role in mediating the relation between depressive syndromes and suicidal behavior (e.g., Beck et al., 1975; Fawcett et al., 1990; Wetzel, Margulies, Davis, & Karam, 1980). However, more recent research has not supported this definition. While hopelessness is believed to be a multi-faceted construct, several researchers have found that lack of positive future thinking plays a more important role in hopelessness than the presence of negative future thinking (MacLeod et al., 2005; MacLeod, Pankhania, Lee, & Mitchel, 1997a; MacLeod, Rose, & Williams, 1993; O'Connor & Cassidy, 2007).

Williams (2001) "Cry of Pain" model of suicidality posited that future thinking in suicide is an important variable. This model describes suicidal ideation as a reaction to a stressful situation that has three components: perception of defeat, no escape, and no rescue (i.e., feeling trapped, no positive future). Judgment about these three components are affected by information processing deficits (e.g., positive future thinking) and individual differences factors. The Cry of Pain model moves beyond other models that focused on escape to incorporate the states of entrapment and defeat (Gilbert & Allan, 1998). Resulting from impaired positive future thinking, when an individual with suicidal thoughts envisions the future, they can see no end to the entrapment, and hopelessness ensues. In this conceptualization of suicidality, it is the interaction between the desire to escape from a situation characterized by feelings of defeat and rejection and not having the internal or external resources to escape, which is pertinent to suicide risk. In the Cry of Pain model, the presence of rescue factors (e.g., positive future thinking) moderate or attenuate the deleterious effect of the perception of inescapability on one's wish to die. This moderating pathway has been supported by data from a clinical case control study (O'Connor, 2003). According to O'Connor et al. (2007), a higher level of positive future thinking reduces the sense of entrapment, resulting in the individual believing that he/she has more to look forward to and, consequently, greater reasons for living and better mental health outcomes.

MacLeod et al. (1998) have shown that a deficit of positive anticipation about the future increases hopelessness and differentiates between parasuicidal and non-

parasuicidal groups. Parasuicidal patients show an absence of anticipation of pleasurable future events, but not an increased anticipation of unpleasant events (MacLeod et al., 1993). Research among older individuals by Hirsch et al. (2006) reveals that positive future orientation is associated with less suicidal ideation. These authors suggest there is a need to develop cognitive-based treatments that focus specifically on enhancing future orientation. O'Connor and Cassidy (2007) found that in a group of repeated self-harmers that were 2 months post-suicide attempt, those with high levels of positive future thinking showed the best outcome on hopelessness and suicidal thinking. These authors believe that interventions which attempt to modify positive future thinking are warranted for suicide prevention. In addition to its potential value in suicide prevention, interventions focusing on increasing positive future cognitions can also be implemented as an add-on to other treatments.

Future-Oriented Group Training for Suicidal Patients

Theoretical Foundation/Background Information and Model

When suicidal patients enter treatment, they are confronted with a commonly held misconception among health care workers that suicidal thinking and behavior will vanish when underlying psychiatric problems are treated. However, there are good reasons to believe this is not the case. Suicidal thinking fluctuates over time (De Leo, Cerin, Spathonis, & Burgis, 2005; Gunnell, Harbord, Singleton, Jenkins, & Lewis, 2004) and is likely to reoccur in most depressed individuals in the future (Williams, Crane, Barnhofer, Van der Does, & Segal, 2006). For example, in a study among formerly suicidal patients, Williams, Barnhofer, Crane, and Beck (2005) showed that problem-solving abilities and autobiographical memory, which are commonly associated with suicidal thinking and behavior, deteriorate when the patient's mood lowers once again. This supports the notion that suicidality appears to become a syndrome, irrespective of underlying psychiatric morbidity (Ahrens & Linden, 1996). Autobiographical memories are important building blocks in the cognitive construction of hope, or positive future thinking.

There is a shortage of well-described, evidence-based treatment methods for suicidal behavior and suicidal ideation. A few randomized clinical trials focusing on self-harm and suicidal behavior have been published, such as MACT (Manual Assisted Cognitive-Behavior Therapy; Davidson, Brown, James, Kirk, & Richardson, 2014; Evans et al., 1999) and Cognitive Therapy and Cognitive-Behavioral therapies (Brown et al., 2005; Forkmann, Brakemeier, Teismann, Schramm, & Michalak, 2016; Rudd et al., 2015). There are also studies on suicidality as a component of treatment programs for borderline patients, such as Dialectical Behavioral Therapy (DBT; Andreasson et al., 2016; Linehan, 1993; Linehan et al., 2015; Verheul et al., 2001), Schema-Focused Therapy (Giesen-Bloo et al., 2006),

and Mentalization-Based Treatment (Bateman & Fonagy, 2004). Most of these interventions have been developed for specialized settings and specific patient groups.

Broadly, most consistent and convincing theories on suicidal thinking and behavior include hopelessness as a contributing factor; therefore, this is the core component of the Future-Oriented Group Training for Suicidal Patients intervention (FOGT). According to Beck (1967), three variables constitute the negative triad: hopelessness, self-esteem, and a negative perception of the environment. Across many studies, hopelessness is a robust predictor or indicator of risk for suicidal behavior (Vinas, Canals, Gras, Ros, & Domenech-Llaberia, 2002). Research shows that lack of positive future expectancies, as a part of hopelessness, is an especially important factor in developing suicidal ideation and behavior (MacLeod et al., 1993). MacLeod et al. (1998) have shown that a deficit of positive anticipation about the future relates to hopelessness and discriminates between parasuicidal and non-parasuicidal groups. Specifically, parasuicidal patients show an absence of anticipation of pleasurable future events, but not an increased anticipation of unpleasant events (MacLeod et al., 1993). Indeed, lack of positivity seems to be especially related to borderline personality disorder (MacLeod et al., 2004), which confers high risk for suicide. MacLeod et al. (1997a) hypothesized that this shortage of positivity might reflect a lack of available sources of rewarding and enjoyable experiences, inaccessibility of cognitive representations of future positive outcomes, or an inability to derive pleasure from normally enjoyable events. Research among older individuals, by Hirsch et al. (2006), reveals that positive future orientation is associated with less current and less worst-point suicidal ideation. However, no cognitive-based treatment for suicide risk has focused specifically on enhancing future orientation, which is a central component of our group-based treatment.

Another important element of any new intervention for suicidal individuals should be problem solving. According to Hawton et al. (2000), forms of problem-solving therapy are promising in the treatment of suicidal patients. Research by Eskin, Ertekin, and Demir (2008) showed significant decrease of suicide risk when adolescents and young adults received problem-solving therapy. Consistent evidence has shown that people who attempt suicide have poor problem-solving skills (Linehan, Camper, Chiles, Strohsal, & Shearin, 1987; Pollock & Williams, 2001) and, further, problem-solving therapy reduced levels of depression and hopelessness in patients who have attempted suicide (Townsend et al., 2001). A study among suicide attempters, by Jollant et al. (2005), shows that decision-making is impaired in this group, evaluated in a period in which the participants had no axis I disorder. Indeed, several attempts have been made to therapeutically influence problem-solving skills, like STEPPS (Systems Training for Emotional Predictability and Problem Solving, Blum et al., 2008) and BATD (Behavioral Activation Treatment for Depression, Hopko, Sanchez, Hopko, Dvir, & Lejuez, 2003). In general health practice, Problem-Solving Therapy (PST), developed by Nezu, Nezu, and Perri (1990) has proven to be helpful. Furthermore, some other available interventions have a stronger focus on dysfunctional cognitions, like the time-limited approach by Rudd, Joiner, and Rajab (2001), and cognitive therapy for suicide attempters, evalu-

ated in a randomized controlled trial (RCT) by Brown et al. (2005). These authors developed a 10-week program in which they combined basic cognitive therapy with usual care, enhanced with tracking and referral services. They found a 50% lower reattempt rate in their cognitive therapy sample compared to the sample that only received usual care, even after 18 months. In our Future-Oriented Group Training, we have incorporated problem-solving development as an important therapeutic strategy.

Suicidal behavior is also characterized by isolation and social detachment (Duberstein et al., 2004). As a result, local and governmental incentives to encourage health-seeking behavior, decrease mental health stigma, and increase social support have been developed. Some examples include the Scottish "Choose Life" program, which introduced guidelines for the media coverage of suicide to discourage the reporting of suicide methods, and the "Breathing Space" helpline that targets young men, and Australia's "Social Inclusion Suicide Prevention Initiative." In a review and test of suicide rates in 21 countries with national suicide prevention programs, Matsubayashi and Ueda (2011) found suicide rates decreased overall after the implementation of the programs. On a smaller scale, FOGT encourages participants to seek out a coach or buddy to support them during the training, and to involve partners or friends. This supportive role is also an element in other programs, like in the Community Reinforcement Approach (Roozen et al., 2004).

The FOGT training addresses hopelessness and lack of future thinking and includes elements from cognitive therapy and problem-solving therapy. Furthermore, a main goal of FOGT is to reduce the extent and impact of social isolation, which most suicidal persons report experiencing. FOGT was developed with the intention to be used in conjunction with or in addition to other therapies.

Application

FOGT was developed to address the large and heterogeneous group of suicidal people who are met in everyday practice. As most other extant interventions require specialized training or focus on a specific group of patients (e.g., DBT), FOGT was developed to be a highly structured intervention, specifically developed to be easily implemented. The training is typically administered by psychologists and psychiatrists but may also be delivered by other licensed health care workers, such as psychiatric nurses and social workers. It requires only the basic knowledge of cognitive behavioral therapy that is part of most current educational training programs for mental health care professionals. The FOGT training is structured by a protocol, in which the goals and the components of each session are described. Groups of four (minimum) to a maximum of ten participants have been used in the past, and only patients with overt manic symptoms and psychosis were excluded. In the FOGT training, group interactions are managed, and participant contributions are limited to helpful and constructive feedback. Participants are encouraged to share ideas about how to overcome suicidal ideation and self-destructive behavior (e.g., hopeful

pathways thinking), and there is a focus on translating personal experiences into helpful insights and strategies toward meeting goals (e.g., agentic thinking). For instance, a depressed and suicidal participant who tends to further isolate himself after a disappointment discusses his way of coping during the session. After reading about social isolation in the workbook, further discussions about alternative and adaptive behaviors are facilitated. As well, the group may discuss the ways that negative expectations of one's future can affect behavior in the present, in terms of self-fulfilling prophecies. In this way, major themes in suicidality, like isolation, perfectionism and high standards, and typical thought patterns are discussed, along with topics like crisis management, drugs, and self-protection. There are several ways participants are encouraged to imagine possible future scenarios. For example, mental contrasting exercises are practiced, during which participants are encouraged to mentally explore potential different outcomes and practice with different behaviors. Desired and attainable short-term outcomes are focused on, instead of larger and often-infeasible goals. Finally, group sessions focus on the strengths and values of participants and how to apply them toward attaining goals, as well as on what is sometimes referred to as post-traumatic growth in positive psychology (for instance, Morrill et al., 2008); that is, what has the patient learned from their suicidality, and what elements in their life are truly important?

The distinction between one's behavioral and cognitive tendencies may be understandable from a suicidal perspective, and the desired behavior is essential in FOGT. Participants in FOGT have the autonomy to make their own choices between maintenance of maladaptive coping and feelings, or pro-active and adaptive coping that promotes well-being.

Future Directions for FOGT

To assess the effects of FOGT, a randomized clinical trial was conducted in The Netherlands for the initial study. Overall, the analysis revealed minor effects in suicidal thinking ($d = .21$, $p = .207$) in general, and suicidal desires ($d = .32$, $p = .53$), both not statistically significant. FOGT had a positive effect on deliberate self-poisoning ($d = .32$), and on distress ($d = .47$). Further, an adherer's analysis showed a significant effect on suicidality measured a year after the training ($d = .46$, $p = .011$). To the surprise of the researchers, no change in future thinking was found, with no significant effect on suicidality.

A larger scale RCT is currently being conducted in Belgium, in which FOGT is compared to MBCT and an online problem-solving focused intervention. Like in other composite programs (e.g., Dialectical Behavioral Therapy), further investigation of the components that contribute to the effect (i.e., dissemination studies) are a next step. During the study, analysis of the distinction between severely depressed and moderately depressed participants revealed that severely depressed participants have problems with FOGT, perhaps because a more active attitude is desirable. For severely depressed patients, medication might be necessary, before psychological

interventions like FOGT can be successfully administered. Further studies are needed to substantiate our effects, and the efficiency of FOGT in subgroups of suicidal patients, including patients with moderate versus severe depression, active versus passive suicidality, and chronic versus acute suicidality.

Future of Future-Oriented Treatments for Suicide

In this chapter, we have highlighted three future-oriented therapies for suicide or suicide-related outcomes. Each intervention has a strong theoretical foundation based in classic theories of suicide and depression, and in cognitive theories, such as Snyder's Hope Theory, Beck's Cognitive Triad, and MacLeod and colleagues, which assert that reduced positive expectancies, rather than greater negative expectancies, are related to suicide and its psychopathological correlates.

To begin, Hope Therapy was reviewed and, although it was not specifically developed for suicidality, it appears to be strongly suited for the treatment of suicide risk. In particular, this treatment intervention's theoretical foundation is rooted in Snyder's (2002) Hope Theory. Hope Therapy focuses on increasing adaptive pathway generation (i.e., generating multiple workable routes toward goals), increasing adaptive goal-setting (i.e., setting approach-oriented goals that are aligned with an individual's values with measurable endpoints and built-in sub-goals) and agency enhancement and maintenance (i.e., utilizing CBT techniques to increase determination and motivational positive self-talk). For the use of Hope Therapy in the context of suicide risk, the authors note that it is important to determine whether suicide/suicide behaviors are an individual's goal or pathway and, if so, to work toward replacing suicidal goals with healthier, more-adaptive goals.

Similarly, another therapeutic approach targeting suicide risk factors was discussed—Future-Directed Therapy for Depression (FDT). Based on Beck's (1972) theory that depression results from negative views of the future, as well as MacLeod and colleagues' (e.g., MacLeod & Salaminiou, 2001) consistent finding that depression results from reduced ability to generate positive expectancies about the future, FDT builds its theoretical foundation on three principles: (1) we all have the desire to thrive, or the "need to want"; (2) thoughts and behaviors are limited resources and, if utilized for engagement in activities to promote thriving, will result in greater well-being; and (3) emotions provide feedback on the perceived state of thriving (e.g., hope and optimism). Like Hope Therapy, a large component of FDT focuses on increasing adaptive skills geared toward positive future outcomes (e.g., goal-setting, planning, problem solving). As noted by the authors, FDT differs from traditional Cognitive Behavioral interventions because it is focused on the anticipatory part of human experience. Rather than emphasizing the alteration of irrational thinking, FDT works to build more-effective thought patterns, to increase one's likelihood of effort toward achieving future desired outcomes. The authors provide a layout of the FDT Anticipatory Cognitive Model of Human Experience and, as well, the FDT Cognitive Bias Model of Reward Processing is discussed, in which

reward effort (e.g., behavioral activation) is depicted as mediated by cognitive appraisals of reward anticipation (e.g., expectations and valuation). Given the high prevalence of depression in individuals who experience suicidality, and vice versa, and given that suicidal ideation can be a symptom of depression, further study of Future-Directed Therapy for Depression and its utility for targeting suicidality is warranted. As FDT has been shown to be effective in reducing hopelessness, a common marker of suicide risk, it is likely that further work focused on targeting other suicidal ideation or behaviors may be useful.

Finally, Future-Oriented Group Training for Suicidal Patients (FOGT), a group-based intervention that can be conjunctively added to already-established forms of intervention targeting psychopathology and suicidality, was discussed. Of note, FOGT has several elements in common with the first two interventions discussed, including a focus on teaching skills to enhance future-oriented thinking, problem solving, and social support seeking. In FOGT, participants work together in groups to learn and discuss ways to engage in more adaptive positive and future-oriented thought processes, problem solving, and other strategies. FOGT has shown minor effects on suicidality, and continued research is in progress to further test the effectiveness of FOGT compared to other interventions.

Taken together, this trio of interventions, although preliminary, provides a strong foundation for the continued development and implementation of therapeutic strategies focused on future thoughts and emotion, as a means of reducing risk for suicidal behavior and death by suicide. All three interventions emphasize the promotion of skills to increase positive future cognitions and outcomes, including the resolution of problems and attainment of goals, thereby reducing depression and suicide. As more is learned based on these interventions and theories of suicide, targeted interventions focused on future cognitions can continue to be developed.

References

Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review, 96*, 358–372.

Ahrens, B., & Linden, M. (1996). Is there a suicidality syndrome independent of specific major psychiatric disorder? Results of a split half multiple regression analysis. *Acta Psychiatrica Scandinavica, 94*, 79–86.

Andreasson, K., Krogh, J., Wenneberg, C., Jessen, H. L., Krakauer, K., Gluud, C., … Nordentoft, M. (2016). Effectiveness of dialectical behavioral therapy versus collaborative assessment and management of suicidality treatment for reduction of self-harm in adults with borderline personality trains and disorder—A randomized observer-blinded clinical trial. *Depression and Anxiety, 33*, 520–530.

Anestis, M. D., Moberg, F. B., & Arnau, R. C. (2014). Hope and the interpersonal theory of suicidal behavior: Replication and extension of prior findings. *Suicide and Life-Threatening Behavior, 44*, 175–187.

Bateman, A., & Fonagy, P. (2004). *Psychotherapy for borderline personality disorder - Mentalization-based treatment*. Oxford: Oxford University Press.

Beck, A. T. (1967). *Depression: Causes and treatment*. Philadelphia, PA: University of Pennsylvania Press.

Beck, A. T. (1972). The phenomena of depression: A synthesis. In D. Offer & D. X. Freedman (Eds.), *Modern psychiatry and clinical research: Essays in honor of Roy R. Grinker, Sr* (pp. 136–158). New York, NY: Basic Books.

Beck, A. T., Brown, G., & Steer, R. A. (1989). Prediction of eventual suicide in psychiatric inpatients by clinical ratings of hopelessness. *Journal of Consulting and Clinical Psychology, 57*, 309.

Beck, A. T., Kovacs, M., & Weissman, A. (1975). Hopelessness and suicidal behavior. *Journal of the American Medical Association, 234*, 1146–1149.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York, NY: Guilford.

Beck, A., Schlagenhauf, F., Wüstenberg, T., Hein, J., Kienast, T., Kahnt, T., … Wrase, J. (2009). Ventral striatal activation during reward anticipation correlates with impulsivity in alcoholics. *Biological Psychiatry, 66*, 734–742.

Beck, A. T., Steer, R. A., Kovacs, M., & Garrison, B. (1985). Hopelessness and eventual suicide: A 10-year prospective study of patients hospitalized with suicidal ideation. *The American Journal of Psychiatry, 142*, 559–563.

Bermpohl, F., Kahnt, T., Dalanay, U., Hägele, C., Sajonz, B., Wegner, T., … Heinz, A. (2009). Altered representation of expected value in the orbitofrontal cortex in mania. *Human Brain Mapping, 31*, 958–969.

Berridge, K. C. (2004). Motivation concepts in behavioral neuroscience. *Physiology & Behavior, 81*, 179–209.

Bjarehed, J., Sarkohl, A., & Andersson, G. (2010). Less positive or more negative? Future-directed thinking in mild to moderate depression. *Cognitive Behaviour Therapy, 39*, 37–45.

Blum, N., St John, D., Pfohl, B., Stuart, S., McCormick, B., Allen, J., et al. (2008). Systems Training for Emotional Predictability and Problem Solving (STEPPS) for outpatients with borderline personality disorder: A randomized controlled trial and 1year follow-up. *The American Journal of Psychiatry, 4*, 468–478.

Brailean, A. M., Koster, E. H., Hoorelbeke, K., & De Raedt, R. (2014). Attentional modulation by reward and punishment cues in relation to depressive symptoms. *Journal of Behavior Therapy and Experimental Psychiatry, 45*, 351–359.

Brown, G., & Beck, A. T. (1989). The role of imperatives in psychopathology: A reply to Ellis. *Cognitive Therapy and Research, 13*, 315–321.

Brown, G. K., Ten Have, T., Henriques, G. R., Xie, S. X., Hollander, J. E., & Beck, A. T. (2005). Cognitive therapy for the prevention of suicide attempts: A randomized controlled trial. *JAMA, 294*(5), 563–570.

Browning, M., Holmes, E. A., Charles, M., Cowen, P. J., & Hamer, C. J. (2012). Using attentional bias modification as a cognitive vaccine against depression. *Biological Psychiatry, 72*, 572–579.

Browning, M., Holmes, E. A., & Harmer, C. J. (2010). The modification of attentional bias to emotional information: A review of the techniques, mechanisms, and relevance to emotional disorders. *Cognitive, Affective, & Behavioral Neuroscience, 10*, 8–20.

Caccioppo, J. T., Berntson, G. G., & Crites, S. L., Jr. (1996). Social neuroscience: Principles of psychophysiological arousal and response. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 72–101). New York, NY: Guilford.

Chang, E. C., Martos, T., Sallay, V., Chang, O. D., Wright, K. M., Najaran, A. S., & Lee, J. (2017). Examining optimism and hope as protective factors of suicide risk in Hungarian college students: Is risk highest among those lacking positive psychological protection? *Cognitive Therapy and Research, 4*, 278–288.

Chang, E. C., Yu, E. A., Kahle, E. R., Jeglic, E. L., & Hirsch, J. K. (2013a). Is doubling up on positive future cognitions associated with lower suicidal risk in Latinos?: A look at hope and positive problem orientation. *Cognitive Therapy and Research, 37*, 1285–1293.

Chang, E. C., Yu, E. A., Lee, J. Y., Hirsch, J. K., Kupfermann, Y., & Kahle, E. R. (2013b). An examination of optimism/pessimism and suicide risk in primary care patients: Does belief in a changeable future make a difference? *Cognitive Therapy and Research, 37*, 796–804.

Cheavens, J. S., Cukrowicz, K. C., Hansen, R., & Mitchell, S. M. (2016). Incorporating resilience factors into the interpersonal theory of suicide: The role of hope and self-forgiveness. *Journal of Clinical Psychology, 72*, 58–69.

Cheavens, J. S., Feldman, D. B., Gum, A., Michael, S. T., & Snyder, C. R. (2006). Hope therapy in a community sample: A pilot investigation. *Social Indicators Research, 77*, 61–78.

Cheavens, J. S., & Guter, M. (2018). Hope therapy. In S. J. Lopez & M. Gallagher (Eds.), *The handbook of hope* (2nd ed.). New York, NY: Oxford Press.

Cheavens, J. S., & Ritschel, L. A. (2014). Hope theory. In M. M. Tugade, M. N. Shiota, & L. D. Kirby (Eds.), *Handbook of positive emotions* (pp. 396–410). New York, NY: Guilford.

Clark, D. A., Beck, A. T., & Brown, G. (1989). Cognitive mediation in general psychiatric outpatients: A test of the content-specificity hypothesis. *Journal of Personality and Social Psychology, 56*, 958–964.

Clithero, J. A., Reeck, C., Carter, R. M., Smith, D. V., & Huettel, S. A. (2011). Nucleus accumbens mediates relative motivation for rewards in the absence of choice. *Frontiers in Human Neuroscience, 5*, 87.

D'Zurilla, T. J., & Nezu, A. M. (2006). *Problem-solving therapy: A positive approach to clinical intervention* (3rd ed.). New York, NY: Springer.

Davidson, K. M., Brown, T. M., James, V., Kirk, J., & Richardson, J. (2014). Manual-assisted cognitive therapy for self-harm in personality disorder and substance misuse: A feasibility trial. *The Psychiatric Bulletin, 38*, 108–111.

Davidson, C. L., Wingate, L. R., Rasmussen, K. A., & Slish, M. L. (2009). Hope as a predictor of interpersonal suicide risk. *Suicide and Life-Threatening Behavior, 39*, 499–507.

De Leo, D., Cerin, E., Spathonis, K., & Burgis, S. (2005). Lifetime risk of suicide ideation and attempts in an Australian community: Prevalence, suicidal process, and help-seeking behaviour. *Journal of Affective Disorders, 86*, 215–224.

De Raedt, R., & Koster, E. W. (2010). Understanding vulnerability for depression from a cognitive neuroscience perspective: A reappraisal of attentional factors and a new conceptual framework. *Cognitive, Affective, & Behavioral Neuroscience, 10*, 50–70.

Demeyer, I., & De Raedt, R. (2014). The effect of future time perspective manipulation on affect and attentional bias. *Cognitive Therapy and Research, 38*, 302–312.

Diener, E., & Emmons, R. A. (1984). The independence of positive and negative affect. *Journal of Personality and Social Psychology, 47*, 1105–1117.

Duberstein, P. R., Conwell, Y., Connor, K. R., Eberly, S., Evinger, J. S., & Caine, E. D. (2004). Poor social integration and suicide: Fact or artifact? A case-control study. *Psychological Medicine, 34*(7), 1331–1337.

Emmons, R. A. (1992). Abstract vs concrete goals: Personal striving level, physical illness, and psychological well-being. *Journal of Personality and Social Psychology, 62*, 292–300.

Eskin, M., Ertekin, K., & Demir, H. (2008). Efficacy of a problem-solving therapy for depression and suicide potential in adolescents and young adults. *Cognitive Therapy and Research, 32*, 227–245.

Evans, K., Tyrer, P., Catalan, J., Schmidt, U., Davidson, K., Dent, J., … Thompson, S. (1999). Manual Assisted Cognitive Behavioural Therapy (MACT): A randomized controlled trial of a brief intervention with bibliotherapy in the treatment of recurrent deliberate self-harm. *Psychological Medicine, 2*, 19–25.

Everaert, J., Duyck, W., & Koster, E. W. (2014). Attention, interpretation, and memory biases in subclinical depression: A proof-of-principle test of the combined cognitive biases hypothesis. *Emotion, 14*, 331–340.

Everaert, J., Tierens, M., Uzieblo, K., & Koster, E. W. (2013). The indirect effect of attention bias on memory via interpretation bias: Evidence for the combined cognitive bias hypothesis in subclinical depression. *Cognition and Emotion, 27*, 1450–1549.

Fawcett, J., Scheftner, W. A., Fogg, L., Clark, D. C., Young, M. A., Hedeker, D., & Gibbons, R. (1990). Time-related predictors of suicide in major affective disorder. *The American Journal of Psychiatry, 147*, 1189–1194.

Feldman, D. B., & Dreher, D. E. (2012). Can hope be changed in 90 minutes? Testing the efficacy of a single-session goal-pursuit intervention for college students. *Journal of Happiness Studies, 13*, 745–759.

Forkmann, T., Brakemeier, E., Teismann, T., Schramm, E., & Michalak, J. (2016). The effects of Mindfulness-based Cognitive Therapy and Cognitive Behavioral Analysis System of Psychotherapy added to treatment as usual on suicidal ideation in chronic depression: Results of a randomized-clinical trial. *Journal of Affective Disorders, 200*, 51–57.

Giesen-Bloo, J., van Dyck, R., Spinhoven, P., van Tilburg, W., Dirksen, C., van Asselt, T., … Arntz, A. (2006). Outpatient psychotherapy for borderline personality disorder: Randomized trial of schema-focused therapy vs transference-focused psychotherapy. *Archives of General Psychiatry, 63*, 649–658.

Gilbert, P., & Allan, S. (1998). The role of defeat and entrapment (arrested flight) in depression: An exploration of an evolutionary view. *Psychological Medicine, 28*, 585–598.

Gunnell, D., Harbord, R., Singleton, N., Jenkins, R., & Lewis, G. (2004). Factors influencing the development and amelioration of suicidal thoughts in the general population. *British Journal of Psychiatry, 185*, 385–393.

Hawton, K., Townsend, E., Arensman, E., Gunnell, D., Hazell, P., House, A., & Van Heeringen, K. (2000). Psychosocial versus pharmacological treatments for deliberate self-harm. *The Cochrane Database of Systematic Reviews, 2*, CD001764.

Heiy, J. E., Feldman, D. B., Rand, K., & Cheavens, J. S. (2015, February). *A laboratory-based assessment of hope theory: Goals and pathways*. Poster presented at the Society for Personality and Social Psychology, Long Beach, CA.

Heller, A. S., Johnstone, T., Shackman, A. J., Light, S. N., Peterson, M. J., Kolden, G. G., … Davidson, R. J. (2009). Reduced capacity to sustain positive emotion in major depression reflects diminished maintenance of fronto-striatal brain activation. *PNAS Proceedings of the National Academy of Sciences of the United States of America, 106*, 22445–22450.

Hirsch, J. K., Conner, K. R., & Duberstein, P. R. (2007). Optimism and suicide ideation among young adult college students. *Archives of Suicide Research, 11*, 177–185.

Hirsch, J. K., Duberstein, P. R., Conner, K. R., Heissel, M. J., Beckman, A., Franus, N., & Conwell, Y. (2006). Future orientation and suicide ideation and attempts in depressed adults ages 50 and over. *The American Journal of Geriatric Psychiatry, 14*, 757–757.

Hirsch, J. K., & Kelliher Rabon, J. (2015). Optimistic explanatory style and suicide attempt in young adults. *International Journal of Mental Health and Addiction, 13*, 675–686.

Hirsch, J. K., Nsamenang, S. A., Chang, E. C., & Kaslow, N. J. (2014). Spiritual well-being and depressive symptoms in female African American suicide attempters: Mediating effects of optimism and pessimism. *Psychology of Religion and Spirituality, 6*, 276–283.

Hopko, D. R., Sanchez, L., Hopko, S. D., Dvir, S., & Lejuez, C. W. (2003). Behavioral activation and the prevention of suicidal behaviors in patients with borderline personality disorder. *Journal of Personality Disorders, 17*(5), 460–478.

Huffman, J. C., Boehm, J. K., Beach, S. R., Beale, E. E., DuBois, C. M., & Healy, B. C. (2016). Relationship of optimism and suicidal ideation in three groups of patients at varying levels of suicide risk. *Journal of Psychiatric Research, 77*, 7776–7784.

Joiner, T. E. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.

Jollant, F., Bellivier, F., Leboyer, M., Astruc, B., Torres, S., Verdier, R., … Courtet, P. (2005). Impaired decision making in suicide attempters. *American Journal of Psychiatry, 162*(2), 304–310.

Juckel, G., Schlangenhauf, F., Koslowski, M., Filonov, D., Wüstenberg, T., Vilringer, A., … Heinz, A. (2006). Dysfunction of ventral striatal reward prediction in schizophrenic patients treated with typical, not atypical, neuroleptics. *Psychopharmacology, 187*, 222–228.

Klausner, E. J., Clarkin, J. F., Spielman, L., Pupo, C., Abrams, R., & Alexopoulos, G. S. (1998). Late-life depression and functional disability: The role of goal-focused group psychotherapy. *International Journal of Geriatric Psychiatry, 13*, 707–716.

Klonsky, E. D., & Glenn, C. R. (2009). Assessing the functions of non-suicidal self-injury: Psychometric properties of the Inventory of Statements About Self-Injury (ISAS). *Journal of Psychopathology and Behavioral Assessment, 31*, 215–219.

Linehan, M. M. (1993). *Cognitive behavioral treatment of borderline personality disorder*. New York, NY: Guilford.

Linehan, M. M., Camper, P., Chiles, J. A., Strohsal, K., & Shearin, E. (1987). Interpersonal problem solving and parasuicide. *Cognitive Therapy and Research, 11*(1), 1–12.

Linehan, M. M., Korslund, K. E., Harned, M. S., Gallop, R. J., Lungu, A., Neacsiu, A. D., … Murray-Gregory, A. M. (2015). Dialectical behavioral therapy for high suicide risk in individuals with borderline personality disorder: A randomized clinical trial and component analysis. *JAMA Psychiatry, 72*, 475–482.

Lopez, S. J., Ciartelli, R., Coffman, L., Stone, M., & Wyatt, L. (2000). Diagnosing for strengths: On measuring hope building blocks. In C. R. Styder (Ed.), *Handbook of hope: Theory, measures, and applications* (pp. 57–85). San Diego, CA: Academic Press.

Lyubomirsky, S. (2008). *The how of happiness: A scientific approach to getting the life you want*. New York, NY: Penguin Press.

MacLeod, A. K. (2012). Goals and plans: Their relationship to well-being. In A. Efklides & D. Moraitou (Eds.), *A positive psychology perspective on quality of life* (pp. 33–50). New York, NY: Springer.

MacLeod, A. K., & Byrne, A. (1996). Anxiety, depression, and the anticipation of future positive and negative experiences. *Journal of Abnormal Psychology, 105*, 286–289.

MacLeod, A. K., Coates, E., & Heatherton, J. (2008). Increasing well-being through teaching goal-setting and planning skills: Results of a brief intervention. *Journal of Happiness Studies, 9*, 185–196.

MacLeod, A. K., & Cropley, M. L. (1995). Depressive future-thinking: The role of valence and specificity. *Cognitive Therapy and Research, 19*, 35–50.

MacLeod, A. K., Pankhania, B., Lee, M., & Mitchel, D. (1997a). Parasuicide, depression and the anticipation of positive and negative future experiences. *Psychological Medicine, 4*, 973–977.

MacLeod, A. K., Tata, P., Kentish, J., & Jacobsen, H. (1997b). Retrospective and prospective cognitions in anxiety and depression. *Cognition and Emotion, 11*, 467–479.

MacLeod, A. K., Rose, G. S., & Williams, M. G. (1993). Components of hopelessness about the future in parasuicide. *Cognitive Therapy and Research, 17*(5), 441–455.

MacLeod, A. K., & Salaminiou, E. (2001). Reduced positive future-thinking in depression: Cognitive and affective factors. *Cognition and Emotion, 15*, 99–107.

MacLeod, A. K., Tata, P., Evans, K., Tyrer, P., Schmidt, U., Davidson, K., … Catalan, J. (1998). Recovery of positive future thinking within a high-risk parasuicide group: Results from a pilot randomized controlled trial. *British Journal of Clinical Psychology, 37*, 371–379.

MacLeod, A. K., Tata, P., Tyer, P., Schmidt, U., Davidson, K., & Thompson, S. (2005). Hopelessness and positive and negative future thinking in parasuicide. *British Journal of Clinical Psychology, 44*, 495–504.

Macleod, A. K., Tata, P., Tyrer, P., Schmidt, U., Davidson, K., & Thompson, S. (2004). Personality disorder and future-directed thinking in parasuicide. *Journal of Personality Disorders, 18*, 459–466.

Maslow, A. (1999). *Toward a psychology of being*. Mississauga, ON: Wiley.

Matsubayashi, T., & Ueda, M. (2011). The effect of national suicide prevention programs on suicide rates in 21 OECD nations. *Social Science & Medicine, 73*, 1395–1400.

Miranda, R., & Mennin, D. S. (2007). Depression, generalized anxiety disorder, and certainty in pessimistic predictions about the future. *Cognitive Therapy and Research, 31*, 71–82.

Mitchell, S. M., Cukcrowicz, K. C., Van Allen, J., & Seegan, P. L. (2015). Moderating role of trait hope in the relation between painful provocative events and acquired capability for suicide. *Crisis: The Journal of Crisis Intervention and Suicide Prevention, 36*, 249–256.

Morrill, E. F., Brewer, N. T., O'Neill, S. C., Lillie, S. E., Dees, E. C., Carey, L. A., & Rimer, B. K. (2008). The interaction of post-traumatic growth and post-traumatic stress symptoms in predicting depressive symptoms and quality of life. *Psycho-Oncology, 17*, 948–953.

Nezu, A. M., Nezu, C. M., & Perri, M. G. (1990). Psychotherapy for adults with a problem-solving framework: Focus on depression. *Journal of Cognitive Psychotherapy, 4*, 247–256.

Nock, M. K., & Prinstein, M. J. (2004). A functional approach the assessment of self-mutilative behavior. *Journal of Consulting and Clinical Psychology, 72*, 885–890.

O'Connor, R. C. (2003). Suicidal behavior as a cry of pain: Test of a psychological model. *Archives of Suicide Research, 7*, 297–308.

O'Connor, R. C., Armitage, C. J., & Gray, L. (2006). The role of clinical and social cognitive variables in parasuicide. *British Journal of Clinical Psychology, 45*, 465–481.

O'Connor, R. C., & Cassidy, C. (2007). Predicting hopelessness: The interaction between optimism/pessimism and specific future expectancies. *Cognition and Emotion, 21*, 596–613.

O'Connor, R. C., Whyte, M., Fraser, L., Masterton, G., Miles, J., & MacHale, S. (2007). Predicting short-term outcome in well-being following suicidal behavior: The conjoint effects of social perfectionism and positive future thinking. *Behaviour Research and Therapy, 45*, 1543–1555.

Oettingen, G. (2012). Future thought and behaviour change. *European Review of Social Psychology, 23*, 1–63.

Pollock, L. R., & Williams, J. M. G. (2001). Effective problem solving in suicide attempters depends on specific autobiographical recall. *Suicide & Life-Threatening Behavior, 31*(4), 386–396.

Reading, A. (2004). *Hope and despair: How perceptions of the future shape human behavior*. Baltimore, MD: Johns Hopkins University Press.

Roozen, H. G., Boulogne, J. J., van Tulder, M. W., van den Brink, W., De Jong, C. A., & Kerkhof, A. J. (2004). A systematic review of the effectiveness of the community reinforcement approach in alcohol, cocaine and opioid addiction. *Drug and Alcohol Dependency, 74*(1), 1–13.

Rudd, M. D., Bryan, C. J., Wertenberer, E. G., Peterson, A. L., Young-McCaughan, S., Mintz, J., … Bruce, T. O. (2015). Brief cognitive-behavioral therapy effects on post treatment suicide attempts in a military sample: Results of a randomized clinical trial with 2-year follow-up. *The American Journal of Psychiatry, 172*, 441–449.

Rudd, M. D., Joiner, T., & Rajab, M. H. (2001). *Treating suicidal behavior: An effective, time- limited approach*. New York, NY: Guilford.

Salamone, J. D., Correa, M., Farrar, A. M., Nunes, E. J., & Pardo, M. (2009). Dopamine, behavioral economics, and effort. *Frontiers in Behavioral Neuroscience, 3*, 13.

Schlagenhauf, F., Juckel, G., Koslowski, M., Kahnt, T., Knutson, B., Dembler, T., … Heinz, A. (2008). Reward system activation in schizophrenic patients switched from typical neuroleptics to olazapine. *Psychopharmacology, 196*, 673–684.

Schlagenhauf, F., Sterzer, P., Schmack, K., Ballmaier, M., Rapp, M., Wrase, J., … Heinz, A. (2009). Reward feedback alterations in unmedicated schizophrenia patients: Relevance for delusions. *Biological Psychiatry, 65*, 1032–1039.

Schmuck, P., & Sheldon, K. M. (2001). *Life goals and well-being: Towards a positive psychology of human striving*. Ashland, OH: Hogrefe & Huber Publishers.

Seligman, M. (1975). *Helplessness: On depression, development, and death*. San Francisco, CA: W. H. Freeman.

Snyder, C. R. (1994). *The psychology of hope*. New York, NY: Free Press.

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*, 249–275.

Snyder, C. R., Cheavens, J., & Sympson, S. C. (1997). Hope: An individual motive for social commerce. *Group Dynamics: Theory, Research, and Practice, 1*, 107–118.

Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., … Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*, 570–585.

Snyder, C. R., Rand, K. L., & Sigmon, D. R. (2018). Hope theory: A member of the positive psychology family. In M. W. Gallagher & S. J. Lopez (Eds.), *The Oxford handbook of hope* (pp. 27–43). New York, NY: Oxford University Press.

Snyder, C. R., Sympson, S. C., Ybasco, F. C., Borders, T. F., Babyak, M. A., & Higgins, R. L. (1996). Development and validation of the State Hope Scale. *Journal of Personality and Social Psychology, 70*, 321–335.

Staudinger, M. R., Erk, S., Abler, B., & Walter, H. (2009). Cognitive reappraisal modulates expected value and prediction error encoding in the ventral striatum. *NeuroImage, 47*, 713–721.

Stöber, J. (2000). Prospective cognitions in anxiety and depression replication and methodological extension. *Cognition and Emotion, 14*, 725–729.

Stoy, M., Schlagenhauf, F., Sterzer, P., Bermpohl, F., Hägele, C., Schotzki, K., & Ströhle, A. (2012). Hyporeactivity of ventral striatum towards incentive stimuli in unmedicated depressed patients normalizes after treatment with escitalopram. *Journal of Psychopharmacology, 26*, 677–688.

Ströhle, A., Stoy, M., Wrase, J., Schwarzer, S., Schlagenhauf, F., Huss, M., … Juckel, G. (2008). Reward anticipation and outcomes in adult males with attention- deficit/hyperactivity disorder. *NeuroImage, 39*, 966–972.

Sun, S., Vancouver, J. B., & Weinhardt, J. M. (2014). Goal choices and planning: Distinct expectancy and value effects in two goal processes. *Organizational Behavior and Human Decision Processes, 125*, 220–233.

Thornton, L. M., Cheavens, J. S., Heitzmann, C. A., Dorfman, C. S., Wu, S. M., & Andersen, B. L. (2014). Test of mindfulness and hope components in a psychological intervention for women with cancer recurrence. *Journal of Consulting and Clinical Psychology, 82*, 1087–1100.

Todd, R. M., Cunningham, W. A., Anderson, A. K., & Thompson, E. (2012). Affect-biased attention as emotion regulation. *Trends in Cognitive Sciences, 16*, 365–372.

Townsend, E., Hawton, K., Altman, D. G., Arensman, E., Gunnell, D., Hazell, P., … van Heeringen, K. (2001). The efficacy of problem-solving treatments after deliberate self-harm: Meta-analysis of randomized controlled trials with respect to depression, hopelessness and improvement in problems. *Psychological Medicine, 31*, 979–988.

Treadway, M. T., Bossaller, N. A., Shelton, R. C., & Zald, D. H. (2012). Effort-based decision-making in major depressive disorder: A translational model of motivational anhedonia. *Journal of Abnormal Psychology, 121*, 553.

Treadway, M. T., & Zald, D. H. (2011). Reconsidering anhedonia in depression: Lessons from translational neuroscience. *Neuroscience & Biobehavioral Reviews, 35*, 537–555.

Verheul, R., Van den Bosch, L. M. C., Koeter, M. W. J., De Ridder, M. A. J., Stijnen, T., & Van den Brink, W. (2001). Dialectical behavior therapy for women with borderline personality disorder: 12-month, randomized clinical trial in The Netherlands. *The British Journal of Psychiatry, 182*, 135–140.

Vilhauer, J. S., Cortes, J., Moali, N., Chung, S., Mirocha, J., & Ishak, W. W. (2013). Improving quality of life for patients with major depressive disorder by increasing hope and positive expectations with future directed therapy (FDT). *Innovations in Clinical Neuroscience, 10*, 12.

Vilhauer, J. S., Young, S., Kealoha, C., Borrmann, J., IsHak, W. W., Rapaport, M. H., … Mirocha, J. (2012). Treating major depression by creating positive expectations for the future: A pilot study for the effectiveness of future-directed therapy (FDT) on symptom severity and quality of life. *CNS Neuroscience & Therapeutics, 18*, 102–109.

Vinas, F., Canals, J., Gras, E., Ros, C., & Domenech-Llaberia, E. (2002). Psychological and family factors associated with suicidal ideation in pre-adolescents. *Spanish Journal of Psychology, 5*, 20–28.

Wetzel, R. D., Margulies, T., Davis, R., & Karam, E. (1980). Hopelessness, depression, and suicide intent. *The Journal of Clinical Psychiatry, 41*, 159–160.

Williams, J. (2001). *Suicide and attempted suicide*. London: UK: Penguin.

Williams, J. M. G., Barnhofer, T., Crane, C., & Beck, A. T. (2005). Problem solving deteriorates following mood challenge in formerly depressed patients with a history of suicide ideation. *Journal of Abnormal Psychology, 114*(3), 421–431.

Williams, J. M. G., Crane, C., Barnhofer, T., Van der Does, A. J. W., & Segal, Z. V. (2006). Recurrence of suicidal ideation across depressive episodes. *Journal of Affective Disorders, 92*, 189–194.

World Health Organization (WHO). (2014). *Preventing suicide: A global imperative*. Geneva: WHO.

Wrase, J., Schlagenhauf, F., Kienast, T., Wüstenberg, T., Bermpohl, F., Kahnt, T., … Heinz, A. (2007). Dysfunction of reward processing correlates with alcohol craving in detoxified alcoholics. *NeuroImage, 35*, 787–794.

Young, M. A., Fogg, L. F., Scheftner, W., Fawcett, J., Akiskai, H., & Maser, J. (1996). Stable trait components of hopelessness: Baseline and sensitivity to depression. *Journal of Abnormal Psychology, 105*, 155–165.

Chapter 10
Meaning-Centered Men's Groups (MCMG) for the Transition to Retirement

Marnin J. Heisel and The Meaning-Centered Men's Group Project Team

Introduction

The older adult population is growing rapidly in North America and much of the Western world, consistent with the aging of the vast baby-boom cohort (Cohen, 2003; United Nations, 2015; United States Census Bureau, 2003). Over 20% of North Americans are expected to reach or exceed their 65th year by 2030, and more than 90 million Americans will reach older adulthood by 2060 (Ortman, Velkoff, & Hogan, 2014; Statistics Canada, 2010). Life expectancy is increasing in an unprecedented fashion and the average age of the population is rising. Although many older adults enjoy good health and emotional well-being, many do not, necessitating efforts to promote mental health and prevent negative outcomes, including suicide.

The Meaning-Centered Men's Group Project Team also includes: *Co-Investigators*: Ross M. G. Norman, Ph.D., C.Psych. (UWO), Paul S. Links, M.D., FRCP(C) (UWO; McMaster University), Sharon L. Moore, Ph.D., R.N., R.Psych. (Athabasca University), Gordon L. Flett, Ph.D. (York University), Sisira Sarma, Ph.D. (UWO), Norm O'Rourke, Ph.D., R.Psych. (Ben-Gurion University), and Rahel Eynan, Ph.D. (UWO); *Collaborators*: Kim Wilson, M.S.W., Ph.D. (University of Guelph), and Paul Fairlie, Ph.D. (York University); *Community Partners*: Third Age Outreach-St. Joseph's Health Care, London (Beverly Farrell, R/TRO), Kiwanis and Hamilton Road Seniors and Community Centre City of London, and the Canadian Coalition for Seniors' Mental Health (David Conn, M.D., FRCP(C)), and the Centre for Suicide Prevention (Mara Grunau, M.A.; Robert Olson, B.A., M.L.I.S.).

M. J. Heisel (✉) · The Meaning-Centered Men's Group Project Team
Department of Psychiatry, The University of Western Ontario, London Health Sciences Centre-Victoria Hospital, London, ON, Canada
e-mail: Marnin.Heisel@lhsc.on.ca

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*,
Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_10

Suicide and Its Prevention in Later Life

Older adults have high rates of morbidity and mortality, including by suicide, and consume a large proportion of healthcare services (Canadian Institute for Health Information, 2011). The estimated cost of healthcare services increases with declining health, especially among older men (Lubitz, Cai, Kramarow, & Lentzner, 2003). Suicidal older men typically engage in use of firearms and other violent means of self-injury, demonstrate a high intent to die, and are more likely than younger adults to succumb to their injuries (Heisel & Duberstein, 2016). North American men have higher rates of suicide than do women across the lifespan; this discrepancy is greatest in later life (see Fig. 10.1). Men over the age of 55 account for more than one-quarter of the over 45,000 North Americans who die by suicide annually, or roughly 80% of the nearly 16,000 individuals over 55 who do so (Statistics Canada, 2014; WISQARS database; Centers for Disease Control and Prevention (CDC), 2017). The estimated cost of suicide, in lost productivity and healthcare expenditures for those left behind, approaches one million dollars per life lost (Clayton & Barceló, 1999). The cost of suicide, in terms of loss of life and in pain and suffering for those left behind (see Mitchell, Kim, Prigerson, & Mortimer, 2005), is incalculable. Initiatives are thus needed to promote mental health and well-being and reduce despair and risk for suicide among vulnerable older adults.

