Resilience and Student Engagement: Promotive and Protective Processes in Schools

Ann S. Masten, Kayla M. Nelson, and Sarah Gillespie

Abstract

Effective schools buffer students against the effects of adversity on learning and positive adjustment in the present and prepare them for future resilience. This chapter draws on the developmental literature about resilience in children and the educational psychology literature on student engagement to highlight the multifaceted role of schools in resilience. We adopt a scalable and multidisciplinary systems definition of resilience as the capacity of a dynamic system to adapt successfully to challenges that threaten the function, survival, or development of the system. We consider the multifaceted roles in promoting and nurturing resilience of student engagement, broadly defined to include behavioral, emotional, and cognitive processes that connect students to learning and their school communities. Student engagement affords greater access to resources and resilience capacity that can protect children at risk due to acute and chronic adverse childhood experiences while also facilitating the development of resilience factors widely implicated as the building blocks of future competence and resilience. Student engagement processes mediate, moderate, and reflect the processes by which school systems can support and nurture student resilience through multisystem interactions. A "short list" of resilience factors consistently associated with student resilience is delineated along with multiple ways that schools support and nurture these influential factors. Schools can mitigate risk, provide an array of resources and opportunities, and simultaneously nurture powerful adaptive systems that build future resilience for individuals and thereby their communities and societies.

Studies of resilience suggest that effective schools buffer children against the effects of adversity on learning and positive adjustment in the present while also nurturing their future competence and resilience (Doll, 2013; Masten, 2014b, 2021; Theron, 2021; Ungar et al., 2019). Research suggests that student engagement plays key roles in the processes by which schools contribute to this dual mobilization and development of adaptive systems that serve to protect children at risk due to acute and chronic adverse childhood experiences, while also facilitating the development of resilience factors widely implicated as foundational to future competence and resilience capacity. This chapter draws from developmental science on resilience in children

A. S. Masten (✉) · K. M. Nelson · S. Gillespie
University of Minnesota Twin Cities, Minneapolis, MN, USA
e-mail: amasten@umn.edu; nels8814@umn.edu; gille597@umn.edu

and educational science on student engagement to highlight the multiple ways that schools foster resilience in the short and long term, with a focus on the roles of student engagement in the adaptive success of students confronted with significant adversities and disadvantages.

For the purposes of this discussion, we adopt a multidimensional perspective on student engagement, encompassing indicators and processes associated with psychosocial connections of students with school that facilitate learning and academic success (Appleton et al., 2008; Christenson & Pohl, 2020; Wang & Hofkens, 2020). Broad definitions of student engagement encompass behavioral, emotional, and intellectual processes that reflect a multitude of potential interactions with curricular material; relationships with other students, staff, and teachers; participation in the norms and expectations of the school community; and active roles of students in decision making or feedback to shape their learning environments (Coates, 2007; Kuh, 2009). From this perspective, student engagement is multifaceted, including emotional, cognitive, motivational, behavioral, and relational dimensions long associated with positive outcomes in school and in life, ranging from attendance and academic achievement to later work success (Reschly et al., 2020). In addition, student engagement comprises a multisystem, multidirectional set of processes by which schools, students, families, and communities influence each other. Student engagement can be influenced by families and peers outside of school as well as by staff and students inside a school community. Moreover, the engagement of individual students as well as their families can influence the overall school climate and quality of education, with the potential for enhancing the overall quality of the school for all of its students. Consequently, there is longstanding interest in promoting student engagement in various ways in order to enhance developmental outcomes in children and youth, particularly for young children at risk of academic and psychological problems (Appleton et al., 2008; Reschly et al., 2020). Similarly, schools also may promote the resilience of the broader communities in which they are embed-ded, fostering a sense of collective identity, building social capital among local residents, and cultivating economic growth (Good, 2019; Milofsky, 2018).

Interventions to promote student engagement and school success have historical connections to the developmental science on competence and resilience (Christenson & Pohl 2020; Masten, 2003; Masten & Motti-Stefanidi, 2009; Reynolds et al., 2007; Wang & Gordon, 1994). The importance of schools, for example, in the success of immigrant youth and in recovery from mass-casualty disasters and conflict is widely recognized by humanitarian agencies as well as researchers (Masten & Narayan, 2012; Masten et al., 2019; Motti-Stefanidi & Masten, 2013). One of the most efficacious and well-established interventions to promote student engagement and avert student dropout, Check & Connect, was explicitly designed to build protective and reduce risk factors identified in the resilience literature, along with other research evidence and theory relevant to student engagement (Christenson & Pohl, 2020).

