Schools are a central cultural context of child and adolescent development. Children spend more time in schools than in any other context outside their homes (Eccles & Roeser, 2010, 2011). Success in school is associated with both current mental health status and future life opportunities (NAS, 2006; NCES, 2006). Yet research shows that not everyone in the USA either thrives in or completes K–12 schooling. Poor children (a disproportionately high percentage of whom are African-, Mexican-, and Native American), as well as those with significant emotional/behavioral problems (Kessler, Foster, Saunders & Stang, 1995), are much less likely to complete high school or enroll in and graduate from college (Aud, KewalRamani, & Frohlich, 2011). This leaves many young people unprepared to participate and prosper fully in the changing US economy (Duncan & Murane, 2011). In addition, many children, particularly but not only those living in poverty, come to school unprepared to deal with the demands of schooling and with unmet health and mental health needs (Adelman & Taylor, 2009; Greenberg et al., 2003). Lack of readiness and untreated problems can contribute to academic failure at school and growing social and behavioral problems across the school years.

Under the right circumstances, schools and teachers can help two broad categories of children and adolescents to learn and thrive emotionally and socially at school: those who are or have been exposed to multiple developmental risks outside of school and those who are exposed to new developmental risks at school because they either have great difficulty mastering the curriculum or experience social difficulties with peers. To address the needs of these two broad categories of students, schools today offer both targeted intervention services for vulnerable children, adolescents, and their families (Christener, Mennuti, & Whitaker, 2009), as well as school-wide reforms and universal prevention programs aimed at cultivating academic and social-emotional skills and prosocial behavior among all students (Hawkins et al., 2008; Zins, Weissberg, Wang, & Walberg, 2004).

In this chapter, we discuss schooling in relation to the mental health of children and adolescents using a developmental systems framework. The chapter is divided into four main sections. First, we describe the demographic characteristics of the current US school-aged population, the educational progress and problems characteristic of this population, and the fact that poverty disproportionately affects different racial/ethnic groups in the school-aged population in ways that
create and exacerbate gaps in school readiness and mental health before children even begin schooling (Duncan & Murane, 2011). We document the prevalence, co-occurrence, and reciprocal influence of physical, social-emotional, and academic development among the school-aged population. We discuss how school-based mental health efforts can comprise an integral part of a national investment strategy in human health and development that targets poor children and their families, begins early, and is part of an ongoing system of investments that stretch from cradle to career (Heckman, 2007). Second, we describe malleable self-system factors associated with co-occurring patterns of emotional/behavioral and academic problems in school-aged children and youth, including (1) self-regulatory processes (e.g., executive function and emotion regulation), (2) self-representations (e.g., autobiographical self-narrative), and (3) social-cognitive processes (e.g., empathy and perspective-taking). We propose these malleable factors are key psychological targets of school-based interventions and prevention programs aimed at students’ mental health (Roeser, Peck, & Nasir, 2006). Third, we outline four roles that elementary and secondary schools can play in the social-emotional development of students and their families, including crisis intervention, service provision, use of social-emotional learning programs, and school-wide reform. In this section, we conceptualize schools as multilevel contexts of human development that can be designed to run in ways that foster children’s and adolescents’ healthy social-emotional development and, at the same time, prevent emotional/behavioral problems from arising or worsening by fostering students’ belonging in and bonding to the aims of the school (Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004). Fourth, we highlight several malleable school system factors associated with the prevention of problems and the cultivation of social-emotional learning and prosocial behavior that represent key ecological targets of school reform efforts aimed at improving students’ academic success and mental health.

### Characteristics of the US School Population

There are approximately 49 million school-aged children and adolescents (ages 5–18 years) in the USA today (Sable & Garofano, 2007). One in five in this population is either the child of recent immigrants or an immigrant himself/herself (Garcia, Jensen, & Cuellar, 2006) and speaks a language other than English (most frequently Spanish) in their homes (NCES, 2006). Overall, the school-aged population today is approximately 57% European-American, 20% Latin-American, 17% African-American, 5% Asian-American/Pacific Islander, and 1% Native American/Indian (Sable & Garofano, 2007).