Suicidology, the discipline devoted to the study and prevention of suicide, is relatively young; newer still are programmatic efforts that study and seek to prevent suicide among older adults. The suicide prevention literature includes few intervention studies targeting suicidal older adults (Heisel & Duberstein, 2016) and fewer still focused on older men (Lapierre et al., 2011). With the exception of our trial of Interpersonal Psychotherapy (IPT) for older adults at risk for suicide (Heisel,

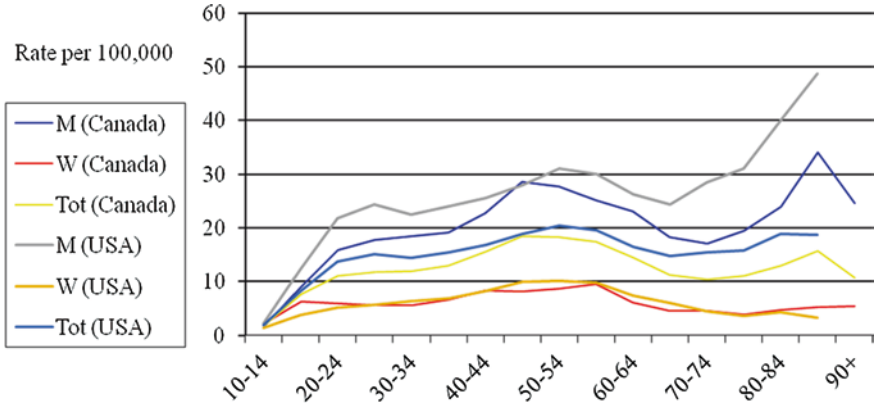

Fig. 10.1 2013 Suicide Rates for Canada and the United States. *Note*: Canadian suicide rates are available up to age 90+; US suicide rates are available to 85+. 2013 suicide rates are shown as this is the most recent year for which both Canadian and American data are publically available. *M* men; *W* women; *Tot* total (i.e., both men and women)

Duberstein, Talbot, King, & Tu, 2009; Heisel, Talbot, King, Tu, & Duberstein, 2015), these studies have largely involved depression care delivered in non-mental health settings, including collaborative mental health trials in primary care medical settings (Alexopoulos et al., 2009; Bartels et al., 2004; Unützer et al., 2006) and supportive initiatives such as telephone distress services (DeLeo, Dello Buono, & Dwyer, 2002) and community-based depression screenings and counseling (Oyama et al., 2005, 2008). Although their findings have shown promise in reducing suicide ideation or behavior, the effectiveness of these studies has been limited largely to older women (Duberstein, Heisel, & Conwell, 2011; Heisel, 2016), partly due to a reluctance of older men to seek mental healthcare and participate in intervention trials.

Suicide Prevention in Men Facing Retirement

There is a pressing need for suicide prevention initiatives targeting middle-aged and older men, given their elevated risk for suicide, and a near-absence of efficacious interventions (Suicide Prevention Resource Center [SPRC], 2016). Canetto coined the term "gender paradox of suicide" noting that men more frequently die by suicide although women more frequently engage in suicidal behavior (Canetto & Lester, 1998). Among the factors believed to confer excess risk for suicide in older men is a stereotypic pattern of reluctance to seek healthcare, especially when feeling vulnerable or depressed (Crabb & Hunsley, 2006), and socially mediated expectancies of men as independent, autonomous, and in-control (Levant & Richmond, 2008). Möller-Leimkühler (2003) suggested that men who face challenges such as loss of work and unemployment tend to assume personal responsibility for what may be societal challenges (e.g., economic downturns and ageist employment practices), and perceive themselves as failures. They may, thus, be more likely to employ poor coping strategies, restrict their emotional expression, and engage in alcohol and substance misuse, risk-taking, violence, and suicidal behavior. These theories suggest a need to focus on improving men's abilities to cope with losses and challenging life transitions, to seek help for emotional and health-related difficulties, and to engage in and nurture supportive interpersonal relationships.

Retirement is a life transition that may be especially daunting for men who have invested considerable time and energy in, and derive a sense of identity from, their work and careers; it can involve a perceived loss of self that is difficult to recapture or replenish. Men generally have greater difficulty than women in cultivating interests and relationships outside of work, thereby increasing their vulnerability to the psychosocial ramifications of retirement, and potentially conferring risk for marital conflict, loneliness, depression, and substance misuse (Perreira & Sloan, 2002; Weingarten, 1988). North American men's suicide rates initially peak in mid-life, decline from their mid-50s through mid-60s, and then increase dramatically from retirement age throughout their later years (see Fig. 10.1; CDC, 2017; Statistics Canada, 2014). Retirement may, thus, be viewed as both a key life transition that can trigger increasing suicide risk in men, and a critical period for effective intervention.

Whereas many men eagerly look forward to retirement and enjoy considerable health, leisure, and life satisfaction in their post-employment years, retirement can unearth or exacerbate health and mental health problems (Butterworth et al., 2006; Gill et al., 2006; Karpansalo et al., 2005; Pinquart & Schindler, 2007; Westerlund et al., 2009). Retirement can lead to declining finances and decreases in purposeful activity, daily routines, and social interaction. For those individuals who define themselves primarily by their work roles or successes, retirement may engender a reduced sense of personal worth, especially if it is involuntary or if they have not planned realistically for meaningful post-retirement pursuits, social relations, or long-term financial needs (Nordenmark & Stattin, 2009; Schellenberg & Silver, 2004). Retirement can have a negative impact on one's identity, especially when considered in the contexts of developmental changes associated with aging and with family, societal, and cultural roles, and role expectations (Canetto, 2017; Sorensen & Cooper, 2010). Associations among work, life, family relations, and psychological well-being are complex. Interpersonal dynamics with spouses, partners, and other close family members can impact men's satisfaction with retirement. Some men find that the family relationships they had put on hold while pursuing a career are not easily re-engaged following retirement. Those who sacrificed time with family to focus on "being the breadwinner" may find their close loved ones resentful, believing that they preferred working to spending time with them. "Workaholism" has been shown to contribute to work-family conflict and negatively impact marital satisfaction (Bakker, Demerouti, & Burke, 2009). Men with high levels of family stress or with strained marriages prior to retirement may paradoxically find that retirement has less of a negative impact on their marital satisfaction and can be beneficial to their emotional well-being (Coursolle, Sweeney, Raymo, & Ho, 2010; Kim & Moen, 2002).

Early retirement, particularly through layoffs, unemployment, or employer pressure, can foment feelings of despondency, demoralization, worthlessness, hopelessness, and anger at being discarded by an employer to whom one has dedicated one's adult life, and can contribute to depression and suicide ideation (Brand, Levy, & Gallo, 2008; Yen et al., 2005). Despite clear evidence of post-retirement morbidity and mortality, including by suicide, and the potential benefit in preventive interventions for vulnerable men facing retirement (Bamia, Trichopoulou, & Trichopoulos, 2008; Brockman, Müller, & Helmert, 2009; Qin, Agerbo, & Mortensen, 2003; Schneider et al., 2011), the intervention literature is nearly silent on this issue.

The relative paucity of interventions for at-risk older adults in general, and for retired men in particular, poses a substantial challenge to existing healthcare resources. Effective, feasible, and sustainable options are needed to overcome inefficiencies in mental health systems, a dearth of provider expertise in suicide prevention, and a paucity of outreach initiatives and proven interventions to reduce suicide risk (Heisel & Duberstein, 2005, 2016). Interventions are needed that overcome the reluctance of some men to seek care, that are consistent with their values and goals, and that are informed by an understanding of suicide risk and resiliency (SPRC, 2016). It is with these considerations in mind that we developed MCMG (Meaning-Centered Men's Groups), a 12-session, community-based group intervention

designed to promote the mental health and well-being of men transitioning to retirement. This work was made possible largely through funding provided by the Movember Mental Health fund. This fund recognizes the need for resources and interventions to promote men's mental health, enhance resiliency, and reduce the risk of mental health problems and suicide.

Psychological Resiliency to Suicide: A Conceptual Framework

Although individuals at imminent risk for suicide require aggressive life-saving interventions, researchers have increasingly shifted their focus from clinical-level interventions for individuals at imminent risk to public-health interventions for populations at less immediate risk (Erlangsen et al., 2011; Knox, Conwell, & Caine, 2004). This trend is consistent with "Rose's Theorem," which posits that "a large number of people at a small risk may give rise to more cases of disease than the small number who are at a high risk" (Rose, 2001, p. 431).

Recently, we outlined a conceptual framework of older adult suicide prevention that incorporates consideration of predisposing risk and resiliency factors, which respectively increase or decrease the likelihood of the onset of suicide ideation or behavior, independently or together with intervening precipitating events (Heisel & Flett, 2016a; see Fig. 10.2). Consistent with this framework, older men who focused on their careers to the exclusion of cultivating meaningful relationships, interests, and pursuits (Risk), may find retirement-related changes in daily routine, activities, social interactions, and sense of identity overwhelming (Precipitant), and become depressed or contemplate suicide. Conversely, those who balanced career with family or community involvement, interests, and pursuits (Resiliency) may anticipate retirement as a time in which to pursue interests and pastimes, relationships, and meaningful activities.

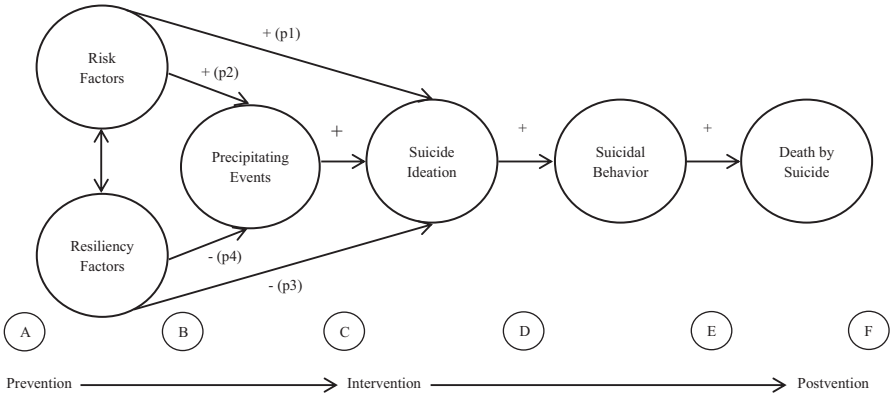

Fig. 10.2 Our Conceptual Framework of Late-Life Suicide Prevention

Our conceptual framework takes into consideration concepts of Prevention, Intervention, and Postvention prevalent in the field of Suicidology, represented in Fig. 10.2 as circled letters from A to F, reflecting potential points along the trajectory towards death by suicide at which action can be taken to reduce suicide risk. These range from a point prior to the onset of risk factors ("A") to a point following death by suicide ("F") and include everything in between. This framework also takes into consideration the role of Universal, Selective, and Indicated levels of intervention prevalent in public health (Erlangsen et al., 2011). Our trial of individual IPT for adults over 60 with current suicide ideation or recent suicide behavior (Heisel et al., 2009, 2015) thus corresponds to a D-E stage initiative, reflecting a clinical "indicated intervention." MCMG for men facing retirement comprises a B-C stage initiative, reflecting a "selective prevention" initiative, and is predicated on the thesis that intervening to help men find meaning in and beyond the transition to retirement may enhance psychological resiliency and ultimately reduce risk for suicide.

Meaning in Life and Suicide Prevention

The Viennese psychiatrist Viktor Frankl (1905–1997) theorized that the pursuit of Meaning in Life (MIL), an existential-psychological variable conceptualized as profound significance, purpose, or coherence, is central to human motivation, and that psychopathology and risk for suicide result partly from a lack of perception of meaning in life situations, and a consequent experience of emptiness, which he termed the "existential vacuum." The existential vacuum serves as a warning sign that something is amiss in one's life and ideally promotes meaningful self-examination; ignoring it can lead to frantic efforts to fill the void with risk-taking and other negative health behavior, potentially leading to psychological despair, depression, and suicidality. He advised cultivating multiple sources of MIL to prevent despair associated with loss of a single source of meaning, including *Creative* pursuits, meaningful *Experiences*, healthy *Attitudes* towards challenges and success, and *Ultimate* questions of one's greater purpose in life (Frankl, 1988). Similar to a keystone in an archway, which, when pulled leads to the arch crumbling, individuals who focus on a single source of meaning may experience despair, should that key source of meaning be threatened. Conversely, individuals with multiple sources of meaning have numerous avenues by which they can continue to maintain their psychological well-being, even in the face of adversity.

Frankl is best known for his classic text "Man's Search for Meaning" (Frankl, 1985), in which he described his survival of Auschwitz and other concentration camps during the second world war, and the role of MIL in helping him and others maintain their grasp on life in the face of atrocity. Yet Frankl's previous experiences, running a counseling center for unemployed youth struggling financially in post-World War I Vienna, are also pertinent to the question of finding meaning in adversity (Frankl, 1997). He noted that helping youth find unpaid volunteer activi-

ties enhanced their feelings of usefulness and engendered recognition of MIL despite the negligible impact it had on their finances. Analogously, we reasoned that encouraging men facing retirement to seek and respond to meaningful opportunities in their activities, relationships, attitudes, and beliefs may enhance their well-being and reduce risk for despair and suicide ideation.

A growing body of research has evidenced significant positive associations between MIL (or purpose in life, a closely associated construct) and adaptive health-related variables including reasons for living, psychological well-being, self-transcendence, resiliency, optimism, self-esteem, pain management, social support, and longevity, and negative associations between MIL and stress, anxiety, substance misuse, depression, hopelessness, and suicide ideation (Boyle, Barnes, Buchman, & Bennett, 2009; Braam, Bramsen, van Tilburg, van der Ploeg, & Deeg, 2006; Garcia Pintos, 1988; Heisel, 2009; Heisel & Flett, 2008, 2016a; Heisel, Neufeld, & Flett, 2016; Kim, Kawachi, Chen, & Kubzansky, 2017; Krause, 2003, 2007, 2009; Krause & Shaw, 2003; O'Connor & Vallerand, 1998; Reker, 1997; Zika & Chamberlain, 1992). Our research has shown that MIL is associated positively with self-rated health, life satisfaction, psychological well-being, and reasons for living, and associated negatively with poor perceived social support, depression, hopelessness, and suicide ideation in middle-aged and older adults across community, residential, and clinical settings (Heisel, 2009; Heisel & Flett, 2004, 2008). MIL also moderated the impact of depressive symptoms on suicide ideation, and was most protective at higher levels of depression, supporting the contention that meaning-recognition promotes adaptive coping in the face of adversity (Heisel & Flett, 2007, 2014; see also Shrira, Palgi, Ben-Ezra, & Shmotkin, 2011). Longitudinal findings provided further support for our conceptual framework; we found that baseline MIL conferred resiliency to the onset or exacerbation of suicide ideation in community-residing older adults over 1–2 years of follow-up, even when controlling for depressive symptoms and intervening daily hassles (Heisel & Flett, 2016a). These findings together suggest that MIL may play a critical role in promoting psychological well-being and preventing the advent or worsening of despair and suicide risk in later life.

Meaning-Centered Interventions

Existential interventions have relevance for older adults facing retirement and other life transitions, due in part to the increasing tendency for self-reflection, increasing capacity for spirituality, and greater potential perception of MIL with age (Guttmann, 2008; Hicks, Trent, Davis, & King, 2012; Kimble, 2000; Lukas, 1986; Neugarten, 1996). MCMG is theoretically consonant with Logotherapy, Frankl's meaning-centered psychotherapy (Frankl, 1971, 1985, 1988), an approach ideally suited to enhancing psychological resiliency in the context of life's transitions. Research findings have supported the thesis that meaning-centered interventions can help promote psychological well-being, build hope among retirees, enhance MIL, and

decrease the wish to die among individuals with advanced cancer. Breitbart and colleagues (2015) reported that their Meaning-Centered Group Psychotherapy significantly enhanced MIL and reduced the wish to hasten death in terminally ill older adults and proved more efficacious than did supportive group therapy. Although not explicitly grounded in existential theory, two quasi-experimental intervention studies, of integrated reminiscence and narrative therapies for depressed older adults (Bohlmeijer, Westerhof, & Emmerik-de Jong, 2008) and a cognitive-behavioral group designed to train early retirees to set, plan, and pursue meaningful goals (Lapierre, Dubé, Bouffard, & Alain, 2007), showed post-treatment increases in psychological well-being. Participants in our focused trial of IPT, which we adapted for older adults at risk for suicide partly by incorporating meaning-focused discourse, experienced significant reductions in suicide ideation and depressive symptoms and improvement in MIL and psychological well-being (Heisel et al., 2009, 2015). These findings collectively suggest that existentially grounded and developmentally relevant psychological interventions can enhance well-being and decrease psychopathology in later life. Encouraging men facing retirement to seek and enhance MIL in their activities, relationships, attitudes, and beliefs may thus help promote psychological resiliency and well-being, and reduce risk for depression, hopelessness, and suicide ideation.

The overall purpose of this study was to iteratively develop and initially evaluate MCMG for men concerned about or struggling with the transition to retirement. Consistent with a hybrid effectiveness-implementation design (Curran, Bauer, Mittman, Pyne, & Stetler, 2012), this study involves fairly broad inclusion criteria, close monitoring and assessment of study processes and outcomes, and consideration of the real-world applicability and sustainability of MCMG.

Methods

Participants

The inclusion and exclusion criteria for our study were developed to enable men who were struggling with the transition to retirement to participate in MCMG and to exclude those with psychological symptoms better served by intervention in a clinical setting. Eligible participants included community-residing men over the age of 55 who were planning to retire within the next 2 years, were currently in the process of transitioning to retirement, or who had retired in the past 5 years, to ensure the salience of this life transition. We lowered the initial age of inclusion from 60 years, having been approached by men in their mid-50s who had accepted a retirement package, been downsized, or were otherwise no longer working. We intended initially to restrict participation to men who were planning to retire in the coming year or had retired in the past year to ensure the salience of retirement concerns but learned that a broader window of time was more relevant to the experiences and needs of community-residing men transitioning to retirement. Eligible

participants had to be cognitively intact (scoring ≥14/16 on the brief version of the Mini-Mental State Examination second Edition or MMSE-2BV; Folstein, Folstein, White, & Messer, 2010), capable of speaking and understanding English and providing informed consent and must have either expressed concern or worry about retirement, reported struggling to find meaning in this life transition, or believed that they could get more out of life in retirement.

Individuals who were currently receiving psychotherapy for issues related to retirement were excluded to avoid potentially confounding intervention effects. Despite the ultimate aim of this study to reduce risk for suicide, we also excluded individuals who screened positive for severe suicide ideation (e.g., scoring ≥10 on the Geriatric Suicide Ideation Scale-Screen or GSIS-Screen; Heisel & Flett, 2006, 2016b) or for an active untreated major mental disorder (Axis I disorder [SCID-I]; First, Spitzer, Gibbon, & Williams, 1997). This was done as MCMG was not designed as a treatment for individuals currently at risk for suicide or with active psychopathology but, rather, to be an upstream or preventive psychological intervention promoting of psychological resiliency and well-being and preventive of the onset or worsening of suicide ideation. Participants were thus provided with a list of mental health resources and referred for care if struggling with emotional difficulties. Those endorsing severe suicide ideation would be provided immediate psychological support, and those judged by the P.I. to be at imminent risk for suicide would be accompanied to the local hospital Emergency Department. The study protocol received research ethics approval from the University of Western Ontario Health Sciences Research Ethics Board.

Procedures

The overall study was designed to iteratively develop and refine MCMG for community-residing men facing the transition to retirement, across four project stages. *Stage 1* involves delivery of two courses of MCMG: (1a) an initial group to assess the feasibility of recruiting and retaining 10–12 men into a community-based psychosocial group and to evaluate the tolerability and acceptability of MCMG; and (1b) a second course of MCMG revised based on participant feedback to initially evaluate pre- to post-intervention changes in outcomes. *Stage 2* comprises a non-randomized controlled intervention study to assess change in outcomes for participants in MCMG as compared with a weekly Current-Events Discussion Group (CEDG). Participants are given choice of intervention; those who opt to participate in CEDG can take part in a future course of MCMG. Individuals who do not get their choice of group can opt to join a wait-list pending the start of the next round of group sessions. *Stage 3* involves dissemination of MCMG to distant sites. *Stage 4* involves assessment of the cost-effectiveness of delivering MCMG in community settings to men transitioning to retirement. This chapter focuses on assessing the initial feasibility, tolerability, and acceptability of MCMG; future articles will focus on assessing the effectiveness of this novel intervention, both over time and compared to controls.

Recruitment

Creative outreach approaches are needed to engage vulnerable men in interventions that are empowering, respectful, and delivered in a format that they find acceptable and consistent with their values and ideals. Having anticipated recruitment challenges, consistent with a stereotypic reluctance among some men to seek psychological interventions and social support and to engage in emotional expression (Cramer et al., 2014; Harding & Fox, 2015; Wilson, Cordier, & Wilson Whatley, 2013), we developed a multi-component recruitment strategy together with our community partners. Participants were not recruited from mental health systems in keeping with the upstream focus of this intervention. Flyers were posted in locations commonly frequented by men facing retirement, including stores, restaurants, and other businesses, professional offices, clubs, gyms, and sports arenas. An electronic version of the study flyer was posted on community newspaper websites and on sites advertising goods, services, and community events. Flyers were also distributed by our community partners and through local aging networks. We granted media interviews focusing on men's mental health, reached out to retiree interest and education groups, and routinely attended local health, recreation, and information fairs, and automotive shows.

We convened a "Men's Retirement and Leisure Fair" at a popular public market on a Sunday, targeting men facing retirement and their family members and social supports. The planning committee for this community event included members of our research team, community collaborators, and media representatives. This event was designed to provide a venue in which to learn about community resources supporting men's health and leisure in retirement and about the present study. A well-known community member served as Master of Ceremonies, and a keynote presentation featured a former professional hockey player and coach who described both career highlights and emotional and physical health challenges he experienced following the end of his professional sports career. Additional activities included a panel discussion in which men prominent in the local community discussed their challenges and experiences transitioning to retirement, and brief presentations by men's health researchers and by facilitators of other local men's groups. Brief workshops were offered on golf, cooking, and financial planning, and local retirement and leisure groups staffed over 20 tables that were arranged in trade-show format. The event was widely publicized, featured free refreshments and door prizes, and attracted over 300 community members. Those in attendance provided positive feedback on the event.

Assessments

Individuals who expressed an interest in this study were provided with an explanation of its rationale, focus, and aims and invited to participate in an in-person *eligibility assessment*. Participants were informed that the eligibility assessment was designed to assess whether the study was appropriate for them, rather than whether

the participant was appropriate for the study, recognizing that men facing the transition to retirement may be sensitive to the experience of social exclusion or mistakenly believe that the interview assessed their personal competence. After providing voluntary informed consent, participants were administered a demographics questionnaire and screens for cognitive and physical functioning, presence of an active mental disorder, misuse of alcohol and/or drugs, Post-Traumatic Stress Disorder, and suicide ideation, suicide plans, and history of suicidal behavior. They were also asked to complete a self-report measure assessing MIL. Those meeting eligibility criteria were invited to participate in the study.

Participants were next scheduled to take part in a *pre-group assessment*, 1–2 weeks prior to the initial MCMG session, for preliminary assessment of study outcome variables and covariates. Group participants were later asked to return to complete these measures again for a *mid-group assessment* that took place between the sixth and seventh group sessions, a *post-group assessment* that took place following the final group session, and follow-up assessments that took place *3-* and *6-months* after completing a course of MCMG. In addition to completing the outcome measures, they were administered group process measures, assessing the strength of the working alliance and satisfaction with group at the mid- and post-group assessments, and asked to complete a semi-structured qualitative "exit interview" at the post-group assessment. Consistent with the intent-to-treat principle, individuals who discontinued participation prior to the end of group ($n = 3$, overall) were invited back to complete the remaining study interviews.

Each assessment session lasted between 60 and 120 min in duration, with breaks and multiple sittings offered as needed. Research personnel were trained to check-in with the participants to ensure that they were not feeling overly upset or overwhelmed by the interview and to suggest breaks. Study assessments typically took place in an office building, rather than in a clinical setting, to avoid pathologizing retirement, and to enhance participant comfort. Participants attended the study assessment sessions individually, coordinated by one or more research personnel. The P.I., who served as lead facilitator in the MCMG groups, participated in the eligibility and pre-group assessment sessions to begin establishing rapport with group members, and to enable him to more sensitively tailor group discussions to the personal backgrounds and retirement experiences of each participant. He did not participate in the assessment of group process measures to avoid influencing participant responses.

Measures

Demographics

Participants completed a demographics form that we have used in our previous research (e.g., Heisel & Flett, 2006, 2016b), assessing their age, place of birth, current residence, marital status, number of children and grandchildren, cultural

background, ethnicity, religion, degree of religious involvement, educational history, occupational history, and presence and severity of health problems.

Cognitive Functioning

Participants completed the Mini-Mental State Examination 2nd Edition Brief Version (MMSE-2BV; Folstein et al., 2010), an abbreviated and revised version of the Mini-Mental State Examination (Folstein, Folstein, & McHugh, 1975), requiring respondents to repeat and memorize a 3-item word list and to demonstrate orientation to place and time.

Diagnostic and Clinical Variables

We assessed the presence of an active mental disorder with the Structured Clinical Interview for the DSM-IV (SCID-I; First et al., 1997). Participants initially completed screening items assessing for the presence of substance-misuse, anxiety, and eating disorders, and then completed the SCID Current Mood Disorder Module and Psychotic Screener to assess for mood, psychotic, and delusional disorders. Those screening positive for possible substance misuse on the SCID were administered follow-up measures of alcohol (the Alcohol Use Disorders Identification Test or AUDIT; Saunders, Aasland, Babor, Fuente, & Grant, 1993) or drug misuse (the Drug Abuse Screening Test or DAST; Skinner, 1982). Participants also completed the Trauma History Screen (THS; Carlson et al., 2011) and the Screen for Posttraumatic Stress Disorder (SPTSS; Carlson, 2001) to assess for the presence and severity of PTSD.

Physical Functioning

Participants were administered the 8-item Instrumental Activities of Daily Living (IADL; Lawton & Brody, 1988a) and 6-item Physical Self-Maintenance Scales (PSMS; Lawton & Brody, 1988b), assessing their ability to complete instrumental (e.g., use the phone, shop, prepare food, and handle finances) and basic activities of daily living (e.g., toileting, feeding, ambulating, and grooming).

Health-Related Quality of Life

Health-related quality of life was assessed with the EQ 5D (The EuroQol Group, 2009), a 5-item measure assessing level of difficulty with mobility, self-care, usual activities, pain or discomfort, and anxiety or depression, and a 100-point Visual Analogue Scale assessing current self-rated health (from 0 “Worst imaginable health state” to 100-“Best imaginable health state”).

Suicide Ideation

Participants were screened for presence of severe suicide ideation with the Geriatric Suicide Ideation Scale-Screen (GSIS-Screen; Heisel & Flett, 2012, 2017). The GSIS-Screen is a 5-item, five-point Likert-scored abbreviated screening tool based on the Geriatric Suicide Ideation Scale (GSIS; Heisel & Flett, 2006). The GSIS is a 31-item multidimensional measure whose component subscales assess the presence and severity of Suicide Ideation (e.g., "I want to end my life"), Death Ideation ("I often wish I would pass away in my sleep"), Loss of Personal and Social Worth ("I generally feel pretty worthless"), and Perceived Meaning in Life (e.g., "I feel that my life is meaningful") among older adults. The GSIS also includes a single item assessing history of suicide behavior ("I have tried ending my life in the past"). The GSIS has demonstrated strong internal consistency, test-retest reliability, construct, criterion, and predictive validity, and sensitivity to clinical change (see Heisel & Flett, 2016b). The GSIS-Screen was developed by selecting GSIS items that differentiated older adults with higher as compared with lower suicide ideation and those with or without a history of suicidal behavior, and aimed to retain the strong response characteristics and multidimensional focus of the full GSIS. The GSIS-Screen contains one item from each of the four GSIS subscales, and the item assessing history of suicide behavior. Scoring consists of reverse-coding the Perceived Meaning in Life item and summing all five items. Higher scores are reflective of more severe suicide ideation.

Meaning in Life (MIL)

MIL was assessed with the Experienced Meaning in Life Scale (EMIL; Heisel, 2009), a 40-item, 5-point Likert-scored measure that was developed and validated for use with older adults to assess domains Frankl identified as typical sources of meaning or values: Creative (e.g., "I enjoy participating in recreational activities"); Experiential (e.g., "The beauty of nature is uplifting to me"); Attitudinal (e.g., "I try to find meaning in life even when I am suffering or in pain"); and Ultimate MIL (e.g., "My spirituality helps me feel connected with something greater than myself"). The EMIL contains 10 items for each of these four domains of MIL; participants were also administered a 6-item short-form of the EMIL during brief evaluations at the end of each MCMG session. Secondary analyses of data for men in our scale validation study demonstrated internal consistency and 2-week test-retest reliability for EMIL totals ($\alpha = 0.92$; ICC = 0.85), subscales ($0.72 < \alpha < 0.92$; $0.71 <$ ICC < 0.91), and the abbreviated EMIL ($\alpha = 0.73$; ICC = 0.77), and significant construct validity.

Subjective Well-Being

Subjective well-being was assessed with the 5-item, 7-point Likert-scored, Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), a psychometrically valid and internally consistent measure assessing a respondent's

subjective appraisal of life satisfaction. The SWLS has previously been shown to be significantly negatively associated with later-life suicide ideation and positively associated with psychological resiliency and well-being (e.g., Heisel & Flett, 2006, 2008, 2016b). Internal consistency was strong at the pre-group assessment ($\alpha = 0.85$).

Group Process Measures

Therapeutic Alliance

The 36-item Short-Form of the Working Alliance Inventory (WAI; Horvath & Greenberg, 1989) was administered at mid- and post-group assessments to assess the strength of relationships between group members and facilitators. The WAI assesses the strength of the alliance and contains subscales assessing therapeutic Task, Goal, and Bond. Higher scores are associated with therapeutic improvement (Heisel et al., 2009, 2015; Stevens, Muran, Safran, Gorman, & Winston, 2007).

Group Satisfaction

Participants completed a 10-item Group Satisfaction Scale (GSS) at mid- and post-group assessments in order to assess their acceptance and satisfaction with MCMG. The GSS is a modified version of an internally consistent ($\alpha = 0.82$) 10-item Treatment Satisfaction Survey that we used in our IPT trial with suicidal older adults (Heisel et al., 2009, 2015), and which was based on clinical survey items developed for psychotherapy clients.

Semi-Structured Group Feedback Questions

Participants were administered end-of-session evaluation forms, to be completed on a session-by-session basis, and semi-structured study exit interviews at the post-group assessments, inquiring into their impressions of the group and suggestions for its improvement.

Intervention

MCMG is a 12-session psychological group intervention designed to elicit a sense of camaraderie among men, 55 years of age or older, who are struggling with or concerned about their transition to retirement. MCMG sessions were delivered in community settings and advertised as a “men’s group dealing with adjustment to retirement” rather than a “therapy group” to encourage older men’s participation

and to normalize concerns about this life transition. Groups were facilitated by the project P.I., a Clinical Psychologist, and co-facilitated by a community-based social service provider to enhance cost-effectiveness, replicability, generalizability, and sustainability. Group sessions focused on intrapersonal and interpersonal transitions associated with retirement in the context of discussions about the meaning of work and retirement, leisure, relationships, and generativity (see Appendix A). We chose a group format given associated cost and health benefits (Katz et al., 2002; Pinquart, Duberstein, & Lyness, 2007), and the advantages of social discourse among men facing a common life transition in enhancing camaraderie and social support (Burke, Maton, Mankowski, & Anderson, 2010; Gottlieb, 2000; Reddin & Sonn, 2003), as these may further increase MIL (Krause, 2007) and mitigate suicide risk (Purcell et al., 2012; Raue, Meyers, Rowe, Heo, & Bruce, 2007; Rowe, Conwell, Schulberg, & Bruce, 2006; Vanderhorst & McLaren, 2005). As group members attended to the problems, challenges, and experiences of fellow participants and provided them with support and assistance, they had the opportunity to transcend their own difficulties and engage more meaningfully and productively in helping others. Lukas termed this process "dereflection" and identified it as an important element in effective meaning-centered intervention (Lukas & Zwang-Hirsch, 2002). The opportunity to support others could have the additional benefit of increasing participants' feelings of mattering to others. Rosenberg and McCullough (1981) postulated that older adults may experience age-related reduction in feelings of mattering. If so, experiences that promote mattering can be vitally important as a sense of mattering may serve a protective role against suicide ideation (see Flett, 2018).

The course of weekly discussion topics began with more surface-level examples of finding meaning in work and leisure (Creative MIL), and gradually deepened into discourse regarding finding meaning in relationships (Experiential MIL), in attitudes towards life's challenges and successes (Attitudinal MIL), and in generativity, transcendence, and spirituality (Ultimate MIL; see Appendix A). In discussing negative life experiences, participants were taught the importance of finding meaning in what Frankl termed the "tragic triad," reflecting universal human experiences of pain/suffering, guilt, and death. Examples were shared of individuals who retained an appreciation for Meaning in Life and thus avoided succumbing to despair and suicidality, including Frankl's (1985) own account of surviving concentration camps. A brief presentation was given in a final session, tying together theory, research findings demonstrating that MIL can help enhance psychological well-being and protect against depression and suicidality, and the relevance of a meaning-centered approach to men facing the retirement transition. Participants remarked that this session helped to consolidate their understanding and appreciation of the rationale for the group sessions.

MCMG was delivered as a 12-session, 90-min, once weekly intervention. A typical MCMG session began with a brief reminder of the theme of the previous week's session, in order to enhance continuity, and a 5–10 min check-in, in which each member was encouraged to share experiences of the past week in order to enhance group cohesion. Group members were specifically encouraged to focus on their recent meaning-centered activities and experiences, especially those that, when

implemented successfully, helped to overcome difficulties. The focus then turned to a 5–10 min introduction of the theme of that week's session by the group facilitators, so as to provide brief theoretical and pragmatic background, and was followed by encouragement of input and discussion by the group members. This was followed by another "group go-around" opportunity, in which members could offer their thoughts and reflections on the session's theme, engage in discussion with one another, and provide mutual encouragement and support. Handouts and group exercises were used to engage group members, deepen their exploration of topics of discussion, and enhance cohesion. Groups ended with a check-in and brief evaluation of that week's session. The facilitators would typically introduce topics of discussion, provide background information linking that week's theme with Frankl's theory, and help to facilitate group discussions. They would additionally provide emotional support for group members, striving to provide meaning-centered responses that were consistent with the group's theoretical focus. Hence, if a group member indicated that his leisure time was limited by the need to provide care for a sick family member, this disclosure would typically elicit sympathy from group members. The facilitators might then follow this expression of support by discussing the concept of finding meaning in sacrifice. The lead facilitator would also check-in with group members who appeared to be struggling, or who acknowledged feeling out of place in the group. Participants were provided with the lead facilitator's office and cell-phone numbers and encouraged to contact him at any time if struggling with emotional difficulties. Participants in our previous trial of IPT for suicidal older adults had found this "lifeline" effective in helping them feel interpersonally connected and valued and helped to mitigate risk for suicide (see Heisel et al., 2009, 2015). Participants occasionally reached out to the lead facilitator with mood and/or anxiety symptoms, or for advice and assistance with personal problems, interpersonal difficulties, or on behalf of friends or loved ones who were struggling to access the mental healthcare system or were at elevated risk for suicide. Group members were encouraged to keep in touch with each other after group ended, to maintain cohesion, camaraderie, mutual support, and any gains associated with group participation.

Results

Descriptive statistics for participants in the three initial courses of MCMG are presented in Table 10.1. These findings are followed by presentation of data regarding participant acceptance of MCMG, including group attendance information (see Table 10.2); summaries of responses to weekly end-of-session evaluation forms (see Table 10.3); mid- and post-group data regarding participant satisfaction with group and working relationship with the group facilitators (see Table 10.4); and reports from the semi-structured exit interviews.

As of the start of the third course of MCMG, 88 individuals had expressed interest in the study, either in-person at a community event or by way of an e-mail or

Table 10.1 Descriptive characteristics of study participants at baseline assessment ($N = 30$)

Variable	M	SD	Range	*N*
Age	63.7	4.1	55–70	30
Number of children	2.1	1.3	0–5	30
Number of grandchildren	2.1	2.1	0–7	26
Feelings towards retirement	4.7	1.3	2–7	30
EQ5D self-rated health	81.1	8.8	60–95	30
MMSE2-BV	15.3	0.9	14–16	30
IADL	0.3	0.6	0–2	27
PSMS	0.2	0.5	0–2	30
AUDIT	4.4	2.6	1–11	26
GSIS-Screen	7.0	2.0	5–13	30
SWLS	24.6	6.8	10–34	30
EMIL	163.1	16.7	132–192	30

Variable	*N*	%
Born in Canada	26	87
English is primary language	29	97
Education		
College/trade school	11	37
University	10	33
Graduate school	8	27
Current marital status		
Single	2	7
Married/remarried[a]	23	79
Divorced/widowed/other	4	14
Currently involved in a romantic relationship	27	93
Currently lives alone	4	13
Current employment status		
Employed part- or full-time	6	20
Self-employed	4	13
Retired/semi-retired	20	67
When do you anticipate retiring (if working)?		
<24 months	4	13
>24 months	3	10
Uncertain	3	10
Sources of income		
Employment income	10	33
Pension[b]	23	77
Investments/savings	24	80
Spousal income/pension	11	37
Considers self to be religious	19	63

(continued)

Table 10.1 (continued)

Variable	*N*	%
Considers self to be spiritual	24	80
Has family doctor	29	97
Has mental health provider	4	13

EQ 5D Self-Rated Health 0–100 Visual Analogue Scale on the European Quality of Life Scale (EQ5D); *MMSE2-BV* Mini-Mental State Examination 2nd Edition Brief Version; *IADL* Instrumental Activities of Daily Living Scale; *PSMS* Physical Self-Maintenance Scale; *AUDIT* Alcohol Use Disorders Identification Test; *GSIS-Screen* Geriatric Suicide Ideation Scale-Screen; *SWLS* Satisfaction with Life Scale; *EMIL* Experienced Meaning in Life Scale

[a]Nine participants reported having been previously married

[b]17 participants reported receiving a pension from the Federal and/or Provincial government(s), 12 did not state the source of their pension(s)

Table 10.2 Participant attendance of MCMG group sessions

	Group 1			Group 2			Group 3			Overall	
Week	#	*n*	%	#	*n*	%	#	*n*	%	M	%
1	10	10	100.0	8	10	80.0	10	10	100.0	28/30	93.3
2	8	10	80.0	6	10	60.0	8	10	80.0	22/30	73.3
3	7	10	70.0	8	10	80.0	10	10	100.0	25/30	83.3
4	10	10	100.0	7	10	70.0	6	10	60.0	23/30	76.7
5	8	10	80.0	8	9	88.9	9	10	90.0	25/29	86.2
6	8	10	80.0	8	8	100.0	7	10	70.0	23/28	82.1
7	6	10	60.0	6	8	75.0	8	10	80.0	20/28	71.4
8	10	10	100.0	7	8	87.5	9	10	90.0	26/28	92.9
9	8	10	80.0	5	8	62.5	6	9	66.7	19/27	70.4
10	9	10	90.0	4	8	50.0	6	9	66.7	19/27	70.4
11	5	10	50.0	6	8	75.0	5	9	55.6	16/27	59.3
12	8	10	80.0	8	8	100.0	6	9	66.7	22/27	81.5
13	6	10	60.0	–	–	–	–	–	–	6/10	60.0
14	9	10	90.0	–	–	–	–	–	–	9/10	90.0
15	8	10	80.0	–	–	–	–	–	–	8/10	80.0
M			80.0			77.4			77.1		78.1
SD			15.1			15.4			15.2		10.6
# Discontinued		0			2			1		1/10	10.0

Note: # number of participants in attendance during that week's session; *n* number of participants enrolled in a course of MCMG (an individual was considered part of the group until he either explicitly indicated a desire to leave the group or missed four consecutive sessions without contacting or responding to phone calls from the P.I.); % percentage of participants in attendance; Overall mean attendance figures across all three courses of MCMG; *#Discontinued* number of participants who discontinued participation in MCMG

Table 10.3 Participants' end of session evaluations of MCMG

Variable	Group 1 (n = 10) M(SD)	Group 2 (n = 9) M(SD)	Group 3 (n = 10) M(SD)	Overall (N = 29) M(SD)	$F_{(dfBG,dfWG)}$	p
Experiences	4.06(0.44)	3.36(1.05)	3.89(0.72)	3.78(0.80)	$2.10_{(2,26)}$	0.143
Circumstances	3.81(0.36)	3.30(0.95)	3.80(0.56)	3.65(0.67)	$1.86_{(2,26)}$	0.176
Session	4.29(0.46)	3.68(1.14)	4.26(0.52)	4.09(0.78)	$1.98_{(2,26)}$	0.158
Topic	4.37(0.42)	3.99(0.51)	4.23(0.54)	4.20(0.50)	$1.42_{(2,26)}$	0.259
Consistency	4.01(0.31)	3.63(0.81)[a]	3.99(0.53)[b]	3.89(0.57)[c]	$1.16_{(2,24)}$	0.331
Format	4.11(0.33)	3.74(0.63)	4.12(0.45)	4.00(0.49)	$1.90_{(2,26)}$	0.169
Camaraderie	3.98(0.68)	3.60(0.83)	4.09(0.53)	3.90(0.69)	$1.28_{(2,26)}$	0.296
EMIL-SF	26.08(2.85)*	22.46(2.52)*	25.19(2.25)	24.65(2.90)	$5.11_{(2,26)}$	0.013

Note: [a]n = 8; [b]n = 9; [c]N = 27. Groups with means that share an asterisk (*) are significantly different from one another. All variables are scored on a 5-point scale, with response ratings of 1 = Not at all, 2 = Slightly, 3 = Fairly, 4 = Quite, 5 = Extremely, with the exception of EMIL-SF scores, which are scored as: 1 = Strongly Disagree; 2 = Disagree; 3 = Neither Agree Nor Disagree; 4 = Agree; 5 = Strongly Agree. Experiences = "How relevant was today's session to your personal experiences regarding retirement?"; Circumstances = "How relevant was today's session to the circumstances that concern you most in life?"; Session = "Overall, how comfortable were you with today's group session?"; Topic = "How comfortable were you with today's topic of discussion?"; Consistency = "How consistent was today's session with the other group sessions so far?"; Format = "How well do you feel the group format "worked" or fit for today's topic of discussion?; Camaraderie = "How strong was your sense of camaraderie with your fellow group members today?; EMIL-SF = 6-item Short-Form of the Experienced Meaning in Life Scale

Table 10.4 Participant tolerance/satisfaction with MCMG

Variable	Mid-group assessment M	SD	Range	N	Post-group assessment M	SD	Range	N
GSS	45.1	3.9	31–50	27	45.6	3.5	35–50	27
WAI-task	5.6	0.9	3.4–6.9	24	5.4	1.0	2.5–7.0	25
WAI-goal	5.1	1.2	1.9–6.8	26	5.3	1.0	2.5–7.0	26
WAI-bond	6.2	0.5	5.3–6.9	27	6.1	0.6	4.8–7.0	26
WAI-total	5.6	0.8	3.9–6.8	24	5.6	0.8	3.6–7.0	25

GSS Group Satisfaction Scale; *WAI* Working Alliance Inventory (Short-Form); *WAI Task* WAI Task subscale; *WAI-Goal* WAI Goal subscale; *WAI-Bond* WAI Bond subscale; *WAI-Total* Total WAI scores

phone call. A number of these individuals were ultimately not interested in joining the study at that time or were unavailable for contact. Fifty-nine individuals presented for an eligibility assessment, and 57 consented to participate in the study. Four of these individuals were ineligible for the study and four changed their minds and withdrew their consent. Ten individuals were recruited into each of the three initial MCMG groups and another 10 for the initial CEDG group (not described in this chapter); nine individuals joined a wait-list for a future course of group.

Of the 30 participants invited to join a course of MCMG, 29 attended at least one session, and 27 completed a full course of MCMG. Descriptive statistics are presented for all 30 individuals invited to join a course of group (see Table 10.1). Participants ranged from 55 to 70 years of age ($M = 63.7$, $SD = 4.1$). Most participants had been born in Canada ($n = 26$; 87%), spoke English as their native language ($n = 29$; 97%), were currently married or involved in a romantic relationship ($n = 27$; 93%), had an average of two children ($M = 2.1$, $SD = 1.3$) and two grandchildren ($M = 2.1$, $SD = 2.1$), and lived with a spouse, non-spouse partner, or other family member ($n = 26$; 87%). A majority reported having attended college or trade school ($n = 11$; 37%), undergraduate ($n = 10$; 33%) or graduate-level university studies ($n = 8$; 27%). Two-thirds reported being partly- or fully retired from work at the eligibility assessment and having worked in production or service industries or as a professional (e.g., teacher, doctor, lawyer; $n = 20$; 67%). The remainder were employed on a part- or full-time basis or were self-employed ($n = 10$; 33%). Those who had not yet retired were divided among those anticipating retirement in the next 2 years ($n = 4$; 13%), in more than 2 years' time ($n = 3$; 10%), or who could not say when they might retire ($n = 3$; 10%). Participants generally reported drawing income from various sources, including pensions from government, employer, or unnamed sources ($n = 23$; 77%), from personal investments or savings ($n = 24$; 80%), and from a spouse's employment, investment, or pension income ($n = 11$; 37%).

Participants were generally healthy, reporting high average self-rated health on the EQ5D ($M = 81.1/100$, $SD = 8.8$; Range: 60–95); few reported difficulties with basic or instrumental activities of daily living. Few participants scored above thresholds for problem-drinking on the AUDIT (≥ 8; $n = 3$) or for suicide ideation on the GSIS-Screen (≥ 10; $n = 4$). Participants' ratings of subjective well-being and of MIL were generally good. Most had access to a family physician (97%), and few reported currently seeing a mental health provider ($n = 4$; 13%).