With the goal of linking current efforts to promote student engagement with advancements in resilience science, this chapter includes the following sections. The first section provides a contemporary definition of resilience from a multisystem developmental perspective, emphasizing the salience of schools for resilience, particularly in the context of overcoming situations of high cumulative risk, including homelessness, poverty, disaster, political conflicts, migration, discrimination, maltreatment, and related adversities. The second section elaborates on parallels in the "short list" of resilience factors consistently observed in theory and empirical studies of resilience broadly defined and the more specific literature on protective influences of schools. Section three examines the evidence on mediating and moderating roles of student engagement in resilience processes. The fourth section highlights the multifaceted roles of schools in nurturing resilience and preventing adversity for their students and societies. Conclusions highlight the alignment of research on resilience and student engagement, the dual roles of schools in resil-

ience processes present and future, the vital role schools are expected to play in pandemic recovery, and the need for resilience studies focused on adaptive processes afforded by schools that are particularly important for diverse students.

Resilience Defined from a Developmental Multisystem Perspective

Resilience can be defined from many perspectives, ranging from engineering or ecology to psychology or urban planning, referring broadly to the qualities or processes involved in withstanding or adapting to disturbances or adversities that threaten different kinds of natural or built systems (Folke, 2016; Masten, 2014b; Ungar, 2021). For the purposes of this discussion, which is focused on students in the context of schools, we adopt a multisystem view that is scalable and multidisciplinary, reflecting the growing dominance of systems thinking in developmental science and the call for integrating knowledge on resilience from different disciplines to meet challenges posed by disasters, epidemics, political conflicts, and related global challenges (Masten, 2018a; Masten & Motti-Stefanidi, 2020).

We define resilience as the capacity of a dynamic system to adapt successfully through multiple processes to challenges that threaten that system's function, survival, or development (Masten, 2014b; Masten et al., 2021). We view students as living systems, whose development (and resilience at any given time) is continually influenced by many interacting systems within their bodies and minds as well as between the whole person and their environments. Individuals are embedded in other systems, including families and schools, that in turn are connected to other systems, and they also are influenced by many processes related to culture and environments. These views are consistent with developmental systems theory (Gottlieb, 2007; Griffiths & Taber, 2013; Lerner, 2006, Overton, 2013), Bronfenbrenner's socioecological theory (Bronfenbrenner & Morris, 2006), developmental psychopathology (Masten & Cicchetti, 2016),

family resilience theory (Walsh, 2016), social-ecological theory (Folke, 2016), studies of student engagement in the education literature (Wang & Hofkens, 2020), and multisystem views of resilience emerging in many other disciplines (Ungar, 2021).

Schools also can be viewed as complex dynamic systems (Hawkins & James, 2018), influenced by individuals who attend or work in the school and by many systems outside of the school with influence on school staff, students, and curriculum, ranging from families of their students to teacher unions and policy makers. The quality of schools in terms of education and the well-being of their students and staff will depend on support from their students, families of students, their communities, and many other organizations. The quality and resilience of schools are shaped by many interactions, including the complex array of processes encompassed by the concept of student engagement, as well as excellent leadership (Hawkins & James 2018; Masten & Motti-Stefanidi, 2009; Wang & Hofkens, 2020). High-quality student engagement supports the overall effectiveness of a school as well as the individual experiences of its students.

Recognizing that many interactions shape the course of development across intersecting system levels carries with it the idea that changes at one level or in one domain of functioning in a system are likely to spread to affect other areas of function and, potentially, other system levels. The potential of multisystem interactions to change the course of development in a system is captured by the concept of *developmental cascades* (Masten & Cicchetti, 2010). Exposure to chronic, severe trauma in childhood, for example, can influence lifelong health through biological changes in stress-regulation and other neurobiological systems central to health (Boyce et al., 2021; McEwen, 2019). Early success at school, facilitated by first rate early childhood education before school entry and effective teaching and school leadership after school begins, can promote success among children who experience many forms of deprivation and adversity in childhood (Bellis et al., 2018; Masten, 2014b; Huebner et al., 2016; Reynolds et al., 2018).

From the point of view of students, schools are contexts where many learning and social interactions take place. In Bronfenbrenner's social ecological theory (Bronfenbrenner & Morris, 2006), schools represent a key microsystem for individual development. Through many interactions with staff, teachers, other students, instructional material, and the extracurricular context, students change and develop in many ways, ideally learning academic skills, such as reading and math, as well as social-emotional skills of getting along with other people, following the behavioral rules of their community and society, and understanding the values and ways of succeeding in their environment. Interactions in schools can socialize immigrant youth to the norms, expectations, and values of a new host culture, while interactions in the home promote protective connections to their heritage culture; the development of bicultural competence is linked to the success and well-being of immigrant youth (Motti-Stefanidi et al., 2020). Societies charge schools with educating and socializing their children for competence in the society, in parallel but different ways than their families. Families and societies alike expect schools to keep their children safe from harm while also preparing them for future learning, work, and civic engagement.