### Educational Characteristics of US School Population

By the 12th grade, African-American and Latino students are, on average, approximately 4 years behind Asian- and European-American students in school achievement (NCES, 2006). In addition, dropout rates in 2010 were highest among Latin Americans (15%), Native Americans/Native Alaskans (12%), and African-Americans (8%) and lowest among European (5%) and Asian-Americans (4%) (Aud et al., 2011). The dropout rate of immigrant Mexicans and their children is particularly high and troubling given the size of this population of students (Slavin & Calderon, 2001) and reflects the effects of diverse factors, including poverty, under--resourced schools, discrimination, early childbearing among females, the need to work to support one’s family, and long-standing difficulties in school (Lopez, 2009). Mexican-American youth are also the least likely to attend college, as well as the most likely to attend 2-year community colleges rather than 4-year undergraduate colleges (Slavin & Calderon, 2001). By age 25 years, approximately...
32% of Asian-Americans/Pacific Islanders, 20% of European-Americans, 13% of African-Americans, 9% of Latin Americans, and 10% of Native Americans/Alaskan Natives have attained a 4-year college degree (Aud et al., 2011).

Poverty and Achievement Gaps in US School Population

The cumulative stress of poverty exerts significant detrimental influences on children’s health, mental health, and readiness to learn in school—contributing to achievement gaps during elementary and secondary school (Blair & Diamond, 2008; Gunnar & Quevedo, 2007). Poor children begin kindergarten 2 or more years behind their classmates academically, and these differences persist or increase over time due to various ecological risk factors in neighborhoods, school, and families (Ramey & Ramey, 2004). The precursors to later achievement gaps between Asian- and European-Americans and their African-, Latin- and Native American peers begin before school entry and differences in achievement between Asian- and European-American students and their African-, Latin- and Native-American counterparts are at least partially a function of greater poverty rates (and associated ecological risk factors) among the latter groups (Duncan & Murane, 2011; Sameroff, Seifer, Baldwin & Baldwin, 1993). Over 33% of Latin-American and between 25 and 33% of all African- and Native American/Native Alaskan students grow up in poverty (NCES, 2006).

Mental Health Problems in the US School Population

Approximately 25% of the US school population is characterized by mental health problems that impair students’ daily functioning in and out of school (Costello, Copeland, & Angold, 2011; Merikangas et al., 2010). Many never receive services for these problems in or outside the schools (Adelman & Taylor, 2009). Fiscally, the costs of these problems are enormous: The “annual quantifiable cost of such disorders among young people was estimated in 2007 to be $247 billion” (Institute of Medicine, 2009, p. 1).

Internalizing problems. The median ages of onset for anxiety and depression are 6 and 13 years of age, respectively (Merikangas et al., 2010), with girls showing more internalizing problems than boys beginning in early adolescence (Garber, 2006). Internalizing problems are associated with poorer school functioning and peer difficulties during both childhood and adolescence (Nolen-Hoeksema, Girgus, & Seligman, 1986; Roese, Strobel, & Quihuis, 2002). A pessimistic or helpless explanatory style is hypothesized to be a central feature of co-occurring internalizing and school/achievement-related problems in childhood and adolescence (Dweck, 2008; Joiner & Wagner, 1995; Roese et al., 2006).