Acceptability and Tolerability of MCMG

Findings from the initial courses of MCMG were quite promising, suggesting that participants found it to be an acceptable and tolerable intervention. Attendance of weekly sessions was generally good; overall attendance data for all 30 group members (analyses not shown; available upon request) indicated that participants on average attended approximately three-quarters of the 12 weekly group sessions ($M = 8.93$ [74%], $SD = 2.94$, Range: 0–12 sessions). Although participant-level attendance varied across groups (Group 1: $M = 9.70$ [81%], $SD = 0.68$, Range: 9–11 sessions; Group 2: $M = 8.10$ [68%], $SD = 4.36$, Range: 0–12 sessions; Group 3: $M = 9.00$ [75%], $SD = 2.63$; Range: 3–12 sessions), this difference was not statistically significant ($F_{(2,27)} = 0.73$, $p = 0.49$). Participants in the initial course of MCMG opted to extend their meetings to 15 sessions; attendance remained strong across all

15 meetings (M = 12.00 [80%], SD = 0.94; Range: 11–13 sessions). Groups 2 and 3 ran for the planned 12-session duration.

Group-level attendance figures (see Table 10.2) indicated good overall attendance of each session, with an average of over three-quarters of participants in attendance in any given week (M = 78%; SD=10.6; Range: 59–100%). Participants usually provided advanced notice of sessions that they anticipated missing due to vacations or scheduling conflicts. Attendance fluctuated over time, declining slightly during the Summer and Winter vacation seasons. Attendance was generally strongest at the initial session, fluctuated over time, and appeared to increase slightly following the mid-group assessment and at the final session. Missed sessions were rare; the P.I. typically contacted a participant following non-attendance of more than a single group session or if he was concerned about an individual's health or safety. Drop-outs were uncommon, with an average 10% rate of attrition overall (or n = 1 per group).

Participant Feedback: Session-By-Session Evaluations

Five minutes were set aside at the end of each session for completion of a brief evaluation form. Participants were asked to use a pseudonym for these evaluations, to encourage candor. Summaries of participant responses to a subset of items on the evaluation forms appear in Table 10.3 (additional item responses are available upon request).

Participants generally shared positive feedback regarding their experiences in MCMG, with mean responses ranging from 3.65 (SD = 0.67; "How relevant was today's session to the circumstances that concern you most in life?") to 4.20 (SD = 0.50; "How comfortable were you with today's topic of discussion?") on a 5-point Likert-type scale (with response options of 1="Not at all"; 2 = "Slightly"; 3 = "Fairly"; 4 = "Quite"; 5 = "Extremely"). Participants gave a mean rating of 4.09 (SD = 0.78) to the question, "Overall, how comfortable were you with today's group session?" Participants scored in a moderate-to-high average range (M = 24.65, SD = 2.90, N = 29) on the 6-item abbreviated EMIL. These scores fluctuated somewhat over time and both within- and between-groups; participants in Groups 1 (M = 26.08, SD = 2.85, n = 10) and 3 (M = 25.19, SD = 2.25, n = 10) reported significantly greater MIL than did Group 2 (M = 22.46, SD = 2.52, n = 9; $F_{(2,26)}$ = 5.11, p = 0.013).

Group Process Ratings

Participants provided feedback on group process measures at mid- and post-group assessments, reporting a high degree of satisfaction with MCMG at these respective time points (GSS: M = 45.1, SD = 3.9, Range: 31–50, n = 27; M = 45.6, SD = 3.5,

Range: 35–50, n = 27). They also endorsed having experienced a strong working alliance with the group facilitators, yielding relatively high respective mid- and post-group assessment scores on WAI totals (M = 5.6, SD = 0.8, Range: 3.9–6.8, n = 24; M = 5.6, SD = 0.8, Range: 3.6–7.0, n = 25), and for the measure's Task (M = 5.6, SD = 0.9, Range: 3.4–6.9, n = 24; M = 5.4, SD = 1.0, Range: 2.5–7.0, n = 25), Goal (M = 5.1, SD = 1.2, Range: 1.9–6.8, n = 26; M = 5.3, SD = 1.0, Range: 2.5–7.0, n = 26), and Bond subscales (M = 6.2, SD = 0.5, Range: 5.3–6.9, n = 27; M = 6.1, SD = 0.6, Range: 4.8–7.0, n = 26).

Participant Feedback: Exit Interviews

Participants met with trained research assistants to complete the study exit interviews. The interviews comprised 30 semi-structured questions inquiring into participant experiences with MCMG, including comfort with the other group members, impressions of the facilitators, feedback on study methods, and recommendations to inform the delivery of future groups. Responses were written-out verbatim by the research assistants, a selection of which appears below. Direct quotes have been summarized by theme and are presented *in italics*.

Group Satisfaction

When asked about their satisfaction with MCMG, most participants reported having enjoyed their group experiences *("Very satisfied…outstanding"; "Couldn't be more satisfied. Everything was very positive and supportive"; "Very satisfied with group members and interactions within the group")*. Some commented positively on having gotten to know individuals from different backgrounds and life experiences *("Great to hear others' perspectives"; "…it was interesting listening to the experiences of those who have retired"; "I enjoyed it – Opened my mind to how others are affected by retirement")* and yet noted a commonality to their retirement experiences *("I thought it was good to meet with other people with the same issues and learn from other people"; "…learned that retirement issues are pretty common"; "Surprised at how heterogeneous the group looked to be, but how homogenous people were with feelings")*.

Interpersonal Factors

Interpersonal themes were prevalent throughout the exit interviews and included comments about a deepening sense of comfort among group members *("Started slow, feeling each other out"; "I did feel that my emotional needs were met by the other participants. Everyone was supportive…comfortable with each other"; "Kind of like a pep club for seniors")*. Themes of camaraderie and mutual support were

common, and included poignant comments regarding themes of brotherhood ("*Felt supported…people respected each other"; "Met emotional needs and needs for camaraderie"; "Out of the group I got nine brothers I didn't have before")*, safety, respect, social inclusion, and belonging ("*I was able to feel safe enough to talk about my emotions"; "Felt supported…never felt out of place…everyone was included"; "I did feel included and I haven't had much of that in the past"; "… everyone showed respect when I was speaking"*). A minority of participants stated that they were looking for intellectual stimulation rather than emotional support *("It wasn't a group where you went for emotional support"; "I needed the social interaction and intellectual conversation and the group provided that. It wasn't a shoulder to cry on, but a place of mutual respect")*. Participants reported a strong mutual affinity *("Great group…enjoyed meeting other group members and plan on seeing them again"; "Everybody came from different backgrounds and walks of life…their lives were fascinating…great guys")*, and yet some expressed frustration with talkative group members *("A few members derailed or tended to dominate the session")*.

Group Facilitators

Participants generally reported being comfortable with the facilitators *("Good facilitator – real bonding of group members"; "Positive – …was quietly skillful in creating an environment that let people come out of their shells"; "…was personable, knowledgeable and I have much respect for him…not phony, not about everyone else. This allowed me to open up")*. A few participants indicated that they would have welcomed a more active style of facilitation *("…I wonder if there's something he could've done to motivate us more and get more info out of us")*, whereas others expressed a preference for less facilitator direction *("Facilitators should have enabled group to work among themselves with less micro-management")*.

Group Process

The process of MCMG sessions was addressed in several participant comments, including reference to emotional candor *("Got to a good level of disclosure"; "… pleasantly surprised by the openness of the participants")* and satisfaction with communication ("*Not a problem communicating, people were receptive"; "There was no sense of being forced to participate any more than you felt comfortable doing"*). Counter to a prevalent notion that men avoid discussing their feelings and relationships, when asked what topics they would have wished to discuss in more detail, many cited relationships *("Family relationship/ marital issues. More focus on that would help"; "Would have discussed most topics much more deeply; including relationships"; "Felt he had more to say about relationship/ love and would have spent more time on that")*.

Benefits of Group Participation

Some participants acknowledged experiencing a deepening appreciation of challenges inherent in the transition to retirement *("Expected that transition would be easy but there is more of an adjustment than most people realize")* and the opportunities therein for finding meaning and purpose *("The purpose of the group was very important and it filled the void of attempting to find… purpose in retirement")*. Others used the group as a sounding board and found its members validating *("I got good feedback saying I didn't have to retire because society says you must"; "Sometimes you need a second opinion. It is good to know that what you are doing is the right thing")*. Participants commented positively on sessions focusing on finding meaning in life transitions *("Absolutely what I was looking for. Timing could not have been better"; "Lots of good information and ideas of how to deal with retirement and keep oneself active"; "Addressed all of my problems with retirement. Surprised at how effective the group was…")*.

Men Only

Although it has become commonplace to offer interventional groups for women, men's groups are still somewhat novel. We asked the participants to indicate whether they believe that groups for men are necessary or useful; 25/28 (89.3%) respondents reported preferring the "men only" format of group sessions. Some reported being *"very comfortable"* participating in a group with other men and expressed the opinion that men need opportunities to congregate with other men *("I think guys are more open to talk amongst guys")*. Others noted that they couldn't imagine offering this group in a mixed-sex format *("I think it is the only way that it can be done"),* and that involving women in the group might fundamentally change the group experience *("Totally different dynamic with women")*. Whereas a few participants indicated that women might have helped elicit emotional openness *("women might have facilitated quicker bonding and helped keep the group together after the study")*, others indicated that they were able to be open because they were among men *("You don't have to get strong, you can 'open your armour'—show the weak spots")*. Participants overall advised restricting MCMG to men.

Recommendations for Improving MCMG

We asked group members to identify challenges or drawbacks to MCMG and to share recommendations for improving the group experience. A few shared frustrations with their group experience, finding it unfocused or unstructured at times, or felt uncomfortable by what felt to them like psychotherapy, rather than practical advice for keeping active in retirement *("Not at all what I hoped. It wasn't what I expected…it very quickly became a therapy session"; "Wasn't goal-focused enough. Liked the men, but didn't share the same concerns…enjoyed the conversations…but wasn't sure what I was expected to get out of the group")*. Some would have

preferred discussing finances or other retirement-related issues *("Financial aspect of the whole thing and what healthcare system will be like in the future"; "I was looking for more direction on matching myself to proper activities in retirement");* while others would have liked more personalized feedback or direct advice on what to do in retirement *("I was looking for answers—how do you stay motivated…?" "The actual adjustment to retirement…personal challenges")* or more academic discourse *("Would have liked for there to be lectures about each topic before diving into the group discussion"; "More time going into the philosophy theory and academic material about Frankl").*

Duration

Participants were asked about their impressions of the length of the MCMG sessions. Although they were generally satisfied with 90-min sessions (*"90 minutes was good. Don't need to have it any different"*), some would have preferred longer meetings (*"In the end, I was thinking it was too short. The amount of time, normally, was good"; "There were many times when the conversation could have gone on longer"*) whereas, others were frustrated with groups running long (*"Always went past, but never dragged"*). Most participants reported feeling comfortable with the 12-session group format (*"Just right"*); a few found it a little long (*"Might have been 2 sessions too long"*), and some would have liked more sessions (*"Went quickly"; "Too short"; "Didn't want it to end"*). Overall, the consensus was for MCMG to ideally fall somewhere in the 10–15 session range.

MCMG Redux

When asked whether they would have signed up to participate in a course of MCMG if they knew then what they know now, 90% of the participants said "yes"; 93% provided a rating of 5/5 on a Likert-type scale, suggesting that they would have been "Extremely Likely" to do so ($M = 4.9$; $SD = 0.6$). Some participants reported benefiting from learning from others going through the transition to retirement *("Enjoyed the fact that there were other men in my situation…valuable to hear their opinions and difficulties"; "It helped me understand what retirement is all about"; "Yes, I got what I was expecting")* and that it promoted well-being *("I was at a point in my life where suicide was a reality, and knowing what I know now, I would not have waited to call").* One even remarked *"Every retired person should get this opportunity."*

Discussion

The purpose of the present study was to initially assess the feasibility of delivering 12-session courses of Meaning-Centered Men's Groups (MCMG) designed to help men transition successfully to retirement, promote their mental health and

well-being, and prevent the onset of suicide ideation (Heisel et al., 2016). We specifically sought to assess the tolerability and acceptability of this novel intervention with participants in the first three courses of MCMG. This study is consistent with our conceptual framework outlining the protective role of psychological resiliency processes in preventing the onset or exacerbation of suicide risk among older adults in the context of life transitions (Heisel & Flett, 2014), and with theory and research suggesting that recognition of Meaning in Life (MIL) helps protect against suicide thoughts and behavior (Edwards & Holden, 2001; Heisel & Flett, 2006, 2008, 2014, 2016a, 2016b; Kleiman & Beaver, 2013). Our initial findings support the feasibility of delivering MCMG and demonstrate participant tolerance with and acceptance of this novel intervention.

Participant recruitment was initially slow. Few individuals contacted us within the first few months of the study's inception, despite early expression of interest following public announcements about the study. This was not unexpected, as recruitment challenges are common in psychological research with middle-aged and older men (Bhar et al., 2013), a demographic typically less likely than women to seek mental healthcare (World Health Organization, 2002). There is also a paucity of community-based social and leisure services designed explicitly for men approaching retirement, and "seniors" or "eldercare" services typically cater to people who are long-retired, further restricting avenues of recruitment. We thus embarked on a creative multi-pronged recruitment strategy that has proven effective, as has hiring specific project staff dedicated to enhancing participant recruitment. Ongoing review and revision of our recruitment practices has also served us well. An example of this involved refining our recruitment posters, which had initially been text-based and monochromatic; our new posters are printed in full color and include photographic images and humorous captions (e.g., a photograph of an old-looking tartan couch with the caption, "Is this your retirement plan? If so, give us a call"). We reasoned that visual imagery might help capture the attention of men facing retirement, and that the use of humor might help promote healthy self-detachment (Frankl, 1988) and make the research enterprise seem less daunting. These efforts appear to have been successful, as we have seen an increase in expressions of interest from potential participants, and some have commented specifically on the new flyers.

Despite initial recruitment challenges, when participants contacted us about the study they were generally quite likely to agree to appear for an eligibility assessment and, if eligible, to join and remain in a group. Conducting initial brief telephone conversations with potential participants may have helped to facilitate participation by setting the tone for an open, friendly, and supportive experience. We deliberately employed broad inclusion criteria, consistent with our hybrid effectiveness-implementation project design (Curran et al., 2012) and with our aim of reaching out to generally healthy community-residing men facing the transition to retirement. We remained in periodic contact with participants awaiting the start of group to keep them apprized of the status of the project, to check-in on their state of well-being, and to maintain their interest. Nevertheless, some opted not to join a course of MCMG following such a delay, suggesting value in more frequent contact

with individuals on wait-lists. Consistent with our experience in individual psychotherapy research (e.g., Heisel et al., 2015), when men joined a course of MCMG, they typically remained for the duration of group sessions.

Although not captured in a standardized fashion, an unexpected set of themes emerged over the course of the study eligibility assessments. These included having grown up without a father figure present to model the transition to retirement; having experienced strife or unpleasantness in the final years of work; having lost a friend, colleague, or loved one to suicide; and having been exposed to many potentially traumatic events over the life course. Although not ubiquitous, these themes occurred with sufficient regularity to suggest a possible association between these challenging life experiences and the emergence of concerns of relevance to the transition to retirement. Prospective research is needed investigating whether these life experiences portend difficult transitions to retirement, and whether they interact with risk factors to increase risk for suicide.

Overall findings to date support the acceptability and tolerability of MCMG for men transitioning to retirement. Responses to the end-of-session evaluations suggested that group members enjoyed participating in MGMG and found it beneficial. They identified having enjoyed positive experiences, a sense of camaraderie, and mutual support that developed and deepened over the course of the intervention, and they saw relevance in the sessions' themes to experiences that mattered to them in retirement. The themes that emerged during the study exit interviews further underscored these positive experiences, highlighting participant satisfaction and enjoyment of group, a sense of mutual support, acceptance, inclusion, and personal growth. These themes are highly consistent with those identified in Reddin and Sonn's (2003) thematic analysis of interviews from participants in supportive men's groups in Australia, including sense of community, integration and fulfillment of needs, and personal growth. Our participants expressed differing opinions as to the duration and focus of the MCMG sessions, but generally found them enjoyable. In facilitating the groups, we tried to strike a balance between being overly rigid or structured, on the one hand, and overly organic or flexible, on the other. Some participants expressed a wish for greater structure, disapproving of group sessions that wandered from that week's stated focus, whereas others responded favorably to the "free-flowing" nature of the group discussions. Group members were more united, however, in expressing discomfort with sessions in which one or more participants dominated the discussion, far preferring sessions in which each member shared his personal thoughts and experiences. Participant endorsement of MIL fluctuated from session-to-session and between participants, yet routinely ranged from moderate to high scores. These findings are consistent with research demonstrating typically high levels of MIL on self-report scales across psychological and epidemiologic research studies (Heintzelman & King, 2014).

Group process findings indicated a high overall participant satisfaction with MCMG, with endorsement of strong group satisfaction at mid-group and post-group assessments. Participants endorsed a strong rapport with group facilitators and agreement with both the tasks and goals of MCMG. These findings suggest that participants found MCMG to be enjoyable, reflective of their needs and interests,

satisfying, and beneficial. This conclusion is further underscored by the nearly unanimous reports that participants would recommend MCMG to others; some have already done so. Participants in two of the groups have continued meeting as a group on a nearly-monthly basis for breakfast or social get-togethers; the initial group's participants have now been meeting for nearly 3 years since their final group session. Additional courses of MCMG are now underway. Our first distant course of MCMG has recently ended; preliminary reports are quite promising and suggest that MCMG can be delivered effectively by facilitators not involved in the development of this intervention.

Preliminary findings offer initial support for community-outreach interventions designed to convene groups of men transitioning to retirement, to enhance camaraderie and social support and potentially confer psychological resiliency to the onset or exacerbation of emotional difficulties. These findings support the probable value of early or "upstream" initiatives designed to enhance mental health and well-being rather than focusing exclusively on detection and intervention for psychopathology and elevated suicide risk. Whereas the intervention literature has demonstrated the general effectiveness of large-scale, complex, community-outreach interventions (e.g., DeLeo et al., 2002; Oyama et al., 2005, 2008) and collaborative care approaches to suicide risk reduction among older adults (e.g., Alexopoulos et al., 2009; Unützer et al., 2006), these studies did not focus explicitly on suicide risk reduction among men, were generally not shown to be significantly efficacious among older men, and did not aim to enhance psychological resiliency and well-being (Heisel & Duberstein, 2016). Our small clinical trial of IPT, adapted for adults over the age of 60 with current suicide ideation or recent suicidal behavior, demonstrated efficacy in reducing or resolving depression and suicide ideation and in significantly enhancing psychological well-being and MIL (Heisel et al. 2009, 2015); controlled research is needed further testing this promising intervention in reducing suicide risk and enhancing psychological well-being. A recent meta-analysis of 39 studies demonstrated significant benefit in positive psychological interventions for individuals struggling with depression and associated psychological difficulties; findings generally demonstrated small yet significant enhancement in subjective well-being and psychological well-being ratings (Bolier et al., 2013). The majority of studies investigated did not focus explicitly on older adults or on intervening with individuals potentially at risk for suicide and were of lower methodological rigor. Huffman and colleagues (2014) recently published feasibility data from a study in which a set of positive psychological exercises were delivered to individuals hospitalized for suicide ideation and/or behavior, with the intent of promoting optimism and reducing hopelessness. Study participants were trained to complete nine different positive psychological exercises, including counting their blessings, writing a letter of gratitude, focusing on personal strengths, and engaging in acts of kindness, and completed a brief rating scale assessing optimism and hopelessness immediately before and after completing each exercise. Study findings generally supported the feasibility of delivering positive psychological exercises in a mental health inpatient unit and showed significant reduction in hopelessness and improvement in optimism ratings across the majority of exercises. Interventions

focusing on enhancing Purpose in Life and Optimism were generally less efficacious than were the other exercises, suggesting that suicidal inpatients might require additional supports or alternative approaches to improving these psychological outcomes. Psychological interventions explicitly aimed at enhancing MIL and reducing distress among middle-aged and older adults have been found promising, including group-based Meaning-Centered psychotherapy for individuals with terminal illness (Breitbart et al., 2015) and cognitively oriented groups designed to help retirees find meaningful goals (Lapierre et al., 2007). Taken as a whole, these findings suggest that clinical and community level psychological interventions can effectively reduce symptoms of depression and suicide ideation and that upstream interventions can additionally promote psychological resiliency and enhance well-being. Whereas clinical and crisis services are unquestionably necessary for those at imminent risk for suicide, early interventions for lower-risk individuals can be palatable and potentially useful.

Our findings indicate that middle-aged and older men will participate in an active and engaged fashion in groups of a social and emotional nature. Counter to stereotypes regarding men's reticence towards emotional expressivity, our experiences show that men are willing and able to express themselves honestly and to share their emotional experiences, provided that the context is right and the discussions take place in a confidential setting. Participants were nearly unanimous in advocating for men's-only groups, identifying camaraderie as a key feature of their group experience. Participants expressed comfort and satisfaction with study procedures, which included convening study interviews in an office setting, and offering group sessions in a community center. Potential benefits have been identified in conducting innovative outreach for mental healthcare with older adults (e.g., Yang & Jackson, 1998), and large-scale trials have demonstrated the effectiveness of outreach mental health interventions in reducing symptoms of late-life depression and suicide ideation (Lohman, Raue, Greenberg, & Bruce, 2016; Rabins et al., 2000). Our current findings similarly support meeting people where they are and suggest value in moving psychological interventions out of the clinic and into the community, especially when involving promotion of mental health and resiliency. Those wishing to do so are advised to work closely with community partners, recognizing that changes in the strategic direction of community agencies and turnover in personnel are not uncommon, and can prove challenging. A pragmatic benefit associated with participating in a group such as ours is the opportunity to engage meaningfully with a mental health professional who can provide emotional support, promote psychological resiliency and well-being, reduce risk for suicide, and, if needed, refer the group member for additional services.

The preliminary findings of this study are best considered in the context of its limitations, which include simple summary evaluation of themes raised in semi-structured interview responses, uncontrolled analyses, and inclusion of a select sample. Future articles will focus on quantitative analyses of primary and secondary study outcomes together with qualitative findings of the initial courses of MCMG, and investigation of between-group outcomes from the controlled portion of this study.

The ultimate objective of this study is to evaluate whether MCMG is effective at enhancing MIL and psychological well-being, facilitating the transition to retirement, and mitigating risk for depression and suicide ideation. MCMG may have benefit as a work outplacement option in various sectors, and policy relevance for a rapidly growing population demographic. Adaptations of MCMG may further prove effective in promoting mental health and well-being in the workplace, for individuals struggling with health and mental health conditions, and for those facing other life transitions.

Acknowledgments Funding for this study was generously provided by a Men's Mental Health grant (MH#007) from the Movember Foundation Canada. Professor Flett holds a Tier 1 Canada Research Chair in Personality and Health.

We greatly appreciate the assistance and contributions of our colleagues, collaborators, trainees, and research assistants on this project. Sincere thanks to all of our study participants.

Previous versions of this chapter were presented at meetings of scientific societies focusing on aging, mental health, and suicide prevention, including the American Association of Suicidology, the American Foundation for Suicide Prevention/International Academy for Suicide Research, the Canadian Association for Suicide Prevention, the International Association for Gerontology and Geriatrics, the International Association for Suicide Prevention, and the Viktor Frankl Institute of Vienna's Future of Logotherapy Conference.

Appendix A: MCMG Session-By-Session Overview

Session	Session overview/themes
Pre-group assessments	
1	*Welcome and introduction to group*
	Orientation to group format, culture, and expectations
	Overview of the purpose of the group and discussion of the role of meaning in life in enhancing mental health and well-being
2	*Meaning in Creativity I*
	Work, career identity, and the role of "being a provider"
3	*Meaning in Creativity II*
	Purposeful activity, feeling productive, and the importance of routine
4	*Meaning in Creativity III*
	Volunteering, mentorship, and other societal contributions
5	*Meaning in Creativity IV*
	Exercise, sport, recreation, art, hobbies, and other leisure activities
6	*Meaning in Experiences I*
	Beauty, music, art, literature, performance, sports, and nature
Mid-group assessments	
7	*Meaning in Experiences II*
	Relationships, friendships, business relations, and camaraderie

Session	Session overview/themes
8	*Meaning in Experiences III*
	Love, significant other/confidant(e), children, extended family, and pets
9	*Meaning in Attitudes I*
	The tragic triad: Pain/suffering, guilt, and death
10	*Meaning in Attitudes II*
	An uplifting triad: Optimism, hope, and joy
11	*Meaning in life and generativity*
	What is my legacy? How will I be remembered? What have I contributed?
	How can I still make a meaningful and purposeful contribution?
12	*Wrap-up, lessons learned, and next steps*[a]
Post-group assessments	

[a]As co-creators of the group experience, group members will together determine the group's next steps

References

Alexopoulos, G. S., Reynolds, C. F., III, Bruce, M. L., Katz, I. R., Raue, P. J., Mulsant, B. H., … The PROSPECT Group. (2009). Reducing suicidal ideation and depression in older primary care patients: 24-month outcomes of the PROSPECT study. *American Journal of Psychiatry, 166*, 882–890.

Bakker, A. B., Demerouti, E., & Burke, R. (2009). Workaholism and relationship quality: A spillover-crossover perspective. *Journal of Occupational Health Psychology, 14*, 23–33.

Bamia, C., Trichopoulou, A., & Trichopoulos, D. (2008). Age at retirement and mortality in a general population sample: The Greek EPIC Study. *American Journal of Epidemiology, 167*, 561–569.

Bartels, S. J., Coakley, E. H., Zubritsky, C., Ware, J. H., Miles, K. M., Areán, P. A., … PRISM-E Investigators. (2004). Improving access to geriatric mental health services: A randomized trial comparing treatment engagement with integrated versus enhanced referral care for depression, anxiety, and at- risk alcohol use. *American Journal of Psychiatry, 161*, 1455–1462.

Bhar, S. S., Wiltsey-Stirman, S., Zembroski, D., McCray, L., Oslin, D. W., Brown, G. K., & Beck, A. T. (2013). Recruiting older men for geriatric suicide research. *International Psychogeriatrics, 25*, 88–95.

Bohlmeijer, E. T., Westerhof, G. J., & Emmerik-de Jong, M. (2008). The effects of integrative reminiscence on meaning in life: Results of a quasi-experimental study. *Aging & Mental Health, 12*, 639–646.

Bolier, L., Haverman, M., Westerhof, G. J., Riper, H., Smit, F., & Bohlmeijer, E. (2013). Positive psychology interventions: A meta-analysis of randomized controlled studies. *BMC Public Health, 13*, 119.

Boyle, P. A., Barnes, L. L., Buchman, A. S., & Bennett, D. A. (2009). Purpose in life is associated with mortality among community-dwelling older persons. *Psychosomatic Medicine, 71*, 574–579.

Braam, A. W., Bramsen, I., van Tilburg, T. G., van der Ploeg, H. M., & Deeg, D. J. H. (2006). Cosmic transcendence and framework of meaning in life: Patterns among older adults in the Netherlands. *Journal of Gerontology: Social Sciences, 61B*, S121–S128.

Brand, J. E., Levy, B. R., & Gallo, W. T. (2008). Effects of layoffs and plant closings on subsequent depression among older workers. *Research on Aging, 30*, 701–721.

Breitbart, W., Rosenfeld, B., Pessin, H., Applebaum, A., Kulikowski, J., & Lichtenthal, W. G. (2015). Meaning-centered group psychotherapy: An effective intervention for improving psychological well-being in patients with advanced cancer. *Journal of Clinical Oncology, 33*, 749–754.

Brockman, H., Müller, R., & Helmert, U. (2009). Time to retire-time to die? A prospective cohort study of the effects of early retirement on long-term survival. *Social Science & Medicine, 69*, 160–164.

Burke, C. K., Maton, K. I., Mankowski, E. S., & Anderson, C. (2010). Healing men and community: Predictors of outcome in a men's initiatory and support organization. *American Journal of Community Psychology, 45*, 186–200.

Butterworth, P., Gill, S. C., Rodgers, B., Anstey, K. J., Villamil, E., & Melzer, D. (2006). Retirement and mental health: Analysis of the Australian national survey of mental health and well-being. *Social Science & Medicine, 62*, 1179–1191.

Canadian Institute for Health Information. (2011). *National health expenditure trends, 1975 to 2011*. Ottawa, ON: Canadian Institute for Health Information.

Canetto, S. S. (2017). Suicide: Why are older men so vulnerable? *Men and Masculinities, 20*, 49–70.

Canetto, S. S., & Lester, D. (1998). Gender, culture, and suicidal behavior. *Transcultural Psychiatry, 35*, 163–190.

Carlson, E. B. (2001). Psychometric study of a brief screen for PTSD: Assessing the impact of multiple traumatic events. *Assessment, 8*, 431–441.

Carlson, E. B., Smith, S. R., Palmieri, P. A., Dalenberg, C., Ruzek, J. I., Kimerling, R., … Spain, D. A. (2011). Development and validation of a brief self-report measure of trauma exposure: The trauma history screen. *Psychological Assessment, 23*, 463–477.

Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. (2017). *WISQARS (Web-Based Injury Statistics Query and Reporting System) Fatal Injury Reports National and Regional, 1981*–2015. Data file. Retrieved November 14, 2017, from https://www.cdc.gove/injury/wisqars/fatal.html.

Clayton, D., & Barceló, A. (1999). The cost of suicide mortality in New Brunswick, 1996. *Chronic Diseases in Canada, 20*, 89–95.

Cohen, J. E. (2003). Human population: The next half century. *Science, 302*, 1172–1175.

Coursolle, K. M., Sweeney, M. M., Raymo, J. M., & Ho, J.-H. (2010). The association between retirement and emotional well-being: Does prior work-family conflict matter? *Journal of Gerontology: Social Sciences, 65B*, 609–620.

Crabb, R., & Hunsley, J. (2006). Utilization of mental health care services among older adults with depression. *Journal of Clinical Psychology, 62*, 299–312.

Cramer, H., Horwood, J., Payne, S., Araya, R., Lester, H., & Salisbury, C. (2014). Do depressed and anxious men do groups? What works and what are the barriers to help seeking? *Primary Health Care Research & Development, 15*, 287–301.

Curran, G. M., Bauer, M., Mittman, B., Pyne, J. M., & Stetler, C. (2012). Effectiveness-implementation hybrid designs: Combining elements of clinical effectiveness and implementation research to enhance public health impact. *Medical Care, 50*, 217–226.

DeLeo, D., Dello Buono, M., & Dwyer, J. (2002). Suicide among the elderly: The long-term impact of a telephone support and assessment intervention in northern Italy. *British Journal of Psychiatry, 181*, 226–229.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71–75.

Duberstein, P. R., Heisel, M. J., & Conwell, Y. (2011). Suicide in older adults. In M. E. Agronin & G. Maletta (Eds.), *Principles and practice of geriatric psychiatry* (2nd ed.). Philadelphia: Lippincott Williams & Wilkins.

Edwards, M. J., & Holden, R. R. (2001). Coping, meaning in life, and suicidal manifestations: Examining gender differences. *Journal of Clinical Psychology, 57*, 1517–1534.

Erlangsen, A., Nordentoft, M., Conwell, Y., Waern, M., De Leo, D., Lindner, R., … International Research Group on Suicide Among the Elderly. (2011). Key considerations for preventing suicide in older adults: Consensus opinions of an expert panel. *Crisis, 32*, 106–109.

EuroQol Group (2009). *EQ5D user guide: Basic information on how to use the EQ-5D (Version 2.0)*. Author.

First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. W. (1997). *Structured clinical interview for DSM-IV Axis I disorders-patient edition (SCID-I/P, Version 2.0, 4/97 revision)*. New York: Biometrics Research Department, New York State Psychiatric Institute.

Flett, G. L. (2018). *The psychology of mattering: Understanding the human need to be significant*. Cambridge, MA: Academic Press.

Folstein, M. F., Folstein, S. E., & McHugh, P. R. (1975). Mini-mental state': A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research, 12*, 189–198.

Folstein, M. F., Folstein, S. E., White, T., & Messer, M. A. (2010). *MMSE-2: Mini-mental state examination. User's manual* (2nd ed.). Lutz, FL: Psychological Assessment Resources.

Frankl, V. E. (1971). *The doctor and the soul: From psychotherapy to logotherapy*. (R. Winston, Trans. New York: Bantam.

Frankl, V. E. (1985). *Man's search for meaning*. New York: Washington Square Press (Originally published 1946).

Frankl, V. E. (1988). *The will to meaning: Foundations and applications of logotherapy*. New York: Penguin.

Frankl, V. E. (1997). *Viktor Frankl recollections: An autobiography*. New York: Plenum Press.

Garcia Pintos, C. C. (1988). Depression and the will to meaning: A comparison of the GDS and PIL in an Argentine population. *Clinical Gerontologist, 7*, 3–9.

Gill, S. C., Butterworth, P., Rodgers, B., Anstey, K. J., Villamil, E., & Melzer, D. (2006). Mental health and the timing of men's retirement. *Social Psychiatry and Psychiatric Epidemiology, 41*, 515–522.

Gottlieb, B. H. (2000). Self-help, mutual aid, and support groups among older adults. *Canadian Journal of Aging, 19*, 58–74.

Guttmann, D. (2008). *Finding meaning in life, at midlife and beyond: Wisdom and spirit from Logotherapy*. Westport, CT: Praeger.

Harding, C., & Fox, C. (2015). It's not about "Freudian couches and personality changing drugs": An investigation into men's mental health help-seeking enablers. *American Journal of Men's Health, 9*, 451–463.

Heintzelman, S. J., & King, L. A. (2014). Life is pretty meaningful. *American Psychologist, 69*, 561–574.

Heisel, M. J. (2009). Assessing experienced meaning in life among older adults: The development and initial validation of the EMIL. *International Psychogeriatrics, 21*, S172–S173.

Heisel, M. J. (2016). Suicide among older adults. In M. J. Rapoport (Ed.), *Geriatric psychiatry review and exam preparation guide: A case-based approach (Chapter 2.8)* (pp. 206–227). Toronto, ON: University of Toronto Press.

Heisel, M. J., & Duberstein, P. R. (2005). Suicide prevention in older adults. *Clinical Psychology: Science and Practice, 12*, 242–259.

Heisel, M. J., & Duberstein, P. R. (2016). Working sensitively and effectively to reduce suicide risk among older adults. In P. M. Kleespies (Ed.), *The Oxford handbook of behavioral emergencies and crises (Chapter 22)* (pp. 335–359). Oxford: Oxford University Press.

Heisel, M. J., Duberstein, P. R., Talbot, N. L., King, D. A., & Tu, X. M. (2009). Adapting interpersonal psychotherapy for older adults at risk for suicide: Preliminary findings. *Professional Psychology: Research and Practice, 40*, 156–164.

Heisel, M. J., & Flett, G. L. (2004). Purpose in life, satisfaction with life and suicide ideation in a clinical sample. *Journal of Psychopathology and Behavioral Assessment, 26*, 127–135.

Heisel, M. J., & Flett, G. L. (2006). The development and initial validation of the geriatric suicide ideation scale. *The American Journal of Geriatric Psychiatry, 14*, 742–751.

Heisel, M. J., & Flett, G. L. (2007). Meaning in life and resilience to suicidal thoughts among older adults. In P. T. P. Wong, L. C. J. Wong, M. McDonald, & D. Klaassen (Eds.), *The positive psychology of meaning and spirituality* (pp. 183–196). Abbotsford, BC: INPM Press.

Heisel, M. J., & Flett, G. L. (2008). Psychological resilience to suicide ideation among older adults. *Clinical Gerontology, 31*, 51–70.

Heisel, M. J., & Flett, G. L. (2012). Screening for suicide ideation among older adults: The development and initial validation of abbreviated versions of the geriatric suicide ideation scale. *Canadian Psychology, 53*, 228.

Heisel, M. J., & Flett, G. L. (2014). Do meaning in life and purpose in life protect against suicide ideation among community-residing older adults? In A. Batthyany & P. Russo-Netzer (Eds.), *Meaning in Existential and Positive Psychology (Ch. 18)* (pp. 303–324). New York: Springer.

Heisel, M. J., & Flett, G. L. (2016a). Does recognition of meaning in life confer resiliency to suicide ideation among community-residing older adults?: A longitudinal investigation. *The American Journal of Geriatric Psychiatry, 24*, 455–466.

Heisel, M. J., & Flett, G. L. (2016b). Investigating the psychometric properties of the geriatric suicide ideation scale (GSIS) among community-residing older adults. *Aging & Mental Health, 20*, 208–221.

Heisel, M. J., & Flett, G. L. (2017). *GSIS-screen the geriatric suicide ideation scale screen: A user's guide*. Unpublished test manual.

Heisel, M. J., Flett, G. L., Links, P. S., Norman, R. M. G., Sarma, S., Moore, S. L., … The Meaning-Centered Mens Group Project Team. (2016). Enhancing psychological resiliency in older men facing retirement with Meaning-Centered Men's Groups. In *Logotherapy and existential analysis: Proceedings of the Viktor Frankl Institute Vienna 1* (pp. 165–173). Cham: Springer International.

Heisel, M. J., Neufeld, E., & Flett, G. L. (2016). Reasons for living, meaning in life, and suicide ideation: Investigating the roles of key positive psychological factors in reducing suicide risk in community-residing older adults. *Aging & Mental Health, 20*, 195–207.

Heisel, M. J., Talbot, N. L., King, D. A., Tu, X. M., & Duberstein, P. R. (2015). Adapting interpersonal psychotherapy for older adults at risk for suicide. *The American Journal of Geriatric Psychiatry, 23*, 87–98.

Hicks, J. A., Trent, J., Davis, W. E., & King, L. A. (2012). Positive affect, meaning in life, and future time perspective: An application of socioemotional selectivity theory. *Psychology and Aging, 27*, 181–189.

Horvath, A. O., & Greenberg, L. S. (1989). Development and validation of the Working Alliance Inventory. *Journal of Counseling Psychology, 36*, 223–233.

Huffman, J. C., DuBois, C. M., Healy, B. C., Boehm, J. K., Kashdan, T. B., Celano, C. M., … Lyubomirsky, S. (2014). Feasibility and utility of positive psychology exercises for suicidal inpatients. *General Hospital Psychiatry, 36*, 88–94.

Karpansalo, M., Kauhanen, J., Lakka, T. A., Manninen, P., Kaplan, G. A., & Salonen, J. T. (2005). Depression and early retirement: Prospective population based study in middle aged men. *Journal of Epidemiology and Community Health, 59*, 70–74.

Katz, D., Koppie, T. M., Wu, D., Meng, M. V., Grossfeld, G. D., Sadesky, N., … Carroll, P. R. (2002). Sociodemographic characteristics and health related quality of life in men attending prostate cancer support groups. *The Journal of Urology, 168*, 2092–2096.

Kim, E. S., Kawachi, I., Chen, Y., & Kubzansky, L. D. (2017). Association between purpose in life and objective measures of physical function in older adults. *JAMA Psychiatry, 74*, 1039–1046.

Kim, J. E., & Moen, P. (2002). Retirement transitions, gender, and psychological well-being: A life-course, ecological model. *Journal of Gerontology: Psychological Sciences, 57B*, P212–P222.

Kimble, M. A. (2000). *Viktor Frankl's contribution to spirituality and aging*. Binghamton, NY: The Haworth Pastoral Press.

Kleiman, E. M., & Beaver, J. K. (2013). A meaningful life is worth living: Meaning in life as a suicide resiliency factor. *Psychiatry Research, 210*, 934–939.

Knox, K. L., Conwell, Y., & Caine, E. D. (2004). If suicide is a public health problem, what are we doing to prevent it? *Public Health Matters, 94*, 37–45.
Krause, N. (2003). Religious meaning and subjective well-being in late life. *Journal of Gerontology: Social Sciences, 58B*, S160–S170.
Krause, N. (2007). Longitudinal study of social support and meaning in life. *Psychology and Aging, 22*, 459–469.
Krause, N. (2009). Meaning in life and mortality. *Journal of Gerontology: Social Sciences, 64B*, 517–527.
Krause, N., & Shaw, B. A. (2003). Role-specific control, personal meaning, and health in late life. *Research on Aging, 25*, 559–586.
Lapierre, S., Dubé, M., Bouffard, L., & Alain, M. (2007). Addressing suicidal ideations through the realization of meaningful personal goals. *Crisis, 28*, 16–25.
Lapierre, S., Erlangsen, A., Waern, M., DeLeo, D., Oyama, H., Scocco, P., … The International Research Group for Suicide Among the Elderly. (2011). A systematic review of elderly suicide prevention programs. *Crisis, 32*, 88–98.
Lawton, M. P., & Brody, E. M. (1988a). Instrumental activities of daily living (IADL): Original observer-rated version. *Psychopharmacology Bulletin, 24*, 785–791.
Lawton, M. P., & Brody, E. M. (1988b). Physical self-maintenance scale (PSMS): Original observer-related version. *Psychopharmacology Bulletin, 24*, 793–797.
Levant, R. F., & Richmond, K. (2008). A review of research on masculinity ideologies using the male role norms inventory. *The Journal of Men's Studies, 15*, 130–146.
Lohman, M. C., Raue, P. J., Greenberg, R. L., & Bruce, M. L. (2016). Reducing suicidal ideation in home health care: Results from the CAREPATH depression care management trial. *International Journal of Geriatric Psychiatry, 31*, 708–715.
Lubitz, J., Cai, L., Kramarow, E., & Lentzner, H. (2003). Health, life expectancy, and health care spending among the elderly. *The New England Journal of Medicine, 349*, 1048–1055.
Lukas, E. (1986). *Meaning in suffering: Comfort in crisis through Logotherapy*. (J.B. Fabry, Trans. Berkeley, CA: Institute of Logotherapy Press.
Lukas, E., & Zwang-Hirsch, B. (2002). Logotherapy (Chapter 14). In R. F. Massey & S. D. Massey (Eds.), *Comprehensive handbook of psychotherapy. Vol. 3: Interpersonal/Humanistic/Existential* (F.W. Kaslow, Series Editor). Hoboken, NJ: Wiley.
Mitchell, A. M., Kim, Y., Prigerson, H. G., & Mortimer, M. K. (2005). Complicated grief and suicide ideation in adult survivors of suicide. *Suicide and Life-threatening Behavior, 35*, 498–506.
Möller-Leimkühler, A. (2003). *European archives of psychiatry and clinical neurosciences* (Vol. 253, pp. 1–8).
Neugarten, B. L. (1996). *The meanings of age: Selected papers of Bernice L. Neugarten*. Chicago, IL: University of Chicago Press.
Nordenmark, M., & Stattin, M. (2009). Psychosocial wellbeing and reasons for retirement in Sweden. *Aging & Society, 29*, 413–430.
O'Connor, B. P., & Vallerand, R. J. (1998). Psychological adjustment variables as predictors of mortality among nursing home residents. *Psychology and Aging, 13*, 368–374.
Ortman, J. M., Velkoff, V. A., & Hogan, H. (2014). An aging nation: The older population in the United States. *Population estimates and projections*. U.S. Census Bureau. Retrieved January, 2015, from https://www.census.gov/prod/2014pubs/p25%971140.pdf.
Oyama, H., Sakashita, T., Ono, Y., Goto, M., Fujita, M., & Koida, J. (2008). Effect of community-based intervention using depression screening on elderly suicide risk: A meta-analysis of the evidence from Japan. *Community Mental Health Journal, 44*, 311–320.
Oyama, H., Watanabe, N., Ono, Y., Sakashita, T., Takenoshita, Y., Taguchi, M., … Kumagai, K. (2005). Community-based suicide prevention through group activity for the elderly successfully reduced the high suicide rate for females. *Psychiatry and Clinical Neurosciences, 59*, 337–344.
Perreira, K. M., & Sloan, F. A. (2002). Excess alcohol consumption and health outcomes: A 6-year follow-up of men over age 50 from the health and retirement study. *Addiction, 97*, 301–310.

Pinquart, M., Duberstein, P. R., & Lyness, J. M. (2007). Effects of psychotherapy and other behavioral interventions on clinically depressed older adults: A meta-analysis. *Aging & Mental Health, 11*, 645–657.

Pinquart, M., & Schindler, I. (2007). Changes in life satisfaction in the transition to retirement: A latent-class approach. *Psychology and Aging, 22*, 442–455.

Purcell, B., Heisel, M. J., Speice, J., Franus, N., Conwell, Y., & Duberstein, P. R. (2012). Family connectedness moderates the association between living alone and suicide ideation in a clinical sample of adults 50 years and older. *The American Journal of Geriatric Psychiatry, 20*, 717–723.

Qin, P., Agerbo, E., & Mortensen, P. B. (2003). Suicide risk in relation to socioeconomic, demographic, psychiatric, and familial factors: A national register-based study of all suicides in Denmark, 1981-1997. *The American Journal of Psychiatry, 160*, 765–772.

Rabins, P. V., Black, B. S., Roca, R., German, P., McGuire, M., Robbins, B., … Brant, L. (2000). Effectiveness of a nurse-based outreach program for identifying and treating psychiatric illness in the elderly. *Journal of the American Medical Association, 283*, 2802–2809.

Raue, P. J., Meyers, B. S., Rowe, J. L., Heo, M., & Bruce, M. L. (2007). Suicidal ideation among elderly homecare patients. *International Journal of Geriatric Psychiatry, 22*, 32–37.

Reddin, J. A., & Sonn, C. C. (2003). Masculinity, social support, and sense of community: The men's group experience in Western Australia. *Journal of Men's Studies, 11*, 207–223.

Reker, G. T. (1997). Personal meaning, optimism, and choice: Existential predictors of depression in community and institutional elderly. *The Gerontologist, 37*, 709–716.

Rose, G. (2001). Reiteration: Sick individuals and sick populations. *International Journal of Epidemiology, 30*, 427–432.

Rosenberg, M., & McCullough, B. C. (1981). Mattering: Inferred significance and mental health among adolescents. *Research in Community and Mental Health, 2*, 163–182.

Rowe, J. L., Conwell, Y., Schulberg, H. C., & Bruce, M. L. (2006). Social support and suicidal ideation in older adults using home healthcare services. *American Journal of Geriatric Psychiatry, 14*, 758–766.

Saunders, J. B., Aasland, O. G., Babor, T. F., de la Fuente, J. R., & Grant, M. (1993). Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption—II. *Addiction, 88*, 791–804.

Schellenberg, G., & Silver, C. (2004). You can't always get what you want: Retirement preferences and experiences. *Canadian Social Trends, 75*, 2–7.

Schneider, B., Grebner, K., Schnabel, A., Hampel, H., Georgi, K., & Seidler, A. (2011). Impact of employment status and work-related factors on risk of completed suicide: A case-control psychological autopsy study. *Psychiatry Research, 190*, 265–270.

Shrira, A., Palgi, Y., Ben-Ezra, M., & Shmotkin, D. (2011). How subjective well-being and meaning in life interact in the hostile world? *The Journal of Positive Psychology, 6*, 273–285.

Skinner, H. A. (1982). The drug abuse screening test. *Addictive Behavior, 7*, 363–371.

Sorensen, P., & Cooper, N. J. (2010). Reshaping the family man: A grounded theory study of the meaning of grandfatherhood. *The Journal of Men's Studies, 18*, 117–136.

Statistics Canada. (2010). *Population projections for Canada, provinces, and territories: 2009–2036. Catalogue no. 91–520-X (ISBN: 0–660–19525-9)*. Ottawa, ON: Statistics Canada.

Statistics Canada. (2014). *CANSIM, table 102–0551: Deaths and mortality rate, by selected grouped causes, age and sex, Canada*. Retrieved from http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/hlth66a-eng.htm.

Stevens, C. L., Muran, J. C., Safran, J. D., Gorman, B. S., & Winston, A. (2007). Levels and patterns of the therapeutic alliance in brief psychotherapy. *American Journal of Psychotherapy, 61*, 109–129.