Going to school, getting along with other people there, and learning the skills essential for making one's way in society are some of the *developmental tasks* expected of children in most modern societies (Masten, 2014b). Developmental tasks are the physical or psychosocial milestones or accomplishments by which progress in development is typically evaluated by society, parents, and eventually by young people themselves. These are the criteria by which we often judge how well development is going, based on many generations of observation as well as research that these accomplishments indicate not only current competence but also the likelihood of future competence (Heckman, 2006; Masten et al., 2006). Such criteria have played a central role in education (Havighurst, 1974) and in resilience research as indicators of positive adapta-

tion to adversity or risk (Masten, 2014b; Masten & Coatsworth, 1998).

The study of resilience in developmental research required the operationalization of two core components: the adversity or risk posing a threat to development and the criteria for evaluating how well the young person was doing (Masten et al., 2021). Although there are many other criteria to consider, both positive (e.g., psychological well-being) and negative (e.g., trauma symptoms) developmental tasks were popular among developmental scientists, perhaps because parents, teachers, communities, and societies agree on their importance. The thesis that "competence begets competence" was widely believed before data began to back up this idea and economist James Heckman and others documented the high return on investment in early childhood competence (Huebner et al., 2016).

Developmental tasks change, of course, as development proceeds and as the context changes. Infants and toddlers are expected to form attachment bonds and learn the language of the family, whereas students of school age are expected to attend school, follow classroom rules, and learn numerous academic and social skills. When migration occurs and young people enter school in a new culture and/or context, routine developmental tasks are often compounded by acculturation and adapting to the new context (Motti-Stefanidi & Masten, 2013, 2020). For immigrant youth, schools often serve as a primary acculturative context for learning about their new homeland, exploring their cultural identities and potential conflicts between the developmental tasks of their native culture and host culture, making friends among host-culture peers, gaining a sense of belonging, and future opportunities. Success in school also offers a gateway to success in higher education, work, and status in the new society. For receiving societies, success among immigrant youth offers enhanced human capital and a more diverse workforce.

As evidence accrued on the success of children in terms of developmental tasks in the school context, it became clear that student engagement indexed in multiple ways was generally related to

competence or success in school-related developmental tasks (such as academic achievement, peer acceptance, and prosocial conduct), both for native and immigrant youth. Concomitantly, evidence grew that student engagement also was a key mediator and moderator of school success for young people at risk of school failure and developmental problems due to adverse childhood experiences, socioeconomic risks, or migration (Appleton et al., 2008; Durlak, 2009; Masten, 2014b; Masten & Motti-Stefanidi, 2009; Motti-Stefanidi & Masten, 2013). The varied processes represented by the construct of "student engagement" in this body of work included relationships with teachers and peers, attendance and participation in school activities, a sense of belonging or school spirit, and family involvement in school activities. These processes reflect behavioral, emotional, and cognitive aspects of engagement (Appleton et al., 2008).

From the perspective of the schools, student engagement can be viewed as a mediator and moderator of overall school effectiveness, with schools as systems striving to educate and promote competence of their students (Eccles & Roeser, 2011). For schools educating students at risk of learning or behavioral problems related to disadvantage, adversity, or migration, bolstering student engagement can be conceptualized as a strategy for improving the competence of all students and the resilience of their high-risk students (Reschly et al., 2020; Wang & Gordon, 1994). As a result, student engagement has been the target of interventions to bolster school effectiveness in general and promote resilience specifically among high-risk students. In their edited volume, Reschly et al. (2020) provide multiple chapters illustrating different strategies of intervention aimed at boosting emotional, cognitive, motivational, and relational engagement of students with school. Similarly, many of the preventive interventions intended to promote school achievement and adjustment among children at risk due to trauma, discrimination, migration, or poverty have focused on engaging students as foundational to facilitating the opportunities and interactions that are essential to learning and building relationships that support these students (Masten,

2014b). More specifically, in the resilience literature, student engagement processes were conceptualized as a means to build resilience capacity.

In resilience theory, general predictors of better outcomes are known as *promotive factors*, whereas influences that play an additional or exclusive role in the context of high exposure to adverse experiences are known as *protective factors* (Masten & Cicchetti, 2016). This difference reflects "main effects" versus moderating or "interactional effects" (interacting with a risk factor) of a variable on desired outcomes. Effective schools can be generally better for learning and also specifically helpful for children at risk due to disadvantages or adversities, acting as both a promotive and protective factor. Similarly, individual or family attributes, such as self-control or parenting skills, can be good for development at all risk levels but especially important for children in high-risk circumstances.