Physical Health Problems in the US School Population

Chronic health problems in the US school population are now quite prevalent, especially among those living in poverty. Low-income students, including disproportionate numbers of African-, Latin, and Native Americans, are at greater risk for dental, health, and mental health issues and are less likely to receive services for such issues compared to their Asian- and European-American counterparts (Flores & Tomany-Korman, 2008). Health problems in the school population include those associated with breathing (e.g., asthma; Akinbami, Moorman, Garbe, & Sondik, 2009), eating (e.g., obesity; Datar, Sturm, & Magnabosco, 2004), and sleeping (e.g., fatigue; Stein, Mendelsohn, Obermeyer, Amronmin, & Benca, 2001)—all of which are negatively associated with school attendance, attention, and engagement and learning. It was estimated that school children with asthma, for instance, collectively missed about 10.5 million days of school due to their illness in 2008 (Akinbami, Moorman, & Liu, 2011). Young people today also report considerably higher levels of daily stress than members of older generations (Pew Research, 2010)—yet another health problem that can undermine school learning and emotional well-being (Blair & Diamond, 2008).
Across both childhood and adolescence, males are more likely than females to manifest externalizing problems (Merikangas et al., 2010). The predictive relation between externalizing problems in childhood, especially those involving inattention and school failure, and school withdrawal later during adolescence, is well-documented (Cairns, Cairns, & Neckerman, 1989; Hinshaw, 1992). Males are more likely to have co-occurring school, peer, and externalizing problems than females (Merikangas et al., 2010). Rejection sensitive and hostile attributional styles may underlie co-occurring externalizing and school/achievement-related problems (Dodge, 2006; Fontaine, 2010).

Violence is a prevalent form of externalizing problem in US schools. In 2009–2010, approximately 75% of US public schools recorded one or more incidents of violent crime (rape, physical attack, robbery) and approximately 33% of students in grades 9–12 reported “being in a physical fight during the past year” (Robers, Zhang, & Truman, 2012). Physical fights and fears of physical attack peak after the transition to secondary school and decline thereafter (Robers et al., 2012). Bullying (repeated, aggressive behavior intended to harm or disturb a person or group who is less powerful) is also prevalent in US schools (Nansel et al., 2001). Bullying includes physical threats and harm, name-calling, teasing, spreading of rumors, social rejection, and theft of personal property. It can occur either face to face or online. In a nationally representative study of US students in grades 6–10, 31% reported moderate to frequent bullying and 4% reported being cyberbullied at or outside of school (NCES, 2011). Bullying (as both a perpetrator and a target) is more prevalent among males than females (Nansel et al., 2001). Lesbian, gay, bisexual, and transgender (LGBT) adolescents are at particular risk for homophobic forms of bullying. Among self-identified LGBT youth, adolescent males, adolescents who attend rural schools in isolated communities, and younger adolescents are at greatest risk of exposure to homophobic language or other forms of victimization in school (Russell, Seif, & Truong, 2001). Frequent exposure to bullying is a risk factor for depression, suicidal ideation and attempts, and diminished academic achievement among heterosexual and LGBT youth, especially gay males (King et al., 2008; Poteat & Espelage, 2007; Sweer, Espelage, Vaillancourt, & Hymel, 2010). Bullies do worse in school and engage in more problem behavior (drinking, smoking) than their non-bully peers (Nansel et al., 2001). Bullying, like other forms of school violence, peaks after the transition to secondary school and declines thereafter (Neiman, 2011). Clearly, the transition to secondary school is a key time for school violence prevention efforts.

Co-occurring Patterns of Problems in US School Population

Internalizing and externalizing problems co-occur with each other (Merikangas et al., 2010) and with academic problems in a substantial minority (25%) of the US school population. In an effort to bring together research on mental health and school problems among the US school population, we have proposed the existence of at least three patterns of academic and emotional/behavioral functioning (Roese & Eccles, 2000). The first pattern is characterized by an academically helpless classroom motivational style (i.e., worry, anxiety, and internalizing blame for school failure), achievement and social difficulties with peers (loneliness, neglect), and internalizing emotional/behavioral problems. The second pattern is characterized by an academically helpless and defiant motivational style (anger, frustration, and externalizing blame for school failure), achievement and social difficulties with peers (aggression, rejection), and externalizing emotional/behavioral problems. The third and most adaptive pattern is that of educational resilience characterized by a mastery-oriented, malleability-focused classroom motivational style despite internalizing and/or externalizing problems (Aunola, Stattin, & Nurmi, 2000; Lau & Roese, 2007; Roese, Eccles, & Sameroff, 2000; Roese et al., 2002). These three hypothesized subgroups closely resemble the three personality types described as “over-controllers,” “under-controllers,”...
and “resilients,” respectively (Asendorpf, Borkenau, Ostendorf, & van Aken, 2001; Block & Block, 1980; Rammstedt, Riemann, Angleitner, & Borkenau, 2004; Robins, John, Caspi, Moffitt, & Stouthamer-Loeber, 1996).