Suicide Prevention Resource Center. (2016). *Preventing suicide among men in the middle years: Recommendations for suicide prevention programs*. Waltham, MA: Education Development Center.

United Nations, Department of Economic and Social Affairs, Population Division. (2015). *World Population Ageing 2015* (ST/ESA/SER.A/390).

United States Census Bureau. (2003). *National population projections*. Retrieved from http://www.census.gov/prod/2001pubs/c2kbr01-10.pdf.

Unützer, J., Tang, L., Oishi, S., Katon, W., Williams, J. W., Hunkeler, E., … for the IMPACT Investigators. (2006). Reducing suicidal ideation in depressed older primary care patients. *Journal of the American Geriatrics Society, 54*, 1550–1556.

Vanderhorst, R. K., & McLaren, S. (2005). Social relationships as predictors of depression and suicidal ideation in older adults. *Aging & Mental Health, 9*, 517–525.

Weingarten, H. R. (1988). Late life divorce and the life review. *Journal of Gerontological Social Work, 12*, 83–97.

Westerlund, H., Kivimaki, M., Singh-Manoux, A., Melchior, M., Ferrie, J. E., Pentti, J., … Vahtera, J. (2009). Self-rated health before and after retirement in France (GAZEL): A cohort study. *Lancet, 374*, 1889–1896.

Wilson, N. J., Cordier, R., & Wilson Whatley, L. (2013). Older male mentors' perceptions of a Men's Shed intergenerational mentoring program. *Australian Occupational Therapy Journal, 60*, 416–426.

World Health Organization. (2002). *Gender and mental health*. Geneva: WHO.

Yang, J. A., & Jackson, C. L. (1998). Overcoming obstacles in providing mental health treatment to older adults: Getting in the door. *Psychotherapy, 35*, 498–505.

Yen, Y. C., Yang, M. J., Yang, M. S., Lung, F. W., Shih, C. H., Hahn, C. Y., & Lo, H. Y. (2005). Suicidal ideation and associated factors among community-dwelling elders in Taiwan. *Psychiatry and Clinical Neurosciences, 59*, 365–371.

Zika, S., & Chamberlain, K. (1992). On the relation between meaning in life and psychological well-being. *British Journal of Psychology, 83*, 133–145.

Chapter 11
The Six R's Framework as Mindfulness for Suicide Prevention

Thao N. Le, Leysa Cerswell Kielburger, and Bhante Buddharakkhita

Introduction

Suicide is a form of violence that is not only adversely consequential to oneself but to many others. While the intention, thought, and act to end one's life ultimately comes down to a single personal decision, it is far from being a personal affair. In fact, it is tied to much broader, social-systematic, and ecological concerns requiring integration and reflection across multiple dimensions as reflected in the ontological principle of dependent origination (*Pratītyasamutpāda),* a core teaching of the Buddha (*Buddhadharma*). Accordingly, "when this exists, that comes to be. With the arising of this, that arises. When this does not exist, that does not come to be. With the cessation of this, that ceases" (Samyutta Nikaya 12.61). In other words, things only exist due to their co-dependent arising from multiple causes and multiple conditions. A flower exists only because of the presence of non-flower elements (e.g., the sun, water, soil, insects, wind; Thich Nhat Hanh, 2000); there is no intrinsic nature of a flower nor in fact to anything at all including the self. Thus, suicide comes about due to many conditions that co-arise together, personal and impersonal, individual and societal. Most prevention and intervention efforts for suicide, however, have taken a more individualistic approach to focusing on developing an individual's skills and competencies, or in training community members to recognize signs of suicide and to make appropriate referrals. While this is extremely

T. N. Le (✉)
Department of Family and Consumer Sciences, University of Hawai'i Manoa, Honolulu, HI, USA
e-mail: thaole3@hawaii.edu

L. C. Kielburger
The Centre for Mindfulness Studies, Toronto, ON, Canada

B. Buddharakkhita
Uganda Buddhist Centre, Entebbe, Uganda

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*, Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_11

important, it does not completely attend to the co-arising conditions embedded in social relations and environment that contribute to suffering.

Mindfulness, as secularized in the West, has predominantly taken this more psychological, individualistic approach. In this chapter, we take the theoretical position of *Pratītyasamutpāda*, by couching prevention of suicide as requiring an overall integration of psychological mindfulness (facilitating individuals' skills), transcendent mindfulness (facilitating individuals' awakening, the soteriological aim of the traditional mindfulness practice), and critical mindfulness (facilitating attending to social, systemic issues), presented within a six R's framework. The six R's framework includes the processes of remembering, redirecting, replacing, reflecting, resolving, and retracing, each of which is discussed more extensively within this chapter. We begin, however, by reviewing the literature and research on mindfulness-based interventions for suicide prevention that currently exist.

Efficacy and Effectiveness of Mindfulness-Based Interventions for Suicide

In the United States, suicide is one of the top ten leading causes of morbidity and ranks number one among active military personnel (Kline et al., 2016). Within the last decade, an exponential increase in the body of literature on contemplative sciences suggest that a contemplative approach can provide evidential relief from suffering, including for those grappling with suicide (e.g., Hargus, Crane, Barnhofer, & Williams, 2010). Contemplative science draws primarily from cognitive neuroscience, developmental psychology, phenomenology, and psychiatry (Thompson, 2007) to investigate the development of human potential (Wallace & Shapiro, 2006). In the United States, such an approach has primarily focused at the individual level, around processes in the brain associated with a person's changes in level of attention, focus, cognition, regulation, neuroplasticity (Stiles, 2008), and epigenetics (Kaliman et al., 2014).

Within the field of contemplative sciences, researchers, clinicians, and academics have, for the most part, centered on mindfulness-based interventions (MBIs) as the contemplative practice to investigate, followed by self-compassion. Notably, there are many other forms of contemplative practices such as storytelling, body movements (e.g., tai chi, yoga), centering prayer, and chanting, among others (see www.contemplativemind.org), but MBIs have received the most attention in terms of scientific investigation. In fact, there are over 5000 studies on MBIs (American Mindfulness Research Association, 2017) with several meta-analytical studies that have been conducted to date (e.g., Gong et al., 2016; Goyal et al., 2014; Gu, Strauss, Bond, & Cavanagh, 2015; Hilton et al., 2016; Kuyken et al., 2016). A majority of the meta-analyses revealed modest empirical evidence for MBIs improving anxiety, depression, and chronic pain (Gu et al., 2015; Hilton et al., 2016; Kuyken et al., 2016), with the greatest body of evidence around efficacy and effectiveness for

Mindfulness-Based Stress Reduction (MBSR; Kabat-Zinn, 1990, 2003), Mindfulness-Based Relapse Prevention (MBRP; Bowen et al., 2009; Bowen, Chawla, & Marlatt, 2011), and Mindfulness-Based Cognitive Therapy (MBCT; Teasdale et al., 2000). Studies and evidence with respect to suicide remain much fewer and thus inconclusive, but trend in a promising direction.

Among Western-based scholars, MBIs are conceptualized as a form of mental training that can lead to the development of particular skills and dispositions (Roeser & Zelazo, 2012), such as mindful awareness and focused attention (Kabat-Zinn, 1994, 2003), emotion regulation, and well-being (Davidson & Begley, 2012; Goleman, 2003; Ricard, 2006). In the Western secular mindfulness approach and clinical literature, the most common definition of mindfulness is non-judgmental awareness about present moment experiences (e.g., Kabat-Zinn, 1990, 2003) that comes about by intentionally paying attention to moment-by-moment events as they unfold, internally and externally, and by noticing reactions to such events with an attitude of open curiosity (refer to Table 11.1, which highlights 24 major studies on suicide and mindfulness gleaned from our search on PubMed, Web of Science, PsychInfo, and Google Scholar). These skills increase one's ability to respond, rather than react, to whatever stimuli (sensations, thoughts, feelings) may arise. This is important as the main risk factors and components of suicidality include feelings of hopelessness and despair, thwarted sense of belonging and avoidance, as well as vulnerability to small changes in mood that instigates reactivity and engagement in suicidal thinking and behavior (Chesin, Benjamin-Phillips, et al. 2016; Williams, Fennell, Barnhofer, Crane, & Silverton, 2015).

With respect to suicide prevention and intervention, the growing scientific literature suggests that participating in MBIs yields improvements in cognitive and emotional regulation, specifically in relation to attention, concentration, inhibitory control, and self-regulation, along with other cognitive and executive functions (EF; Barnhofer et al., 2015; Basharpoor, Daneshvar, & Noori, 2016; Forkmann et al., 2014; Williams et al., 2015). These cognitive processes and executive functions help to organize and determine a person's social and emotional competence and functioning in the world. More recently, Mindfulness-based Cognitive Therapy for Preventing Suicide Behavior (MBCT-S) has been adapted as a 10-week group intervention that incorporates the Safety Planning Intervention. Considered a best practice by the Suicide Prevention Resource Center, the Safety Planning Intervention elicits the individual to provide a written list of coping strategies and sources of support (e.g., family, friends, professionals) to help alleviate a suicide risk (Stanley & Brown, 2012). MBCT-S is currently a widely used intervention for veterans with high suicide risk at the Veterans Health Administration (VHA; Kline et al., 2016); however, pilot studies only exist at present (Chesin et al., 2015). Most contemplative interventions for suicide prevention have been adapted from models developed for the prevention of depressive relapse, stress, and chronic pain, such as MBSR and MBCT, since there is substantial evidence regarding the link between depressive mind states and suicide (e.g., Barnhofer et al., 2015).

MBIs for suicide prevention/intervention such as MBSR, MBCT, and MBRP have largely targeted concerns around an individual's ability to self/emotionally

Table 11.1 Studies on mindfulness, self-compassion, and suicide

Name of author and study title	Sample size, ethnicity/race, age group	Design	Intervention vs. prevention studies	Mindfulness definition/ conceptualization	Measures	Main findings	Mechanisms
Anastasiades et al. (2017), *Perceived stress, depressive symptoms, and suicidal ideation in undergraduate women with varying levels of mindfulness*	928 participants (undergraduate students at a large southeastern university). Female (100%). Caucasian (76.7%), African American (12.2%), Hispanic/Latino (3.1%), Asian American (2.3%), other (5.3%). Age 18–26 (M = 19.92, SD = 1.58)	Quantitative (cross-sectional design)	Prevention	Non-judgmental awareness of the present moment	Mindful attention awareness scale (MAAS). Beck scale for suicide ideation (BSS)	Mindfulness moderated depressive symptoms on perceived stress and suicidal ideation	Explicitly examined: mindfulness mediates between depressive symptoms and recurrent suicidal thinking Inferred: mindfulness increases well-being and improves attention regulation
Barnhofer et al. (2015). *Mindfulness-based cognitive therapy (MBCT) reduces the association between depressive symptoms and suicidal cognitions in patients with a History of suicidal depression*	274 participants. Female (74%). Caucasian (95%). Age 18–70. A history of at least three previous episodes of depression, being in remission during the previous 8 weeks	Quantitative (based on RCT data by Williams et al., 2014)	Intervention	Awareness arising from: (1) intentionally paying attention on present moment; (2) noticing habitual reactions; (3) ability to respond with an attitude of open curiosity and compassion	Beck depression inventory–II (BDI-II). Suicidal cognitions scale (SCS)	Mindfulness weakened association between depressive symptoms and suicidal thinking	MBCT decouples the link between depressive symptoms and suicidal thinking Inferred: MBCT increases regulation (emotional/ behavioral) and decreases the risk for depression, thus preventing suicide

Basharpoor et al. (2016). *The relation of self-compassion and anger control dimensions with suicide ideation in university students*	150 participants (University students from Mohaghegh Ardabili University, Iran). Female (86) and male (64). Married (52) and single (98). Age (M = 21.25 years)	Quantitative	Prevention	Awareness and acceptance as component of self-compassion	Beck suicide ideation scale (BSIS). Self-compassion scale (SCS; mindfulness subscale)	Self-compassion and anger control factors were associated with suicide ideation	Explicitly examined: emotion regulation and self-compassion decrease suicidal thinking
Birnbaum and Birnbaum (2004). *In search of inner wisdom: Guided mindfulness meditation in the context of suicide*	40 participants. Female (25) and male (15). Caucasian (21), indigenous population from Alaska (19). Age 25–60	Qualitative (inductive ground theory methods)	Intervention	Attitude of acceptance in present moment	History of suicide attempts	Recommended guided meditation as a cross-cultural spiritual intervention for post-suicidal individuals	Inferred: self-awareness and meta-awareness can shift one's perception of self and connection to others, increase compassion and acceptance, and improve interpersonal relationships
Buitron et al. (2016). *Mindfulness moderates the association between perceived burdensomeness and suicide ideation in adults with elevated depressive symptoms*	218 participants (undergraduates). Female (78%). Hispanic (72.8%), White (63.8%), Black/African American (18.3%), Asian (6.9%), native American or Alaskan native (1.4%). Age 18–47	Quantitative.	Prevention	Awareness of present moment that is non-judgmental	Five facet mindfulness questionnaire (FFMQ). Adult suicide ideation questionnaire (ASIQ)	Mindfulness did not significantly moderate the association between thwarted belongingness and suicide ideation	Explicitly examined: mindfulness moderates the association between perceived burdensomeness and suicidal thinking Inferred: self-regulation (emotion/behavior) reduces depressive symptoms and suicidal thinking

(continued)

Table 11.1 (continued)

Name of author and study title	Sample size, ethnicity/race, age group	Design	Intervention vs. prevention studies	Mindfulness definition/ conceptualization	Measures	Main findings	Mechanisms
Chesin, Benjamin-Phillips, et al. (2016). *Improvements in executive attention, rumination, cognitive reactivity, and mindfulness among high -suicide risk patients participating in adjunct Mindfulness-Based Cognitive Therapy: Preliminary findings*	10 participants. Female (80%, *n* = 8). Age 18–64 (M = 41.7; SD = 16.3)	Quantitative (quasi-experimental pre–post design)	Intervention	Attention and acceptance of present moment experiences	Five facet mindfulness questionnaire (FFMQ). Self-compassion scale-short (SCS-S). Columbia University suicide history form	Treatment with mindfulness-based cognitive therapy and safety planning (MBCT-S) may improve cognitive deficits specific to suicide ideators and attempters, among depressed patients	Explicitly examined: executive attention mediates between rumination and suicidal ideation. Inferred: improved executive attention and self-regulation (emotion/ attention/behavior) decreases rumination and cognitive reactivity to suicidality

Chesin and Jeglic (2016). *Factors associated with recurrent suicidal ideation among racially and ethnically diverse college students with a history of suicide attempt: The role of mindfulness*	118 participants (college students in the northeastern United States). Hispanic (49%). Black (21%). White (20%). Other (10%). Female (86%). Age: non-ideators (n = 67) M = 21.7, SD = 5; and current ideators (n = 51) M = 20.8, SD = 6.3	Quantitative	Prevention	Attention and acceptance of present moment experiences	Beck scale for suicide ideation (BSS). Five factors mindfulness questionnaire (FFMQ)	Ability to observe experience was inversely related to the severity of suicidal ideation	Explicitly examined: mindfulness mediates between depressive symptoms and current suicidal thinking Inferred: self-regulation (attention/emotion) and meta-awareness are protective factors against suicide behavior among high-risk groups
Collett et al. (2016). *Negative cognitions about the self in patients with persecutory delusions: An empirical study of self-compassion, self-stigma, schematic beliefs, self-esteem, fear of madness, and suicidal ideation*	21 participants (clinical with persecutory delusions). Female (52%). Age 21–66 (M = 45.6, SD = 12.1) 21 participants (non-clinical control participants). Female (52%). Age 22–61 (M = 41.9, SD = 12.2)	Quantitative (cross-sectional design)	Intervention	Self-compassion as an open, non-judgmental, kind stance	Self-compassion scale (SCS). Beck scale for suicidal ideation (BSS)	Suicidal ideation was highly associated with low self-compassion	Explicitly examined: self-compassion is associated with suicidal ideation. Inferred: increased self-compassion and self-esteem and decreased negative self-concept, and negative self-comparisons to others, can decrease risk of suicidal ideation

(continued)

Table 11.1 (continued)

Name of author and study title	Sample size, ethnicity/race, age group	Design	Intervention vs. prevention studies	Mindfulness definition/ conceptualization	Measures	Main findings	Mechanisms
Collins, Best, Stitzke, and Page (2016). *Mindfulness and zest for life buffer the negative effects of experimentally-induced perceived burdensomeness and thwarted belongingness: Implications for theories of suicide*	Study 1: 92 participants (undergraduate psychology students). Female (66%). Age (M = 19.84) Study 2: 52 participants (undergraduate psychology students). Female (54%). Age (M = 19.48)	Quantitative	Prevention	Attention and non-judgment of present moment experiences	Self-injurious thoughts and behaviors interview (SITBI) Suicide assessed using three items: "I have no intention of killing myself in the near future," "it is very unlikely that I would die by suicide anytime soon," and "if I wanted to kill myself, I feel ready to do so"	Individuals receiving mindfulness training displayed greater persistence relative to controls	Inferred: self-regulation increases persistence and distress tolerance
Forkmann et al. (2014). *Effects of mindfulness-based cognitive therapy on self-reported suicidal ideation: Results from a randomised controlled trial in patients with residual depressive symptoms*	106 participants (in Germany). Age (TAU group: M = 54.0 years, SD = 13.24, *N* = 35, 65.7% female); (CBASP group: M = 50.2 years, SD = 10.5, *N* = 35, 63.9% female); (MBCT group: M = 48.4 years, SD = 11.5, *N* = 36, 58.2% female)	Randomized control trial	Intervention	Awareness arising from: (1) intentionally paying attention on present moment; (2) noticing habitual reactions; (3) ability to respond with an attitude of open curiosity and compassion	Hamilton depression rating scale (HAMD). Beck depression inventory (BDI)	Suicidal ideation (SI) reduced among patients with chronic depression when assessed via clinician rating in the MBCT and CBASP group (not in the TAU group), but there was no significant effect of treatment on SI when assessed via self-report	Explicitly examined: self-regulation mediates between rumination and suicidality Inferred: self-regulation and decentering (from thoughts, feelings, etc.) prevents downward mood spiral and suicidal ideation and behavior

Forkmann et al. (2016). *The effects of mindfulness-based cognitive therapy and cognitive behavioral analysis system of psychotherapy added to treatment as usual on suicidal ideation in chronic depression: Results of a randomized clinical trial*	106 participants. TAU group: *N* = 35, female (65.7%), age (M = 54, SD = 13.24); CBASP group: *N* = 35, female (63.9%), age (M = 50.2, SD = 10.5); and MBCT group: *N* = 36, female (58.2%), age (M = 48.4, SD = 11.5)	Randomized control trial	Intervention	Awareness arising from: (1) intentionally paying attention on present moment; (2) noticing habitual reactions; (3) ability to respond with an attitude of open curiosity and compassion	Hamilton depression rating scale (HAMD). Beck depression inventory (BDI)	MBCT and CBASP may be successful psychotherapeutic approaches for the group-based treatment of SI in chronically depressed patients (SI reduced when assessed by clinician rating in the MBCT and CBASP group, but not in TAU group. No significant treatment effect on SI when assessed via self-report)	Explicitly examined: self-regulation mediates between rumination and suicidality Inferred: self-regulation and decentering (from thoughts, feelings, etc.) prevents downward mood spiral and suicidal ideation and behavior
Hargus et al. (2010). *Effects of mindfulness on meta-awareness and specificity of describing prodromal symptoms in suicidal depression*	27 participants. Female (18). Male (9). Age 26-64 (M = 41.89, SD = 10.47). MBCT group: *N* = 14; and TAU group: *N* = 13	Randomized control trial; 3 months follow-up	Intervention	Awareness arising from: (1) intentionally paying attention on present moment; (2) noticing habitual reactions; (3) ability to respond with an attitude of open curiosity and compassion	Relapse signature of suicidality interview (ReSSI). Measure of awareness and coping in autobiographical memory (MACAM) (adapted version)	MBCT participants increased meta-awareness and decreased BDI-II scores (no change in those allocated to TAU)	Decentering and increased self-awareness (and meta-awareness) prevents future relapse into suicidal depression

(continued)

Table 11.1 (continued)

Name of author and study title	Sample size, ethnicity/race, age group	Design	Intervention vs. prevention studies	Mindfulness definition/ conceptualization	Measures	Main findings	Mechanisms
Haswell, Graham (1996). *Self-inflicted injuries. Challenging knowledge, skill, & compassion*	Women who present repeatedly with self-inflicted injuries, who are being treated by physicians	Review article				Understanding the etiology, presentation, and management of self-injury episodes may help therapists and physicians surmount their own negative feelings and be more supportive of patients	
Kline et al. (2016). *Rationale and study design of a trial of mindfulness-based cognitive therapy for preventing suicidal behavior (MBCT-S) in military veterans*	164 participants (high suicide risk veterans)	Randomized control trial. 4 weeks, 8 weeks, 6 months, and 12 months follow-up	Intervention	Intentional and attentional focus on present-moment experience	Columbia suicide severity rating scale (C-SSRS). Beck scale for suicide ideation (SSI). Five facet mindfulness questionnaire–Short form (FFMQ-SF). Suicide-related coping measure	This study has the potential to enhance quality and efficiency of VHA care for veterans at suicide risk and to improve the quality of life for veterans and their families	Explicitly examined: association between self-regulation (attention/ emotion) and suicidality. Inferred: attention regulation interrupts suicide-associated feedback loops and modifies neurocognitive and physiological markers associated with suicidal thinking/behavior (e.g., cognitive rigidity, over-general autobiographical memory)

Le and Gobert (2015). *Translating & implementing a mindfulness-based youth suicide prevention intervention in a Native American community*	8 participants (members the confederated Salish and Kootenai tribes (CSKT) of the Flathead reservation, Northwestern Montana). Female (3). Male (5). Age 15–20 (M = 17)	Mixed methods (feasibility study)	Prevention	Attention and non-judgment of present moment experiences	Mindfulness (two-items that asked: "How often, in the past week, did you think about something other than what you were doing?" and "how often, in the past week, were you focused on what you were doing?"). Healthy self-regulation (HSR). Patient health Questionnaire-9 (PHQ-9)	Mindfulness is a potential prevention strategy for youth suicide for native American youth; however, a collaborative and indigenous research framework is needed to ensure feasibility and sustainability of MBIs	Inferred: increase in distress tolerance, improvements in impulse control and emotion regulation, and increasing decoupling of one's thoughts and experience from self and the meaning of self may reduce the downward spiral associated with suicidal thinking and behavior
Luoma and Villatte (2012). *Mindfulness in the treatment of suicidal individuals*		Review article		Attention and non-judgment of present moment experiences		Mindfulness can increase awareness, equanimity, and self-compassion among those contemplating suicide and help clinicians to respond adaptively to the stress of working with suicidal clients and maintain flexibility in challenging clinical situations	Inferred: improved cognitive defusion (ability to observe the process of thinking rather than be entangled in cognitive activity) and over-general memory, as well as increased self-compassion, self-regulation, and distress tolerance

(continued)

Table 11.1 (continued)

Name of author and study title	Sample size, ethnicity/race, age group	Design	Intervention vs. prevention studies	Mindfulness definition/ conceptualization	Measures	Main findings	Mechanisms
Marchand (2012). S*elf-referential thinking, suicide, and function of the cortical midline structures and striatum in mood disorders: Possible implications for treatment studies of mindfulness-based interventions for bipolar depression*		Review article		Attention and non-judgment of present moment experiences		Evidence to support the use of MBIs for suicide prevention includes: (1) ruminative/self-focused thinking contribute to suicide-related behaviors/thoughts; (2) the cortical midline structures (CMS) are key in self-referential thinking and emotional regulation/ dysregulation; (3) CMS functional abnormalities are common in mood disorders; (4) striatum and CMS dysfunction are involved in the neurobiology of suicide-related thoughts/behaviors; (5) abnormal functional connectivity between striatum and CMS are relevant to depressive symptoms and suicide	Inferred: mechanisms include improved regulation and change in brain structures (thicker cortex in a CMS region, thicker gray matter in anterior cingulate, etc.)

Serpa, Taylor, and Tillisch (2014). *Mindfulness-based stress reduction (MBSR) reduces anxiety, depression, and suicidal ideation in veterans*	79 participants (veterans at an urban veterans health administration medical facility). Male (89%). Age (M = 60, SD = 7)	Quantitative	Intervention	Attention and non-judgment of present moment experiences	Five facet mindfulness questionnaire (FFMQ). Patient health Questionnaire-9 (PHQ-9)	MBSR training reduced anxiety, depression, and SI, and improved mental health functioning scores. Pain intensity and physical health functionality did not show improvements	Inferred: physiological mechanisms associated with MBSR can be highly efficacious at reducing anxiety, depression, and pain
Shorey et al. (2016). *The relationship between dispositional mindfulness, borderline personality features, and suicidal ideation in a sample of women in residential substance use treatment*	81 participants (in residential treatment in the Southeastern United States). Female (100%). Caucasian (96.3%), African American (3.7%). Age 18–60 (M = 32.30, SD = 13.95)	Quantitative (cross-sectional design)	Intervention	Attention and non-judgment of present moment experiences	Mindful attention awareness scale (MAAS). Personality assessment inventory (PAI)	Dispositional mindfulness is negatively associated with borderline personality disorder features and suicidal ideation	Explicitly examined: dispositional mindfulness and suicidal ideation. Inferred: reduced ability for mindful awareness (of all experiences) may increase destructive behavior (e.g., self-harm, suicide attempts) and avoidance of uncomfortable thoughts, feelings, situations, etc

(continued)

Table 11.1 (continued)

Name of author and study title	Sample size, ethnicity/race, age group	Design	Intervention vs. prevention studies	Mindfulness definition/ conceptualization	Measures	Main findings	Mechanisms
Tanaka et al. (2011). *The linkages among childhood maltreatment, adolescent mental health, and self-compassion in child welfare adolescents*	117 participants. White (27%), Black (31.3%), dual or multiple ethnicity (27.8%). Age 16 to 20 (M = 18.1, SD = 1.0)	2 years longitudinal study	Prevention	Self-compassion as kindness and acceptance of oneself; mindfulness as present, here-and-now experience	Self-compassion scale (SCS). Suicide assessment item: "In the last 12 months, did you actually attempt suicide?"	Higher childhood emotional abuse, emotional neglect, and physical abuse were associated with lower self-compassion Youth lower on self-compassion were more likely to have psychological distress, problem alcohol use, and report a serious suicide attempt as compared with those with high self-compassion	Explicitly examined: self-compassion and suicide attempts Inferred: emotion reactivity and regulation is compromised. Self-compassion may be modified and may improve self-view
Tucker et al. (2014). *Mindfulness tempers the impact of personality on suicidal ideation*	315 participants. Female (64.8%). Caucasian (81%), American Indian (6.7%), Biracial (3.5%), African American (3.2%), Hispanic (2.9%), Asian-American (1.9%), other (0.6%). Age 18–24 (M = 19.34 years)	Quantitative	Prevention	Attention and non-judgment of present moment experiences	Five factor mindfulness questionnaire (FFMQ), hopelessness depression symptom questionnaire–Suicidality subscale (HDSQ-SS)	Mindfulness weakened the relationship between neuroticism and suicidal ideation. A strong negative relationship between suicidal ideation and extraversion was present at low levels of mindfulness	Explicitly examined: self-regulation mediates between neuroticism and suicidal ideation Inferred: decreased emotional reactivity (increased emotion regulation) decreases suicidal ideation among those with low levels of extraversion and high levels of neuroticism

Vettese et al. (2011). *Does self-compassion mitigate the association between childhood maltreatment and later emotion regulation difficulties? A preliminary investigation*	81 participants. Male (65.4%). Caucasian (72.8%). Age 16 to 24 (M = 19.49, SD = 2.32)	Quantitative (cross-sectional design)	Intervention	Self-compassion as kindness and acceptance of oneself	Difficulties with emotion regulation scale (DERS). Self-compassion scale (SCS). Brief symptom inventory (BSI)	Self-compassion was negatively associated with emotion regulation difficulties and childhood maltreatment, and predicted emotion dysregulation above and beyond maltreatment history, current severity of psychological distress, and problem substance use	Explicitly examined: self-compassion significantly mediates between history of childhood maltreatment and emotion regulation difficulties. Inferred: self-compassion may be learned and may decrease anxiety, shame, depression, distressing outcomes, etc
Williams and Swales (2004). *The use of mindfulness-based approaches for suicidal patients*		Review article		Non-judgmental awareness of the present moment		MBIs for suicidal behavior address failures in reality testing, difficulties in managing the experience of affect (anger, anxiety, sadness), and the accompanying thoughts/beliefs	Inferred: mechanisms include improved emotion regulation, impulse control (behavioral regulation), self-awareness, distress tolerance, interpersonal skills/regulation, and attention regulation. Increased self-awareness may interrupt automaticity, rumination, and distressed mood and increase one's awareness of how often immediate, affect-based reactions tend to increase rather than decrease problems

(continued)

Table 11.1 (continued)

Name of author and study title	Sample size, ethnicity/race, age group	Design	Intervention vs. prevention studies	Mindfulness definition/ conceptualization	Measures	Main findings	Mechanisms
Williams et al. (2015). *Mindfulness and the transformation of despair: Working with people at risk of suicide*	274 participants (255 participants were analyzed; 19 left the trail), female (72%). Caucasian (95%). Age 18 to 68 (M = 43 years, SD = 12 years)	Randomized control trial. 3, 6, 9, and 12 months follow-up	Intervention	Awareness arising from: (1) intentionally paying attention on present moment; (2) noticing habitual reactions; (3) ability to respond with an attitude of open curiosity and compassion	Structured clinical interview for DSM (SCID). Beck scale for suicidal ideation (BSS). Suicide attempt and self-injury interview (SASII)	MBCT is more effective in preventing relapse to major depression than both CPE and TAU when severity of childhood trauma is taken into account. Mindfulness training was an "active ingredient" that improved the effectiveness of the intervention for the most at-risk people	Inferred: mechanisms include acceptance, self-compassion, and decentering which help to facilitate emotional processing (increased distress tolerance) and decrease rumination and suicide risk

regulate effectively. This is because individuals who experience suicidal thoughts—having intentions to engage in self-harming behaviors and/or to actually engage in acts of suicide—suffer from an inability to dis-identify from their thoughts; that is, they believe their thoughts to be true and real. They may also experience lower distress tolerance, and an inability to be with and sit with discomforting emotions and to direct their emotional energy to more wholesome states of mind (Chesin, Interian, et al., 2016). Shapiro, Brown, and Astin (2008) explained that mindfulness practices activate and enhance a person's attention and metacognition, which is his/her capacity to be aware of, reflect upon, and exercise control over his/her own cognitive processes. Transformative learning is dependent on metacognitive awareness or "reperceiving" (Shapiro, Carlson, Astin, & Freedman, 2006), the ability to discern and direct one's attention toward an alternative perception (e.g., "I am such a worthless person" to "it is only a thought, a habit pattern of thinking, that is passing through my mind at the moment"). This competency is a protective factor in reducing one's risk of depression and/or suicidality (Williams et al., 2015) and is associated with self-regulation. Self-regulation involves regulation of emotions (Davidson & Begley, 2012), cognitive flexibility (Crone, Donohue, Honomichl, Wendelken, & Bunge, 2006), and inhibition of impulses (Luna & Sweeney, 2004). Goleman's (1995, 2003) research indicates that adolescents who can mindfully self-regulate by calming themselves down when faced with stressful environmental stimuli are more likely to develop this response, and the ability to manage distress on a cognitive level. Zelazo and Lyons (2012) described how contemplative practices train top-down influences on self-regulation (e.g., prefrontal skills such as executive function) while modulating bottom-up influences (e.g., reducing anxiety) on those top-down skills. This feedback loop operates in a dynamic, reciprocal fashion between external stress and internal motivation (i.e., unwholesome thoughts), which can potentially affect the executive function of the brain. Because suicide is associated with ruminating on negative thoughts and ideas, the ability to suspend this habitual pattern can be highly ameliorating for an individual (Law & Tucker, 2018).

Other individual risk factors implicated in suicidality include ideas around shame. According to Brown (2012), shame is conceptualized as the mind's highly internal critical voice that incessantly plays two narratives: "I am not good enough," and "Who do you think you are?" It is perceived as a lack of worth, and of deficiency surrounded with secrecy (things about me that others do not know) and judgments (and if they knew, they would not like me). Self-compassion (directing kindness to oneself and realizing common humanity) has been considered a potentially malleable construct for use with individuals with negative self-views, such as shame (Neff & McGehee, 2010). For instance, among a sample of young adults in a treatment program for addictions and mental health issues, self-compassion was negatively associated with emotion dysregulation above and beyond prior histories of abuse and psychological distress (Vettese, Dyer, Li, & Wekerle, 2011).

Research on suicide risk has also investigated relational components of shame, with the interpersonal-psychological theory of suicide proposing that it is the unfulfilled sense of connection and belonging that drives suicidality (Joiner, 2005). Specifically, this theory identifies thwarted belongingness and perceived

burdensomeness as crucial factors and encompasses feelings of shame (I am not good enough; hence, I have become a burden to others, limiting wholesome connections). As we are social creatures and need to feel that we belong somewhere, thwarted belongingness is the sense that our affiliative attachment needs are compromised and unfulfilled. Collins, Stebbing, Stritzke, and Page (2017) explored whether a brief mindfulness intervention could attenuate the impact of interpersonal factors on desire to escape, based on a computer task that manipulated perceived burdensomeness and thwarted belongingness; they found that MBI attenuated the effects of the interpersonal factors, suggesting that MBIs may protect against interpersonal adversity associated with suicidal desire. Buitron, Hill, and Pettit (2016) similarly found mindfulness to moderate the effect of perceived burdensomeness, but not thwarted belongingness, on suicidality. Among a large sample of diverse college students, Chesin and Jeglic (2016) reported that suicidal ideation was inversely related to awareness of present moment experience, suggesting that a pause from incessant thinking of past and future is a helpful strategy.

Perhaps Williams et al. (2015) have conducted the most comprehensive study on mindfulness and suicide to date. Williams et al. (2015) suggested that suicidal thoughts and feelings often arise in the context of a depressive episode, when despair and hopelessness are present. They identified that those who face despair and contemplate suicide have often lived (or are living) in difficult circumstances and may have a genetic disposition toward unpredictable or large mood swings. A common pathway to suicidality involves "the feeling of being totally defeated combined with the feeling that there is no escape" (p. 15). Impaired problem solving and being overgeneral in memory are critical factors that may also render a person vulnerable. For those with a history of suicidality, their associated moods and cognitions may be coupled with this behavior and can be triggered by just one aspect of this interconnected pattern (Williams et al., 2015). Their mental pain often increases when thoughts and feelings are suppressed or avoided, as this can often make them even more intrusive. One's vulnerability to suicidal depression is often dependent upon small shifts or drops in mood, which then reactivate suicidal ideas and behavior.

The framework put forth by Williams et al. (2015) targets a person's automatic reactivity and tendency to "couple" his/her mood to suicidal ideas and urges. Mindfulness-Based Cognitive Therapy (MBCT), their preferred mode of intervention, has been shown to "uncouple" a person's mood from his/her suicidal ideas and urges (Williams et al., 2015). MBCT training also reduces the tendency to overgeneralize memories, which can improve one's ability to respond skillfully to life's challenges. An increase in self-awareness, self-compassion, and the ability to decenter are all beneficial mechanisms of mindfulness, which help to facilitate emotional processing (increased distress tolerance) and decrease rumination and suicide risk. Mindfulness helps people to decenter from unpleasant aspects of experience and to actively re-engage with life; when mindfulness is practiced, people feel more connected and aware (Williams et al., 2015).

In another study, Chesin, Benjamin-Phillips, et al. (2016) outlined risk factors and intervention strategies in their review of 40 studies on MBIs for suicidal behavior. They identified the deficits common to those at risk for suicide as problem-

solving deficits, an altered stress response, and attentional dyscontrol (Chesin, Interian, et al., 2016). MBIs are suggested to be effective in reducing and improving these deficits through three possible mechanisms of action: improved attentional control, or "the ability to detect subjectively salient or adaptive stimuli while facing simultaneous distraction" (p. 519); an improved, regulated stress response (e.g., improved top-down regulatory processes); and, improved cognitive problem solving, especially when under stress (Chesin, Benjamin-Phillips, et al., 2016). Problem-solving skills are shown to protect against the recurrence of suicidal ideation and suicide attempt (Chesin, Interian, et al., 2016). Thus MBIs, like MBCT, are effective at reducing symptoms of depression and suicidal ideation, as well as reducing the vulnerabilities associated with suicidality. As Williams et al. (2015) modified MBCT to increase engagement and response among high suicide risk individuals (e.g., enhancement of treatment engagement through a structured interview), Chesin, Interian, et al. (2016) also emphasized the importance of increasing the acceptability and engagement of MBIs for this target population. Like Williams et al. (2015), they identified the importance of targeting suicidal ideation and emphasized the efficacy of using MBIs with individuals at high risk of suicide.

Although Williams et al.'s (2015) framework, along with other MBIs, have been widely accepted among clinicians, researchers, and academics, it is not without critiques and concerns by a small but growing body of academics and practitioners advocating for a more integral and critical conscious perspective. Critiques, such as those by Purser and Loy (2013) and King (2016), contend that secular mindfulness-based interventions, such as MBCT, MBSR, and MBRP, are biased toward a particular political-economic philosophy, namely neoliberal capitalism, that frames mindfulness as an individualistic endeavor in favor of a privatized, psychological practice; such an approach becomes complicit in favoring the status quo of oppression and injustice. This argument suggests that by couching mindfulness as solely an autonomous, personal enterprise toward self-control and self-optimization, it disregards attending to larger systemic, institutional factors and situational stressors that contribute to suffering (Kirmayer, 2015; Purser & Loy, 2013). In other words, by teaching individuals to be mindful, we conveniently put the onus and burden on the individual to change, rather than calling attention to, and trying to change, larger systemic forces. As an illustrative example, in the review of current MBIs for suicidal behavior, all 40 studies reviewed did not include much discussion about, or investigation of, contextual or cultural factors that may contribute to suicidality, or how culture/context may influence mindfulness practice for participants and, thus, outcomes (Chesin, Interian, et al., 2016). Most studies also considered mindfulness as an intervention (e.g., MBCT), targeting individuals who already had experiences with suicide or those at risk for recurrent suicidal behavior, rather than presenting mindfulness within a more preventative or global framework (i.e., awakening from all forms of suffering). Consequently, this medicalization and psychologization of mindfulness serves to sidetrack attention away from issues of culture and context (Germano, 2014; King, 2016), including the cultural frames in which secular mindfulness practices claim effectiveness (i.e., scientific reductionism) and are promoted (e.g., neoliberalism; Lavelle, 2016). Indeed, this ideology is consistent with neoliberal values of authenticity, competitiveness, and individualism (Wilson, 2014).

Even within the western scientific framework, we should also note that many studies concerning the use of contemplative practices to prevent suicide or curtail its repeated occurrences are still preliminary and lacking in scientific rigor. Studies remain limited by small samples with weak statistical power, reliance on self-report measures only, and limited long-term follow-up (see Table 11.1); few have employed the gold standard of clinical sciences—double-blind randomized clinical trials with active controls. Exceptions to this are few (e.g., Barnhofer et al., 2015; Forkmann et al., 2014; Forkmann, Brakemeier, Teismann, Shramm, & Michalak, 2016; Hargus et al., 2010; Kline et al., 2016; Williams et al., 2015). Further, we are still restrained in our understanding about the change process associated with MBIs for suicide, in part due to the lack of qualitative research and clear description about the actual intervention itself. Information about the reported experiences of individuals as they engage in the practice of mindfulness (i.e., what do they do, and how do they experience mindfulness?), and the intensity and duration of participants' engagement in the practice, as well as the experience and qualification of the trainers delivering the intervention all remain lacking in many studies to date. Critiques concerning external validity and generalizability (effective for whom?) have also been expressed, in that most studies have been conducted predominantly with adults and with European American populations, or even fail to report sufficient demographic information (see Table 11.1). Further, evidence-based programs such as at MBCT have not been extensively evaluated among ethnic minority communities or paid sufficient attention to context and culture, including the form and manner of cultural adaptations that may need to take place for acceptability and sustainability; such studies remain egregiously limited (Cheng & Sue, 2014). This is especially problematic when the burden of suicide appears to be experienced disproportionately by certain ethnic, or otherwise vulnerable, populations (e.g., native, indigenous, and rural populations) and communities, particularly among the young. First Nations youth in Canada, for instance, experience suicide rates five to seven times higher than non-Aboriginal youth, and Inuit youth have one of the highest suicide rates in the world (Health Canada, 2017). Native Hawaiian youth ranked highest in the nation for self-reported rates of suicidal behaviors in 2009 (Centers for Disease Control and Prevention, 2010).

Finally, we note that the conceptualization of mindfulness has primarily been biased toward one aspect of mindfulness—on present moment awareness without judgment (Kabat-Zinn, 1994; see Table 11.1). Although this is an important component of mindfulness, it does not necessarily capture the full spectrum of mindfulness from the Buddhist tradition where mindfulness practices originated. Therein lies the third criticism of the current mindfulness and, particularly, clinical movement approach—detraditionalization (King, 2016). As mindfulness practices entered Western soils, it necessarily adapted to Western culture with its emphasis on medicalization, psychologization, detraditionalization, and secularization (King, 2016; Kirmayer, 2015). Without exploring here the historical differences between the varied Buddhist traditions (refer to Dunne, 2011; Sharf, 2015, for an extensive review), King (2016) articulately summarized the dimensions in which mindfulness is anchored: in one historical tradition, the focus of *sati* (mindfulness in Pali, or *smirti* in Sanskrit) is on cultivating bare attention, presencing that is conditioned by equa-

nimity and detachment. In other historical traditions, it also encompasses a "disciplined exercise of analytical insight (prajñā)" into "its" (object of attention) antecedent causes and conditions and an intention to direct consciousness toward ethically wholesome rather than unwholesome thoughts (King, 2016, p. 32). While mindfulness approaches for suicide prevention/intervention have primarily focused on mental and cognitive strategies, a total embrace of both traditions requires regarding mindfulness as not just about learning to pay attention on a moment-to-moment basis and effective self-regulation skills, but, equally important, as about developing insight (cognitive understanding as well as tacit, experiential understanding of co-arising phenomena) and cultivating ethical thought, speech, and actions. In fact, in some traditions, one is required to cultivate a strong foundation in ethical thought, speech, and action before embarking upon concentration/stillness and mindfulness techniques. In this regard, we propose a more comprehensive framework of mindfulness for suicide prevention by adopting venerable Bhante Buddharakkhita's five R's framework for thought management (redirect, replace, reflect, retrace, and resolve; Buddharakkhita, 2017) along with mindfulness as remembering, or memory (original definition of *sati, smirti*). As suicide prevention, this framework considers mindfulness as explicitly Buddhist-derived, and integrates and considers both personal and socially engaged dimensions, informed and propelled by virtue ethics, with the goal of liberation and awakening from suffering.

Mindfulness as Suicide Prevention: The Six R's Framework

Mindfulness is the ability to see and, thus, understand with crystal clarity, the what, how, and why of each thought, speech, and action in each moment of every moment. It involves breaking through conditioned habits associated with clinging (greed), reactivity (aversion), and ignorance stemming from delusions, attachment, and identification to the self (Gotink et al., 2015). While it may appear that such a practice is self-focused (e.g., "I" learn to see my biases), ultimately, truly understanding and embodying the principle of co-dependent arising (i.e., I as impermanent, arising from multiple conditions) reduces the grip of self-reference motivations. The radical shift in perspective, reducing attachment to self and the ability to suspend conceptual understanding, results in an expansion of the circle of "I" to the welfare and concern of the collective. Such a freedom requires unshakeable stability, on two pillars, that is possible through Right Mindfulness: insight (wisdom) and compassion. We propose a framework for mindfulness as suicide prevention anchored on core teachings of Buddha's (*Buddhadharma*) foundational premises and soteriological goal. This framework integrates strategies, competencies, and approaches that are intertwined and collectively serve to encourage unfolding of insight and compassion, and which are intentionally preventative for realization of healthy mind and healthy community. As a preventive approach, it is not just targeting individuals who are at risk for suicide and/or experiencing recurrent suicide episodes that are more in line with MBCT (Williams et al., 2015) and MBCT-S (Kline et al.,

2016), but is also concerned with the need to include critical attention to community health because community welfare (everyone's well-being) interacts with and impacts any one person's well-being.

In this six R's framework, the first three sets of strategies (Remembering, Redirecting, Replacing) encompass the approach of psychological mindfulness, as espoused by current MBIs such as MBSR, MBCT, and MBRP. These sets of strategies aim to cultivate non-identification and non-reactivity through skillful attention to, focus on, and being with phenomena as they arise. The reflect and resolve strategy is similar to what Bhikkhu Bodhi (1997, 2016) considered "transcendent mindfulness," that is, direct, experiential awareness into nonself and dependent origination, the core of *Buddhadharma*. While current MBIs and MBIs for suicide prevention do include skills for non-identification, they do not necessarily include skills associated with reification (e.g., Miller, 2016). Thus, the set of strategies proposed here aim to progressively loosen the grip on the self, toward a reification process of self by contemplation and understanding impermanence, interdependence/interbeing, and nature of dissatisfaction. The retrace strategy considers how suicide is not just a personal matter, but also conditioned by the interplay of other factors (e.g., community factors, colonization experiences, intergenerational trauma, environmental factors), thus, attention beyond individual factors and competencies are needed—critical mindfulness. The methodology of critical pedagogy/indigenous critical pedagogy can be used to examine assumptions, biases, and conditions that have shaped historical, cultural, systemic events that contribute to suffering. Retracing can also be an individual-level practice, but the practice entails a critical, analytical reflection on the causes and conditionings, including personal, cultural, and collective factors, that interrelate to contribute to suicidal thoughts and attempts.

Remembering

Among the academic community, there is still no agreed upon consensus about the definition of mindfulness (Van Dam & Grossman, 2011). Within traditional Buddhism, mindfulness includes a range of different practices to train the mind toward a high level of focus and attention whereby one is keenly aware of the object of attention (Bhikkhu Bodhi, 2016), and with exceptional concentration/stillness, acquires greater facility to see things as they are, rather than through the filters of a conditioned mind. The Pali and Sanskrit words translated into English as mindfulness are *Sati and Smirti*, respectively. *Sati/smirti* means to remember, or to recollect, and encompasses memory. What is it that is being remembered? It is remembering where the mind is in this moment, the awareness of whatever is happening within and outside the "encapsulated self," and, also, the awareness of whether whatever is arising (in the mind, speech, and action) is in accordance with wholesome states of mind and virtues, or not. Mindfulness is the "observing power" of the mind, like a mirror, that reveals things, phenomena, experiences, etc., as is, without adding or subtracting anything. It can be regarded as an awareness without the usual

discursive mind chatter (e.g., commenting, labeling, judging, comparing). With a still and calm mind, an awareness arises to illuminate things as they are. It is not only awareness about the mental state of the mind (whether it is wholesome or not wholesome), but also the awareness and effort to intentionally direct the mind toward ethical concerns and wholesome states.