Over the years, research on children who overcame adversity or succeeded in school despite a history of risk circumstances consistently pointed to a set of individual, family, and school qualities often identified as promotive and protective factors (Masten, 2014b; Masten et al., 2021; Ungar & Theron, 2020). Striking parallels in the qualities of individual youth, families, and schools associated with resilience in children and in each of these contexts suggested that there may be multisystem processes connecting these fundamental human adaptive systems that fostered resilience, particularly when networks of these systems were aligned. In the next section, we discuss these apparent drivers of resilience and the role of student engagement in engaging and enhancing them.

Converging Research on Resilience Linking Students, Families, and Schools

Research on children at risk consistently implicated a set of recurring resilience factors associated with better outcomes in the near and far term under diverse conditions of risk or adversity

(Garmezy, 1985; Masten, 2014b; Luthar, 2006; Ungar & Theron, 2020). Examples of these factors (sometimes called the "short list") implicated a set of basic human adaptive systems associated with good adaptation, particularly under adversity. The short list included individual attributes, relationships, and qualities of a child's context, such as effective/supportive caregiving, schools, and communities. Meanwhile, other lines of research on effective families and family resilience (Henry et al., 2015; Patterson, 2002; Walsh, 2016), as well as effective schools and school resilience (Anderson, 1994; Edmonds, 1979; Masten, 2014b; Theron, 2021; Ungar et al., 2019) pointed to very similar resilience factors.

In recent theory and reviews of the literature, resilience scholars have noted the striking similarities in resilience factors identified across major social systems in the lives of children and youth, suggesting that this alignment is not coincidental. Instead, the alignment may reflect the multisystem nature of resilience and the interdependent processes that afford humans the capacity to adapt, arising from many generations of natural and sociocultural selection (Masten, 2018a; Masten et al., 2021; Ungar, 2018). Resilience factors associated with better adjustment among children at risk of various reasons also tend to co-occur, although situated in different systems, consistent with the idea that protective processes interact across systems in ways that afford synergy and thereby greater resilience capacity (Fritz et al., 2018; Höltge et al., 2021; Masten, 2011). Social networks of adaptive systems may have co-evolved, drawing on the fundamental adaptive capabilities of individuals in our highly social species. These speculations have led to interest in research on network analysis of resilience and similar efforts to measure the coordinated capacity of social-contextual systems to support individual human resilience (Fritz et al., 2018; Höltge et al., 2021).

Common psychosocial resilience factors that span individual attributes, relationships, and contexts have been reported for decades in case studies, empirical studies, and reviews of the literature on young people who show positive adjustment and outcome in the context of exposure to signifi-

cant adversity (e.g., Garmezy, 1985; Masten et al., 1990; Werner & Smith, 1992). Such observations are entirely consistent with developmental systems and social-ecological theories of resilience. Ongoing research continues to add evidence of common resilience factors, despite inconsistencies in research methods and concepts of resilience (Masten et al., 2021). Persistent inconsistencies of both concepts and methods continue to limit the feasibility of systematic reviews of this literature. Nonetheless, recent efforts to conduct systematic and scoping reviews of the literature on resilience in young people support the basic conclusions from early observations and narrative reviews that there are multisystem resilience factors that appear across cultures and diverse situations of risk (Christmas & Khanlou, 2019; Fritz et al., 2018; Meng et al., 2018; Ungar & Theron, 2020).

Examples of frequently identified factors associated with resilience in students are shown in Table 1, including comparable factors from a student and school perspective (Doll, 2013; Masten, 1994, 2007, 2014b; Masten & Motti-

Table 1 Short list of resilience factors associated with student resilience

From a student perspective	From a school perspective
Close relationships, attachment bonds with family, other adults, and friends	Caring, respectful relationships among students, faculty, and staff
Sense of security, belonging	School climate of safety and inclusion
Problem-solving skills	Effective teaching
Self-regulation (cognitive, emotional)	Structure and effective leadership
Motivation to succeed, agency	Scaffolding to enhance mastery motivation
Positive views of self, identity, self-efficacy	Positive views of students and school
Positive outlook on the future, optimism	Positive outlook on student and school future
Sense of purpose and meaning	School spirit, collective purpose
Engaged with effective school and teachers	Student engagement
Family engagement	Community engagement
Parenting and family resilience	Teacher and school resilience