Of particular interest are students who manifest educational resilience—school success despite significant emotional/behavioral problems and exposure to developmental risks (Becker & Luthar, 2002; Roeser et al., 2006). Roesser and Peck (2003) examined unexpected processes of educational resilience (defined as enrollment in college after completion of high school) among young people who faced exposure to multiple personal and family, school, and peer risks in early adolescence. Results showed that participation in positive out-of-school activities during high school was a key factor predicting which at-risk youth completed high school and enrolled in college by age 25. In follow-up studies, results showed that educational resilience among these at-risk youth was predicted by specific kinds of structured after-school activities, those that bonded high-risk adolescents to their school (e.g., athletics), church (e.g., volunteering), or other community-based institutions (Peck, Roeser, Zarrett, & Eccles, 2008). By age 30, results showed it was a combination of such bonding activities in high school and greater self-regulation during early adulthood that predicted which high-risk individuals graduated from a 4-year college by age 30 (Peck, Malanchuk, Roeser, & Eccles, 2012). This work highlights the important roles of self-regulation (Moffitt et al., 2011) and community settings and other extracurricular activities that foster self-regulation in promoting educational resilience among high-risk children and adolescents (Eccles & Gootman, 2002; McLaughlin, 2000). It may prove beneficial for future research to focus on co-occurring patterns of risk and resilience across the domains of physical health, mental health, and school functioning in different subgroups of students. This work could inform the next generation of school-based programs by accurately targeting maladaptive processes and fostering protective factors among students facing developmental risks (Becker & Luthar, 2002).

Malleable Psychological Processes

Advances have been achieved in identifying key psychological self-system processes associated with co-occurring patterns of academic, social, and emotional/behavioral functioning such as those just described. Such processes represent key psychological targets of school-based mental health programs (Roeser et al., 2006; Snow, Corno, & Jackson, 1996). Here we describe three key domains of such processes characteristic of the self-system, including (a) self-regulation or executive function; (b) self-representation; and (c) social cognition. We briefly discuss how each domain is relevant to students’ academic and social-emotional development and cite basic evidence suggesting such processes are amenable to intervention.

Self-Regulation

The domain of self-regulation (SR) refers to individual factors such as self-awareness, self-control, resilience following setbacks, resisting temptations, cognitive flexibility, planning, and meta-cognition related to learning. SR is heavily implicated in academic and social-emotional competence across development (Blair & Razza, 2007). Individual differences in SR early in life predict subsequent differences in school readiness, mastery of basic literacy and numeracy skills, and externalizing behavior problems in childhood (Blair & Razza, 2007), academic and social-emotional problems in adolescence (Cairns et al., 1989), and physical health, economic security, and social functioning in adulthood (Moffitt et al., 2011). In a recent review in Science on interventions designed to cultivate executive functioning (EF) across development, Diamond and Lee (2011) concluded that diverse activities can be used to improve children’s executive functioning, including computerized training, non-computerized games, aerobics, martial arts, yoga, mindfulness, and school curricula. Central to all of these activities is repeated practice with intrinsically motivating, increasingly challenging tasks. Diamond and Lee (2011) suggest that in efforts to improve executive functions, “focusing narrowly on them may not be as
effective as also addressing emotional and social
development (as do curricula that improve exec-
utive functions) and physical development
(shown by positive effects of aerobics, martial
arts, and yoga).” These ways of fostering EF
may be especially important for children whose
out-of-school environments are stressful, cha-
totic, and less likely to be characterized by struc-
tured out-of-school opportunities for physical,
social, and emotional developments (Grantham-
McGregor et al., 2007). Results from random-
ized trials have shown that social-emotional
learning programs such as the PATHS curricu-
um are effective ways that schools can cultivate
SR in students (Greenberg et al., 2003). In addi-
tion, research shows that when teachers impart
self-regulatory strategies to students that they
can use to learn content more effectively, espe-
cially strategies involving meta-cognition (e.g.,
asking oneself if one understands what one is
reading while reading to monitor comprehen-
sion) and planning (e.g., setting aside a specific
time in a quiet space for homework), they learn
more effectively (Hattie, Biggs, & Purdie, 1996).