Psychologists, such as Haidt (2001), asserted that most of us operate under unconscious awareness; what we deem as conscious choices are actually shaped by non-conscious, automatic and intuitive, emotional processing (Haidt, 2001). For instance, saying that "I chose to eat chocolates" is perhaps not fully recognizing that the preference for chocolates is conditioned by multiple discrete moments of prior sensory, emotional experiences that were paired with contextual variables and interpretations (I like this) laid deep down in the memory circuits of the brain. For individuals suffering from suicidal ideation/behavior, lack of awareness can be particularly problematic because of the mind's learning pattern toward unwholesome states, and the persistence of this habit. They may even fully believe the content of their thoughts (e.g., I am hopeless), and because they believe their thoughts, they become awash in feelings of shame, worthlessness, and burdensomeness, which then feeds more unwholesome thoughts in a vicious loop. Mindfulness can serve as a disrupter by shining the light of awareness to the unaware, unwholesome states of mind.

Before knowing how to direct the mind, one must first know where the mind is and what the mind is doing. In psychology, this capacity is known as meta-awareness, metacognition, decentering, or taking an observer's stance (Gotink et al., 2015). It is the ability to be able to stand back, with dispassion, and observe the contents of the mind, be it a sensation, thought, or feeling, and not get caught up or hijacked by it. For individuals suffering from suicidal thoughts or behaviors, this is a crucial ability, as this observer's stance facilitates an important process of non-identification. Non-identification means recognizing that one is not one's thoughts, feelings, emotions, sensations, but that these are merely events passing through the mind. This metacognitive ability promotes the process of letting go. Barnhofer et al. (2015) observed that the ability to decenter is one mechanism by which mindfulness helps with suicide. Hargus et al. (2010) also found that mindfulness training improves meta-awareness skills for those suffering from suicidal depression which, in turn, reduces subsequent relapse.

Another mechanism in ameliorating suicide is increasing a person's capacity to sit with discomforting emotions, feelings, and thoughts because individuals at risk for suicide have low distress tolerance, and sometimes seek unhealthy means to escape discomfort. Williams et al. (2014), for instance, indicated that MBCT is useful in helping individuals to be in touch with painful stimuli rather than avoiding it or ruminating about it. Reactivity is a common pattern among individuals at risk for suicide (Williams et al., 2015); thus, with greater non-identification comes less reactivity. So, in essence, remembering means remembering to be aware—knowing one's mental state. Once one "remembers," then one may redirect the mind toward more wholesome states of mind, or toward the object of the discomfort, to enhance the ability to be with distress and discomforting feelings and emotions.

Redirecting

A common trope of many MBIs, including MBSR and MBCT, is that we suffer from an attention deficit, or a mind wandering problem, and that being unable to pay attention to the present moment, or mindlessness, is the main etiology for stress and suffering. Hence, a core aspect of mindfulness and focus of MBIs is to teach individuals how to cultivate focus and attention (Gotink et al., 2015). This relates to the redirecting technique. Once the individual is aware that the mind has wandered away from the object of focus, be it perseverating on a thought (i.e., ruminating) or aimless mind wandering (to a difficult past, or anxiety-provoking future), then the individual can temporarily disengage the mind from whatever it is doing and redirect the mind to a neutral object of attention (e.g., breath) or to a wholesome object of attention (e.g., kind thoughts). Whenever disturbing thoughts arise, redirecting the mind to neutral or wholesome thoughts can help to dispel the energy fueling the disturbing thoughts. In mindfulness of the breath practice, for instance, one is invited to direct full attention on the sensation of breathing. The breath serves as a neutral object of attention, anchoring one's mind on the here and now. Individuals who suffer from suicidal thoughts/behavior often ruminate, "chewing on" thoughts repeatedly. Unfortunately, most of the thoughts are negative, and negative thoughts are particularly "sticky" in nature (Joormann, Levens, & Gotlib, 2011). Relatedly, Brown (2012) stated that the brain is wired to create a narrative, a story about who we are that often includes blame, self-criticism, self-imperfections, and the not-good-enough story line; further, because each story requires a beginning, middle, and end, we may fill in any limited data points in our story with values, ideas, and conspiratory thoughts related to our sense of incompleteness and lack. This is particularly the case among suicidal individuals, as they tend to suffer from over-generalized memory (i.e., inability to retrieve specific memories but, rather, remembering, more generally, over many events and periods; Sinclair, Crane, Hawton, & Williams, 2017) in the way they recall their personal past (autobiographical memory). This, in turn, affects their reactivity to the present; hence, such memory processes contribute to feelings of hopelessness and despair and impair problem solving. For suicidal individuals, redirecting attention away from negative thoughts and stories, perhaps by focusing on a neutral object like one's breath, the leaves flickering on a tree, or the touch of the wind blowing on one's face, for instance, may lessen the grip of this habit. In one empirical study, mindfulness was shown to reduce thoughts of burdensomeness by putting a pause on negative judgment and reactions (Buitron et al., 2016).

Interestingly, neuroscience data continue to reveal that our default mental habit is inherently self-focus, whereby neural patterns show biased tendencies toward thoughts, feelings, and sensations related to the self (i.e., default mode network; Hölzel et al., 2011). It is likely that the default mode network of those suffering from suicide is even more heightened and intense. As a result, the content of ruminating thoughts, for the most part, are self-referential in nature in addition to being extremely negative. Suicidal individuals suffer from incessant negative self-cognitions, including, among others, negative self-attributes and self-schemas, and these negative self-cognitions are much more pronounced as compared to persons without mental health issues (Collett, Pugh, Waite, & Freer, 2016; Marchand, 2012).

Hence, mechanisms and strategies, such as redirecting, divert mental energy feeding self-referential, negative thoughts toward neutrality. At best, negative thoughts and feelings are not being fed further along self-referential lines (Marchand, 2012). Forkmann et al. (2014) showed how being able to cultivate distance from worrying cognition can help with suicide, while Pagnoni, Cekic, and Guo (2008) revealed that meditation helps to reduce self-referential thinking by altering changes in the cortical midline structures of the default mode network. Relatedly, MBCT-S was shown to decrease rumination and sense of hopelessness among the 10 participants in the study (Chesin, Benjamin-Phillips, et al., 2016).

Replacing

A criticism of many current MBIs is the absence of ethics and virtues in its program and training. According to *Buddhadharma*, mindfulness practices need to be embedded and enacted within ethical components of cultivating wholesome states of mind in thoughts, speech, and actions. The strategy of replacing is the effort to replace unwholesome states of mind with wholesome states of mind. For instance, this includes replacing thoughts of greed with thoughts of non-greed (generosity); thoughts of hatred or anger with thoughts of non-hatred (loving-kindness, compassion, self-compassion); thoughts of blame with thoughts of non-blame; thoughts of ingratitude with thoughts of gratitude; and thoughts of delusion with thoughts of wisdom and understanding. In the Buddhist tradition, forms of meditations known as the *Brahmaviharas* explicitly prescribe cultivating certain mind states, specifically loving-kindness, compassion, empathetic joy, and equanimity. They are regarded as effective antidotes to dysfunctional perceptions, thoughts, schemas, and feelings, and need to be repeated daily in all areas of thought, speech, and actions. For instance, the moment one is aware (remembering as mindful) that anger has arisen, immediately, thoughts of loving-kindness should be invited to come up to replace and neutralize anger. Accordingly, loving-kindness is wishing that all sentient beings be happy, and compassion is wishing all to be free from suffering. The recent construct of self-compassion, first coined by Neff (2003), is about extending kindness, positive regard, and acceptance to oneself rather than engaging in self-criticism when encountering experiences of aversion (pain, shortcomings). It also includes the component of common humanity, the recognition that we are all imperfect. Loving-kindness meditation and compassion meditation are derived from the *Brahmaviharas*, with secularized versions such as the Cognitively-Based Compassion Training (CBCT; developed by Emory University). CBCT has six curriculum modules that aim at stabilizing attention, fostering present-moment awareness, and cultivating equanimity, self-compassion, empathy, gratitude, and compassion (Kirby, 2017). Unlike other MBIs (e.g., MBSR), CBCT has components that include processes of reasoning and reflection, and clear instructions on what wholesome states to cultivate and how to cultivate them, as based on the *Brahmaviharas*. The Compassion Cultivation Training (CCT) developed by Stanford University with Geshe Thubten Jinpa is also a secularized version of

compassion meditation, conducted as an 8-week educational program that aims to foster resilience, empathy, and connection. It provides training on being present with suffering (rather than avoiding) and engaging in compassionate action (Jazaieri et al., 2014). Cultivating these wholesome mind states have been shown to decrease obsessive self-concern (Negi, 2009; Seppala, Rossomando, & Doty, 2013) and increase social connection (Hutcherson, Seppala, & Gross, 2008). Germer and Neff (2013) noted that participants in the Mindful Self-Compassion Therapy receiving self-compassion and mindfulness training reported significant increases in self-compassion and mindfulness, and experienced decreases in anxiety and depression as compared to the control.

Although limited, studies on self-compassion, loving-kindness meditation, and compassion meditation, with respect to suicide, are yielding positive indications that an intentional focus on nurturing thoughts of loving-kindness, empathy, and equanimity toward self and others is protective against suicidality (e.g., Basharpoor et al., 2016; Collett et al., 2016). This is because suicidal individuals suffer from intense, entrenched negative self-referential thinking such as self-criticism and low self-worth. Such patterns of thinking and schemas tend to become over-generalized and catastrophized, which sparks rumination, cognitive inflexibility, and negative mood, eliciting a cycle of distress that increases suicide risk. Such deficits in cognitive processing often persist during remission for those who have previously attempted suicide, creating a vulnerability to repeat suicidal patterns.

Mindfulness meditation facilitates seeing these negative self-thoughts or experiences for what they are, as impermanent phenomena and not necessarily real and concrete, and by encouraging individuals to lean into their discomfort, curtails avoidance tendencies. As a complement, loving-kindness and self-compassion meditation serves to not only replace these negative, dysfunctional patterns, but also blocks the reactivation of these patterns and maladaptive behavioral responses. Because suicidal individuals often regard themselves as "damaged," "alone in the world," and "a burden to others," engaging in loving-kindness and compassion meditation can be quite significant in being both antidote and vaccine to negativity. Over time, the typically damaged perceptions of thinking attenuate, and are overridden by, more wholesome perceptions (e.g., Basharpoor et al., 2016; Germer & Neff, 2013). Thus, in the replace strategy, individuals intentionally engage in replacing unwholesome states of mind with wholesome states of mind. The replacement strategy combines attention with the intention of letting go, loving-kindness, and non-harm to ourselves and others.

Reflecting

In the reflecting strategy, individuals may observe that unwholesome states of mind lead to unhappiness, while skillful states of mind lead to joy. However, because suicidal individuals often engage in suppression of negative thoughts and feelings, such unwholesome thoughts and feelings can become even more intrusive, so mental analysis may lead to endlessly raking over the past to understand present state of

mind and feelings. In this regard, the reflecting strategy needs to be guided within the parameters of the Buddhist traditional practices of analytical insight (*Paññā (Pali)/prajñā* (Sanskrit)). This is the practice of examining all phenomena (sensory, thought, feelings) through the lenses of impermanence, unsatisfactoriness, and non-self (the three marks of *Buddhadharma*). This strategy, which is termed "reflecting" in the present framework, specifically focuses on deepening the non-identification processes that were in the redirecting process, while also loosening the reification process.

The reflecting strategy involves contemplation on the two major underlying and unskillful habit patterns that give rise to suicidal thoughts and behavior: clinging and reactivity. According to *Buddhadharma*, it is the energy of greed and aversion that propels clinging and reactivity, respectively. The clinging pattern relates to one's habitual orientation toward pleasurable states, while reactivity is aversion toward whatever is arising (e.g., sensation, thought, actions) that is not pleasant or not as one wishes. On and on, individuals toggle back and forth between clinging and reactivity and, for suicidal individuals, this cycling of clinging and reactivity can be even more intense and amplified. Both clinging and reactivity are based on a strong identification with self in the sense that one imbues perception, interpretation, and meaning of any arising phenomena (e.g., thoughts, feelings) to being something about the self, rather than seeing these events as processes of coming and going. In other words, this intense self-referential bias results in clinging and reactivity. Excessive rumination and distorted self-perceptions are implicated in dysregulated cognitive processes that foster depression and suicide (Marchand, 2012). For suicidal individuals, attachment to aversive narratives about self and others, and distorted worldviews, can amplify their anguish and suffering. MCBT and other MBIs help individuals struggling with suicide to cultivate the observer's stance, the ability to step back from experiences to observe and note phenomena without becoming involved, getting caught up, or enmeshed in it, but to notice the experience with kindness, acceptance, and discernment. However, these MBIs do not necessarily proceed to the next level of addressing the reification process (Miller, 2016).

Current studies from neuroscience literature seem to reflect what has been expressed in *Buddhadharma* regarding lack of an intrinsic, substantial, essential, permanent self; rather, the self comes into being as a result of a reification process of clinging and conceptualization, of causes and conditions. In other words, the self arises via this "selfing" process. Ajahn Brahm (2006) uses the analogy of the onion to illustrate the nature of the reification process, whereby the "I" at the center (self-referenced bias) goes on and on (On..I…On) to the past and future. Similarly, Miller (2016) discussed how excessive misidentification and attachment to self contributes to suffering, considered as "self-cherishing" within Buddhist psychology, as a "deeply painful mentalizing; an all-consuming cognitive-affective fixation on distorted, hyper-egoic self-narratives" (p. 340). As well, Miller notes the potential beneficial effects of mindfulness on self-cherishing:

> Mindfulness slows down the selfing/self-cherishing processes so that one may experience impermanence of the self, of the illusoriness of the self; ultimately, combined with a strong foundation in ethics, insight, freedom spontaneously occurs. Moreover, being able to see

> the selfing process clearly, there is also the simultaneous seeing of interdependency, of the porous boundaries between self and others (p. 345).

Finally, Miller (2016) considered the "emptying of distorted narratives" of a "provisional not-self" to be compassion (p. 345).

In the reflect strategy, then, one can use the principles of *Buddhadharma* of non-self, impermanence, and dissatisfaction (or nirvana as extinction of conceptualization) as doorways to apprehend reality directly. In reflecting on these principles, one lessens being caught up in the grasping and aversion cycle, in the identification and reification processes, and, as a result, may experience equanimity, centeredness, and wisdom. One may also foresee and understand potential repercussions of thoughts, speech, and action, realizing how volition contributes to cycles of distress, suffering or happiness, and well-being. Hence, freedom from the discursive, commentating, judging mind, and self-referenced reification process provides substantial relief for anyone, let alone those struggling with a difficult mind state.

Resolving

Resolve includes having strong determination and motivation to cultivate new habits, and the commitment to direct the mind toward wholesome mental states (Sanskrit: *kuśalā* dharma; King, 2016). There are many ways to engage resolve. For instance, there is the resolve and determination to cultivate mindfulness to recognize distracting thoughts as they arise, and to avoid buying into thoughts without examining them. This can be accomplished by directly applying awareness and mindfulness to that specific negative mind state. Mentally noting difficult mind states can be very useful in confronting the issue at hand and, eventually, banishing the negative thought for good. When the mind is free from distracting thoughts, there is greater likelihood for feelings of happiness to arise, which makes it easier to redouble the effort.

Another aspect of resolve is making the effort to develop wholesome states of mind. When thoughts of generosity, loving-kindness, and compassion arise, there is effort to sustain their presence in the mind so that one's expressions of these mental qualities become more spontaneous and refined. And as each positive thought comes into being, there is effort to nurture it until it reaches its full potential.

Similarly, effort can be directed toward prolonging the presence of wholesome states of mind. This is the effort to maintain. When wholesome states of mind have already arisen, the effort is directed toward making sure that fleeting glimpses become sustained thoughts for longer periods of time. So, whenever thoughts of loving-kindness or compassion arise, the resolve is to maintain them, not allowing opposite mental states such as anger or hatred to take their place. Over time, resolve transforms the mindlessness habit into effortless mindfulness, as the new habit of mindfulness becomes the primary, default pattern.

One of the current limitations in mindfulness research is knowing the factors that contribute to individuals continuing and sustaining the practice, particularly secular

mindfulness. Attrition is a primary consideration in mindfulness practices and mindfulness research, as is the lack of longitudinal studies that could inform personal, contextual, and interactive factors associated with continuity of practice. This is an area that requires greater exploration, as commitment is required for any form of mastery.

Retracing

The last five strategies have for the most part focused at the individual level with aims to instill experiential, embodied awareness into the nature of self, cognitive processes, and interdependency. In this retrace strategy, continuing the theme of interconnection, we can take a step back and retrace the circumstances, particularly the socio-ecological and cultural factors that contribute to suicide. Retracing can be in the form of critical mindfulness, exercised through reflection, such as that used in critical pedagogy or indigenous critical pedagogy.

Freire's (1996) original theory on critical pedagogy involves a contextual, interrelated analysis of historical, political, economic, and educational factors that contribute to oppression and injustice experienced by certain community groups. Further, indigenous critical pedagogy concerns contemplation on the connection between education and sovereignty, in service toward liberation from the forces of colonization. It includes understanding how indigenous epistemologies (indigenous ways of knowing) have been undermined by Western ways of knowing (e.g., logical positivism) and forces (e.g., capitalism, neoliberalism), that have resulted in insidious destruction of culture, traditions, languages, and habitats. Seeking through education, to bring this to light through critical dialogue and discussion, allows a re-honoring of indigenous ways of knowing and being (Meyers, 2003; Reyes, 2013). King (2016) proposed that critical mindfulness is an "ethical decolonization of consciousness" as a response to disparities in ill-ease contributed by "neoliberal ideologies and capital-driven globalization" (p. 43). Awareness is emancipation; it is the unknown and the unacknowledged that binds individuals and communities in a perpetual cycle of disharmony. For suicide, this can take the form of avoidance, suppression, and repression of identity, culture, and traditions, which result from neoliberal policies and globalization that contribute to cycles of distorted perspectives.

Indigenous and native communities (Alaskan Natives, Native Americans, Native Hawaiians) currently have the highest suicide rates in the United States and Canada, particularly among youth and young adults (Centers for Disease Control and Prevention, 2010; Health Canada, 2017). Researchers identified erosion of culture and loss of land, along with attenuation of cultural practices, due to displacement of native populations by Westerners, as serious contributing factors to high rates of suicide among indigenous youth (Chung-Do et al., 2015). In addition, rural native/indigenous youth are particularly vulnerable due to lack of access to appropriate mental health services and support. In this retracing strategy, risk factors associated with indigenous/native communities may include considering aspects of being

decultured and colonized, and intergenerational effects of culture loss (Chung-Do et al., 2015). For example, underlining the very important concept and value of "ohana," which means family and extended family for Native Hawaiian, is the essence of interdependence, communal value, and orientation. Mindfulness practice that is endorsed in contemporary US society, given that it is highly individualistic and medicalized (King, 2016), may run counter to traditional ways and values unless it is presented and incorporated into the cultural way of being in the world as communal, which is a core element of traditional mindfulness practices (e.g., Sangha). Across many cultures and traditions, the emphasis is on the community, and it is the cultural traditional practices that bind communities and families together. Cultures that have strong communities have lower rates of violence and suicide (Chandler & Lalonde, 2008; Kirmayer et al., 2007).

Social isolation is an established, strong risk factor for suicide, whereas being in intimate relationships, having children and lots of friends decreases suicide risk (Van Orden et al., 2010). Theories such as the interpersonal-psychological theory of suicide (Joiner, 2005) indicate that absence of reciprocal care contributes to thwarted belongingness, a key motivating factor for suicide. MBCT offered in groups increases feelings of social belongingness and, thus, may decrease suicidal risks. It is likely that, for mindfulness practices to be efficacious in reducing suicide risk, it cannot simply be offered as a several-week course or an individual endeavor but must, instead, be embedded and enacted within an ongoing community activity and tradition.

At the individual level, retracing involves the process of tracking and following phenomena to its birth and roots, including tracing the collective narratives that interact with, and inform, personal narratives. For instance, when fear arises, tracing to its origin may reveal an aversion to the present danger, with the pattern of aversion due to experiences and conditionings from personal history (e.g., being a victim of abuse, assault), familial/ancestral experiences (e.g., family history of abuse, cultural group's colonization experiences), and inherited characteristics embedded in the survival instinct of hominid forefathers (e.g., survival mechanisms of the sympathetic system). Risk factors that have been identified for suicide include personal history of mental disorder, incarceration, drug abuse, social isolation and loss, history of suicide in the family, and recent suicide among social models of peers (e.g., Birnbaum & Birnbaum, 2004). The assumption is that by retracing a particular thought to its origin, this increase in awareness serves to weaken or eradicate its influence. Retracing can shine the light of awareness on thoughts, feelings, and circumstances. One of the strategies in Mindfulness-Based Relapse Prevention (MBRP; Witkiewitz, Marlatt, & Walker, 2005) is the assessment of potential interpersonal, intrapersonal, environmental, and physiological risks for relapse and understanding the facts that may precipitate a relapse. Cognitive and behavioral approaches are then taught as a self-management strategy to prevent possible occurrence of a relapse.

For suicidal individuals, retracing can involve in-depth reflection on the causes and conditions that led to the dysfunctional cognitive processes and maladaptive behaviors. In this practice, they may begin to see that their condition and circumstances are a result of many factors, and not solely attributed to one factor including a personal, individual one.

Wisdom and Insight

Because of the habitual pattern of the mind to engage in the discursive thoughts of judging, comparing, labeling, and analyzing, it is highly advantageous to learn strategies to quiet the mind, to reduce the mental chattering. Thus, the first step is to recognize what the mind is doing (remembering), and then to redirect the mind to a neutral object (e.g., breath) to establish stillness of mind. This requires a great deal of attention, focus, and letting go. In fact, letting go is a core aspect of stillness (Ajahn Brahm, 2006). Current secular forms of mindfulness practice focus predominantly on the cultivation of present moment awareness through attention and focus with a "nonjudging" attitude, giving rise to "bare attention" (e.g., Kabat-Zinn, 2003). This is similar to the "redirecting" strategy to reduce the habitual pattern of mind wandering, mind chattering, and rumination, the default pattern of many suffering from anxiety, depression, and suicide. Along these lines, Williams et al. (2015) provided a comprehensive, extensive framework on adapting MBCT for individuals plagued with recurrent suicidal thoughts and impulses, and step-by-step guidelines for adapting mindfulness to address the needs of suicidal individuals. This framework provides a comprehensive description in applying psychological mindfulness for suicidal individuals, and the skills developed align with remembering (awareness), redirecting, and replacing strategies (although not necessarily replacing with ethical, wholesome thoughts, speech, and action).

Without a "quiet" (non-reactive, non-chattering), and stillness of mind, it is virtually impossible to see things as they truly are rather than through conditioned biases, conceptualizations, and schemas, combined with the mind's tendency to label, compare, analyze, and judge. The replacing strategy complements the redirecting strategy by intentionally directing the mind toward more wholesome mental states like loving-kindness or equanimity, which facilitates cultivation of a more stable, quiet, clear mind. Because it takes a lot of mental energy to deal with negative mind states, when the mind is calm, this energy becomes freed up, allowing one to see with piercing clarity the cause and conditions that give rise to certain mind states, including afflictive ones like depressive and suicidal thoughts. With a more centered, stable, equanimous mind, one can engage in retracing—recognizing the co-arising, interdependency of circumstances, and the causes and conditions that gave rise to suicidal thoughts and impulses. Yet, this is a strategy that needs patience, time, and care. Although this strategy can be enacted at the individual level, it is necessarily social-relational, resonating with scholars and practitioners who are advocating for a more critical mindfulness approach.

With greater understanding comes great insight and wisdom. Bhikkhu Bodhi calls wisdom "the primary tool for deliverance" (Bhikkhu Bodhi, 2013), and it is wisdom power that will ultimately prevent suicide. Coupled with the resolve strategy of faith and courage, in the reflect strategy, the energy of attention and awareness is directed toward radical examination into the nature of self (and conversely, interdependence, interbeing) and the underlining causes and conditions of suffering (e.g., craving, clinging, aversion, self-cherishing, impermanence). Reflecting and

resolving allows for the exercising of "transcendent mindfulness" (Boddhi, 2011), promoting a radical change in consciousness and being.

In essence, mindfulness encompasses not only mental training in terms of developing attention, focus, self- and emotional regulatory competencies, but also involves philosophical reflection and critical analysis grounded in ethics and virtue (wholesome states). Collectively, these six Rs, as mindfulness, involve critical awareness of the three marks of existence as expounded in the *Buddhadharma* (unsatisfactoriness, impermanence, and nonself) that, if left unexamined, result in continued unfolding of unskillful, unwholesome thoughts, speech, and action habits. Current research has emphasized psychological mindfulness, with notable clinical researchers and academics, such as Williams et al. (2015), providing theory-based interventions to help individuals manage and deal with recurrent episodes of depression and suicide. Although research support is promising, critiques of the mindfulness movement contend that MBI therapies are not any more effective as compared to active relaxation, placebos, or medication (Kuyken et al., 2015; Miller, 2016). Further, the "active" ingredient in MBIs is still not clear.

Ultimately, the fruit of mindfulness practice is an embodied presence of insight and compassion—wisdom power. *Buddhadharma* provided important ancient teachings and strategies that continue to be very relevant, even in modern times. By secularizing, detraditionalizing, and psychologizing mindfulness, researchers and practitioners may be delimiting the full capacity of mindfulness and its varied modalities to help with suicide. Our attempt here is to expand the dialogue and stretch the conversation toward a larger perspective, by encouraging additional incorporation of *Buddhadharma* in MBIs.

Beyond Personal Toward Context and Collective

Mindfulness is both an individually and socially engaged endeavor. As we started out at the beginning of this chapter—"that this is, because of that is; this is not, because of that is not" (Thich Nhat Hanh, 2000), we go back to the core teachings in Buddhism and the roots of mindfulness—the nature of interdependence and co-arising. Mindfulness can not only be a personal project task (i.e., I need to become more mindful), but as right mindfulness is present, there comes a natural unfolding of insight into the co-arising nature of all phenomena (wisdom), resulting in motivation and resolve to reduce all suffering (compassion). This naturally leads toward engagement to address systemic issues such as oppression, economic injustice, and colonization, that otherwise give rise to conditions of suffering and contribute to suicide. Lavelle (2016) contended that the individualistic framing of current secular forms of mindfulness approaches may, at first, appear empowering in giving individuals tools to manage their stress and ill-ease but, in fact, are actually disempowering. It is disempowering because it places the onus and burden on the individual to change, as if they have full agency over their health. On the other hand, we know that adverse political, social, and economic factors can greatly compromise and undermine an individual's health and well-being (Purser, 2015), and such

adversities ripple into subsequent generations (intergenerational effects). Scholars, such as Germano (2014), are increasingly calling attention to the need for inclusion of contextual and cultural aspects in designing and implementing contemplative programs. Such programming requires awareness of the relational dynamics that occur within and among communities, and the systemic factors that hinder or facilitate flourishing or ill-health. As Lavelle (2016) clearly articulated:

> "…a context-sensitive approach facilitates a natural expansion of the conceptualization of the causes of suffering and the methods for overcoming suffering, thereby allowing practitioners, programmers, and researchers to draw upon diverse, community-based, and ecologically sensitive approaches for healing that have been overlooked because of a narrowly imposed Buddhist contemplative or modern frame" (p. 241).

As such, more can be done that encompasses this fundamental principle of interdependence. Mindfulness not only includes present moment awareness, but also the reflective and philosophical dimensions of social engagement and ethics (King, 2016).

If applied effectively, mindfulness allows us to deepen awareness of interconnection, interdependence, and interbeing (Thich Nhat Hanh, 2000) of heart and mind, of self and others, and of our internal world and external circumstances that are intertwined and co-arise together; this is an awareness of how every phenomenon is a result of various causes and conditions coming together. Beyond a cognitive understanding is an embodied emotional/mental state awareness, the continued, sustained experience of which is a profound antidote to any sense of thwarted belongingness.

Rose (2012) compellingly suggested that we move toward an ecological and "enactive" view of consciousness in recognizing mutual interdependency and interaction that expands critical reflection to the wider social world and how it functions. To do so requires not reducing mental factors and mental states to a decontextualized view of mindfulness-based techniques (Samuel, 2014). Thus, we believe that a program that encompasses all dimensions of mindfulness—psychological mindfulness, transcendent mindfulness, and critical mindfulness—would indeed be a comprehensive, enactive package, and one that may cut through all layers that contribute to suffering and suicide.

References

Anastasiades, M. H., Kapoor, S., Wootten, J., & Lamis, D. A. (2017). Perceived stress, depressive symptoms, and suicidal ideation in undergraduate women with varying levels of mindfulness. *Archives of Women's Mental Health, 20*(1), 129–138. https://doi.org/10.1007/s00737-016-0686-5

American Mindfulness Research Association. (2017). Mindfulness journal publications by year, 1980–2016. Retrieved from goAMRA.org.

Barnhofer, T., Crane, C., Brennan, K., Duggan, D., Crane, R., Eames, C., … Williams, J. (2015). Mindfulness-based cognitive therapy (MBCT) reduces the association between depressive symptoms and suicidal cognitions in patients with a history of suicidal depression. *Journal of Consulting and Clinical Psychology, 83*(6), 1013–1020. https://doi.org/10.1037/ccp0000027

Basharpoor, S., Daneshvar, S., & Noori, H. (2016). The relation of self-compassion and anger control dimensions with suicide ideation in university students. *International Journal of High Risk Behavior Addiction, 5*(4), e26165.

Birnbaum, L., & Birnbaum, A. (2004). In search of inner wisdom: Guided mindfulness meditation in the context of suicide. *The Scientific World Journal, 4*, 216–227. https://doi.org/10.1100/tsw.2004.17

Bodhi, B. (1997). *Self-transformation*. Retrieved May 13, 2017, from http://www.vipassana.com/resources/bodhi/self-transformation.php

Boddhi, B. (2011). What does mindfulness really mean? A canonical perspective. *Contemporary Buddhism, 12*, 19–39. https://doi.org/10.1080/14639947.2011.564813

Bodhi, B. (2013, November 13). *The noble eightfold path: The way to the end of suffering*. Retrieved May 13, 2017, from http://www.accesstoinsight.org/lib/authors/bodhi/waytoend.html

Bodhi, B. (2016). The transformations of mindfulness. In R. E. Purser, D. Forbes, & A. Burke (Eds.), *Handbook of mindfulness: Culture, context, and social engagement* (pp. 3–14). Cham: Springer International. https://doi.org/10.1007/978-3-319-44019-4_1

Bowen, S., Chawla, N., Collins, S., Witkiewitz, K., Hsu, S., Grow, J., … Marlatt, A. (2009). Mindfulness-based relapse prevention for substance use disorders: A pilot efficacy trial. *Substance Abuse, 30*, 205–305.

Bowen, S., Chawla, N., & Marlatt, A. G. (2011). *Mindfulness-based relapse prevention for addictive behaviors: A clinician's guide*. New York: Guildford Press.

Brahm, A. (2006). *Mindfulness, bliss, and beyond*. Somerville, MA: Wisdom Publications, Inc.

Brown, B. (2012). *Daring greatly: How the courage to be vulnerable transform the way we live, love, parent and lead*. New York: Penguin Random House.

Buddharakkhita, B. (2017). *Sowing seeds of peace*. Entebbe, Uganda: Uganda Buddhist Centre.

Buitron, V., Hill, R. M., & Pettit, J. W. (2016). Mindfulness moderates the association between perceived burdensomeness and suicide ideation in adults with elevated depressive symptoms. *Suicide and Life-threatening Behavior, 47*(5), 580–588. https://doi.org/10.1111/sltb.12314

Centers for Disease Control and Prevention. (2010). Youth risk behavior surveillance—United States, 2009. *MMWR. Morbidity and Mortality Weekly Report, 59*, SS-5 Retrieved from http://www.cdc.gov/mmwr/pdf/ss/ss5905.pdf

Chandler, M., & Lalonde, C. (2008). Cultural continuity as a protective factor against suicide in first nations youth. *Horizons, 10*(1), 68–72.

Cheng, J. K. Y., & Sue, S. (2014). Addressing cultural and ethnic minority issues in the acceptance and mindfulness movement. In A. Masuda (Ed.), *Cultural issues in acceptance and mindfulness, chapter 1*. Oakland, CA: New Harbinger Publications.

Chesin, M. S., Benjamin-Phillips, C., Keilp, J., Fertuck, E., Brodsky, B., & Stanley, B. (2016). Improvements in executive attention, rumination, cognitive reactivity, and mindfulness among high–suicide risk patients participating in adjunct mindfulness-based cognitive therapy: Preliminary findings. *The Journal of Alternative and Complementary Medicine, 22*(8), 642–649. https://doi.org/10.1089/amc.2015.0351

Chesin, M. S., Interian, A., Kline, A., Benjamin-Phillips, C., Latorre, M., & Stanley, B. (2016). Reviewing mindfulness-based interventions for suicidal behavior. *Archives of Suicide Research, 20*(4), 507–527.

Chesin, M. S., & Jeglic, E. L. (2016). Factors associated with recurrent suicidal ideation among racially and ethnically diverse college students with a history of suicide attempt: The role of mindfulness. *Archives of Suicide Research, 20*(1), 29–44.

Chesin, M. S., Sonmez, C. C., Benjamin-Phillips, C. A., Beeler, B., Brodsky, B. S., & Stanley, B. (2015). Preliminary effectiveness of adjunct mindfulness-based cognitive therapy to prevent suicidal behavior in outpatients who are at elevated suicide risk. *Mindfulness, 6*(6), 1345–1355.

Chung-Do, J. J., Goebert, D. A., Bifulco, K., Tydingco, T., Alvarez, A., Rehuher, D., & Wilcox, P. (2015). Hawai 'i's caring communities initiative: Mobilizing rural and ethnic minority communities for youth suicide prevention. *Journal of Health Disparities Research and Practice, 8*(4), 8.

Collett, N., Pugh, K., Waite, F., & Freer, D. (2016). Negative cognitions about the self in patients with persecutory delusions: An empirical study of self-compassion, self-stigma, schematic beliefs, self-esteem, fear of madness, and suicidal ideation. *Psychiatry Research, 239*, 79–84.

Collins, K. R. L., Best, I., Stitzke, W. G. K., & Page, A. C. (2016). Mindfulness and zest for life buffer the negative effects of experimentally-induced perceived burdensomeness and thwarted belongingness: Implications for theories of suicide. *Journal of Abnormal Psychology, 125*(5), 704–714. https://doi.org/10.1037/abn0000167

Collins, K. R. L., Stebbing, C., Stritzke, W. G., & Page, A. C. (2017). A brief mindfulness intervention attenuates desire to escape following experimental induction of the interpersonal adversity implicated in suicide risk. *Mindfulness, 8*, 1096–1105.

Crone, E. A., Donohue, S. E., Honomichl, R., Wendelken, C., & Bunge, S. A. (2006). Brain regions mediating flexible rule use during development. *The Journal of Neuroscience, 26*(43), 11239–11247. https://doi.org/10.1523/JNEUROSCI.2165-06.2006

Davidson, R. J., & Begley, S. (2012). *The emotional life of your brain*. New York: Hudson Street.

Dunne, J. (2011). Toward an understanding of non-dual mindfulness. *Contemporary Buddhism, 12*(1), 71–88.

Forkmann, T., Brakemeier, E. L., Teismann, T., Shramm, E., & Michalak, J. (2016). The effects of mindfulness-based cognitive therapy and cognitive behavioral analysis system of psychotherapy added to treatment as usual on suicidal ideation in chronic depression: Results of a randomized clinical trial. *Journal of Affective Disorders, 200*, 51–57. https://doi.org/10.1016/j.jad.2016.01.047

Forkmann, T., Wichersb, M., Geschwindc, N., Peetersb, F., Osb, J., Mainza, V., & Collipb, D. (2014). Effects of mindfulness-based cognitive therapy on self-reported suicidal ideation: Results from a randomised controlled trial in patients with residual depressive symptoms. *Contemporary Psychiatry, 55*(8), 1883–1890. https://doi.org/10.1016/j.comppsych.2014.08.043

Freire, P. (1996). *Pedagogy of the oppressed*. New York: Continuum.

Germano, D. (2014). Contemplation in contexts: Tibetan Buddhist meditation across the boundaries of the humanities and sciences. *Paper presented at the Mind and Life International Symposium for Contemplative Studies,* Boston, MA.

Germer, C. K., & Neff, K. D. (2013). Self-compassion in clinical practice. *Journal of Clinical Psychology, 69*, 856–867.

Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books.

Goleman, D. (2003). *Destructive emotions: How can we overcome them?* New York: Bantam.

Gong, H., Ni, C. X., Liu, Y. Z., Zhang, Y., Su, W. J., Lian, Y. J., … Jiang, C. L. (2016). Mindfulness meditation for insomnia: A meta-analysis of randomized controlled trials. *Journal of Psychosomatic Research, 89*, 1–6.

Gotink, R. A., Chu, P., Busschbach, J. J. V., Benson, H., Fricchione, G. L., & Hunink, M. G. M. (2015). Standardised mindfulness-based interventions in healthcare: An overview of systematic reviews and meta-analyses of RCTs. *PLoSONE, 10*(4). https://doi.org/10.1371/journal.pone.0124344

Goyal, M., Singh, S., Sibinga, E. M., Gould, N. F., Rowland-Seymour, A., Sharma, R., … Haythornthwaite, J. A. (2014). Meditation programs for psychological stress and Well-being: A systematic review and meta-analysis. *JAMA Internal Medicine, 173*(3), 357–368. https://doi.org/10.1001/jamainternmed.2013.13018

Gu, J., Strauss, C., Bond, R., & Cavanagh, K. (2015). How do mindfulness-based cognitive therapy and mindfulness-based stress reduction improve mental health and wellbeing? A systematic review and meta-analysis of mediation studies. *Clinical Psychology Review, 37*, 1–12.

Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review, 108*, 814–834.

Hanh, T. N. (2000). Discourse on the middle way (Samyukta Agama, no.301). In *Plum Village chanting and recitation book*. Berkelay, CA: Parallax.

Hargus, E., Crane, C., Barnhofer, T., & Williams, J. M. G. (2010). Effects of mindfulness on meta awareness and specificity of describing prodromal symptoms in suicidal depression. *Emotion, 10*(1), 34–42. https://doi.org/10.1037/a0016825

Haswell, D. E. & Graham, M. (1996). Self-inflicted injuries. Challenging knowledge, skill, and compassion. *Canadian Family Physician*, 42, 1756–1758, 1761–4.

Health Canada. (2017). First nations & Inuit health: Suicide prevention. Retrieved from http://www.hc-sc.gc.ca/fniah-spnia/promotion/suicide/index-eng.php.

Hilton, L., Hempel, S., Ewing, B. A., Apaydin, E., Xenakis, L., Newberry, S., … Maglione, M. A. (2016). Mindfulness meditation for chronic pain: Systematic review and meta-analysis. *Annals of Behavioral Medicine, 51*(2), 199–213. https://doi.org/10.1007/s12160-016-9844-2

Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Z., Vago, D. R., & Ott, U. (2011). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspectives on Psychological Science, 6*(6), 537–559.

Hutcherson, C. A., Seppala, E. M., & Gross, J. J. (2008). Loving-kindness meditation increases social connectedness. *Emotion, 8*, 720–724. https://doi.org/10.1037/a0013237

Jazaieri, H., McGonigal, K., Jinpa, T., Doty, J. R., Gross, J. J., & Goldin, P. R. (2014). A randomized controlled trial of compassion cultivation training: Effects on mindfulness, affect, and emotion regulation. *Motivation and Emotion, 38*(1), 23–35.

Joiner, T. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.

Joormann, J., Levens, S. M., & Gotlib, I. H. (2011). Sticky thoughts: Depression and rumination are associated with difficulties manipulating emotional material in working memory. *Psychological Science, 22*(8), 979–983.

Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain and illness*. McHenry, IL: Delta Publishing.

Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness meditation in everyday life*. New York: Hyperion.

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present and future. *Clinical Psychology: Science and Practice, 10*, 144–156.

Kaliman, P., Álvarez-López, M. J., Cosín-Tomás, M., Rosenkranz, M. A., Lutz, A., & Davidson, R. J. (2014). Rapid changes in histone deacetylases and inflammatory gene expression in expert meditators. *Psychoneuroendocrinology, 40*, 96–107 PMCID: PMC4039194.

King, R. (2016). 'Paying attention' in a digital economy: Reflections on the role of analysis and judgment within contemporary discourses of mindfulness and comparisons with classical Buddhist accounts of *sati*. In R. E. Purser, D. Forbes, & A. Burke (Eds.), *Handbook of mindfulness: Culture, context, and social engagement* (pp. 27–45). Cham: Springer International. https://doi.org/10.1007/978-3-319-44019-4

Kirby, J. N. (2017). Compassion interventions: The programmes, the evidence, and implications for research and practice. *Psychology and Psychotherapy: Theory, Research and Practice, 90*(3), 432–455.

Kirmayer, L. J. (2015). Mindfulness in cultural context. *Transcultural Psychiatry, 52*(4), 447–469.

Kirmayer, L. J., Brass, G. M., Holton, T., Paul, K., Simpson, C., & Tait, C. (2007). *Suicide among aboriginal people in Canada*. Ottawa: Aboriginal Healing Foundation.

Kline, A., Chesin, M., Latorre, M., Miller, R., St. Hill, L., Shcherbakov, A., … Interian, A. (2016). Rationale and study design of a trial of mindfulness-based cognitive therapy for preventing suicidal behavior (MBCT-S) in military veterans. *Contemporary Clinical Trials, 50*, 245–252. https://doi.org/10.1016/j.cct.2016.08.015

Kuyken, W., Hayes, R., Barrett, B., Byng, R., Dalgleish, T., Kessler, D., & Byford, S. (2015). Effectiveness and cost-effectiveness of mindfulness-based cognitive therapy compared with maintenance antidepressant treatment in the prevention of depressive relapse or recurrence (PREVENT): A randomized controlled trial. *The Lancet, 386*, 63–73. https://doi.org/10.1016/S0140-6736

Kuyken, W., Warren, F. C., Taylor, R. S., Whalley, B., Crane, C., Bondolfi, G., … Dalgleish, T. (2016). Efficacy of mindfulness-based cognitive therapy in prevention of depressive relapse: An individual patient data meta-analysis from randomized trials. *JAMA Psychiatry, 73*(6), 565–574.

Lavelle, B. D. (2016). Against one method: Contemplation in context. In R. E. Purser, D. Forbes, & A. Burke (Eds.), *Handbook of mindfulness: Culture, context, and social engagement* (pp. 233–242). Cham, Switzerland: Springer International. https://doi.org/10.1007/978-3-319-44019-4

Law, K. C., & Tucker, R. P. (2018). Repetitive negative thinking and suicide: A burgeoning literature with need for further exploration. *Current Opinion in Psychology, 22*, 68–72.

Le, T. N., & Gobert, J. (2015). Translating & implementing a mindfulness-based youth suicide prevention intervention in a native American community. *Journal of Child and Family Studies, 24*(1), 12–23. https://doi.org/10.1007/s10826-013-9809-z

Luna, B., & Sweeney, J. A. (2004). The emergence of collaborative brain function: FMRI studies of the development of response inhibition. *Annals of the New York Academy of Sciences, 1021*, 296–309.

Luoma, J. B., & Villatte, J. L. (2012). Mindfulness in the treatment of suicidal individuals. *Cognitive and Behavioral Practice, 19*, 265–276.

Marchand, W. R. (2012). Self-referential thinking, suicide, and function of the cortical midline structures and striatum in mood disorders: Possible implications for treatment studies of mindfulness-based interventions for bipolar depression. *Depression Research and Treatment, 2012*, 15. https://doi.org/10.1155/2012/246725

Meyers, M. A. (2003). Hawaiian hermeneutics and the triangulation of meaning: Gross, subtle, and causal. *Social Justice, 30*(4), 54–63.

Miller, L. D. (2016). The ultimate Rx: Cutting through the delusion of self-cherishing. In R. E. Purser, D. Forbes, & A. Burke (Eds.), *Handbook of mindfulness: Culture, context, and social engagement* (pp. 337–352). Cham, Switzerland: Springer International. https://doi.org/10.1007/978-3-319-44019-4

Neff, K. D. (2003). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*, 85–102.

Neff, K. D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity, 9*(3), 225–240. https://doi.org/10.1080/15298860902979307

Negi, L. T. (2009). *Cognitively-based compassion training: A manual*. Atlanta, GA: Emory University Unpublished manuscript.

Pagnoni, G., Cekic, M., & Guo, Y. (2008). "Thinking about not- thinking": Neural correlates of conceptual processing during Zen meditation. *PLoS One, 3*(9), e3083.

Purser, R. (2015). Clearing the muddled path of traditional and contemporary mindfulness: A response to Monteiro, Musten, and Compson. *Mindfulness, 6*, 23–45. https://doi.org/10.1007/s12671-014-0373-4

Purser, R., & Loy, D. (2013). Beyond mindfulness. *Huffington Post*. Retrieved from http://www.huffigtonpost.com/ron-purser/beyond-mcmindfulness_b_35919289.html.

Reyes, N. A. S. (2013). Ike Ku'oko'a: Indigenous critical pedagogy and the connections between education and sovereignty for Ka Lahui Hawai'i. *Hulili: Multidisciplinary Research on Hawaiian Well-Being, 9*, 205–227.

Ricard, M. (2006). *Happiness: A guide to developing life's most important skill*. New York: Little, Brown.

Roeser, R. W., & Zelazo, P. D. (2012). Contemplative science, education and child development: Introduction to the special section. *Child Development Perspectives, 6*, 143–145. https://doi.org/10.1111/j.1750-8606.2012.00242.x

Rose, S. (2012). The need for a critical neuroscience: From neuroideology to neurotechnology. In S. Choudhury & J. Slaby (Eds.), *Critical neuroscience: A handbook of the social and cultural contexts of neuroscience*. Chichester: Wiley-Blackwell.

Samuel, G. (2014). Between Buddhism and science, between mind and body. *Religion, 5*, 560–579.

Seppala, E., Rossomando, T., & Doty, J. (2013). Social connection and compassion: Important predictors of health and well-being. *Social Research, 80*(2), 411–430. https://doi.org/10.1353/sor.2013.0027

Serpa, J. G., Taylor, S. L., & Tillisch, K. (2014). Mindfulness-based stress reduction (MBSR) reduces anxiety, depression, and suicidal ideation in veterans. *Medical Care, 52*, S19–S24.

Shapiro, S. L., Brown, K. W., & Astin, J. A. (2008). Toward the integration of meditation into higher education: A review of research. In M. Duerr (Ed.), *The Center for Contemplative Mind in society* Retrieved from http://www.contemplativemind.org/programs/academic/MedandHigherEd.pdf

Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. *Journal of Clinical Psychology, 62*, 373–390.

Sharf, R. H. (2015). Is mindfulness Buddhist? (and why it matters). *Transcultural Psychiatry, 52*(4), 470–484.

Shorey, R., Elmquist, J., Wolford-Clevenger, C., Gawrysiak, M., Anderson, S., & Stuart, G. (2016). The relationship between dispositional mindfulness, borderline personality features, and suicidal ideation in a sample of women in residential substance use treatment. *Psychiatry Research, 238*, 122–128. https://doi.org/10.1016/j.psychres.2016.02.040

Sinclair, J. M., Crane, C., Hawton, K., & Williams, J. M. (2017). The role of autobiographical memory specificity in deliberate self-harm: Correlates and consequences. *Journal of Affective Disorders, 102*(103), 11–18. https://doi.org/10.1016/j.jad.2006.12.006

Stanley, B., & Brown, G. K. (2012). Safely planning intervention: A brief intervention to mitigate suicide risk. *Cognitive and Behavioral Practice, 19*, 256–264.