Table 2 How schools enhance present and future student resilience

Meeting basic student needs for nutrition, safety, healthcare, and stimulation
Sensitive interactions and teaching that convey respect, concern, commitment, and inclusion
Opportunities for relationships with caring, committed, and competent adults and mentors
Role modeling of effective self-regulation and stress management
Support for self-regulation, autonomy, and self-determination
Fostering values and maintaining a positive school climate
High expectations in the context of supportive relationships
Opportunities for friendships with prosocial peers
Opportunities to learn and develop talents
Opportunities to experience mastery
Fostering healthy habits and daily routines
Special rituals and celebrations that reinforce belonging, accomplishment, and optimism
Connections and collaboration with students' families
Reducing school-based stress and adversity (e.g., reducing conflict, bullying, racism)

Stefanidi, 2009; Ungar & Theron, 2020; Wang & Hofkens, 2020; Wright et al., 2013). These examples of resilience factors represent leading candidates in the quest to know "*What matters?*" for resilience in children and youth. These resilience factors, comprising the short list, are assumed to reflect fundamental adaptive systems and capabilities that develop in human lives resulting from the interplay of biological, social, and ecological processes (Masten, 2014b). Identifying key resilience factors was the primary goal of the first wave of resilience science focused on children and youth (Masten, 2007; Wright et al. 2013).

Later waves of research focused on *how* questions: the processes involved in *how* these factors worked to yield successful adaptation in the midst or aftermath of adversity exposure as well as the development of the capacities for resilience indicated by these factors (Masten, 2007). It was important to understand how resilience led to successful adaptation in order to develop effective interventions for children

at risk of harm from adverse experiences and risky circumstances (Masten, 2014b). Table 2 offers a potential list of "how" schools may foster resilience based on the literature cited in this article on student resilience and effective schools (e.g., Ungar et al., 2019), a list that is highly congruent with recommendations to engage students (e.g., Reschly et al., 2020). Notably, effective schools share many of the qualities of effective families with respect to protecting children in the present and nurturing their resilience for the future (Masten, 2018a, b; Theron, 2021).

In the following section we examine more closely how schools nurture and support resilience. We suggest that student engagement plays a vital role in the processes by which schools foster resilience in the short and long term.

Student Engagement as a Mediator and Moderator of Resilience

Research from diverse corners of the literature on resilience in children and youth implicates student engagement as a mediator and moderator of resilience for children at risk due to adverse life experiences, socioeconomic disadvantage, or racial-ethnic discrimination (Fredricks et al., 2019; Motti-Stefanidi & Masten, 2013; Reschly et al., 2020; Wang & Hofkens, 2020). Success in school is a central developmental task in most contemporary societies, indicating resilience in the cases of students who encounter major obstacles to school success in their lives and serving as a harbinger of future success. Theoretically, some degree of engagement is a prerequisite for most of the resilience processes afforded by effective schools. For example, positive relationships are less likely to develop with a teacher for students who rarely attend school. Growing evidence of malleability in multiple dimensions of student engagement long associated with better school outcomes has spurred considerable interest in interventions to promote student engagement (Fredricks et al., 2019).

Cumulative Risks and Adversities Threaten School Success

Many adversities and disadvantages pose risks to school readiness, learning, conduct, achievement, completion, and psychological well-being at school. These risks often co-occur with cumulative effects on multiple indicators of school adjustment (Evans et al., 2013; Masten, 2014b). Some risks have direct effects on school success and others indirectly influence behavior or psychological well-being in ways that interfere with learning. Children experiencing homelessness may not be able to attend school regularly or may change schools frequently, either of which can disrupt learning (Cowen, 2017; Fantuzzo et al., 2012; Masten et al., 2015). Exposure to violence or neglect can interfere with children developing essential social, emotional, and self-regulation skills important for learning and school success (Labella & Masten, 2018). Youth who experience racism or discrimination based on ethnicity, gender, or weight report worse psychological well-being (e.g., low self-worth, social anxiety, depressive symptoms) and lower academic achievement, particularly if school staff or teachers are the source of the discrimination (Benner & Graham, 2013; Ghavami et al., 2020). Brain development and related cognitive functions and stress-regulation systems can also be affected in lasting ways by exposure to toxic levels of stress or profound neglect in early life (Shonkoff et al., 2012). Lower school readiness, partially mediated by self-regulation skills, is related to poverty and inequality (Blair & Raver, 2015).