Stiles, J. (2008). *The fundamentals of brain development: Integrating nature and nurture*. Cambridge, MA: Harvard University Press.

Tanaka, M., Wekerle, C., Schmuck, M., & Paglia-Boak, A. (2011). The linkages among childhood maltreatment, adolescent mental health, and self-compassion in child welfare adolescents. *Child Abuse & Neglect, 35*(10), 887–898. https://doi.org/10.1016/j.chiabu.2011.07.003

Teasdale, J. D., Segal, Z. V., Williams, J. M. G., Ridgeway, V., Soulsby, J., & Lau, M. (2000). Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy. *Journal of Consulting and Clinical Psychology, 68*, 615–623.

Thompson, E. (2007). *Mind in life: Biology, phenomenology and the sciences of mind*. Cambridge, MA: Harvard University Press.

Tucker, R. P., O'Keefe, V. M., Cole, A. B., Rhoades-Kerswill, S., Hollingsworth, D. W., Helle, A. C., et al. (2014). Mindfulness tempers the impact of personality on suicidal ideation. *Personality and Individual Differences, 68*, 229–233.

Van Dam, N. T., & Grossman, P. (2011). Mindfulness, by any other name…: Trials and tribulations of sati in western psychology and science. *Contemporary Buddhism, 12*(1), 219–239.

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S., Selby, E. W., & Joiner, T. E. (2010). The interpersonal theory of suicide. *Psychological Review, 117*(2), 575–600. https://doi.org/10.1037/a0018697

Vettese, L. C., Dyer, C. E., Li, W. L., & Wekerle, C. (2011). Does self-compassion mitigate the association between childhood maltreatment and later emotion regulation difficulties? A preliminary investigation. *International Journal of Mental Health and Addiction, 9*(5), 480–491. https://doi.org/10.1007/s11469-011-9340-7

Wallace, B. A., & Shapiro, S. L. (2006). Mental balance and wellbeing: Building bridges between Buddhism and Western psychology. *American Psychologist, 61*, 690–701.

Williams, J. M., Crane, C., Barnhofer, T., Brennan, K., Duggan, D. S., Fennell, M. J., … Russell, I.T. (2014). Mindfulness-based cognitive therapy for preventing relapse in recurrent depression: A randomized dismantling trial. *Journal of Consulting and Clinical Psychology, 82*(2), 275–286. https://doi.org/10.1037/a0035036

Williams, J. M., & Swales, M. (2004). The use of mindfulness-based approaches for suicidal patients. *Archives of Suicide Research, 8*, 315–329.

Williams, J. M. G., Fennell, B. M., Barnhofer, T., Crane, R., & Silverton, S. (2015). *Mindfulness and the transformation of despair: Working with people at risk of suicide*. New York: Guilford Publications.

Wilson, J. (2014). *Mindful America*. New York: Oxford University Press.

Witkiewitz, K., Marlatt, G. A., & Walker, D. (2005). Mindfulness-based relapse prevention for alcohol and substance use disorder. *Journal of Cognitive Psychotherapy, 19*(30), 211–228.

Zelazo, P. D., & Lyons, K. E. (2012). The potential benefits of mindfulness training in early childhood: A developmental social cognitive neuroscience perspective. *Child Development Perspectives, 6*, 154–160.

Chapter 12
Community-Based Participatory Research and Community Empowerment for Suicide Prevention

Michael J. Kral and Sean Kidd

Suicide is the 15th leading cause of death worldwide (World Health Organization (WHO), 2014), the 10th leading cause of death among Canadians (Statistics Canada, 2011) and Americans (Centers for Disease Control and Prevention (CDC), 2015) and, in the United States, the second leading cause of death among persons ages 15–29 years old. In the United States, in 2013, the suicide rate was 13.4 per 100,000, and the number of suicide deaths was 42,773, with an additional 383,000 visits to the emergency room for self-inflicted injury (CDC, 2017). The WHO recognizes suicide as a public health priority. According to the WHO (2017), close to 800,000 people die by suicide every year around the world. In rural low- and middle-income countries, about 30% of suicides are due to pesticide self-poisoning, while in the United States, the leading method of suicide is firearm.

In keeping with the positive psychological principles (e.g., social support) noted in this volume, much suicide prevention work has been done that has involved community empowerment. The first suicide prevention service was the Samaritans in England, founded by Chad Varah in 1953. In the beginning, Samaritans was a telephone service staffed mostly by volunteers "to befriend the suicidal and despairing" (Varah, 2001, p. 167). By the year 2000, there were over 100 Samaritan branches in England, as well as branches in almost 80 other countries. In the United States, the first such center was the Los Angeles Suicide Prevention Center (LASPC), founded in 1958 by Edwin Shneidman, Norman Farberow, Robert Litman, and Samuel (Mickey) Heilig. It was started "to fill a gap in the health and service needs of the community" (Shneidman, Farberow, & Litman, 1961, p. 10).

M. J. Kral (✉)
Wayne State University, Detroit, MI, USA
e-mail: michael.kral@wayne.edu

S. Kidd
University of Toronto, Toronto, ON, Canada

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*,
Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_12

Shneidman (1988) noted that a suicide prevention movement developed rapidly in North America, one that generated a sense of positive engagement and efficacy in contexts where traditional professional responses seemed insufficient. He indicated that by 1966, there were three suicide prevention centers in the United States, and by 1970, there were over 200 centers. The nonprofessional mental health volunteer movement in the twentieth century was a tremendous addition to mental health care at the community level (Alley & Blanton, 1976). These lay volunteers and paraprofessionals in crisis centers have filled an access-to-support gap created through poorly resourced, publicly funded services (Kalafat, Gould, Munfakh, & Kleinman, 2007). It might also be posited that the intense stigmatization of mental health problems, and the poorly designed service systems that are reflective of that stigmatization, enhance the appeal of nonprofessional supports (Kidd, McKenzie, & Virdee, 2014).

At the 1968 meeting, which marked the founding of the American Association of Suicidology, Louis Dublin said that "The lay volunteer was probably the most important single discovery in the 50-year history of suicide prevention" (Shneidman, 1988, p. 11). Research has found these volunteers to be as good as, or better than, mental health professionals in helping people to decrease a state of crisis (Brown, 1974; Durlak, 1979; Hattie, Sharpley, & Rogers, 1984). In an early investigation, Durlak (1979) reviewed the outcomes of 42 studies comparing paraprofessional to professional helpers. He found that professionals do not demonstrate superior clinical skills over paraprofessionals, and that professional training is not necessary for the development of an effective helper. Becker and Kleinman (2013) see nonprofessionals or paraprofessionals as part of the collective global investment in mental health, and Kazdin and Rabbitt (2013) acknowledge that nonprofessionals strengthen and expand the health care workforce. Indeed, evidence suggests that nonprofessional peer providers can be integrated into the staff of mental health agencies (Gates & Akabas, 2007).

There has also been a movement of suicide prevention efforts in schools, implemented largely through curriculum-based programs, to help students learn about suicide risk factors and intervention strategies. By 1991, there were several evaluations conducted on these programs, and many evaluations have since been conducted. Some studies indicated positive outcomes, such as: an increase in knowledge of warning signs of suicide; more understanding, and less prejudice, of suicide; increased confidence in talking with a suicidal peer; and, in one study, an increased tendency to assist peers (Aseltine & DeMartino, 2004; Kalafat & Elias, 1991; Ross, 1980; Wyman et al., 2010). Some studies found no increase in distress among students (e.g., Ross, 1980) and, in one study, suicide attempts decreased (Aseltine & DeMartino, 2004). Other studies, however, found that seeking help did not increase, and helping a friend was not more likely (Aseltine & DeMartino, 2004; Kalafat & Elias, 1991). Overall, most studies have found that these school-based suicide prevention programs have not worked well (Garland & Zigler, 1993; Miller, Eckret, & Mazza, 2009; Shaffer, Vieland, & Garland, 1990; Vieland, Whittle, Garland, Hicks, & Shaffer, 1991). Although knowledge about suicide is shown to increase among students, they do not usually help each other or refer troubled students for help.

Berman (2009) strongly suggested the importance of school psychologists being trained in suicide prevention. He noted one study that found 86% of school psychologists had counseled a student who was suicidal or who had attempted suicide, and that courts have established that schools must try to prevent suicide. He believes that school psychologists need to be educated about suicide risk factors and other youth mental health issues, including knowing how to conduct crisis assessments and intervention, knowing the evidence-based practices in suicide prevention, and knowing how to involve parents (Berman, 2009). Indeed, this emphasis has extended to the need for teachers to receive rudimentary training in risk assessment, as gatekeepers (Wyman et al., 2008).

Moreover, other evaluation studies, outside of schools, have found suicide prevention programs to be effective (Capp, Deane, & Lambert, 2001; Goldney, 2005; Miller, Coombs, Leeper, & Barton, 1984; Randell, Eggert, & Pike, 2001; Szanto, Kalmar, Hendin, Rihmer, & Mann, 2007). Szanto et al. (2007) implemented suicide prevention in a region of Hungary with a high suicide rate. They established a depression-management educational program for GPs and their nurses, a depression treatment clinic, and a psychiatrist telephone consultation service. Suicides in this area decreased at a significantly greater rate than in the country and a control region, with female suicides decreasing by 34% while rising 90% in the control region. Miller et al. (1984) studied the effects of suicide prevention centers in 31 US counties, between the years 1968 and 1973, during which time the United States saw the greatest growth of suicide prevention facilities. They found a significant reduction in female suicides, noting that it is females who most often call crisis centers.

Despite such progress, Knox, Conwell, and Caine (2004) point out that a "prevention gap" still exists in the field of suicidology, with a need for a public health perspective to take such prevention more seriously. Of course, other disciplines should follow suit, such as social work, community psychology, nursing, and positive psychology, among others, to work together to empower communities. Thus, previous research indicates that community-based suicide prevention can be effective, across settings and, at the same time, can emphasize community-empowering strategies (Snyder, Lopez, & Pedrotti, 2011), such as continuing education to empower gatekeepers, including school staff, and training to establish peer support networks.

One method for suicide prevention has been through community-based participatory action research. It is known through a variety of names, including community-based participatory research (CBPR), participatory action research (PAR), collaborative research, collaborative inquiry, community-engaged research, social action research, and action research. Central to participatory research is the engagement of community members as co-researchers, involving the sharing of power, democratization of the research process, and action to benefit the community. CBPR has been described as more of an attitude than a research method (Kidd & Kral, 2005) that involves a deep level of embeddedness of researchers within communities seeking to address problems and injustices. The skill sets, ideas, and actions of the group are navigated without the more traditional leadership of a researcher—with all taking ownership roles in determining questions, engaging in inquiry,

analyzing and considering findings, and planning actions based on those findings. These cycles of reflexive inquiry and action might happen many times, all in the service of an agenda set by the affected community. In this work, community participants can take on various roles, from acting as consultants to directing the research and action. This research is a combination of science and social activism, concerned with empowerment and democratic social change. It is focused on reciprocal and equal relationships, where power is shared and, importantly, the role of community participation is considered important in health promotion and health intervention (Draper, Hewitt, & Rifkin, 2010).

In this chapter, we conceptualize this action-based and empowerment-focused approach to resolving community problems, as an extension of positive psychology, in that prevention efforts must be meaning driven and value based for a community and must grow from a collective sense of importance and motivation. Relatedly, there are other means of community empowerment, which are also adaptive in nature, and fit into a social empowerment framework of suicide prevention. For example, social support can be very community based. This can be seen in churches and community activities, and even the internet (Barak, 2007). Social support does reduce the likelihood of a suicide attempt (Kleiman & Liu, 2013). As well, religion, often in the form of church presence in a community, can be protective of mental health (Koenig, 2009) and, indeed, in some communities, clergy-based or church-based suicide prevention activities have been successfully implemented (Molock, Matlin, Barksdale, Puri, & Lyles, 2008). Participatory education (Wallerstein & Bernstein, 1994), health promotion (Laverack & Labone, 2000), and community empowerment activities can lead to improved health (Laverack, 2006). This is especially important for low-income and minority populations, whose health, in general, is poorer (Eisen, 1994). There is a civic renewal movement in the United States that is based on community empowerment, and this includes the public work of citizens in shaping their communities (Sirianni & Friedland, 2001). Community empowerment "connects mental health to mutual help and the struggle to create a responsive community" (Perkins & Zimmerman, 1995). Community empowerment also empowers individuals psychologically (Zimmerman, 1995). Snyder and Leary (2007) look at the positive psychology of building better communities, which involves building a "positive psychology of us" (p. 464) that emphasizes a collectivist orientation that is cooperative in bringing people together.

The historic roots of participatory research are deep and wide, with seeds sewn in the early twentieth century. As one example, beginning in the 1930s, Kurt Lewin's action research emphasized social change (Adelman, 1993; Lewin, 1946), indicating that there was greater productivity in factories when there was democratic participation of the workers (Adelman, 1993). However, CBPR stems, to a large extent, from work in the 1960s, in Latin America, which viewed adult education as democratic empowerment. Orlando Fals Borda and other Latin American sociologists took up these ideas in the frame of adult education as a context for democratic and collective action, including Paulo Friere's seminal work in Brazil (Friere, 1970). These efforts challenged "forms of knowledge generation that position nondominant groups as outsiders" (Brydon-Miller, Kral, Maguire, Noffke, & Sabhlok,

2011). Participatory research went against the idea of expert knowledge, putting a priority on local knowledge instead, and on social change as the primary objective, rather than knowledge generation or other academia-associated agendas. While having roots in Latin American activism, participatory research has since become international (Kapoor & Jordan, 2009), cutting across social issues and academic disciplines. Much of participatory research is qualitative and, as such, methods tend to resonate more with the experiences and interests of marginalized groups, though mixed and quantitative methods are certainly relevant and used at times (Kral & Allen, 2016).

Participatory research aligns with an emergent method movement that goes beyond positivism and neo-positivism, challenging traditional research methods (Hesse-Biber & Leavy, 2008), and fits with current directions in social theory, which emphasize agency, subjectivity, and pragmatism (Ortner, 2006; Toulmin, 1988). It builds on a covenantal ethics: "an ethical stance enacted through relationship and commitment to working for the good of others" (Brydon-Miller, 2009, p. 244). Again, this approach is humanistic and person centered, which are historical perspectives contributing to positive psychology.

Challenges associated with participatory methods include the time needed to do this work fulsomely, and limited support in academic contexts and cultures in terms of funding and other forms of recognition (Kral & Idlout, 2006). While progress has been made in the acknowledgment of the validity of some methods associated with participatory and action-oriented research, such as qualitative methodologies, the rigor of community-engaged participatory methods is much less compatible with academia (Kidd & Kral, 2005). As such, while widely known, participatory methods are much less employed than traditional methodologies. It is work that has, nonetheless, brought considerable attention to areas such as racial discrimination (Williams, Neighbors, & Jackson, 2003), political oppression (Travers, 1997), criminalization (Dupont, 2008), and disability rights (Atkinson, 2005; Chappell, 2000). As such, participatory methods have shown clear relevance in the domain of social problems that are the result of multiple determinants and have systemic implications, like the problem of suicide.

Participatory research has been used to a relatively large extent in suicide prevention. This fits with a new trend in suicidology, termed critical suicidology, which questions the status quo in understanding and preventing suicide. This perspective offers an approach that is more contextualized, subjective, historical, ecological, social justice-oriented, poetic, and socio-political than traditional suicidology (White, Marsh, Kral, & Morris, 2016). Historically, suicidology has been individually focused, with a view of suicide being caused by a mental disorder; as well, suicidology has been viewed as a science, with mostly quantitative research generated (Marsh, 2011). Similarly, suicide prevention has been conceptualized in universal, apolitical, and decontextualized ways. This is a limiting perspective, with a narrower understanding of suicide and suicide prevention; whereas, critical suicidology opens new roads for understanding and action.

In many ways, the study of suicide and suicide prevention are highly amenable to participatory modes of inquiry. First, it has become increasingly apparent that

suicide is a complex social and cultural problem—perhaps best conceived of as a "wild problem." Wild problems are ones that are unstable and embedded in local, historical, and relational contexts (White, 2012). Examples include mental illness in low-income contexts, violence based in racism, and suicide. The nature of suicide as a wild problem is evident in the failure of reductionistic, biomedical approaches to inquiry and action in making any difference in the rates of suicide globally (Marsh, 2011). Positive psychology has also taken an alternative approach to psychological problems and suicide, as seen in this book.

The failure of the traditionalist paradigm is increasingly the subject of critical commentary that is finding its way into mainstream forums (Dobbs, 2017). Specifically, there has been a groundswell of frustration with the marked contrast between the emphases on promised biomedical solutions to mental health problems—in the face of decades of failure to deliver upon that promise. These limited impacts of efforts to date, coupled with increasingly informed and empowered stakeholder groups who are frustrated, create contexts in which participatory models of engagement (1) are much preferred if not required by stakeholders; (2) can cultivate rich and nuanced models of inquiry that more readily assess the system dynamics of suicide which, in turn; (3) identify points of leverage in the system for which informed actions are likely to make the greatest difference (Kidd et al., 2016). Furthermore, participatory methods readily map on to the history of community-engaged responses to suicide and can align well with socio-environmental problems that contribute to suicide, such as racial discrimination, bullying, poverty, and violence. As such, the topic of suicide can prove to be a focused point of entry into an inquiry process that allows insight into its determinants.

So, can communities prevent suicides in their own communities? Here, we will see that when communities take such action, suicides can be prevented. Most of the literature on community-based participatory research and suicide prevention proposes community-based approaches as a viable model, including African American churches developing suicide prevention and mental health interventions (Hankerson & Weissman, 2012; Molock et al., 2008; Williams, 2014), suicide prevention on an Apache reservation (Barlow, 2006), suicide prevention with Latino youth (Ford-Paz, Reinhard, Kuebbeler, Contreras, & Sanchez, 2015), substance use prevention with Native American youth (Lane & Simmons, 2011), and suicide and alcohol abuse prevention in Alaska Native communities (Gonzalez & Trickett, 2014).

Positive outcomes of the integration of participatory research and suicide prevention are reported in several studies. Hacker (2006) developed a community partnership to address youth suicide and overdose, reporting that the community developed their own trauma response team and suicide survivors group, promoted school engagement, and implemented prevention training for a youth workers network, resulting in a decrease in suicidal behavior. Ford, Rasmus, and Allen (2012) conducted a community-based participatory project with Alaska Native youth, which involved a youth steering committee, youth–researcher partnerships, and youth action groups. The youth were involved in all stages of the research, and they guided the translation and application of research findings at the community level. These

activities engaged the youth and contributed to their well-being and healthy living. Mohatt et al. (2014) developed a suicide and alcohol abuse prevention program with Yup'ik Alaska Native youth using a community-based participatory research process. They implemented an indigenous, culture-specific model of intervention, and most of the youth in the community participated, as did elders, tribal and community leaders, and parents. As community planning groups, they developed interventions focused on individuals, families, and the community. Activities included communal mastery, which was joining with significant others in one's family and community to solve problems; a prayer walk; and meetings with individuals and families, with the result that protective factors increased among youth at individual, family, and community levels. Protective factors included a young person's belief that he or she can face life problems successfully through joining with family, drinking less alcohol, and having social support and opportunities in the community. As well, individual, family, and community well-being increased, including scores on the Reasons for Living Inventory, which has strong positive psychological underpinnings (e.g., survival and coping beliefs; responsibility to others).

One community-based participatory project brought community members together to develop a "family guide" for youth suicide prevention (Gryglewicz, Elzy, Brown, Kutash, & Karver, 2014). The researchers brought together 12 parents with youth currently at risk for suicide, 18 survivors of suicide, and eight mental health professionals, from a white, working class population. Themes identified for this family guide included problem awareness, being available to youth, overcoming barriers to service utilization, and family involvement. Twelve additional themes were developed, including the empowerment of parents and families. Community participation was essential, and the authors wrote that "It is essential for community participants to be at the forefront of prevention programs and initiatives from the very beginning" (p. 63). Unfortunately, this family guide was not evaluated as to its effectiveness.

A Case Example: An Indigenous Community in the Canadian Arctic

One of us (Kral) was involved in a youth-led, community-based suicide prevention effort in an Inuit community in the Canadian Arctic (Kral & Idlout, 2009, 2016). The project started in 1998, as a participatory study with Inuit. There was an Inuit steering committee for the study, and an Inuit youth committee in the community. The youth committee was heavily involved in the research, which included asking Inuit community members about suicide and suicide prevention. Once the community project was completed, the President of the youth committee reorganized the committee with new youth, and the committee decided to open a youth center for suicide prevention. A local film company, Isuma, helped the committee raise money to open the center, which included many games, a pool table, and a large screen for

movie night. Elders were involved to teach youth about their culture and language in the form of relatively informal talks. The youth committee even set up peer counseling and a crisis line in the community. There had been many suicides before the center was opened, but after the center opened there were no suicides for 2 years. The center closed after 2 years, however, because of financial problems.

Over the next 8 years after the center closed, deaths by suicide continued to occur, and the rate was quite high. It was at this point that the lead author (Kral) moved to the community to conduct a year-long ethnographic study, and he began working with the next generation of youth committee members, whose primary goal was to re-open the youth center to prevent suicides. The committee met weekly and, along with an older Inuk (singular for Inuit), youth in the community came together in a meeting organized by Kral and the Inuk to talk about their vision for the new youth center. Upon discovery of federal and territorial grants for projects having to do with culture, youth at the large meeting were asked what cultural activities they would like to see in their center. Youth were excited about this prospect, because Inuit culture is very important to them, and so they came up with many suggestions. These suggestions were organized into three themes based on culture, and grant applications were written based on these themes. The youth committee received all grants for which they applied, and the youth center was re-opened, which was cause for community celebration. After re-opening, it was the youth of the community who ran the center, organizing scheduling and oversight, resulting in increased use and attendance of the youth center. Eight years after the center opened, compared to the 8 years prior, suicide decreased by 68% in the community. The youth were successful!

The re-opening of the youth center is an example of a community-based participatory action project for suicide prevention that worked. Unfortunately, the Inuit community closed the youth center a few years later, reportedly because it was too small and was a fire hazard. Today, there is no youth center and no youth committee, and suicides have returned in large numbers, indicating a primary problem with program sustainability. Once a program like the youth center is started, careful planning must occur to determine what needs to be done to sustain such a program. For example, if the center is too small, it would be important to have the space and resources to move it to a larger building to ensure that the program is kept alive. One can see, however, that community-driven suicide prevention is possible, despite challenges. Overall, this work is reflective of a broader turn in participatory research in which the engagement of marginalized youth is a growing movement (Delgado & Staples, 2007; Nicotera, 2008; Wang, 2006). Youth are increasingly engaged in civic activities through public policy/consultation, community coalition involvement, organizational decision-making, organizing and activism, and school-based service learning (Camino & Zeldin, 2002). Civic engagement is a means for people to come together regarding political and social issues and to resolve problems that are of mutual interest. For youth, this can include volunteering in their communities with various services; schools can also provide such engagement opportunities (Balsano, 2005).

Conclusions

As is the case for many mental health-related challenges, suicide is a "wild problem"—a problem that needs consideration in the individual, social, cultural, and historical systems in which it is occurring. The limitations of reductionist approaches to suicide prevention, implemented in service systems that are under-resourced, have been apparent for decades. Somewhat counterintuitively, the failure of service and research sectors to generate action, coupled with the tragedy and trauma of suicide itself, have cultivated very active spaces for community mobilization. Decades of such mobilization have been characterized by creative methods of engagement and empowerment, and nuanced sets of knowledge, that grow out of the lived experience of those involved. These elements resonate well with the key tenets of positive psychology (Biswas-Diener, 2011; Schneller, 2009; Seligman, 2002). For instance, the concept of empowerment is similar to the emphasis on signature strengths in positive psychology and can include the empowerment of communities and positive institutions (Schneller, 2009). The focus on positive human traits is also, inherently, a focus on prevention (Seligman, 2002). There are several key implications that can be taken from the work in this field to date. They can be summarized as follows:

- There is a considerable degree of community-driven work already happening in this space. Academics interested in engaging are advised to conduct a careful review, via documents and interviews with key stakeholders, of actions past and present and their successes and failures. Engaging strategically in this manner will not only lead to less "reinvention of the wheel," but will also serve to forge relationships with community stakeholders.
- While engagement of communities grappling with suicide can be highly energized and carry considerable momentum, it is important to not become so engrossed in an academic orientation (e.g., as an outsider expert, with an agenda), that the true strength of the academic perspective (e.g., a willingness to engage with a community to explore emic resolutions), is lost. This has, historically, gone awry in two primary ways. As seen in reviews of the effectiveness of engaging schools in suicide prevention efforts, it took a considerable amount of time before many of these well-intended efforts were found to be ineffective or, at worst, harmful, and best practices began to emerge (Garland & Zigler, 1993; Miller et al., 2009; Shaffer et al., 1990; Vieland et al., 1991). The second direction of challenge is no more evident than in the resounding failure of southern-derived (i.e., Westernized) suicide prevention efforts in the far north of Canada (Kral, 2012). Such efforts have erroneously attempted to apply interventions which are based in evidence from populations with marked cultural differences from northern, indigenous communities. Without rigorous attention to questions of generalizability and effectiveness, rather than merely implementation and process, many such efforts proved misguided and continue to be pursued with academic partnerships to this day. To be successful, such work must progress

through processes of participatory design, feasibility testing, and trials of effectiveness, within the context of the community of focus.

- Academicians and clinicians with an interest in this area, along with possessing the technical skills of participatory methodologies and the participatory "attitude" described earlier, must also be adaptive and flexible and prepared to engage in and support a range of community activities that are not traditionally academic in nature. These areas might include political activism, engagement in social enterprises, community mobilization and mediation, advertising, and an array of unlikely partnerships (including close friendships) in the process (Kidd et al., 2016). Being too wedded to traditional understandings of the roles and activities of a researcher can reduce the impacts of this work.
- It has been stated that sustainability of participatory prevention programs needs attention. How does one ensure that such programs will continue? Community members running such programs have other responsibilities, such as work and family, and these can take precedent. In our case study, one of the grant expenditures for the Inuit committee's youth center was for a full-time adult director of the center, a paid position in the community. Such a person was hired and, although successful for several years, this too was not sufficient. The community needs to see this work as important enough to continue it, to see benefits they can be grateful for, and must find meaning and purpose in the prevention efforts. Shediac-Rizkallah and Bone (1998) argue that sustainability of community-based programs needs attention from the time of initiation of project design and implementation, to the selection of organizational settings, and during integration with the broader community environment. Sustainability needs to be continuously monitored over time, with an informed and organized perspective on how a program will be continued, and decisions made about who will lead it. McKenzie-Mohr (2000) has suggested social marketing for sustainability, with the identification of the activity to be promoted and barriers to the activity, and the design of strategies to overcome the barriers. Such sustainment will involve the continuous engagement of community partners (Bogart & Kimberly, 2009). There are always other pressing community concerns and, so, community members must be more fully involved in the programs, and funding must be continuous (Merzel & D'Afflitti, 2003).

In sum, positive psychology should include the positive methodology of participatory research, which is value based and growth oriented for a community and its members. This is an empowering methodology for the individuals involved and their communities, and such endeavors can be translationally applied toward suicide prevention efforts, including sustainment efforts. We have reviewed several studies demonstrating the positive effect of community-based participatory action research on the prevention of suicide deaths and the promotion of well-being. When communities are involved in the development and application of prevention programs, positive approaches have been effectively launched from academic fields, including community psychology (Boyd & Bright, 2007), public health (Cargo & Mercer, 2008), social work (Baffour, 2011), nursing (Savage et al.,

2006), and medicine (O'Toole, Aaron, Chin, Horowitz, & Tyson, 2003). Participatory research is being used frequently with indigenous communities, but it can also be applied to any population, and has been described as a new research paradigm: a participatory paradigm (Hall, 1992; Heron & Reason, 1997). Currently, this participatory paradigm is being implemented around the world with many different populations and, at least preliminarily, promises positive outcomes. Psychologists, researchers, and health practitioners are encouraged to engage in this form of positive and empowering research-based intervention, toward the new movement of critical suicidology.

References

Adelman, C. (1993). Kurt Lewin and the origins of action research. *Educational Action Research, 1*, 7–24.

Alley, S., & Blanton, J. (1976). A study of paraprofessionals in mental health. *Community Mental Health Journal, 12*, 151–160.

Aseltine, R. H., & DeMartino, R. (2004). An outcome evaluation of the SOS suicide prevention program. *American Journal of Public Health, 94*, 446–451.

Atkinson, D. (2005). Research as social work: Participatory research in learning disability. *The British Journal of Social Work, 35*, 425–434.

Baffour, T. D. (2011). Addressing health and social disparities through community-based participatory research in rural communities: Challenges and opportunities for social work. *Contemporary Rural Social Work, 3*, 4–16.

Balsano, A. B. (2005). Youth civic engagement in the United States: Understanding and addressing the impact of social impediments on positive youth and community development. *Applied Developmental Science, 9*, 188–201.

Barak, A. (2007). Emotional support and suicide prevention through the internet: A field project report. *Computers in Human Behavior, 23*, 971–984.

Barlow, A. (2006, November). *Employing community based participatory research (CBPR) methods to prevent youth suicide on the White Mountain Apache reservation*. Paper presented at the annual meeting of the American Public Health Association, Boston, MA.

Becker, A. E., & Kleinman, A. (2013). Mental health and the global agenda. *New England Journal of Medicine, 369*, 66–73.

Berman, A. L. (2009). School-based suicide prevention, research advances and practice implications. *School Psychology Review, 38*, 233–238.

Biswas-Diener, R. (Ed.). (2011). *Positive psychology as social change*. New York: Springer.

Bogart, L. M., & Kimberly, U. (2009). Community-based participatory research: Partnering with communities for effective and sustainable behavioral health interventions. *Health Psychology, 28*, 391–393.

Boyd, N. M., & Bright, D. S. (2007). Appreciate inquiry as a mode of action research for community psychology. *Journal of Community Psychology, 35*, 1019–1036.

Brown, W. F. (1974). Effectiveness of paraprofessionals: The evidence. *Journal of Counseling and Development, 53*, 257–263.

Brydon-Miller, M. (2009). Covenantal ethics and action research: Exploring a common foundation for social research. In D. Mertens & P. Ginsberg (Eds.), *Handbook of social research ethics* (pp. 243–258). Thousand Oaks, CA: Sage.

Brydon-Miller, M., Kral, M. J., Maguire, P., Noffke, S., & Sabhlok, A. (2011). Jazz and the Banyon tree: Roots and riffs on participatory action research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (4th ed., pp. 387–400). Thousand Oaks, CA: Sage.

Camino, L., & Zeldin, S. (2002). From periphery to center: Pathways for youth civic engagement in the day-to-day life of communities. *Applied Developmental Science, 6*, 213–220.

Capp, K., Deane, F. P., & Lambert, G. (2001). Suicide prevention in aboriginal communities: Application of community gatekeeper training. *Australian and New Zealand Journal of Public Health, 25*, 315–321.

Cargo, M., & Mercer, S. L. (2008). The values and challenges of participatory research: Strengthening its practice. *Annual Review of Public Health, 29*, 325–350.

Centers for Disease Control and Prevention (CDC). (2015). *Leading causes of death in males in the United States*. Retrieved from http://www.cdc.gov/men/1cod.

Centers for Disease Control and Prevention (CDC). (2017). *Suicide and self-inflicted injury*. Retrieved from https://www.cdc.gov/nchs/fastats/suicide.htm

Chappell, A. L. (2000). Emergence of participatory methodology in learning difficulty research: Understanding the context. *British Journal of Learning Disabilities, 28*, 38–43.

Delgado, M., & Staples, L. (2007). *Youth-led community organizing*. New York: Oxford University Press.

Dobbs, D. (2017). The smartphone psychiatrist. *The Atlantic*, July/August 2017 Issue. Retrieved July 5, 2017, from https://www.theatlantic.com/magazine/archive/2017/07/the-smartphone-psychiatrist/528726/.

Draper, A. K., Hewitt, G., & Rifkin, S. (2010). Chasing the dragon: Developing indicators for the assessment of community participation in health programs. *Social Science and Medicine, 71*, 1102–1109.

Dupont, I. (2008). Beyond doing no harm: A call for participatory action research with marginalized populations in criminological research. *Critical Criminology, 16*, 197.

Durlak, J. A. (1979). Comparative effectiveness of paraprofessional and professional helpers. *Psychological Bulletin, 86*, 80–92.

Eisen, A. (1994). Survey of neighborhood-based, comprehensive community empowerment initiatives. *Health Education & Behavior, 21*, 235–252.

Ford, T., Rasmus, S., & Allen, J. (2012). Being useful: Achieving indigenous youth involvement in a community-based participatory research project in Alaska. *International Journal of Circumpolar Health, 71*, 65–73.

Ford-Paz, R. E., Reinhard, C., Kuebbeler, A., Contreras, R., & Sanchez, B. (2015). Culturally tailored depression/suicide prevention in Latino youth: Community perspectives. *Journal of Behavioral Health Services and Research, 42*, 519–533.

Friere, P. (1970). *Pedagogy of the oppressed*. New York: Seabury.

Garland, A. F., & Zigler, E. (1993). Adolescent suicide prevention: Current research and social policy implications. *American Psychologist, 48*, 169–182.

Gates, L. B., & Akabas, S. H. (2007). Developing strategies to integrate peer providers into the staff of mental health agencies. *Administration and Policy in Mental Health and Mental Health Services Research, 34*, 293–306.

Goldney, R. D. (2005). Suicide prevention: A pragmatic review of recent studies. *Crisis, 26*, 128–140.

Gonzalez, J., & Trickett, E. J. (2014). Collaborative measurement development as a tool in CBPR: Measurement development and adaptation within the cultures of communities. *American Journal of Community Psychology, 54*, 112–124.

Gould, M. S., Kalafat, J., Munfakh, J. L. H., & Kleinman, M. (2007). An evaluation of crisis hotline outcomes part 2: Suicidal callers. *Suicide and Life-threatening Behavior, 37*, 338–352.

Gryglewicz, K., Elzy, M., Brown, R., Kutash, K., & Karver, M. S. (2014). It's time to talk about it: Utilizing a community-based research approach to develop a family guide for youth suicide prevention. *International Journal of Child, Youth, and Family Studies, 5*, 47–69.

Hacker, K. (2006, November). *Youth suicide and overdose: The impact of a research/community partnership on community action*. Paper presented at the annual meeting of the American Public Health Association, Boston, MA.

Hall, B. L. (1992). From margins to center? The development and purpose of participatory research. *The American Sociologist, 23*, 15–28.

Hankerson, S. H., & Weissman, M. M. (2012). Church-based health programs for mental disorders among African Americans: A review. *Psychiatric Services, 63*, 243–249.

Hattie, J. A., Sharpley, C. F., & Rogers, J. H. (1984). Comparative effectiveness of professional and paraprofessional helpers. *Psychological Bulletin, 95*, 534–541.

Head, B. W. (2008). Wicked problems in public policy. *Public Policy, 3*(2), 101.

Heilig, S. M., Farberow, N. L., Litman, R. E., & Shneidman, E. S. (1970). Nonprofessional volunteers in a suicide prevention center. In E. S. Shneidman, N. L. Farberow, & R. E. Litman (Eds.), *The psychology of suicide* (pp. 109–123). New York: Science House.

Heron, J., & Reason, P. (1997). A participatory inquiry paradigm. *Qualitative Inquiry, 3*, 274–294.

Hesse-Biber, S. N., & Leavy, P. (Eds.). (2008). *Handbook of emergent methods*. New York: Guilford Press.

Kalafat, J., & Elias, M. (1991). Evaluation of school-based interventions. In A. A. Leenaars & S. Wenckstern (Eds.), *Suicide prevention in schools* (pp. 231–241). New York: Hemisphere/ Taylor & Francis.

Kalafat, J., Gould, M. S., Munfakh, J. L. H., & Kleinman, M. (2007). An evaluation of crisis hotline outcomes part 1: Nonsuicidal crisis callers. *Suicide and Life-threatening Behavior, 37*, 322–337.

Kapoor, D., & Jordan, S. (Eds.). (2009). *Education, participatory action research, and social change: International perspectives*. New York: Palgrave Macmillan.

Kazdin, A. E., & Rabbitt, S. M. (2013). Novel models for delivering mental health services and reducing the burdens of mental illness. *Clinical Psychological Science, 1*, 170–191.

Kidd, S. A., & Kral, M. J. (2005). Practicing participatory action research. *Journal of Counseling Psychology, 52*, 187–195.

Kidd, S. A., Madan, A., Rallabandi, S., Cole, D., Muskat, E., Raja, S., … McKenzie, K. (2016). A multiple case study of mental health interventions in middle income countries: Considering the science of delivery. *PLoS One, 11*(3), e0152083.

Kidd, S. A., McKenzie, K. J., & Virdee, G. (2014). Mental health reform at a systems level: Widening the lens on recovery-oriented care. *The Canadian Journal of Psychiatry, 59*(5), 243–249.

Kleiman, E. M., & Liu, R. T. (2013). Social support as a protective factor in suicide: Findings from two nationally representative samples. *Journal of Affective Disorders, 150*, 540–545.

Knox, K. L., Conwell, Y., & Caine, E. D. (2004). If suicide is a public health problem, what are we going to do to prevent it? *American Journal of Public Health, 94*, 37–45.

Koenig, H. G. (2009). Research on religion, spirituality, and mental health: A review. *Canadian Journal of Psychiatry, 54*, 283–291.

Kral, M. J. (2012). Postcolonial suicide among Inuit in Arctic Canada. *Culture, Medicine and Psychiatry, 36*, 306–325.

Kral, M. J., & Allen, J. (2016). Community-based participatory action research. In L. A. Jason & D. Glenwick (Eds.), *Handbook of methodological approaches to community-based research: Qualitative, quantitative, and mixed methods* (pp. 253–262). New York: Oxford University Press.

Kral, M. J., & Idlout, L. (2009). Community wellness and social action in the Canadian Arctic: Collective agency as subjective well-being. In L. J. Kirmayer & G. G. Valaskakis (Eds.), *Healing traditions: The mental health of aboriginal peoples in Canada* (pp. 315–334). Vancouver, BC: University of British Columbia Press.

Kral, M. J., & Idlout, L. (2016). Indigenous best practices: Community-based suicide prevention in Nunavut, Canada. In J. White, I. Marsh, M. J. Kral, & J. Morris (Eds.), *Critical suicidology: Transforming suicide research and prevention for the 21st century* (pp. 229–243). Vancouver, BC: University of British Columbia Press.

Kral, M. J., & Idlout, L. K. (2006). Participatory anthropology in Nunavut. In P. R. Stern & M. E. Stevenson (Eds.), *Critical Inuit studies: An anthology of contemporary Arctic ethnography* (pp. 54–70). Lincoln, NE: University of Nebraska Press.

Lane, D. C., & Simmons, J. (2011). American Indian youth substance abuse: Community-driven interventions. *Mount Sinai Journal of Medicine, 78*, 362–372.

Laverack, G. (2006). Improving health outcomes through community empowerment: A review of the literature. *Journal of Health, Population, and Nutrition, 24*, 113–120.
Laverack, G., & Labone, R. (2000). A planning framework for community empowerment goals within health promotion. *Health Policy and Planning, 15*, 255–262.
Lewin, K. (1946). Action research and minority problems. *Journal of Social Issues, 2*, 34–46.
Marsh, I. (2011). *Suicide, foucault, history, and truth*. Cambridge: Cambridge University Press.
McKenzie-Mohr, D. (2000). Fostering sustainable behavior through community-based social marketing. *American Psychologist, 55*, 531–537.
Merzel, C., & D'Afflitti, J. (2003). Reconsidering community-based health promotion: Promise, performance, and potential. *American Journal of Public Health, 93*, 557–574.
Miller, D. N., Eckret, T. L., & Mazza, J. J. (2009). Suicide prevention programs in the schools: A review and public health perspective. *School Psychology Review, 38*, 168–188.
Miller, H. L., Coombs, D. W., Leeper, J. D., & Barton, S. N. (1984). An analysis of the effects of suicide prevention facilities on suicide rates in the US. *American Journal of Public Health, 74*, 340–343.
Mohatt, G. V., Fok, C. C. T., Henry, D., People Awakening Team, & Allen, J. (2014). Feasibility of a community intervention for the prevention of suicide and alcohol abuse with Yup'ik Alaska native youth: The Elluam Tungiinun and Yupiucimta Asvairtuumallerkaa studies. *American Journal of Community Psychology, 54*, 153–169.
Molock, S. D., Matlin, S., Barksdale, C., Puri, R., & Lyles, J. (2008). Developing suicide prevention programs for African American youth in African American churches. *Suicide and Life-threatening Behavior, 38*, 323–362.
Nicotera, N. (2008). Building skills for civic engagement: Children as agents of neighborhood change. *Journal of Community Practice, 16*, 221–242.
O'Toole, T. P., Aaron, K. F., Chin, M. H., Horowitz, C., & Tyson, F. (2003). Community-based participatory research: Opportunities, challenges, and the need for a common language. *Journal of General Internal Medicine, 18*, 592–594.
Ortner, S. B. (2006). *Anthropology and social theory: Culture, power, and the acting subject*. Durham, NC: Duke University Press.
Perkins, D. D., & Zimmerman, M. A. (1995). Empowerment theory, research, and application. *American Journal of Community Psychology, 23*, 569–579.
Randell, B. P., Eggert, L. L., & Pike, K. C. (2001). Immediate post intervention effects or two brief youth suicide prevention interventions. *Suicide and Life-threatening Behavior, 31*, 41–61.
Ross, C. P. (1980). Mobilizing schools for suicide prevention. *Suicide and Life-threatening Behavior, 10*, 239–243.
Savage, C. L., Xu, Y., Lee, R., Rose, B. L., Kappesser, M., & Anthony, J. S. (2006). A case study in the use of community-based participatory research in public health nursing. *Public Health Nursing, 23*, 472–478.
Schneller, S. M. (2009). Promoting wellness: Integrating community and positive psychology. *Journal of Community Psychology, 37*, 922–937.
Seligman, M. E. P. (2002). Positive psychology, positive prevention, and positive therapy. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 3–9). New York: Oxford University Press.
Shaffer, D., Vieland, V., & Garland, A. (1990). Adolescent suicide attempters: Response to suicide prevention programs. *Journal of the American Medical Association, 264*, 3151–3155.
Shediac-Rizkallah, M. C., & Bone, L. R. (1998). Planning for the sustainability of community-based health programs: Conceptual frameworks and future directions for research, practice, and policy. *Health Education Research, 13*, 87–108.
Shneidman, E. S. (1988). Some reflections of a founder. In R. Maris (Ed.), *Understanding and preventing suicide* (pp. 1–12). New York: Guilford.
Shneidman, E. S., Farberow, N. L., & Litman, R. E. (1961). The suicide prevention center. In N. L. Farberow & E. S. Shneidman (Eds.), *The cry for help* (pp. 6–18). New York: McGraw-Hill.
Sirianni, C., & Friedland, L. (2001). *Civic innovation in America: Community empowerment, public policy, and the movement for civic renewal*. Berkeley, CA: University of California Press.

Snyder, C. R., & Leary, S. J. (2007). *Positive psychology: The scientific and practical explorations of human strengths*. Thousand Oaks, CA: Sage.

Snyder, C. R., Lopez, S. J., & Pedrotti, J. T. (2011). *Positive psychology: The scientific and practical explorations of human strengths* (2nd ed.). Los Angeles, CA: Sage.

Statistics Canada. (2011). *The 10 leading causes of death, 2011*. Version updated November 2015. Retrieved from http://statcan.gc.ca/pub/820625-x/2014001/article/11896-eng.htm

Szanto, K., Kalmar, S., Hendin, H., Rihmer, Z., & Mann, J. J. (2007). A suicide prevention program in a region with a very high suicide rate. *Archives of General Psychiatry, 64*, 914–920.

Toulmin, S. (1988). The recovery of practical philosophy. *The American Scholar, 57*, 337–352.

Travers, K. D. (1997). Reducing inequities through participatory research and community empowerment. *Health Promotion Practice, 24*, 344–356.

Varah, C. (2001). The Samaritans: Befriending the suicidal. In E. S. Shneidman (Ed.), *Comprehending suicide: Landmarks in 20th-century suicidology* (pp. 167–170). Washington, DC: American Psychological Association (original published in 1973).

Vieland, V., Whittle, B., Garland, A., Hicks, R., & Shaffer, D. (1991). The impact of curriculum-based suicide prevention programs for teenagers: An 18-month follow up. *Journal of the American Academy of Child and Adolescent Psychiatry, 30*, 811–815.

Wallerstein, N., & Bernstein, E. (1994). Introduction to community empowerment, participatory education, and health. *Health Education Quarterly, 21*, 141–148.

Wang, C. C. (2006). Youth participation in photovoice as a strategy for community change. *Journal of Community Practice, 14*, 147–161.

White, J. (2012). Youth suicide as a "wild" problem: Implications for prevention practice. *Suicidology Online, 3*, 42–50.

White, J., Marsh, I., Kral, M. J., & Morris, J. (2016). *Critical suicidology: Transforming suicide research and prevention for the 21st century*. Vancouver, BC: University of British Columbia Press.

Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2003). Racial/ethnic discrimination and health: Findings from community studies. *American Journal of Public Health, 93*, 200–2008.

Williams, L. (2014). Implementing a mental health ministry committee in faith-based organizations: The promoting emotional wellness and spirituality program. *Social Work in Health Care, 53*, 414–434.

World Health Organization. (2014). *Preventing suicide: A global imperative*. Retrieved from http://apps.who.int/iris/bitstream/10665/1/9789241564779_eng.pdf

World Health Organization. (2017). *Suicide*. Retrieved from http://www.who.int/mediacentre/factsheets/fs398/en/

Wyman, P. A., Brown, C. H., Inman, J., Cross, W., Schmeelk-Cone, K., Guo, J., & Pena, J. B. (2008). Randomized trial of a gatekeeper program for suicide prevention: 1-year impact on secondary school staff. *Journal of Consulting and Clinical Psychology, 76*(1), 104.

Wyman, P. A., Brown, C. H., LoMurray, M., Schmeelk-Cone, K., Petrova, M., Yu, Q., & Walsh, E. (2010). An outcome evaluation of the sources of strength suicide prevention program delivered by adolescent peer leaders in high schools. *American Journal of Public Health, 100*, 1653–1661.

Zimmerman, M. A. (1995). Psychological empowerment: Issues and illustrations. *American Journal of Community Psychology, 23*, 581–599.

Chapter 13
Applied Resiliency and Suicide Prevention: A Strengths-Based, Risk-Reduction Framework

Jameson K. Hirsch, Jessica Kelliher Rabon, and Edward C. Chang

As our authors have highlighted, suicide is a major public health concern, with a multi-factorial etiology that necessitates a broad approach to its treatment. Historically, the treatment for suicidal behavior has focused on the reduction of risk factors, and there is solid evidence to suggest that a risk-reduction paradigm has a beneficial effect on mental health outcomes. Psychopathology, such as depression, and negative cognitions and emotions, such as hopelessness and perceptions of loneliness and isolation, are robust predictors of suicide risk, and interventions to attenuate their impact generally result in reductions in suicidal behavior (Abramson et al., 2002; Chang, Sanna, Hirsch, & Jeglic, 2010). Cognitive-behavioral and interpersonal therapies, for instance, are focused on the resolution of relationship-based difficulties and errors in thinking and acting and are effective in the reduction of suicide risk (Bryan et al., 2018). Yet, as our authors have pointed out, this may be a one-sided approach, which generally neglects aspects of resilience, growth, and adaptivity or addresses them as a by-product of the reduction of risk. We argue, therefore, that a new paradigm in the prevention and treatment of suicide is needed, which both addresses risk while simultaneously and purposefully enhancing resilience, offering a balance of risk-reduction and resilience-promotion. Conceptualized as a translational "applied resilience," we have developed a new descriptive term for this approach—Positive Suicidology.

Emerging in the 1980s with concepts such as spirituality and religiousness, reasons for living, and adaptive problem-solving, suicidologists began to emphasize

J. K. Hirsch (✉)
Department of Psychology, East Tennessee State University, Johnson City, TN, USA
e-mail: hirsch@etsu.edu

J. Kelliher Rabon
Greenville Hospital System Children's Hospital, Greenville, SC, USA

E. C. Chang
Department of Psychology, University of Michigan, Ann Arbor, MI, USA

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*,
Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8_13

concepts such as a "light at the end of the tunnel" or "grasping for hope," and began to frame suicide prevention as a "fight" against death; in other words, a motivational process to move out of a state of despair and into long-term well-being and health (Ellis & Smith, 1991; Hirsch & Ellis, 1998; Rudd, Rajab, & Dahm, 1994). Yet, these early theories on suicide were themselves based on theories acknowledging self-actualization and adversarial growth as processes of change (Heisel & Flett, 2004). For example, early humanistic therapeutic strategies posited movement from the actual to ideal self as a positive form of growth, and classic existential and gestalt theories were long concerned with spirituality, holistic well-being, and interpersonal concerns in the context of death (Sellin, Asp, Wallsten, & Wiklund Gustin, 2017; Orbach, 2007), setting the stage for current work in Positive Suicidology.

To introduce this paradigm of Positive Suicidology, our authors have provided a review of the literature on adaptive, positive psychosocial factors that might be used to reduce suicide risk across the lifespan, and at the differing levels of the individual, relationships, community, and culture. Numerous themes of importance have emerged, which are both interpersonal and intrapersonal in nature; indeed, many of the constructs discussed in this volume are multi-dimensional and cross sociocultural, temporal, and existential boundaries.

In this chapter, we briefly highlight the contributions of our authors, noting their unique perspectives on applying resiliency-based conceptualizations and strategies to the understanding and treatment of suicide. We also note thematic patterns that emerged. For example, our authors emphasized care for the self and others, engagement with support systems, and becoming emotionally balanced via temporal and holistic growth as important personal and clinical objectives. Such efforts, in turn, provide impetus toward meaningful future goals, thereby enhancing psychological well-being and reducing risk for suicide. Our authors also discuss barriers to such growth and well-being, including sociocultural stressors and bias and poor physical health, and we strategize here about potential means for overcoming these intervention challenges. Finally, we envision where the concepts of "applied resiliency" and "positive suicidology" have been, where they are currently, and where they must go in the future to be successful in terms of training and education, research and prevention, and intervention strategies. We begin by discussing the emergent, broad themes of interpersonal and intrapersonal processes which, although they are independent contributors to health outcomes, may also converge to synergistically impact well-being, including suicide-related outcomes. Recognizing the overlap between inter- and intrapersonal processes, we address how positive psychological interventions might address both realms simultaneously to promote well-being. We also examine additional emergent themes, including existential and temporal perspectives on suicide, and paradigms focused on health-related, sociocultural, and environmental factors.

Interpersonal Factors

Supporting historical and current research trends in the field of suicidology (Hirsch & Ellis, 1995), our chapter authors clearly indicate that the realm of interpersonal functioning is critical for the prevention of suicide. In Chap. 7, Kleiman and colleagues highlight the role of thwarted interpersonal needs, acknowledging the damage caused by a lack of social belongingness and feelings of burdensomeness, per the Interpersonal Theory of Suicide (Joiner et al., 2009). Kleiman also addresses other deficit-oriented social constructs, such as loneliness and social isolation, as well as conflict with others.

From the time of Durkheim, and extending to Joiner, many theorists and therapists have noted the critical role of social support, or its absence, in the development and maintenance of psychopathology and suicidality, including its interaction with sociocultural determinants of health to contribute to suicide risk (Recker & Moore, 2016; Van Orden et al., 2010). For example, the absence of social interactions and support are associated with risk for development and worsening of anxiety, depression, substance misuse and suicidal thoughts and behavior, whereas the presence of adaptive social problem-solving and support-offering relationships are related to better physical and mental health, better academic and vocational functioning, and less suicide risk (Leung, Chen, Lue, & Hsu, 2007; Stice, Ragan, & Randall, 2004).

Conversely, Kleiman and colleagues note that enhancement of and integration into social networks, as well as bolstering social support, are resiliency-based strategies for reducing suicide risk. Empirically supported therapies, such as Interpersonal Therapy, and efficacious strategies, such as enhancement of social problem-solving skills, have been shown to reduce suicidal behavior and risk, suggesting the importance of addressing social relations to prevent suicide (Overholser, 1995; Townsend et al., 2001). Further, encouraging interpersonal growth, by fostering attachment and connectedness, as well as social communication and engagement, are approaches with a growing evidence base of support for their application to psychopathology and suicide risk, and should be the focus of ongoing clinical trials to assess their therapeutic value.

Yet, interpersonal elements of importance are not limited to social support or the satisfaction of interpersonal needs, but also occur in the forms of forgiveness (e.g., of and by others; Chap. 3), gratitude (e.g., for things others have done; Chap. 5), reasons for living (e.g., importance of family and friends; Chap. 4), and the pursuit of purpose and meaningfulness (e.g., intergenerational engagement; Chap. 10). Even as a public health strategy, Kral and Kidd note, in Chap. 12, that for modern suicide prevention efforts to be effective, they must involve community-level engagement and communication. A common theme that seems to be vital to suicide prevention efforts, therefore, is that there is much value in the promotion of healthy, reciprocal, and supportive relationships, whether at the interpersonal, institutional, or community levels. As a collective group, the authors in this volume encourage continued clinical and research efforts to ameliorate loneliness, social isolation, and feelings of burdensomeness, but also prompt healthcare providers and researchers

to focus on strengths-based approaches. Applied resiliency, in the form of positive suicidology, is a novel, evidence-based approach with growing support, and may include pro-active and adaptive cognitive-emotional and behavioral strategies, such as improving social problem-solving abilities, strengthening perceived social networks, satisfying relatedness needs, and repairing damaged relationships and social functioning via application of positive psychological principles, such as altruism, gratitude, and forgiveness. We transition to a discussion of these other-related, yet internalized and individual-level, protective factors, in the sections below.

Intrapersonal Factors

In addition to evidence linking interpersonal risk factors (e.g., social conflict) to suicidality, there is also a rich history of investigation of the role of intrapersonal characteristics as risk factors for suicide, ranging from psychache to hopelessness to existential despair, all of which, incidentally, are negatively valenced factors that require reduction (Abramson et al., 2002; Shneidman, 1993). Not to discredit the fact that these risk factors may need to be reduced, but our authors have indicated the importance of recognizing an array of adaptive strengths and virtues that should be independently, and perhaps simultaneously, increased. As individual factors, this spectrum of positive psychological variables is impressive, but a top-down perspective reveals several emergent patterns: that is, (1) our past, present, and future are each important contributors to mental well-being; (2) suicide often emerges from deep, internal yearnings—for others, as noted above, and for purpose; and (3) suicide must be addressed not only at the psychological level of the individual, but also at the physical and environmental levels, including social functioning and community engagement, and the exploration of culturally relevant risk and protective factors. In the following sections, we discuss these thematic positive psychological patterns as they relate to suicide research and prevention.

Temporal Factors

At the intrapersonal level, an interesting theme to emerge is that of temporal well-being, including having an adaptive view of the past, present, and future, which appears to be related to reduced suicide risk (Boniwell & Zimbardo, 2015). In addition to future orientation, research indicates that adaptive forms of other time focal-points (e.g., past positive, present positive) are also beneficially related to physical and mental health, including less suicidal behavior (Hamilton, Kives, Micevski, & Grace, 2003; Laghi, Baiocco, D'Alessio, & Gurrieri, 2009). Our authors in this volume extend suicide prevention to include other temporal constructs, such as forgiveness (e.g., for *past* transgressions), gratitude (e.g., for *past* and *present* acts of kindness extended), and mindfulness (e.g., engagement in the *present* moment).

Knowing what we do about "dwelling in the past," which may contribute to depression, and "fear of the future," which may contribute to anxiety, it seems that mental health interventions and suicide prevention strategies must take temporal holism into account (Deyo, Wilson, Ong, & Koopman, 2009; Seligman, 2011).

In Chap. 2, Kirtley, Melson, and O'Connor acknowledge the importance of classic temporally related constructs, such as hopelessness and pessimism, as robust predictors of suicide risk, but also distinguish these from their counterparts of hope and optimism, citing the importance of addressing both in research and clinical work (O'Keefe & Wingate, 2013). Although a positive future-outlook is important, the mechanism of action of this protective effect is multi-faceted and involves cognitions about a changeable future, motivational strivings, self-efficacious and agentic behaviors, and problem-solving abilities (Britton, Van Orden, Hirsch, & Williams, 2014; Chang et al., 2013; Chu et al., 2018). On the surface, this approach adheres well to traditional therapeutic approaches for psychopathology, which attempt to reduce negative, ruminative thoughts of the present and past, and to reduce worrisome thoughts about the present and future (Beck, 1989). Our approach, however, maintains that this is not sufficient—that to simply reduce these deficits without simultaneously promoting their "opposing," or complementary, adaptive counterparts may only be representing a portion of the available options for the successful treatment of psychopathology and suicide (Duckworth, Steen, & Seligman, 2004).

Indeed, in Chap. 9, Yu and colleagues describe three different therapeutic approaches designed to reduce suicide risk, all of which are focused on the cultivation of future-oriented thoughts, emotions, and goals. Hope Therapy, for instance, emphasizes the development of problem-solving abilities (e.g., pathways thinking), the identification of adaptive future goals, and the promotion of goal motivation (e.g., agentic thinking) to thwart maladaptive, suicidal goals and replace them with adaptive, life-affirming goals. These hope-based efforts are focused across several life domains, including: social and romantic relationships, family life, academics and work, and leisure activities. Future Directed Therapy (FDT), similarly, is focused on the reduction of the suicide risk factor of depression and emphasizes the generation of future-oriented motivational goals which, in turn, promote goal-directed behaviors, leading to better well-being, including feelings of optimism and hope. FDT is also focused on thriving, and on re-orienting our expendable cognitive-emotional resources from usage toward maladaptive goals, toward a focus on adaptive, meaningful life outcomes. Finally, Yu and colleagues discuss Future Oriented Group Training (FOGT), which highlights the deleterious role of hopelessness in the suicidal process, as well as deficits in problem-solving and social efficacy. Often found to be one of the most robust predictors of suicide, hopelessness is a temporal construct, comprising a negative orientation toward the identification and completion of future goals, including the ability to harness interpersonal and problem-solving abilities to reach such goals (Brown, Beck, Steer, & Grisham, 2000). Thus, FOGT not only attempts to correct an unbalanced time perspective, but also promotes pro-active environmental and social engagement to reduce suicide risk.

Finally, although broad in scope, Reasons for Living are discussed in Chap. 4 by Calati, Olié, Ducasse, and Courtet and can be noted to have at least some temporal

components. Focused on what might keep a person alive, in the moment, were they considering suicide, reasons for living reflect just that—a reason to stay alive for another moment of the present and into the future (Linehan, Goodstein, Nielsen, & Chiles, 1983). We tend to think of reasons for living as symbolic of the elements that have meaning and value in life, overlooking the temporal aspects of the construct (Bagge, Lamis, Nadorff, & Osman, 2014). Yet, upon consideration, responsibility to family and child-related concerns, two domains of reasons for living, are also temporally derived, as they are based on distress about what one's suicide might do to a family or children, and how loved ones might fare in the future after a suicide death. Similarly, the survival and coping subscale implies the process of overcoming, and moving past and beyond, current stressors, reflecting an implicit focus on transitioning from the present to the future. Finally, the subscale of moral beliefs provides a measure of not only religious prohibitions against suicide, but also consideration of an afterlife; that is, even issues of morality may include elements of temporality.

Again, a temporal perspective seems to adhere closely to traditional and historical models of psychotherapy that examine, among other factors, adverse childhood experiences (ACEs) and relationships (e.g., Interpersonal Therapy) from the past, current stressors (e.g., Problem-Solving Therapy), and anxiety about the future (e.g., Cognitive-Behavioral Therapy; Cuijpers, de Wit, Kleiboer, Karyotaki, & Ebert, 2018; Hofmann & Smits, 2008; Soleimanpour, Geierstanger, & Brindis, 2017). In this volume, our authors suggest that we must also address temporally positive factors, such as hope and optimism, increasing their salience to buffer against suicide risk. As we continue to conduct research on, and develop interventions for, suicidal behavior, we should take care to investigate the strong importance of not only a client's current presenting problem, which is in the here-and-now, but also the burdens of their past and their fears of the future to help them to develop a more-holistic and balanced temporal perspective. Delving into the past and the future is truly a person-centered therapeutic endeavor, and one that often touches on private moments, troubling times, and deep fears; that is, reconciling our temporality often requires exploration of humanistic and existential topics, including purposefulness, motivation and goals, and the search for meaning, which we discuss in the following sections.

Humanistic and Existential Factors

Because many of the constructs discussed in this volume span thematic boundaries, they can also be addressed at multiple levels; for instance, not just at the temporal level, but also at the humanistic and existential levels. As an example, although the act of forgiveness does include a temporal element, it is not limited by time and can be enacted at any time of choosing (Jacinto & Edwards, 2011). Further, forgiveness is often addressed within the realms of religiousness and spirituality, or as a process of existential growth and recovery (Webb, Hirsch, & Toussaint, 2015). Similar constructs, such as gratitude and reasons for living, can

also be conceptualized within this person-centered theme; that is, they embody the pursuit of values, purpose, and meaning, and engagement in the processes of growth, thriving, and resiliency (Hill, Allemand, & Roberts, 2013; West, Davis, Thompson, & Kaslow, 2011).

In Chap. 3, Webb identifies a model outlining the associations between forgiveness of self, of others, and by God, as well as "unforgiveness" and physical and mental health outcomes, particularly addiction and suicide. With between 70–90% of the global population expressing a belief in God or a higher power, the ubiquity of religious and spiritual characteristics makes them an easily accessible target for therapeutic intervention, and one that is often palatable to clients (Rippentrop, Altmaier, Chen, Found, & Keffala, 2005). For instance, more than 70% of patients report that they wish their healthcare providers would address spiritual issues within the context of treatment (Wilson, Milosevic, Carroll, Hart, & Hibbard, 2008). It is feasible, then, that many suicidal patients would also welcome the introduction of some form of spirituality into their personal and therapeutic recovery processes.

Regarding psychopathology, a growing body of research indicates that forgiveness, particularly self-forgiveness, is beneficially associated with reduced levels of depression, anxiety, and substance abuse, and preliminary findings indicate a salubrious association between forgiveness and suicide risk (Webb, et al., 2015). Webb and colleagues have proposed a forgiveness-based model of suicide risk, positing several mechanisms of action, including via health-related behaviors, such as addiction, and via existential distress, including hopelessness and psychache (Dangel, Webb, & Hirsch, 2018). Thought to act on rumination and resentment, forgiveness may help ease psychological distress, including use of substances to cope with distress, thereby decreasing suicide risk. Forgiveness may also reduce suicide risk through its beneficial impact on other positive psychological variables, akin to the processes outlined by the Broaden and Build Model proposed by Fredrickson (Fredrickson & Joiner, 2002), whereby positive emotions evoke cognitive-emotional expansion. For instance, in a sample of primary care patients, forgiveness was related to greater future orientation and, in turn, to reduced suicidal behavior (Kelliher Rabon, Webb, Chang, & Hirsch, 2018). Yet, it is the humanity of forgiveness, and its spiritual and existential characteristics, that make it so widely accepted as a form of religious coping. Forgiveness is often a profound act, laden with meaning, addressing sensitive issues of shame and guilt—an act so simple, yet so complex and difficult, but with the power to change an individual, relationships, and even communities (Witvliet, Ludwig, & Vander Laan, 2001).

Similarly, the characteristic of gratitude, as described by Krysinka in Chap. 5, can be experienced internally or expressed simply, yet has beneficial effects for both the provider and recipient of thankfulness. Like forgiveness, gratitude, or thankfulness, is often focused on another person or group, and is mutually beneficial, in that both the recipient and deliverer of gratitude appear to manifest emotional and health benefits (Mills et al., 2015). Conceptualized as a prosocial motive, an affective trait, and as a general, positive appreciation for life and others, gratitude is beneficially related to self-concept and self-esteem, and to processes of self-growth, suggesting that it is a dynamic agent in emotional and behavioral

functioning, and one that could be harnessed for suicide prevention efforts (Wood, Froh, & Geraghty, 2010). Gratitude also contributes to a sense of meaningfulness in life, a classic existential construct and human pursuit, and appears to have beneficial effects at the emotional (e.g., greater positive affect), cognitive (e.g., use of active and adaptive coping), and interpersonal levels (e.g., warmer, reciprocal relationships; Emmons & McCullough, 2003).

In a therapeutic context, however, it cannot be presumed that these adaptive characteristics will automatically arise as a by-product of a treatment process that functions via reduction of psychological deficits (e.g., depression, anxiety). The authors in this volume posit that the long-standing tradition of viewing cognitive-emotional opposites (e.g., happiness versus sadness, optimism versus pessimism) as bipolar, rather than as coexistent or orthogonal, is somewhat outdated, lacks empirical support, and may contribute harm to the therapeutic process (Larsen, McGraw, & Cacioppo, 2001; Scheier, Carver, & Bridges, 1994). For example, just because someone is not sad does not mean they are happy, and just because someone is optimistic about their family relationships does not preclude them from being pessimistic about their health. As clinicians, we cannot assume that reducing the presence and intensity of suicide risk factors automatically increases the motivation and will to live, or to be resilient and thrive. In other words, these characteristics must be actively sought and, in the context of therapy and suicide prevention efforts, must be actively promoted in a process of applied resiliency.

One positive psychological factor that has been employed with some success toward the prevention of suicide is mindfulness, a component of the broader construct of self-compassion, which is discussed in Chap. 11 by Le and colleagues. In previous research, engaging in mindfulness is associated with less chronic pain, greater psychological well-being, less hopelessness, and less suicidal behavior, perhaps due to the beneficial effects of mindfulness on executive functioning processes such as impulse control, emotion regulation, and the ability to be aware of and redirect thoughts (Grossman, Niemann, Schmidt, & Walach, 2004). By tempering automatic reactivity, and by de-coupling emotions from cognitions, strategies such as Mindfulness-Based Cognitive Therapy (MBCT) are effective at decreasing suicide risk (Chesin et al., 2015).

Le and colleagues also note that secular mindfulness techniques, although beneficial, neglect other aspects of mindfulness that may be important for suicide prevention. Therefore, these authors propose a "6 R's" Framework of suicide prevention, where remembering, redirecting, and replacing are aspects reflected in traditional mindfulness-based therapeutic approaches, such as MBCT, and emphasize a "reflect and resolve" approach, whereby negative emotions are acknowledged, "released" or reframed, and positive emotions are promoted in their place (Keng, Smoski, Robins, Ekblad, & Brantley, 2012). The final trio of R's include reflecting (e.g., contemplating pleasure-seeking and unpleasantness-avoidance), resolving (e.g., strong motivation to cultivate new habits), and retracing (e.g., reflecting on sociocultural determinants of phenomena), which serve a somewhat different purpose, to reify the self through contemplation of the nature of dissatisfaction, one's relationship with others in the world, and the historical roots of one's discontent. Together, the 6 R's

comprise both an etic and emic approach to suicide prevention and self-evaluation, looking within to resolve intrapersonal distress but also looking outward, with motivational agency, in the service of integrating with others, one's experiences, and the environment; that is, resolving "problems" in a somewhat traditional deficit-reduction approach, but also broadening and building one's perspective in a process of meaning-making and growth through critical mindfulness. Although the terminology may be somewhat different, the commonalities are clear, as the 6 R's approach adheres to the broaden and build model (Fredrickson, 2000), and clearly emphasizes hopefulness (e.g., motivational agency), social integration (e.g., caring, reciprocal relationships) and problem solving (e.g., resolving stress via meaning-making), as potential strategies for preventing suicide (Cheavens, Cukrowicz, Hansen, & Mitchell, 2016; Chu et al., 2018; Range & Penton, 1994).

This self-actualizing, growth-based trajectory is described as a treatment paradigm by Heisel and colleagues in Chap. 10, where they note that meaning-based therapeutic strategies may be of particular importance for some vulnerable populations, such as those who have suffered a loss or who are struggling with their own existential concerns, such as aging, retirement, loss of abilities, or end of life concerns. Feelings of emptiness, termed an "existential vacuum," may result from such losses or age-based changes in routine, such as retirement, and may result in maladaptive attempts to fill this existential void, perhaps with negative health behaviors (e.g., substance abuse) or resulting in feelings of despair and hopelessness (Reker, Peacock, & Wong, 1987). Indeed, the absence of meaning in life is related to an array of poor health outcomes, including reduced quality of life and suicide risk, whereas the presence of meaningfulness is linked to reduced anxiety, depression, and substance misuse (Heisel & Flett, 2004). Heisel and colleagues describe a treatment approach designed for older adults that seeks to enhance meaningfulness and self-growth in order to reduce suicide risk. Based on Frankl's work, this multifaceted approach encourages meaning-making across several life domains, by emphasizing engagement in creative activities and meaningful experiences, and the cultivation of healthy attitudes toward challenges and questioning one's greater purpose in life (Frankl, 1984). Administered in a group format, Meaning Centered Men's Groups target suicide risk by focusing on meaning-making in vocation, leisure, and relationships and, existentially, on matters of generativity, transcendence, and spirituality. Preliminary evidence suggests that this treatment paradigm based on "applied resiliency" can have a beneficial impact on suicide risk and, importantly, that it is feasible and acceptable for delivery to a vulnerable population.

Self in Context: Sociocultural and Environmental Factors

It is also important to recognize that suicide prevention must occur within the context of the physical body and its existence in a series of biopsychosocial and environmental systems and levels (Kim, Baek, Han, Lee, & Yurgelun-Todd, 2015). Our authors have asserted that physical health, including behavioral activation, and

community engagement may play a role in the prevention of suicide. Further, the goal-oriented motivations that accompany hopefulness and future orientation are linked to behaviors occurring within the context of interpersonal relationships, sociocultural vulnerabilities, and environmental barriers (Chang & Banks, 2007; Cheavens et al., 2016; Hirsch, Visser, Chang, & Jeglic, 2012). Finally, by definition, the act of engaging with a community to prevent suicide, whether as a researcher, clinician, or other healthcare provider, stakeholder, or consumer, requires a physical presence, even if online, and, thus, human behavior. This approach aligns well with sociocultural models of behavior, as well as with agentic theories, which propose that the physical body is an organism of change, ever-adapting and responding to a changing world of relationships, communities, organizations, cultures, and governments (Suls & Rothman, 2004).

It is sometimes easy to forget that theoretical assumptions often exist in an ideal world, and that processes of adaptation and resilience can be damaged and hindered by deleterious life experiences, such as poverty, stigma and discrimination, and abuse (Davis, Cook, & Cohen, 2005). It is in the presence of such difficult circumstances where we might see both the most and least successful manifestations of resiliency; that is, many persons seem to thrive under difficult circumstances, manifesting psychospiritual growth; whereas, others may falter, manifesting distress and psychopathology (Bonanno, 2004). The need for an "applied resiliency" approach is often visible in disparaged communities and populations that are deemed "at risk" for suicide, in which their everyday lives are particularly harsh, cruel, or unjust, leaving them vulnerable to psychological injury, but with little opportunity for psychological respite. When we think of at-risk groups, such as transgender persons suffering stigma and discrimination, veterans experiencing moral injury, persons with chronic illness or pain, or persons in poverty, it is our compassionate first response to consider reducing hurtful deficits—to get rid of pain and ameliorate feelings of stigmatization and distress (Dekel, Ein-Dor, & Solomon, 2012; Meyer, 2015). Often, it is only as an afterthought, or as an ancillary strategy, that we, as mental health professionals, attempt to engage our clients in acts of striving and thriving, yet the authors in this volume have asserted that positive psychological approaches may be useful as primary approaches to the treatment of psychopathology and suicidal behavior, including in cultural and ethnic minorities.

In Chap. 6, Cole and Wingate explore the role of diversity, including culture and ethnicity, in the application of positive psychological principles to the prevention of suicide in minority individuals. They note that, first, research on positive suicidology must be inclusive of minority individuals, and that there is a need for cultural sensitivity in the application of positive psychology to mental health treatment and suicide prevention. Ongoing bias, racism, and discrimination, as well as historical trauma, often impact the well-being of members of minority groups and contribute to risk for suicide (Castle, Conner, Kaukeinen, & Tu, 2011). What is unknown, in many instances, is the suitability of current forms and measures of positive psychological principles for minority individuals. Existing research suggests that constructs such as hopefulness, optimism, grit, social support, mindfulness, and religiousness and spirituality are related to reduced suicide risk and behaviors in a

diverse array of minority samples (Pedrotti, Edwards, & Lopez, 2012). Culture-specific protective factors may also exist; for instance, embrace of cultural values and customs, as well as a strong sense of ethnic identity, and even biculturalism, may help to attenuate the impact of risk factors on health and well-being, including mental health and suicide (Allen et al., 2006; Utsey, Bolden, Lanier, & Williams, 2007). Cole and Wingate note, importantly, that positive psychology as a field is poised to be inclusive in its approach and application, given its basis in humanistic, person-centered, and growth-oriented principles, as well as its frequent grounding in, and acceptance of, non-Western approaches, including Eastern philosophies and Native American wisdom (Walsh & Shapiro, 2006).

Again, the characteristic of "applied resiliency" comes to mind, which is not simply a reservoir of positive psychological attributes that somehow balances out the "negative side" of a person or improves untenable sociocultural situations but, instead, requires purposeful and pragmatic implementation to be maximally beneficial. As an example, a growing body of research supports the premise that, to be unrealistically hopeful or optimistic, perhaps in unescapable or unremitting circumstances (e.g., in situations involving discrimination), may be counter-productive (Mattis, 2002; Weinstein, 1987). Similarly, to focus on the cultivation of positive emotions, to the exclusion of recognition and acceptance of negative emotions, is to see only one side of the equation (Gruber, Mauss, & Tamir, 2011). Therefore, clinicians, healthcare providers, and policymakers must embrace a therapeutic model that not only addresses psychosocial deficits, but also enhances psychosocial strengths.

Just as with critical mindfulness, Kral and Kidd, in Chap. 12, advocate for a "critical suicidology," which similarly challenges policymakers, prevention specialists, and communities to investigate the sociocultural and structural determinants of suicide, and to utilize research and intervention strategies that are empowering. Building on the needs and strengths of a community and engaging stakeholders at all levels in a process of evaluation and growth can help to identify meaningful strategies for intervention, which have value and importance for community members. By promoting community involvement in this meaning-making prevention process, empowerment of the community and its members might emerge and, with empowerment, enhanced investment in intervention efforts, facilitation of sustainment efforts, and reduction of suicide risk may follow (Laverack & Labonte, 2000; Varia, Ebin, & Stout, 2014).

At the individual level, this may be accomplished through the processes of physical engagement and behavioral activation, including wellness practices and exercise, as noted by Davidson and colleagues in Chap. 8. From a public health perspective, preventing suicide must be accomplished in a way that can reach the most people, at the least cost, and with the most effectiveness (Conwell & Duberstein, 1995); therefore, interventions that can be performed at home, without supervision and with minimal or no expense, and that have demonstrable effects on well-being are highly desirable. Davidson and colleagues assert that focusing on physical activity, behavioral activation, nutrition, health-related quality of life, stress reduction, and reduction of substance misuse might be effective broad-based approaches to

ameliorating suicide risk, which can be implemented as prevention, rather than intervention, techniques. Whether early in the lifespan or early in the suicide etiological process, employing empowering health-promotion strategies can be used to cope with active distress, but can also be promoted, in advance, as a reservoir of health-focused coping ability to be employed as a form of "applied resilience" in times of distress (Kalra et al., 2012; Smith, Baugh Littlejohns, & Thompson, 2001).

The approach advocated for by Davidson and colleagues emphasizes the promotion of health-related quality of life, which is a subjective assessment of functioning across life domains, including interpersonal relationships, physical and mental health, and degree of impairment; importantly, improved perceptions of HRQL often translate into healthy behaviors, as well as improved morbidity and mortality (Taillefer, Dupuis, Roberge, & LeMay, 2003). As the old saying goes, "healthy body, healthy mind," and the authors of this chapter note that, through strategies such as stress reduction and less use of substances, better HRQL can be attained, including less suicide risk (Brausch & Gutierrez, 2009; Choi, DiNitto, Marti, & Segal, 2017). Importantly, both health promotion and positive psychological exercises can often be conducted independently, at no or low cost, thereby overcoming some of the sociocultural barriers that might otherwise preclude seeking treatment. Yet, when patients do seek treatment, often from medical rather than psychiatric providers, encouragement of positive psychosocial and physical activities seems to be a natural fit as a proscriptive recommendation for improvement of both general health and suicide risk (Paluska & Schwenk, 2000; Richardson et al., 2005). By cultivating health-related volition and a message of health-engagement for laypersons, patients, and providers, a set of prevention strategies might be developed that is broad and comprehensive, integrative across multiple types of healthcare settings and population-level groups, and that can be customized to fit the life circumstances, values, and preferences of the individual client or patient (Chambers et al., 2005).

Conclusion

We have come together, as clinicians and practitioners, academicians and researchers, to better understand the potential contributions of positive psychological factors as a means of reducing suicide risk. In doing so, we also recognize the effectiveness of deficit reduction strategies and the criticality of reducing risk factors, such as depression and hopelessness, to alleviate suicide risk. We are not challenging these clinically supported strategies that embrace the reductionistic medical model of treatment but, rather, are encouraging the development of resiliency-based interventions that can be implemented complementarily and simultaneously to promote well-being and to reduce psychopathology and suicide risk. Burgeoning from early humanistic and existential theories, with a person-centered and self-actualizing approach, the principles of positive psychology have already been successfully applied to numerous domains, including business and management, public health,

and education. In this volume, our authors have applied positive psychological principles to the field of suicidology, in an approach we conceptualize as "applied resilience" in the service of preventing suicide; that is, Positive Suicidology.

Although not exhaustive, our authors have provided a broad overview of the potential of Positive Suicidology, including its breadth and depth, and its translational applicability in the form of development and implementation of therapeutic strategies. Ranging from the promotion of healthy, reciprocal interpersonal relationships, to the cultivation of meaningful interpersonal characteristics, such as gratitude and forgiveness, to encouraging healthy bodies and communities, the constructs and strategies offered in this volume provide insight into the vast possibilities for harnessing empowerment, motivation, and self-growth to reduce suicidal behavior and death by suicide. The fact that our cumulative effort is not exhaustive is encouraging as there are countless other adaptive, protective, and growth-centered constructs that can be investigated for this purpose. For instance, qualities such as grit and courage, experiences such as awe and flow, and the cultivation of religious and spiritual activity are but a few additional possibilities for engendering resiliency and, thereby, preventing suicide. We encourage future researchers and clinicians to continue this journey, solidifying empirical evidence for the Positive Suicidology approach, while expanding the scope of applicability of "applied resiliency" strategies. Human thriving is complex, and understanding the innate, learned and socially determined contributors to well-being and quality of life is an evolving science, yet our authors have provided an initial foray into these areas and have provided strong recommendations for the future of this work.

However, our authors also agree that more research is needed, including prospective and longitudinal studies and randomized controlled trials, utilizing gold-standard measures and diverse samples, to substantiate the role of positive psychological constructs in the prevention of suicide. Thus far, only one study has examined the impact of positive psychological interventions in a suicidal psychiatric sample (Huffman et al., 2014) and, although research is promising, much of Positive Suicidology is based on inferences derived from related constructs (e.g., depression, hopelessness) or basic associations between positive psychological factors and suicidality. The lack of randomized control trials and longitudinal studies highlights the need for more research in this area, but also offers a promising and unexplored area for future research. In addition to basic associations, it is important to investigate the mechanisms of action underlying these linkages, such as cognitive-emotional (e.g., emotion regulation and problem-solving abilities) and executive functioning processes (e.g., decision-making). As well, by investigating the relation of protective factors to known risk factors, a better understanding of the intertwining effect of predictors can be produced; for instance, the beneficial effect of future orientation on suicide may be hindered by factors such as perfectionism and rumination, but simultaneous reduction of rumination and perfectionism paired with bolstering future orientation may provide maximal benefit.

Direct comparisons of those with and without a specific protective characteristic are also important, as such differences may be directly or indirectly related to suicide risk. As an example, what makes a person more likely to be forgiving or

have more gratitude and, in turn, how are those etiological differences related to suicide risk? As well, can "profiles of protection" be delineated, and then cultivated therapeutically? The answers to such questions lie at the intersection of basic research, qualitative investigation, and intervention development, which requires attention from policymakers and funding bodies, and from future generations of researchers willing to boldly examine what, at times, might seem paradoxical. That is, the relation between positive psychology and psychopathology, which are in many respects at odds with one another, may be causally and irrevocably intertwined, requiring their conjunctive attention when addressed therapeutically. Finally, many authors suggest investigation of alternative forms of protective characteristics that might buffer against suicide risk, such as future orientation focused on the afterlife, optimism for specific (rather than general) life goals, or forgiveness of things yet to occur.

Understanding these intricacies is important for clarity and conceptualization, but it is also necessary to elevate protective characteristics from the level of theory, from the realm of well-being, and from healthy populations. Additional studies with clinical samples, including those at risk for suicide, as well as those recovering from suicidal ideation or attempt and, as we have suggested, with non-suicidal persons in a preventive manner, are needed to better understand the potential protective effects of positive psychology for suicide prevention. For instance, Heisel and colleagues suggest promoting meaning-making in a proactive manner, in anticipation of known, potentially stressful events (e.g., retirement) and for persons with sub-clinical symptoms. Such preemptive skill building, resulting in a reservoir of protective characteristics to be drawn upon in times of distress, may be a critical breakthrough for suicide prevention; as such, "applied resiliency" may be sufficient to disrupt the pathways of classic diathesis-stress models, perhaps preventing the transition from suicide ideation to attempt to death by suicide.

In closing, it is the hope of all authors in this volume that suicide—the most preventable of all causes of death—can be reduced, globally and across the lifespan, via the application of strengths-based, adaptive prevention and intervention efforts. We have discussed the history of positive psychology and supported its integration into the field of suicidology, in what we have termed this emerging field of Positive Suicidology. As Seligman and Csikszentmihalyi (2000) declared, if we only focus on the maladaptive side of human behavior to understand psychopathology, we are missing out on a significant portion of human behavior. Therefore, although we assert that reductionistic, deficit-oriented approaches certainly have a role in suicide prevention, given their past successes in reducing suicide risk, we devote our efforts toward the independent investigation and promotion of protective characteristics, in the form of applied resiliency, as both a complementary and primary approach to suicide prevention and intervention.

References

Abramson, L., Alloy, L., Hogan, M., Whitehouse, W., Gibb, B., Hankin, B., & Cornette, M. (2002). The hopelessness theory of suicidality. In T. E. Joiner & M. D. Rudd (Eds.), *Suicide science: Expanding the boundaries* (pp. 17–32). Norwell, MA: Kluwer Academic.

Allen, J., Mohatt, G. V., Rasmus, S. M., Hazel, K. L., Thomas, L., & Lindley, S. (2006). The tools to understand: Resilience in the study of minority stress and health of sexual and gender minorities. *Journal of Prevention & Intervention in the Community, 32*(1–2), 41–59. https://doi.org/10.1300/J005v32n01_04

Bagge, C. L., Lamis, D. A., Nadorff, M., & Osman, A. (2014). Relations between hopelessness, depressive symptoms and suicidality: Mediation by reasons for living. *Journal of Clinical Psychology, 70*(1), 18–31. https://doi.org/10.1002/jclp.22005

Beck, A. T. (1989). Cognitive therapy for depression and panic disorder. *Western Journal of Medicine, 151*(3), 311.

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*(1), 20–28. https://doi.org/10.1037/0003-066X.59.1.20

Boniwell, I., & Zimbardo, P. G. (2015). Balancing time perspective in pursuit of optimal functioning. In *Positive psychology in practice: Promoting human flourishing in work, health, education, and everyday life* (2nd ed., pp. 223–236). Hoboken, NJ: Wiley. https://doi.org/10.1002/9781118996874.ch13

Brausch, A. M., & Gutierrez, P. M. (2009). The role of body image and disordered eating as risk factors for depression and suicidal ideation in adolescents. *Suicide and Life-Threatening Behavior, 39*(1), 58–71. https://doi.org/10.1521/suli.2009.39.1.58

Britton, P. C., Van Orden, K. A., Hirsch, J. K., & Williams, G. C. (2014). Basic psychological needs, suicidal ideation, and risk for suicidal behavior in young adults. *Suicide and Life-Threatening Behavior, 44*(4), 362–371. https://doi.org/10.1111/sltb.12074

Brown, G. K., Beck, A. T., Steer, R. A., & Grisham, J. R. (2000). Risk factors for suicide in psychiatric outpatients: A 20-year prospective study. *Journal of Consulting and Clinical Psychology, 68*(3), 371–377 Retrieved from ISI:000087651500001.

Bryan, C. J., Wood, D. S., May, A., Peterson, A. L., Wertenberger, E., & Rudd, M. D. (2018). Mechanisms of action contributing to reductions in suicide attempts following brief cognitive behavioral therapy for military personnel: A test of the interpersonal-psychological theory of suicide. *Archives of Suicide Research, 22*(2), 241–253. https://doi.org/10.1080/13811118.2017.1319313

Castle, K., Conner, K., Kaukeinen, K., & Tu, X. (2011). Perceived racism, discrimination, and acculturation in suicidal ideation and suicide attempts among black young adults. *Suicide and Life-Threatening Behavior, 41*(3), 342–351. https://doi.org/10.1111/j.1943-278X.2011.00033.x

Chambers, D. A., Pearson, J. L., Lubell, K., Brandon, S., O'Brien, K., & Zinn, J. (2005). The science of public messages for suicide prevention: A workshop summary. *Suicide and Life-Threatening Behavior, 35*(2), 134–145. https://doi.org/10.1521/suli.35.2.134.62871

Chang, E. C., & Banks, K. H. (2007). The color and texture of hope: Some preliminary findings and implications for hope theory and counseling among diverse racial/ethnic groups. *Cultural Diversity and Ethnic Minority Psychology, 13*, 94–103.

Chang, E. C., Sanna, L. J., Hirsch, J. K., & Jeglic, E. L. (2010). Loneliness and negative life events as predictors of hopelessness and suicidal behaviors in hispanics: Evidence for a diathesis-stress model. *Journal of Clinical Psychology, 66*(12), 1242–1253. https://doi.org/10.1002/jclp.20721

Chang, E. C., Yu, E. A., Lee, J. Y., Hirsch, J. K., Kupfermann, Y., & Kahle, E. R. (2013). An examination of optimism/pessimism and suicide risk in primary care patients: Does belief in a changeable future make a difference? *Cognitive Therapy and Research, 37*(4), 796–804. https://doi.org/10.1007/s10608-012-9505-0

Cheavens, J. S., Cukrowicz, K. C., Hansen, R., & Mitchell, S. M. (2016). Incorporating resilience factors into the interpersonal theory of suicide: The role of hope and self-forgiveness in an older adult sample. *Journal of Clinical Psychology, 72*(1), 58–69.

Chesin, M. S., Sonmez, C. C., Benjamin-Phillips, C. A., Beeler, B., Brodsky, B. S., & Stanley, B. (2015). Preliminary effectiveness of adjunct mindfulness-based cognitive therapy to prevent suicidal behavior in outpatients who are at elevated suicide risk. *Mindfulness, 6*(6), 1345–1355. https://doi.org/10.1007/s12671-015-0405-8

Choi, N. G., DiNitto, D. M., Marti, C. N., & Segal, S. P. (2017). Adverse childhood experiences and suicide attempts among those with mental and substance use disorders. *Child Abuse & Neglect, 69*, 252–262. https://doi.org/10.1016/J.CHIABU.2017.04.024

Chu, C., Walker, K. L., Stanley, I. H., Hirsch, J. K., Greenberg, J. H., Rudd, M. D., & Joiner, T. E. (2018). Perceived problem-solving deficits and suicidal ideation: Evidence for the explanatory roles of thwarted belongingness and perceived burdensomeness in five samples. *Journal of Personality and Social Psychology., 115*(1), 137–160. https://doi.org/10.1037/pspp0000152

Conwell, Y., & Duberstein, P. R. (1995). Prevention of late-life suicide—When, where, why and how. *Psychiatry and Clinical Neurosciences, 49*, S79–S83. Retrieved from ISI:A1995RK10900005.

Cuijpers, P., de Wit, L., Kleiboer, A., Karyotaki, E., & Ebert, D. D. (2018). Problem-solving therapy for adult depression: An updated meta-analysis. *European Psychiatry: The Journal of the Association of European Psychiatrists, 48*, 27–37. https://doi.org/10.1016/j.eurpsy.2017.11.006

Dangel, T. J., Webb, J. R., & Hirsch, J. K. (2018). Forgiveness and suicidal behavior: Cynicism and Psychache as serial mediators. *Journal of Psychology: Interdisciplinary and Applied, 152*(2), 77–95. https://doi.org/10.1080/00223980.2017.1408555

Davis, R., Cook, D., & Cohen, L. (2005). A community resilience approach to reducing ethnic and racial disparities in health. *American Journal of Public Health, 95*(12), 2168–2173. https://doi.org/10.2105/AJPH.2004.050146

Dekel, S., Ein-Dor, T., & Solomon, Z. (2012). Posttraumatic growth and posttraumatic distress: A longitudinal study. *Psychological Trauma: Theory, Research, Practice, and Policy, 4*(1), 94–101. https://doi.org/10.1037/a0021865

Deyo, M., Wilson, K. A., Ong, J., & Koopman, C. (2009). Mindfulness and rumination: Does mindfulness training Lead to reductions in the ruminative thinking associated with depression? *EXPLORE: The Journal of Science and Healing, 5*(5), 265–271. https://doi.org/10.1016/j.explore.2009.06.005

Duckworth, A., Steen, T. A., & Seligman, M. E. P. (2004). Positive psychology in clinical practice. *Annual Review of Clinical Psychology, 1*(1), 629–651.

Ellis, J., & Smith, P. C. (1991). Spiritual well-being, social desirability and reasons for living: Is there a connection? *International Journal of Social Psychiatry, 37*(1), 57–63.

Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology, 84*(2), 377–389. https://doi.org/10.1037/0022-3514.84.2.377

Frankl, V. E. (1984). *Man's search for meaning*. New York: Simon & Schuster.

Fredrickson, B. (2000). Cultivating positive emotions to optimize health and well-being. *Prevention and Treatment, 3*, 1–25.

Fredrickson, B., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science, 13*(2), 172–175.

Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of Psychosomatic Research, 57*(1), 35–43.

Gruber, J., Mauss, I. B., & Tamir, M. (2011). A dark side of happiness? How, when, and why happiness is not always good. *Perspectives on Psychological Science, 6*(3), 222–233. https://doi.org/10.1177/1745691611406927

Hamilton, J. M., Kives, K. D., Micevski, V., & Grace, S. L. (2003). Time perspective and health-promoting behavior in a cardiac rehabilitation population. *Behavioral Medicine, 28*(4), 132–139.

Heisel, M., & Flett, G. (2004). Purpose in life, satisfaction with life, and suicide ideation in a clinical sample. *Journal of Psychopathology and Behavioral Assessment, 26*(2), 127–135. https://doi.org/10.1023/B:JOBA.0000013660.22413.e0

Hill, P. L., Allemand, M., & Roberts, B. W. (2013). Examining the pathways between gratitude and self-rated physical health across adulthood. *Personality and Individual Differences, 54*(1), 92–96. https://doi.org/10.1016/J.PAID.2012.08.011

Hirsch, J. K., & Ellis, J. B. (1995). Family support and other social factors precipitating suicidal ideation. *International Journal of Social Psychiatry, 41*(1), 26–30. https://doi.org/10.1177/002076409504100103

Hirsch, J. K., & Ellis, J. B. (1998). Reasons for living in homosexual and heterosexual young adults. *Archives of Suicide Research, 4*(3), 243–248. https://doi.org/10.1023/A:1009696608895

Hirsch, J. K., Visser, P. L., Chang, E. C., & Jeglic, E. L. (2012). Race and ethnic differences in hope and hopelessness as moderators of the association between depressive symptoms and suicidal behavior. *Journal of American College Health, 60*(2), 115–125.

Hofmann, S. G., & Smits, J. A. J. (2008). Cognitive-behavioral therapy for adult anxiety disorders: A meta-analysis of randomized placebo-controlled trials. *The Journal of Clinical Psychiatry, 69*(4), 621–632. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/18363421

Huffman, J. C., DuBois, C. M., Healy, B. C., Boehm, J. K., Kashdan, T. B., Celano, C. M., ... & Lyubomirsky, S. (2014). Feasibility and utility of positive psychology exercises for suicidal inpatients. *General Hospital Psychiatry, 36*(1), 88–94.

Jacinto, G. A., & Edwards, B. L. (2011). Therapeutic stages of forgiveness and self-forgiveness. *Journal of Human Behavior in the Social Environment, 21*(4), 423–437.

Joiner, T. E., Van Orden, K. A., Witte, T. K., Selby, E. A., Ribeiro, J. D., Lewis, R., & Rudd, M. D. (2009). Main predictions of the interpersonal psychological theory of suicidal behavior: Empirical tests in two samples of young adults. *Journal of Abnormal Psychology, 118*(3), 634.

Kalra, G., Christodoulou, G., Jenkins, R., Tsipas, V., Christodoulou, N., Lecic-Tosevski, D., … European Psychiatry Association. (2012). Mental health promotion: Guidance and strategies. *European Psychiatry: The Journal of the Association of European Psychiatrists, 27*(2), 81–86. https://doi.org/10.1016/j.eurpsy.2011.10.001

Kelliher Rabon, J., Webb, J. R., Chang, E. C., & Hirsch, J. K. (2018). Forgiveness and suicidal behavior in primary care: Mediating role of future orientation. *Journal of Spirituality in Mental Health*, 1–13.

Keng, S. L., Smoski, M. J., Robins, C. J., Ekblad, A. G., & Brantley, J. G. (2012). Mechanisms of change in mindfulness-based stress reduction: Self compassion and mindfulness as mediators of intervention outcomes. *Journal of Cognitive Psychotherapy, 26*(3), 270–280.