Resilience in the Context of Cascading Risks

Over time the effects of such risks can accrue and cascade across domains of function at school (Masten et al., 2005; Labella & Masten, 2018). Difficulties with self-regulation skills, for example, can lead to later achievement and conduct problems that contribute to peer rejection and disengagement from school (Sabol & Pianta, 2012; Zelazo, 2020). Yet, evidence also suggests that these cumulative and cascading harms to education can be reduced or prevented by effective family and community supports, high-quality early childhood education, and efforts by schools to engage and support students at risk during the school years (Bellis et al., 2018; Plumb et al., 2016; Robles et al., 2019; Uddin et al., 2021; Ungar et al., 2019). For example, research on families experiencing homelessness indicates that parenting quality is associated with better academic, behavioral, and social adjustment of their children in school (Labella et al., 2017; Masten et al., 2015). The Head Start REDI program, which targets social-emotional and language/literacy skills in disadvantaged preschoolers, has shown lasting effects on school success among children at risk due to poverty (Bierman et al., 2008). This intervention has shown effects on academic engagement (e.g., enthusiastic about learning, attentiveness) that were sustained through elementary school (Welsh et al., 2020) and also had protective effects on school bonding in young adolescents (Sanders et al., 2020).

Check & Connect, mentioned above, was developed in the 1990s as a dropout prevention program but quickly became recognized as a successful intervention to promote student engagement (Christenson et al., 2012; Christenson & Pohl, 2020). This program was influenced by resilience theory and, from the outset, it focused on improving students' connections to school and their sense of belonging. The aims and strategies of Check & Connect continue to align very well with protective factors and processes identified in the resilience literature. In this program, mentors build sustained, trusting relationships with students and work with them to solve problems. They monitor and facilitate student engagement with school and learning in multiple ways, engaging with parents and school personnel as well as students. The program aims to reduce risk factors while also building protective factors, such as a trusted relationships with adults at school, self-efficacy, problem-solving skills, and motivation.

Positive relationships with prosocial, engaged peers may also play a key role in student engage-

ment. Findings from the Longitudinal Studies of Child Abuse and Neglect (LONGSCAN) suggested that positive peer relationships during adolescence had promotive effects on student engagement and protective effects against the risk of adverse childhood experiences (ACEs) on school outcomes at age 16 (Moses & Vollodas, 2017). Opportunities for positive peer interactions may also play a role in the resilience of immigrant youth, discussed further below.

Efforts to engage students in school recognize that schools have multiple academic and social contexts for engaging students (Wang & Hofkens, 2020). Schools can offer diverse social, academic, and extracurricular contexts that appeal to different students. Schools as developmental contexts can offer students different pathways of engagement that fit the individual and developmental needs of students with variable motivations, talents, and past experiences.

Student Engagement in Diverse Racial/Ethnic and Cultural Contexts

Engaging students from diverse ethnic, racial, and cultural backgrounds poses particular challenges for schools (see Galindo et al., chapter "Expanding an Equity Understanding of Student Engagement: The Macro (Social) and Micro (School) Contexts", this volume), but offers great promise for promoting resilience. Students from marginalized populations have good reason to be wary in schools or communities with a history of racism or xenophobia, and many report ongoing experiences of school-based discrimination (Ghavami et al., 2020). Nonetheless, student engagement is associated with better school outcomes and future opportunities for students from racial-ethnic minorities or immigrant families (Motti-Stefanidi & Masten, 2020; Wittrup et al., 2019). Some schools with a diverse student body manage to foster student engagement through different strategies. For example, a recent review of ethnic studies courses found that these culturally grounded curricula promote identity development, well-being, and graduation rates among ethnic minority youth and improved the racial attitudes of white students (Sleeter & Zavala, 2020). Graham (2018) argues that, as schools become increasingly diverse due to the demographic trends in the United States, ethnic minority and majority students alike benefit from protective factors that include cross-ethnic friendships, the development of complex social identities, and reduced vulnerability to bullying or discrimination. A growing literature suggests that culturally responsive teaching and positive cross-ethnic relationships within schools can support the engagement and resilience of youth from different cultural and racial backgrounds.

Research on immigrant youth also suggests there are protective influences at multiple system levels (Motti-Stefanidi, 2018; Motti-Stefanidi & Masten, 2020; Suárez-Orozco et al., 2009, 2018). These include influences at the level of communities or society (welcoming attitudes toward immigrants, cultural pluralism valued, economic and social supports for immigrant families), schools (intermingling of immigrant and native youth, intercultural friendships, inclusive school climate), and individuals (positive identity, self-efficacy). Relationships play a central mediating role in the success of immigrant youth, facilitating both social and academic engagement. Suárez-Orozco et al. (2009) summarize the evidence from the US studies indicating the mediating role of relationships with peers and adults in schools for newcomer immigrant youth success, associated with a sense of belonging, social and emotional support, and practical help. Their findings in the Longitudinal Immigrant Student Adaptation Study (LISA) of young adolescent newcomers to the United States from multiple countries found that multiple aspects of student engagement (e.g., cognitive and behavioral engagement) were facilitated by relationships with co-national peers, teachers at school, and co-national adults in the community, all of which supplemented ongoing parental support. School-based relationships provided two distinct forms of support, emotional and practical, and these caring relationships appeared to foster academic success in a variety of ways. Numerous other studies of immigrant youth underscore the role of positive relationships with peers and teachers in facilitating student engagement, their perceived sense of belonging, and their academic success (Suárez-Orozco et al., 2018).

Research on school success of Black students in countries and communities with a history of racism and discrimination also points to the key role of student engagement. School-based racial discrimination is a risk factor for student disengagement among African American youth in the United States (Neblett et al., 2006; Leath et al., 2019). Research on resilience in African American students suggests that positive relationships and positive racial identity can counter this risk. African American students who perceive that their school supports their cultural identity development have higher grades 1 and 2 years later (del Toro & Wang, 2020). In one recent study, naturally occurring mentoring relationships, particularly when characterized by relational closeness, were found to counter the risk of discrimination on academic engagement, as defined by curiosity for new material and persistence when attempting academic tasks (Wittrup et al., 2019). In another recent study, Leath et al. (2019) found that positive racial identity beliefs protected against the effects of school-based racial discrimination experiences on academic curiosity and persistence of African American adolescents.

Student Engagement in the Context of War or Disaster

Evidence on recovery from disasters and war offers another compelling perspective on the fundamental importance of student engagement for the resilience of students, families, and communities (Masten & Narayan, 2012). Research and observations by humanitarian agencies across decades and many forms of devastating trauma have highlighted the salience of resuming school as a powerful symbol of recovery and the extraordinary value placed on student engagement by parents, community members, and students themselves in countries across the world (Lai et al., 2016; Masten, 2014a). In refugee camps and shelters with children and families who have fled terror or disaster, almost immediately after basic survival needs are met, responders or families themselves begin to set up learning centers or

in longer-term settings, schools. Similarly, the COVID-19 pandemic has revealed the importance to societies around the world of children being in school (Calao et al., 2020; Masten & Motti-Stefanidi, 2020).

In the literature on mass-trauma experiences, student engagement again appears to play multiple roles as a mediator and moderator of positive adaptation in children and their families (Masten, 2021; Osofsky & Osofsky, 2021). After tornadoes and hurricanes, students have been enlisted in recovery projects sponsored by their schools, which serves the double purpose of building self-efficacy and hope in the students and helping the community recover. After Katrina, for example, a successful Youth Leadership Program was established by the St. Bernard Unified School District in collaboration with university researchers and mental health providers, based on models of resilience and self-efficacy (Osofsky & Osofsky, 2021). Many of the interventions designed to foster recovery after disasters and wars also have been implemented in school contexts, not only because this is where the students are located but also because programs in schools are more trusted, perceived as more normative, and simultaneously serve to build resilience in the students, teachers, and parents who participate (Lai et al., 2016; Masten, 2021; Nuttman-Shwartz, 2019). Student engagement in school, more broadly, has the potential to build resilience for the future as well as enhance learning and well-being in the present.

Nurturing Resilience in Schools

Schools have multiple roles in nurturing resilience in the future, as well as providing a healthy learning environment, social support, safety, and protection in the present. Schools build resilience capacity for the future through their roles in shaping cognitive, emotional, motivational, and social skills essential for learning and success in the developmental tasks of childhood and beyond (Doll, 2013; Masten, 2018b; Masten & Motti-Stefanidi, 2009; Ungar et al., 2019). Schools were designed to promote students' development

of competence in domains viewed as important for their future place in society, including reading, writing, mathematics, and the history of their country or government. There also is an implicit curriculum, described as the "hidden curriculum" by Jackson (1968), whereby schools socialize students with the values and behavior expected for successful life in their community or society. The values are likely to include respecting authority, following rules or social norms, and getting along with other people. In addition to explicit and implicit instruction, contemporary schools often provide basic food, healthcare, tutoring, and after school activities, with the goal of enhancing learning or addressing unmet basic needs of disadvantaged students. Through education, societies invest in the human capital of their future citizens and socialize them in the language, culture, and history of the country (Neem, 2017). For immigrant youth, who have acculturative as well as developmental tasks, schools serve as a key context for learning the language and culture of the receiving community or nation and cultivating cross-cultural friendships (Motti-Stefanidi & Masten, 2020). At the same time, schools may also perpetuate social stratification, inequity, and racism (Ladson-Billings & Tate IV, 1995; Theron & Theron, 2014).