Kim, S. M., Baek, J. H., Han, D. H., Lee, Y. S., & Yurgelun-Todd, D. A. (2015). Psychosocial-environmental risk factors for suicide attempts in adolescents with suicidal ideation: Findings from a sample of 73,238 adolescents. *Suicide and Life-Threatening Behavior, 45*(4), 477–487. https://doi.org/10.1111/sltb.12143

Laghi, F., Baiocco, R., D'Alessio, M., & Gurrieri, G. (2009). Suicidal ideation and time perspective in high school students. *European Psychiatry: The Journal of the Association of European Psychiatrists, 24*(1), 41–46. https://doi.org/10.1016/j.eurpsy.2008.08.006

Larsen, J. T., McGraw, A. P., & Cacioppo, J. T. (2001). Can people feel happy and sad at the same time? *Journal of Personality & Social Psychology, 81*, 684–696.

Laverack, G., & Labonte, R. (2000). A planning framework for community empowerment goals within health promotion. *Health Policy and Planning, 15*(3), 255–262. https://doi.org/10.1093/heapol/15.3.255

Leung, K. K., Chen, C. Y., Lue, B. H., & Hsu, S. T. (2007). Social support and family functioning on psychological symptoms in elderly Chinese. *Archives of Gerontology and Geriatrics, 44*(2), 203–213.

Linehan, M. M., Goodstein, J. L., Nielsen, S. L., & Chiles, J. A. (1983). Reasons for staying alive when you are thinking of killing yourself: The reasons for living inventory. *Journal of Consulting and Clinical Psychology, 51*(2), 276–286.

Mattis, J. S. (2002). Religion and spirituality in the meaning-making and coping experiences of African American women: A qualitative analysis. *Psychology of Women Quarterly, 26*(4), 309–321.

Meyer, I. H. (2015). Resilience in the study of minority stress and health of sexual and gender minorities. *Psychology of Sexual Orientation and Gender Diversity, 2*(3), 209–213. https://doi.org/10.1037/sgd0000132

Mills, P. J., Redwine, L., Wilson, K., Pung, M. A., Chinh, K., Greenberg, B. H., … Wood, A. (2015). The role of gratitude in spiritual well-being in asymptomatic heart failure patients. *Spirituality in Clinical Practice, 2*(1), 5.

O'Keefe, V. M., & Wingate, L. R. (2013). The role of hope and optimism in suicide risk for American Indians/Alaska natives. *Suicide and Life-Threatening Behavior, 43*(6), 621–633. https://doi.org/10.1111/sltb.12044

Orbach, I. (2007). Existentialism and suicide. In A. Tomer, G. T. Eliason, & P. T. Wong (Eds.), *Existential and spiritual issues in death attitudes* (pp. 281–316). Mahwah, NJ: Lawrence Erlbaum. Retrieved from https://books.google.com/books?hl=en&lr=&id=7BY4UtRFcE4C&oi=fnd&pg=PA281&dq=existential+therapy+suicide&ots=jFgXTe3XAW&sig=C3Hb4vNwzdOCzdaC7CrxuT3gJZ0#v=onepage&q=existential therapy suicide&f=false

Overholser, J. (1995). Cognitive-behavioral treatment of depression, part II: Techniques for improving social functioning. *Journal of Contemporary Psychotherapy, 25*(3), 205–222. https://doi.org/10.1007/BF02306629

Paluska, S. A., & Schwenk, T. L. (2000). Physical activity and mental health. *Sports Medicine, 29*(3), 167–180. https://doi.org/10.2165/00007256-200029030-00003

Pedrotti, J. T., Edwards, L. M., & Lopez, S. J. (2012). Positive psychology within a cultural context. In *The Oxford handbook of positive psychology* (pp. 49–57). Oxford: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780195187243.013.0006

Range, L. M., & Penton, S. R. (1994). Hope, hopelessness, and suicidality in college students. *Psychological Reports, 75*(1), 456–458.

Recker, N. L., & Moore, M. D. (2016). Durkheim, social capital, and suicide rates across US counties. *Health Sociology Review, 25*(1), 78–91. https://doi.org/10.1080/14461242.2015.1101703

Reker, G. T., Peacock, E. J., & Wong, P. T. P. (1987). Meaning and purpose in life and well-being: A life-span perspective. *Journal of Gerontology, 42*(1), 44–49. Retrieved from http://geronj.oxfordjournals.org/content/42/1/44.abstract

Richardson, C. R., Faulkner, G., McDevitt, J., Skrinar, G. S., Hutchinson, D. S., & Piette, J. D. (2005). Integrating physical activity into mental health services for persons with serious mental illness. *Psychiatric Services, 56*(3), 324–331. https://doi.org/10.1176/appi.ps.56.3.324

Rippentrop, A. E., Altmaier, E. M., Chen, J. J., Found, E. M., & Keffala, V. J. (2005, August). The relationship between religion/spirituality and physical health, mental health, and pain in a chronic pain population. *Pain, 116*(3), 311–321. Retrieved from http://linkinghub.elsevier.com/retrieve/pii/S0304395905002216

Rudd, M. D., Rajab, M. H., & Dahm, P. F. (1994). Problem-solving appraisal in suicide ideators and attempters. *American Journal of Orthopsychiatry, 64*(1), 136–149. https://doi.org/10.1037/h0079492

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the life orientation test. *Journal of Personality and Social Psychology, 67*(6), 1063–1078. Retrieved from ISI:A1994PW57800009.

Seligman, M. E. P. (2011). Building resilience. *Harvard Business Review, 89*(4), 100–106. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/21510522

Seligman, M. E., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychological Association, 55*(1), 5.

Sellin, L., Asp, M., Wallsten, T., & Wiklund Gustin, L. (2017). Reconnecting with oneself while struggling between life and death: The phenomenon of recovery as experienced by persons at risk of suicide. *International Journal of Mental Health Nursing, 26*(2), 200–207.

Shneidman, E. S. (1993). Commentary: Suicide as psychache. *The Journal of Nervous and Mental Disease, 181*(3), 145–147. Retrieved from http://journals.lww.com/jonmd/Fulltext/1993/03000/Commentary__Suicide_as_Psychache.1.aspx

Smith, N., Baugh Littlejohns, L., & Thompson, D. (2001). Shaking out the cobwebs: Insights into community capacity and its relation to health outcomes. *Community Development Journal, 36*(1), 30–41. https://doi.org/10.1093/cdj/36.1.30

Soleimanpour, S., Geierstanger, S., & Brindis, C. D. (2017). Adverse childhood experiences and resilience: Addressing the unique needs of adolescents. *Academic Pediatrics, 17*(7S), S108–S114. https://doi.org/10.1016/j.acap.2017.01.008

Stice, E., Ragan, J., & Randall, P. (2004). Prospective relations between social support and depression: Differential direction of effects for parent and peer support? *Journal of Abnormal Psychology, 113*, 155–159.

Suls, J., & Rothman, A. (2004). Evolution of the biopsychosocial model: Prospects and challenges for Health Psychology. *Health Psychology, 23*(2), 119–125. https://doi.org/10.1037/0278-6133.23.2.119

Taillefer, M. C., Dupuis, G., Roberge, M. A., & LeMay, S. (2003). Health-related quality of life models: Systematic review of the literature. *Social Indicators Research, 64*(2), 293–323.

Townsend, E., Hawton, K., Altman, D. G., Arensman, E., Gunnell, D., Hazell, P., … Van Heeringen, K. (2001). The efficacy of problem-solving treatments after deliberate self-harm: Meta-analysis of randomized controlled trials with respect to depression, hopelessness and improvement in problems. *Psychological Medicine, 31*(6), 979–988.

Utsey, S. O., Bolden, M. A., Lanier, Y., & Williams, O. (2007). Examining the role of culture-specific coping as a predictor of resilient outcomes in African Americans from high-risk urban communities. *Journal of Black Psychology, 33*(1), 75–93. https://doi.org/10.1177/0095798406295094

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E., Jr. (2010). The interpersonal theory of suicide. *Psychological Review, 117*(2), 575.

Varia, S. G., Ebin, J., & Stout, E. R. (2014). Suicide prevention in rural communities: Perspectives from a community of practice. *Journal of Rural Mental Health, 38*(2), 109–115. https://doi.org/10.1037/rmh0000019

Walsh, R., & Shapiro, S. L. (2006). The meeting of meditative disciplines and western psychology: A mutually enriching dialogue. *American Psychologist, 61*(3), 227–239. https://doi.org/10.1037/0003-066X.61.3.227

Webb, J. R., Hirsch, J. K., & Toussaint, L. (2015). Forgiveness as a positive psychotherapy for addiction and suicide: Theory, research, and practice. *Spirituality in Clinical Practice, 2*(1), 48–60.

Weinstein, N. D. (1987). Unrealistic optimism about susceptibility to health problems: Conclusions from a community-wide sample. *Journal of Behavioral Medicine, 10*(5), 481–500. https://doi.org/10.1007/BF00846146

West, L. M., Davis, T. A., Thompson, M. P., & Kaslow, N. J. (2011). "Let me count the ways:" Fostering reasons for living among low-income, suicidal, African American women. *Suicide and Life-Threatening Behavior, 41*(5), 491–500.

Wilson, T., Milosevic, A., Carroll, M., Hart, K., & Hibbard, S. (2008). Physical health status in relation to self-forgiveness and other-forgiveness in healthy college students. *Journal of Health Psychology, 13*(6), 798–803. Retrieved from http://hpq.sagepub.com/content/13/6/798.abstract

Witvliet, C. v. O., Ludwig, T. E., & Vander Laan, K. L. (2001). Granting forgiveness or harboring grudges: Implications for emotion, physiology, and health. *Psychological Science, 12*(2), 117–123. Retrieved from http://pss.sagepub.com/content/12/2/117.abstract

Wood, A. M., Froh, J. J., & Geraghty, A. W. A. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review, 30*(7), 890–905. https://doi.org/10.1016/J.CPR.2010.03.005

Index

A
Abuse and psychological distress, 263
Acceptance and Commitment Therapy (ACT), 80, 81, 83
Acquired capability, 19
Action-based and empowerment-focused approach, 288
Addiction
  and forgiveness, 40
  and recovery, 40
  and spirituality, 38, 39
  and suicidal behavior, 38, 39
  and suicide, 37
Addictive behavior
  and suicidal behavior, 37
Adverse childhood experiences (ACEs), 306
Agentic behaviors, 305
Agreeableness, 90
Alaska Native communities, 290
Alcohol Use Disorders Identification Test (AUDIT), 44
American Association of Suicidology (AAS), 1, 286
American Indian/Alaska Natives (AI/ANs), 115, 116, 118
American Psychological Association (APA), 111, 112
Ancillary exercises, 103
Antidepressant treatments, 81
Anxiety, 103
Applied resiliency, 1, 4, 301
  characteristics, 311
  communities and populations, 310
  intervention strategies, 302
  positive suicidology, 304
  strategies, 313
  suicide prevention, 314
  therapy and suicide prevention efforts, 308
  training and education, 302
  treatment paradigm, 309
Appraisal social support, 145
Appreciation, 89, 90, 92, 102
Attachments to others, 148
Attendance at religious services, 72

B
Beck Hopelessness Scale (BHS), 20
Beck's Cognitive Triad, 20
Behavioral activation, 311
  BATD, 165, 166
  breast cancer patients, 166
  education, 166
  reduction, suicidal ideation, 166
  substance use disorders, 165
  veterans and cancer patients, 165
Behavioral activation treatment for depression (BATD), 165, 166
Behavioral science, 112
Behavioral expressions of gratitude, 97, 100
Beneficiaries, 89
Bicultural identity, 123
Biculturalism, 123, 124
Bivariate associations, 46, 48
Brahmaviharas, 271
Brief Reasons for Living Inventory for Adolescents, 62, 70
Broaden-and-build theory, 9

J. K. Hirsch et al. (eds.), *A Positive Psychological Approach to Suicide*,
Advances in Mental Health and Addiction,
https://doi.org/10.1007/978-3-030-03225-8

Brooding, 96
Buddhadharma, 273
Buddhism, 268, 278

C
Case-control design, 26
Caution, 98
Centers for Disease Control and Prevention (CDC), 285
Character Strengths and Virtues: A Handbook and Classification, 4, 114
Child-Related Concerns (CC), 63, 70, 71, 74
Chinese RFL Scales, 74, 75
Chinese-language Motivations for Living Inventory (CMLI), 61, 64–69, 74–76
Chronic and acute stressors, 8
Chronic health conditions, 24
Classic diathesis-stress models, 314
Cognitive behavioral therapy for suicide prevention (CBT-SP), 6, 161
Cognitive triad, 5
Cognitive-behavioral and interpersonal therapies, 301
Cognitive-behavioral framework
  understanding suicide
    CBT, 5, 6
    cognitive triad, 5
    hopelessness, 5
    risk factors, 5
Cognitive-behavioral theory (CBT), 6, 99, 100, 105, 186
  description, 6
  maladaptive cognitions, 6
  suicidal behavior, 5
Cognitive-behavioral psychotherapy, 98
Cognitive-emotional-behavioral patterns, 11
Cognitively-based compassion training (CBCT), 271
Collaborative Assessment and Management of Suicidality (CAMS), 62, 75, 76, 81, 83
Collective loneliness, 140
Collectivism, 114
College Alcohol Problems Scale, 45
College and Future-Related Concerns (CFC), 74
College Student Reasons for Living Inventory (CS-RFLI), 61, 64–69, 73, 74, 76, 77
Color-blind perspective, 114
Combined cognitive biases model (CCBM), 191
Communication, suicidal thinking, 149
Community-based participatory research (CBPR)
  action-based and empowerment-focused approach, 288
  community empowerment, 285, 288
  depression-management educational program, 287
  health promotion and health intervention, 288
  integration of, 290
  Inuit community, 291, 292
  mental disorder, 289
  mental health problems, 286
  positive methodology, 294
  positivism and neo-positivism, 289
  prevention gap, 287
  public health priority, 285
  qualitative methodologies, 289
  research method, 287
  school psychologists, 287
  school-based suicide prevention programs, 286
  self-inflicted injury, 285
  socio-environmental problems, 290
  suicide prevention efforts, schools, 286
  wild problem, 293
Community empowerment, 285, 288
Community engagement, 310
Compassion cultivation training (CCT), 271
Connectedness, 147, 148
Conservation of Resources Theory (COR), 26
Contemplative practices, 266
Contemplative sciences, 248
Context-sensitive approach, 279
Contingent self-esteem, 138
Coping beliefs (CB), 74
Coping hypothesis, 100
Critical mindfulness, 248, 279
Critical pedagogy, 268
Critical suicidology, 289, 295
Cronbach's α, 45
Cultural differences, 111
Cultural Diversity and Ethnic Minority Psychology (CDEMP), 111
Cultural inclusivity, 125
Culture influences, 114
Culture-specific protective factors, 112, 122–124, 311
Cynicism, 103

D
Data-driven studies, 40
Death reflection, 103
Deficit-oriented approaches, 314

Depression, 301, 309
FDT (*see* Future directed therapy (FDT))
21-item Depression Anxiety Stress Scales (DASS21), 45
Depressive symptoms, 6, 96, 103
Diagnostic and Statistical Manual of Mental Disorders (DSM), 4, 114
Dialectical behavior therapy (DBT), 7, 79, 81, 83, 161
Diathesis-stress paradigm, 19
Discrimination, 116, 123, 126, 127, 310
Distress tolerance, 30

E
e-mental health applications, 89
Emotion dysregulation theory, 7, 263
Emotional and behavioral functioning, 307–308
Emotional social support, 145
Emotions, 301
Empathy, 90
Empowering health-promotion strategies, 312
Ethnic discrimination, 116
Ethnic identity, 123
Ethnic/racial discrimination, 116
Experienced Meaning In Life scale (EMIL), 74

F
Family alliance (FA), 73
Family guide, 291
Family member support (FMS), 74
Family relations (FR), 74
Fear of death (FD), 70, 74–76
Fear of social disapproval (FSD), 63, 70, 71, 73, 76
Fear of suicide (FS), 63, 70–74
Feelings, 19, 20, 22, 26–28
Forgiveness, 307
and addiction, 40
application, 52, 53
constructive and health promoting characteristics, 38
definition, 39, 40
deleterious associations, 53
distinct mediators, 39
gambling problems, 51
prevention, 52
salubrious association, 39
and spirituality (*see* Spirituality)
stress of unforgiveness, 39
stress-and-coping based model, 39
and suicidal behavior, 40, 41
treatment, 51, 52
Forgiveness–addiction/suicidal behavior association
bivariate associations, 46, 48
distinct mediators, 42
etiology, 54
hazardous/harmful drinkers, 42, 48
health-related functioning, 42
health-related outcomes, 41
independent health-related outcome, 43
infancy, 54
intervention, 54
measures
covariates, 45, 47
Cronbach's α, 45
dependent variable, 45
depressive symptoms, 44
independent variables, 45
mediator variables, 45
scoring, 44
methods, 43, 44
multiple dimensions, 54
multivariable associations, 48, 49
prevention, 54
resentments, 42
ruminative stress and resentment-building, 42
salubrious association, 51
sample characteristics, 44, 47
self-condemnation, 43
self-defeating patterns, 43
self-forgiveness, 43
self-report, 53
self-selection bias, 54
statistical analyses, 47
stress-and-coping based model, 41
theoretical modeling, 43
Forgiveness therapy, 97
Friend support (FrS), 74
Future-directed therapy (FDT)
adaptive skills, 200
anergic and anhedonic behavioral patterns, 192
anticipatory cognitive model, human experience, 190, 191
application of, 193, 194
Beck's theory, 189
behavioral activation (BA), 193
biological models, 189
cognitive bias model, 191, 192
cognitive control, 193
components, future thinking, 189
concepts, 190
Cry of Pain model, 195
emotions, 190
faulty reward processing, 191

Future-directed therapy (FDT) (*cont.*)
4-A achievement model, 192, 193
generation, positive expectancies, 200
goal-setting and planning skills, 190
hopelessness, 195
irrational thinking, 200
negative expectations, 189
parasuicidal and non-parasuicidal groups, 195–196
positive expectations, 189
reduction, suicidal thinking, 195
regulation, emotion, 193
risks and costs, 191
suicidal ideation, 196
treatments, 193
Future expectations (FE), 74
Future optimism (FO), 73, 74
Future orientation
absence, 17, 30
cognitions, 183
conceptualisation, 31
content/achievability, 31
cost, 31
distress tolerance, 30
FDT (*see* Future directed therapy (FDT))
FGOT (*see* Future Oriented Group Training (FOGT), suicidal patients)
future thinking (*see* Future thinking)
gaining momentum, 29
general and non-specific sense, 18
hope therapy (*see* Hope therapy)
hopefulness (*see* Hopefulness)
identifying factors, 30
IMV, 19
individuals, 17
interventions, 28–29, 200
IPT, 19
optimism (*see* Optimism)
pessimistic individuals, 31
population, 18
protective effects, 18
protective factors, 29, 32
protective markers, 18
psychosocial risk, 18
role, 30
self-referent, 31
suicidal behaviour, 18, 28, 29
suicidal ideation, 17, 18, 29
suicidal thoughts, 28, 29
suicide deaths, 183
suicide prevention, 18
suicide research, 18
treatments, 184
Future Oriented Group Therapy (FOGT), 29
development, 29
Post-hoc analysis, 29
RCT, 29
and TAU, 29
Future Oriented Group Training (FOGT), suicidal patients, 305
analysis, 199
applications, 198, 199
cognitive therapy
and CBT, 196
and problem-solving therapy, 198
components, treatment programs, 196
decision-making, 197
development and implementation, 201
dysfunctional cognitions, 197
evidence-based treatment methods, 196
hopelessness, 197
MACT, 196
Netherlands, 199
parasuicidal patients, 197
problem-solving abilities and autobiographical memory, 196
problem solving therapy, 197
psychopathology and suicidality, 201
RCT, 198, 199
review and test, 198
Scottish ‘Choose Life’ program, 198
STEPPS and BATD, 197
suicidal behavior, 198
suicidal thinking, 196
treatment, 196
Future-oriented Repetitive Thought scale (FoRT), 21, 22
Future thinking
ability, 20
Beck’s Cognitive Triad, 20
conceptualisations, 20
directionality of relationship, 22
feelings, 22
fluctuations, 23
FoRT, 21, 22
FTT, 20–22
healthy adults, 22
individuals, 21
intra-personal/inter-personal, 22
negative mood induction, 22
non-suicidal controls, 21
parasuicidal behaviour, 21
participants, 22
positive and negative thoughts, 20
problem-solving ability, 21
repetitive thinking, 21
research, 31

social perfectionism, 23
suicidal ideation and behaviour, 22
thoughts, 22
Future thinking task (FTT), 20–22

G
Gaining momentum, 29
Gaining proficiency, 22
Gambling problems, 51
Geriatric Suicide Ideation Scale-Screen (GSIS-Screen), 221
Grateful disposition, 90
Gratitude
beneficiaries, 89
clinical applications, 104
concept, 89
e-mental health applications, 89
grateful disposition, 90
interventions effective, 97
life orientation, 90
moral affects, 89
moral functions, 90
positive effects, 100
psychological conceptualisations, 89
psychological interest, 89
SI and SA
appreciation, 92
brooding, 96
causal effects, 96
clinical population, 97
depressive symptoms, 92–96
direct and indirect effects, 92
GQ-6, 96
grit, 96
hopelessness, 92
humour styles, 96
indirect effects, 92
interpersonal and emotional benefits, 92
and non-fatal suicidal behaviour, 92
parental styles, 92
perceived burdensomeness, 96
prevalence and correlates, 96
preventive effects, 91
protective psychosocial characteristics, 96
psycho-social and physical well-being, 91
and religiosity, 96
resiliency, 92
self-esteem, 92
studies, 91, 93–95
suicidal thoughts, 97
and suicide-related variables, 92
thwarted belongingness, 96
well-being, 92
stumbling blocks and facilitators, 102
trait gratitude, 91
Gratitude lists, 97
Gratitude, Appreciation, and Resentment Test (GRAT), 91
Grit, 120
Group interventions, 146, 147
Growth-based trajectory, 309
Guilt, 103

H
Happiness, Optimism, and Positive Emotions (HOPE) study, 103
Health
and forgiveness (*see* Forgiveness)
and spirituality (*see* Spirituality)
Health promotion
behavioral activation, 165, 166
and death, 174
high-risk approach, 161, 162
historical deficit-oriented approach, 161
HRQL (*see* Health-related quality of life (HRQL))
interventions, 163
mental health, 163
meta-analysis, 162
nutrition, 166–168
PC setting, 174
physical activity (*see* Physical activity)
positive psychological interventions, 162
primary care (PC), 162
psychopathology and suicide risk, 163
psychotherapy, 162
risk factors, suicide, 164
standard mental health treatment, 162
stress reduction, 170–172
substance usage, 172–174
and suicide prevention, 163
treatment, 162
universal, selective and indicated strategies, 163
Health-related behaviors, 307
Health-related quality of life (HRQL)
generic measures, 168
holistic wellness, 168
injury, 170
low physical, 169
MCMG, 220
physical activity, 164
scope of PC providers, 170
self-report measures, 169
standardized self-report metric of, 170
and suicide, 169

Health-related quality of life (HRQL) (*cont.*)
suicide prevention, 170
surveillance program, 168
Heartland Forgiveness Scale, 45
Hedonic treadmill, 98
Help-seeking, 121
Historical grief, 115, 116
Historical loss, 115, 116
Historical trauma, 115, 116
Hope, 119, 120, 127
Hope for the future (HF), 74, 76
Hope theory, 10–12
application of
agency interventions, 186
generation, pathways, 186
goal-setting, 185
interventions, 185
review, 187
testing, 187
conceptualization, 184
development, 200
failure, 184
goal hierarchy, 185
goal pursuit successes, 184
hope theory, 184
NSSI, 185
protective factors, 185
suicidal ideation, 185
suicide behaviors
agency enhancement and maintenance, 188
emotions, 188
goal blockages, 188
goals, 187
interventions, 188
non-suicidal pathways, 188
NSSI, 187, 188
positive problem orientation, 188
six life domains, 187
suicidal ideation, 187
suicide plans, 185
synthesis, pathways thinking, 184
Hopefulness, 18, 310
absence, 26
capability, 27, 28
case-control design, 26
conceptualisation, 26
COR, 26
definition, 25
depression, 27
depressive symptoms, 28
distress tolerance, 27, 28
effects, 28
emotion, 26
goal, 25
IPT model, 28
IPV, 26
LGBTQ, 26, 27
measure, 28
method of escaping, 27
and neuroticism, 28
outcome, 27
perceived burdensomeness, 28
planning capacity, 32
positive outcomes, 25
PST, 28
risk markers, 28
sexual assault, 26
sexual minority group, 27
suicidal ideation
and behaviour, 26–28, 30
and entrapment, 26
thwarted belongingness, 28
Hopelessness, 92, 140, 305
Hopelessness theory, 6
Humour styles, 96

I
Individual-focused activities, 104
Individualism, 114
Informational social support, 145
Instrumental social support, 145
Integrated motivational-volitional (IMV) model, 19
suicidal behavior, 8–9
Intensely grateful, 90
Internal struggle hypothesis, 77
Interpersonal conflict, 142, 143
Interpersonal factors, 303–304
Interpersonal needs, 137
Interpersonal Psychological Theory of Suicide (IPTS), 119
Interpersonal risk factors
humanistic and existential factors, 306–309
sociocultural and environmental factors, 309–312
temporal factors, 304–306
Interpersonal theory of suicide, 7, 8, 71
active ideation, 139
adolescents and adults, 139
burdensomeness and thwarted belongingness, 139, 140
non-interpersonal factors, 139
passive suicidal ideation, 138
positive psychological factors, 139
self-compassion, 139
social connections, 137

social support, 140, 146
suicidal ideation, 139
Interpersonal-psychological theory of suicide (IPT), 19
Interventions effective, gratitude
activities, 98, 100
brief activities, 97
categories, 97
caution, 98
CBT, 99, 100
clinical populations, 99
effectiveness, 98, 100
gratitude lists, 97
group settings, 97
hedonic treadmill, 98
journaling activities, 97
meta-analysis, 98
post-discharge period, 99
PP *vs.* cognition-focused, 99
and psychological well-being, 98
psychotherapy, 98
RCT, 99
social-cognitive appraisals, 97
spontaneously catalyse healing processes, 100
therapeutic relationship, 100
training, 97
treatment, 99
Intimate partner violence (IPV), 26

J
Journaling activities, 97

L
Lesbian, gay, bisexual, transgender, and questioning (LGBTQ), 26, 27
Life orientation, 90
Life review therapy, 97
Life satisfaction (LS), 75
Loneliness
befriending, 141
depressive symptoms, 140
interventions, 140, 141
social situation, 140
social skills training, 141
STBs risk, 140
Los Angeles Suicide Prevention Center (LASPC), 285
Low agreeableness, 103

M
Maladaptive coping strategies, 100
Marlowe-Crowne Social Desirability Scale, 47
Materialism, 103
Meaning in life (MIL), 63, 74, 77–80
adaptive health-related variables, 215
development, 216
high levels, 235
Meaning-Centered Group Psychotherapy, 216
and psychological well-being, 238
recognition of, 234
reduction, distress, 237
sources, 214
and suicide prevention, 214, 215
suicide risk, 223
Meaning-Centered Men's Groups (MCMG)
adaptations, 238
assessment session, 219
challenges, recruitment, 234, 235
characteristics, participants, 225–226
community-based social and leisure services, 234
course of, 234
development, mental health and well-being, 234
eligibility assessment, 218, 219
end of session evaluations, participants, 227
evaluations, 235
four project stages, 217
framework, late-life suicide prevention, 213
group discussions, 235
group sessions and participant attendance, 226
interventions
difficulties, 224
emotional difficulties, 224
evaluation, week's session, 224
group cohesion, 223
"group go-around" opportunity, 224
group sessions, 223
meaning in work and leisure, 223
transition to retirement, 222
limitations, 237
meaning-centered interventions, 215, 216
measures
cognitive functioning, 220
demographics, 219
diagnostic and clinical variables, 220
GSS, 222
health-related quality of life, 220
MIL, 221
physical functioning, 220
semi-structured group feedback questions, 222
subjective well-being, 221
suicide ideation, 221
therapeutic alliance, 222

Meaning-Centered Men's Groups (MCMG) (*cont.*)
men's-only groups, 237
mid-group assessment, 219
MIL and suicide prevention, 214, 215
North America, 209
outcomes
acceptability and tolerability, 228, 229
benefits, group participation, 232
courses of, 224, 228
duration, 233
exit interviews, 230
facilitators, 231
interpersonal themes, 230, 231
MCMG Redux, 233
men only, 232
participants, 228
process, 231
recommendations, 232, 233
satisfaction, 230
session-by-session evaluations, 229
participant tolerance/satisfaction, 227
participants, 216, 217
positive psychological exercises, 236
post-group assessment, 219
pre-group assessment, 219
psychological resiliency, 213, 214
psychological well-being and MIL, 236
recruitment, 218
research, 235
retirement
depression, 211
early retirement, 212
emotional expression, 211
exacerbate and mental health problems, 212
finances, 212
interpersonal dynamics, 212
interventions, 212
negative impacts, 212
recapture or replenish, 211
suicide prevention initiatives, 211
suicide rates, North American men's, 211
session-by-session overview, 238–239
stereotypes, 237
suicide and prevention
older adults, 210
support, 236
tasks and goals, 235
themes, 235
2013 suicide rates, Canada and USA, 210
Meaningfulness, 309
Mental health, 304, 305
Mindful self-compassion program, 139
Mindfulness, 97, 121, 139
awareness of interconnection, 279
Buddhism, 278
clinical movement approach, 266
comprehensive framework, 267
emotional/mental state awareness, 279
empowering, 278
individualistic approach, 248
interdependence and interbeing, 279
medicalization and psychologization, 265
meditation, 272
mental and cognitive strategies, 267
mutual interdependency and interaction, 279
personal enterprise toward self-control and self-optimization, 265
selfing/self-cherishing processes, 273
six R's framework (*see* Six R's framework)
studies, 250–262
western secular mindfulness approach and clinical literature, 249
wisdom and insight, 277, 278
Mindfulness-based cognitive therapy for preventing suicide behavior (MBCT-S), 249, 267, 271
Mindfulness-based cognitive therapy (MBCT), 79, 83, 249
evidence-based programs, 266
MBIs, 265
secular mindfulness-based interventions, 265
social belongingness, 276
training, 264
Mindfulness-based interventions (MBIs)
acceptability and engagement, 265
anxiety, depression, and chronic pain, 248
attention and metacognition, 263
attentional control, 265
change process, 266
cognitive and emotional regulation, 249
cognitive processes and executive functions, 249
contemplative sciences, 248
cultural factors, 265
detraditionalization, 266
evidence-based programs, 266
integral and critical conscious perspective, 265
interpersonal factors, 264
MBCT, 249, 264, 265
MBCT-S, 249
MBRP, 249
MBSR, 249
mental pain, 264
mental training, 249
moods and cognitions, 264

problem-solving deficits, 264–265
problem-solving skills, 265
qualitative research, 266
safety planning, 249
self-compassion, 248, 263
self-regulation, 263
shame, 263
thwarted belongingness and perceived burdensomeness, 263–264
western secular mindfulness approach, 249
Mindfulness-based relapse prevention (MBRP), 249, 265, 268
Mindfulness-based stress reduction (MBSR), 249, 265, 268, 270
Misdirected problem-solving, 24
Moral barometer, 90
Moral motive, 90
Moral objections (MO), 63, 70–73, 82
Moral reinforcer, 90
Moral valence, 90
Moral/religious objections (MRO), 74
Multicultural guidelines, 112
Multivariable associations, 48, 49
feeling forgiven by God, 50
forgiveness, 48
multidimensional, suicidal behavior, 48, 49
of others, 50
of uncontrollable situations, 50
indirect effects, 48
self-forgiveness, 48
suicidal behavior, 48
variables, 48

N

Narcissism, 90, 103
Negative cognitions, 301
Negative impact on family members (NIFM), 75
Negative life events, 12
"Negative religious coping" strategies, 72
Nonsteroidal anti-inflammatory drugs (NSAIDs)
nutrition, 168
Non-suicidal controls, 21
Non-suicidal self-injury (NSSI), 70, 185, 187, 188
Nuanced methodological approaches, 125
Nutrition, 311
knowledge, 168
lifestyle changes, 166, 167
Mediterranean diet, 167
mental health disorders, 168
multi-nutrient supplementation and psychoeducation, 167
NSAIDs, 168
obesity, 167
positive eating habits, 166
reduction, suicide risk, 167

O

Older adults, suicide and prevention, 210
Online resources, 97
Optimism, 31, 120
childhood adversity, 23
chronic health conditions, 24
cognitive set, 25
depression and suicidal behaviour, 25
distressing events, 23
and future orientation, 24
and hope, 23, 25
individuals, 23
interpersonal conflict, 23
lack of preparedness, 24
misdirected problem-solving, 24
negative life events, 24
and pessimism, 24
pessimists, 24
prevailing belief, 24
PTSD, 25
socially prescribed perfectionism, 25
suicidal ideation and behaviour, 24, 25, 31
Organization skills, 99

P

Parasuicidal behaviour, 21
Parasympathetic myocardial control, 102
Participatory action research (PAR), 287
Participatory methods, 289
Participatory research, 289
Pathological psychosocial factors, 37
Peer relations (PR), 74
Peer-acceptance and support (PAS), 73, 74
People of color (POC), 113, 117, 118
Perceived burdensomeness, 19, 96
Perfectionism, 103
Personality traits, 103
Perspective taking, 90
Physical activity, 311
depression, 164
hopelessness, 164
over-exercise, 165
PP principles, 165
PTSD treatment, 164
quality of life, 164

Physical activity (*cont.*)
reduction, 164
and suicidal ideation and attempts, 164
Physical engagement, 311
Physical Self-Maintenance Scales (PSMS), 220
Physical well-being, 102
Positive Appraisal Style Theory of Resilience (PASTOR), 82
Positive effects of gratitude
broadening, 101
building, 101
coherence, 102
coping hypothesis, 100
materialistic strivings, 101
mechanisms, 102
moral affect, 101
physical well-being, 102
protective *vs.* psychosocial ill-being, 101
religion and spirituality, 101
schematic hypothesis, 100
self-esteem, 101
self-respect, 101
social comparisons, 101
suicide risk factors, 102
Positive Emotion, Relationships, Meaning, Accomplishment (PERMA) model, 138
Positive experiences, 4
Positive memory bias, 101
Positive problem orientation, 119
Positive psychological constructs, 114, 115
Positive psychological intervention, *see* Meaning-Centered Men's Groups (MCMG)
Positive psychology (PP), 138, 143
adaptive cognitive-emotional functioning, 5
application, 304
beneficial impact, 307
Character Strengths and Virtues: A Handbook and Classification, 4
characteristics, 3, 4
cultural and ethnic minorities, 310
deficit-oriented, 3
DSM, 4
emotion regulation, 5
encouragement, 312
exercises, 5
factors, 37, 313
forgiveness (*see* Forgiveness)
group node, 3
and health outcomes
mental illness, 4
and suicide, 4–5
human behavior, 3
individual, 3
interventions, 302
lifespan, 3
mental health treatment and suicide prevention, 310
necessary and emerging, 2
patterns, 304
potential protective effects, 314
and protective characteristics, 3
prevention of suicide, 308, 310, 313
principles, 3, 312
racial/ethnic minorities, 113–115
social well-being, 5
spirituality (*see* Spirituality)
strengths of communities and cultures, 3
subjective, 3
suicide prevention
broaden-and-build theory, 9–10
hope theory, 10–11
SDT, 11–13
and suicidology, 3
Positive self-evaluation (PSE), 74
Positive suicidology, 1–3, 9, 12, 302, 304, 310, 313, 314
Post-discharge period, 99
Post-hoc analysis, 29
Post-traumatic stress disorder (PTSD), 25, 41, 164
Pre-motivation phase, 8
Primary Care (PC), health, *see* Health promotion
Problem-solving abilities, 21, 305
Problem-solving therapy (PST), 28, 81, 161
Protective characteristics, 3
Protective factors, 29
Protective Reasons against Suicide Inventory (PRSI), 61, 64–69, 75–77
Psychache, 8, 41, 51
Psychiatric disorders, 18
Psychodynamic family systems, 98
Psycho-educational group activities, 97
Psychological adjustment, 123
Psychological interventions, 302
Psychological mindfulness, 248, 279
Psychological well-being, 302
Psychopathology, 2, 301
Psychosocial theories of suicide
depressive symptoms, 6
emotion dysregulation theory, 7
factors, 6
hopelessness theory, 6
IMV model, 8–9
interpersonal theory, 7, 8
psychache, 8

Psychosocial variables, 2, 104
Psychotherapy, 79, 98
PubMed database, 62

Q
Qualitative research
  RFL, 77–79
Quantity, 41

R
Racial discrimination, 117
Racial microaggressions (RMAS), 113, 117, 118
Racial/ethnic minorities
  APA, 111, 112
  CDEMP, 111
  cultural differences, 111
  culture-specific protective factors, 122–124
  group members, 111
  growing rates, 111
  marginalized/disadvantaged statuses, 111
  multicultural guidelines, 112
  in positive suicidology, 127, 128
  PP, 111, 113–115
  sociopolitical contexts, 115–118
  suicide resilience, 112
  suicidology, 111–113
Racism, 290, 310
Racism-related stress, 116
Randomised controlled trials (RCTs), 99, 127
  FOGT, 29
Reasons for Dying (RFD) *vs.* Reasons for Living (RFL) Assessment, 75, 76
Reasons for living (RFL)
  ACT, 80, 81, 83
  antidepressant treatments, 81
  assessment, 62
  assessment scales (*see* RFL assessment scales)
  beliefs and attitudes, 61
  CAMS, 76, 81
  categorization, 61
  clinical treatments, 83
  cognitive abilities and processes, 61
  cognitive and cognitive-behavioral framework, 61
  concept of resilience to suicidality, 61, 82
  construct, 2
  contributions and bidirectional interrelations, 82
  DBT, 79, 81, 83
  definitions, 81
  different populations, 62
  framework, 81
  gratitude, 79, 80
  internal struggle hypothesis, 77
  MBCT, 79
  methods, 62–63
  and MIL, 79
  PASTOR, 82
  perception of patient, 61
  PP, 80
  PST, 81
  qualitative research, 77–79
  resilience factors, 81
  resilience mechanisms, 81
  resilience outcome/process, 81
  resilience variables, 61
  RFLI, 61
  scales, 62
  scores, 81
  short-term plans, 81
  suicide prevention, 62
  and suicidal behaviors, 62
  and suicidal thoughts, 62
  TMBI, 81
  types, 62
Reasons for Living for Older Adults scale (RFL-OA), 61, 73, 74, 76, 77
Reasons for Living Inventory (RFLI)
  assessment, 63
  attendance at religious services, 72
  Brief Reasons for Living Inventory for Adolescents, 70
  CC, 63, 70, 71
  CS-RFLI, 73, 74, 76
  cultural differences, 71
  events, 71
  FS, 63, 70, 71
  FSD, 63, 70, 71, 76
  interpersonal theory of suicide, 71
  Likert scale, 63
  MO, 63, 70, 71, 73
  NSSI, 70
  religion role, 72
  religious affiliation, 72
  RF, 63, 70, 71
  RFL-A, 73, 76
  RFL-OA, 74, 76
  RFL-YA, 74, 76
  SA, 70, 71, 73
  SCB, 63, 70, 71, 73
  scores, 63, 72, 73
  SD, 70
  self-acceptance, 77
  self-esteem, 77
  SI, 70–73

Reasons for Living Inventory (RFLI) (*cont.*)
and suicidal behaviors, 70
and suicidal thoughts, 70
systematic review, 72
test-retest reliability, 63
Reasons for Living inventory for Adolescents (RFL-A), 61, 73, 74, 76
Reasons for Living inventory for Young Adults (RFL-YA), 61, 73, 74, 76
Reduction of suicide risk, 301
Reflecting strategy, 272–274
Relational loneliness, 140
Religion
and spirituality, 2
Religiosity, 96, 101, 121
Religious affiliation, 72
Religious beliefs (RB), 75, 76, 78
Religiousness *vs.* spirituality, 38
Repetitive thinking, 21
Replacement strategy, 271–272
Resilience factor, 138
Responsibility to family (RF), 63, 70, 71, 76
Responsibility to friends and family (RFF), 73
Retracing strategies, 275–276
RFL assessment scales
Chinese RFL Scales, 74, 75
vs. RFD, 75, 76
RFLI (*see* Reasons for Living Inventory (RFLI))
Risk factors
conflict with others, 143
Interpersonal theory of suicide (*see* Interpersonal theory of suicide)
loneliness, 140–141
social isolation, 141, 142
Risk-reduction, 301

S
Safety planning intervention, 146, 249
Salience activity, 103
Salubrious association, 41
Schematic hypothesis, 100
Self-acceptance (SelfA), 73–75, 77
Self-compassion, 248, 263, 264, 271, 272
Self-condemnation, 43
Self-criticism, 23
Self-determination theory (SDT), 10–11
cognitive-emotional-behavioral patterns, 11
external regulation, 11
human motivation, 11
identified regulation, 11
intrinsic motivation, 11
introjected regulation, 11
negative life events, 12
people experience, 11
SI, 12
suicide prevention, 12
types of processes, 11
Self-esteem, 103, 150, 307
Self-forgiveness, 11, 40, 41, 43, 51, 307
Self-injury, 5
Self-reconciliation, 40
Self-referent, 31
Self-regulation, 263
Self-reported racism, 117
Sexual assault, 26
Sexual minority group, 27
Short Form health survey Version 2 (SF-36v2), 168
Six R's framework
redirecting, 270–271
reflecting, 272
remembering, 268–269
replacing, 271
resolving, 274–275
retracing, 275
Social-cognitive appraisals, 97
Social communication and self-disclosure, 149
Social comparisons, 101
Social integration, 2
Social isolation
binge drink socially, 141
definition, 141
loneliness, 142
negative feeling, 141
novel approach, 142
religious service attendance, 142
STB risk factor, 141
suicide rate, 142
Socially prescribed perfectionism, 25
Social networks, 114, 144
Social perfectionism, 23
Social problem-solving, 28
Social support, 120, 121
definition, 145
interpersonal theory of suicide, 146
interventions, 146
objective, 145
positive psychological protective factors, 146
protective against STBs, 145
protective factor, 146
research, 146
safety planning, 146
sources, 145
STB risk, 145, 146
types, 145

Societal level, 2
Sociocultural adjustment, 123
Sociocultural models of behavior, 310
Sociocultural, and environmental factors, 302
Sociopolitical contexts, 115–118
Spirituality, 121
  and addiction, 38, 39
  belief, 38
  component of human nature, 38
  constructive and health promoting characteristics, 38
  definition, 38
  and forgiveness (*see* Forgiveness)
  and religion, 2
  and suicidal behavior, 38, 39
Spontaneously catalyse healing processes, 100
Stigma and discrimination, 310
Stigmatization and distress, 310
Strain theory of suicide, 72
Strengths-based approach, 1
Stress, 117
  anxiety and depression, 171
  coping skills, 171, 172
  high levels of, 170
  internet resources, 172
  mindfulness-based stress reduction, 171
  parasympathetic control, heart rate, 171
  reduction, suicidal ideation and behavior, 172
  regulation, 172
Stress reduction, 311
Stress-and-coping based model, 41
Substance misuse, 309
Substance usage
  alcohol and suicide mortality, 172
  alcoholics anonymous (AA), 173
  forgiveness, 173
  poisonings, 172, 173
  prevention, suicide, 173
  religious attendance, 173
  self-harm, 172
  suicide risk, 172
  treatment, 173, 174
Suicidal behavior
  addictive behavior, 37
  depression, 24, 27, 31
  engaging, 23
  forgiveness, 40, 41
  future orientation, 30
  history of, 219, 221
  hopefulness, 26
  hopelessness, 28, 30
  hospital readmission, 23
  relationship, 22
  reports, 26
  retirement, 211
  sexual assault, 31
  thoughts to, 19
Suicidal Behaviors Questionnaire-Revised, 45
Suicidal ideation (SI), 12, 61, 70–76, 78–82
  and attempts, 24
  and behaviour (*see* Suicidal behaviour)
  and depression, 24
  and enactment, 25
  FOGT, 29
  future orientation, 30
  and hopelessness, 25
  and perceived burdensomeness, 19
  theories, 20
  and thwarted belongingness, 19
Suicidal individuals
  maladaptive characteristics, 61
Suicidal thoughts, 97
Suicidal thoughts and behaviors (STBs), 113, 119, 122, 123, 126, 137
  interpersonal conflict, 142
  protective factors
    attachment to others, 148, 149
    connectedness, 147, 148
    self-esteem, 150
    social networks, 144
    social support (*see* Social support)
Suicide
  and addiction (*see* Addiction)
  cognitive-behavioral framework, 5–6
  conceptualization, 1
  despair and death, 1
  evidenced by, 2
  and future orientation (*see* Future orientation)
  human strengths and attributes, 12
  individually-focused/community focused, 12
  interpersonal/intrapersonal, 12
  and mental distress, 12
  mortality rates, 37
  and PP (*see* Positive psychology (PP))
  preventable cause of death, 1
  prevention and intervention strategies, 2
  psychosocial theories (*see* Psychosocial theories of suicide)
  psychosocial variables, 2
  risk factors, 2, 29
  scientific community, 37
  societal level, 2
  strengths-based approach, 1
  treatments, 2, 12
Suicide attempt (SA), 61, 70–73, 75, 76, 79, 81, 82
Suicide death (SD), 70, 72

Suicide prevention
African Americans, 121
application of positive psychology, 310
applied resiliency, 308, 314
deficit-oriented approaches, 314
etic and emic approach, 309
fight against death, 302
and gratitude (*see* Gratitude)
help-seeking, 121
and intervention, 112, 114, 126, 128
mindfulness, 308
potential protective effects of positive psychology, 314
and research, 92
6 R's framework, 308
sociocultural and environmental factors, 309–312
strategies, 305
Suicide Prevention Resource Center (SPRC), 211
Suicide-related concerns (SRC), 73
Suicide resilience, 112
Suicide resiliency factors, 113
Suicide-specific studies, 113
Suicide Status Form (SSF), 75
Suicidology, 111, 112, 126–128
AAS, 1
and positive psychology, 3, 5
racial/ethnic minorities, 112, 113
research, 5
Survival and coping beliefs (SCB), 63, 70, 71

T
Temporal and holistic growth, 302
Thankfulness, 101
Therapeutic intervention, 63, 307
Three step theory (3ST), 20
Thwarted belongingness, 7, 12, 19, 96
Time perspective, 29
Traditional deficit-reduction approach, 309
Traditional therapeutic approaches, 305
Trait gratitude, 91, 101
Transcendent mindfulness, 248, 279
Transdiagnostic theory, 8
Transformative learning, 263
Trauma-focused approach, 124
Treatment as usual (TAU)
and FOGT, 29
Treatment, suicidal behavior, 301

U
Unforgiveness, 307

V
Volitional phase, 19

W
Well-being, 302, 304
Western, educated, industrialized, rich, and democratic (WEIRD"), 112
World Health Organization (WHO), 285
Writing gratitude letters, 103

Z
Zero-order associations, 45, 47