For students growing up in a context of high cumulative risk or adversity, effective schools can add resources and protections that compensate for missing relational and material supports in the home or neighborhood, provide a safe haven, and buffer children from the effects of adverse childhood experiences or ongoing dangers (Masten, 2014b; Ungar et al., 2019). When risk in the home or community is or has been very high, schools play an especially important role in fostering resilience and recovery and mitigating risk. Schools that provide a rich environment of safe and positive relationships, learning, structure, routines, motivational experiences, skill-building, healthy nutrition, and prosocial friendships offer pathways to opportunity for children at risk due to current and past adversity. Student engagement and school stability can mitigate the risks associated with homelessness, particularly when the school context is proactively

resilience-informed as well as trauma-informed (Masten et al., 2015; Moore et al., 2020).

There also is evidence supporting universal resilience-focused interventions in schools, although the research is limited. A systematic review of the literature on intervention studies aiming to strengthen protective factors for children in schools found support for short-term effects of interventions (particularly cognitive-behavioral interventions) on internalizing symptoms of students (Dray et al., 2017). One might expect that effect sizes of selective and targeted school-based interventions to promote mental health and resilience would be even larger (Sanchez et al., 2018), given that selective and targeted interventions leverage student engagement in schools to provide critical additional services.

The COVID-19 pandemic, which caused prolonged school closures, abrupt shifts to distance learning, and other major educational disruptions, has underscored the importance of schools for the well-being and development of children at risk due to disadvantage and adversity (Dvorsky et al., 2020; Masonbrink & Hurley, 2020; Masten, 2021; Masten & Motti-Stefanidi, 2020; Rundle et al., 2020; Ungar & Theron, 2020; Viner et al., 2021). As school closures continued, concerns increased about the myriad ways development could be negatively impacted (e.g., by food insecurity, obesity, anxiety, suicidal thinking, depressed mood, and undetected child maltreatment), along with concerns about learning losses, particularly among children already at risk of developmental or educational problems. Fortunately, there appears to be a concomitant surge of research to document effects of school closures, distance learning, and efforts to support students as they return to school. These efforts are likely to inform future education policy on school responses to similar threats and disaster preparedness of education systems. Schools may be uniquely situated to promote resilience and recovery following this pandemic and future mass-casualty threats, and such data could inform key avenues for mobilizing and reconnecting students with multisystem promotive and protective processes afforded by effective schools.

Conclusions

Research on the role of schools in resilience continues to grow, along with increasing attention to the multisystem nature of resilience in human development. Theory and evidence on resilience factors and processes identified in the developmental literature show striking alignment with the scholarship on school resilience and the multifaceted roles of student engagement in the affordance and nurturing of student competence and resilience. It is clear that schools play a vital role in supporting children and youth burdened with past and present adversity in multiple ways, ranging from mitigating risk and providing nutrition or health care, to caring, committed, and respectful relationships that support or mobilize adaptive systems critical to resilience and recovery in the context of adversity or high cumulative risk. Resilience-effective schools, much like families, offer their students important relationships and role modeling; a sense of worthiness, belonging, security, and hope; active protections against danger; daily interactions that foster learning, problem-solving, and many skills for living in society; as well as opportunities for developing their talents and self-confidence. Through many interactions and activities, schools extend the resilience capacities of their students in the present, and through many educational processes, build resilience for the future as well. Student engagement plays many mediating and moderating roles in these adaptive processes and thereby contributes to the present and future resilience of their students. As a result of their roles in supporting the development of competence and resilience, schools and student engagement also play vital roles in building human capital and resilience of communities and societies.

Nonetheless, growing attention to the challenges and opportunities afforded by multiethnic and multicultural communities and schools has underscored the need for more nuanced research on the roles of school in addressing discrimination and fostering justice as well as acculturation. Future research is needed on the roles of student and family engagement for resilience in the intersectional contexts of diverse identities, ethnicities, cultures, individual lived experiences, and histories of oppression, political conflict, or structural violence.

Finally, the cascading threats posed by the COVID-19 pandemic to children, families, schools, communities, economies, and nations around the world have underscored the multifaceted roles played by schools in the development and resilience of children and their societies. It is already clear that some societies, including the United States, have under-invested in the resilience of children and families and underestimated how essential schools are to the function and well-being of their societies. Forthcoming research on risk, resilience, and recovery in the wake of COVID-19 will undoubtedly advance our knowledge of resilience in relation to schools as well as other vital adaptive systems.

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