Self-Representation
Psychological representations of self in terms of
perceived competence and worth, attributional
styles for personally relevant events, and goals
are also implicated in patterns of academic and
emotional/behavioral risk and resilience
(Wigfield, Eccles, Roeser, & Schiefele, 2008).
Self representations and attributional styles rep-
resent a second domain that can be positively
influenced through school-based prevention,
intervention, and health promotion efforts (Dweck
& London, 2004). Students’ self-perceived aca-
demic competence, for instance, interacts recipro-
cally and negatively with depressive symptoms
(Roeser et al., 2000; Uhrlass, Schofield, Coles, &
Gibb, 2009). Educational and developmental
research has confirmed the following key deter-
mnants of school engagement and disengage-
ment, as well as mentally healthy responses to
school failure and academic difficulties: (1) attrib-
utional processes concerning the causes of suc-
cess and failure at school, (2) belief in one’s (or
lack of) ability to influence academic competence
and intelligence, (3) valuing of different subjects,
and (4) mastery goal orientation when learning in
the classroom. After controlling for students’ cog-
nitive ability, the more students believe that they
are academically competent and can develop their
abilities or intelligence through effort (e.g.,
Bandura, 1997; Dweck, 2008), and the more stu-
dents attribute the causes of academic difficulty to
malleable factors rather than to an internal stable
deficit in ability or intelligence (Graham, 1997),
the more likely they are to approach, persist at,
and master academic tasks and persist through
difficulties. Similarly, the more students find an
academic subject intrinsically interesting and
important with respect to other goals or values,
the more likely they are to invest in learning the
subject, to choose related courses and activities in
the future, and to stay engaged in school, even if
they otherwise show elevated levels of distress
(Wigfield et al., 2008). Finally, the more that stu-
dents pursue goals of mastery and self-improve-
ment, in contrast to pursuing goals such as trying
to demonstrate one’s superior relative ability or
hide one’s perceived relative inability, the more
resilient they are in the face of inevitable aca-
demic setbacks (Meece, Anderman, & Anderman,
2005). These phenomena representational pro-
cesses underlying co-occurring academic and
emotional/behavioral problems and educational
resilience despite emotional/behavioral problems
(Roeser & Eccles, 2000).

Blackwell and colleagues showed that early
adolescent students randomly assigned to a con-
dition in which they were taught about the malle-
ability of intelligence showed positive change in
classroom motivation and less of a decline in
grades after the transition to secondary school
compared to controls (Blackwell, Trzesniewski,
& Dweck, 2007). Similarly, in intervention stud-
ies aimed at reducing the detrimental effects of
stereotype threats on the achievement of Latin
and Native-American students, Aronson and col-
leagues (2009) identified three vital components
of effective interventions: (1) reinforcement of
the idea that intelligence is malleable and, like a
muscle, grows stronger when exercised; (2) rein-
forcement of the idea that difficulties in school
are often part of a normal learning curve or
adjustment process, rather than something unique to a particular students’ abilities, social identity, or sociocultural background; and (3) provisions of opportunities for students to reflect on sources of their self-worth beyond school achievement. In sum, self-representations represent key targets for school-based interventions targeting students with academic problems, social-emotional/behavioral problems, or both (Dweck & London, 2004).

Social Cognition

Social cognitive processes represent a third domain of psychological targets for school-based mental health efforts. Social cognition (SC) refers to information processing about the social environment and other people (Fiske & Taylor, 1991). Social cognitive processes such as empathy and perspective taking are important psychological features of individuals with emotional/behavioral problems (Lansford et al., 2006; Rood, Roelofs, Bogels, Nolen-Hoeksema, & Schouten, 2009). Research on social information processing styles like rejection sensitivity suggests a malleable set of schemas (beliefs, images, feelings) that are rather automatically applied in social situations and that generate perceived social threat, anxiety, and behaviors that can fuel social rejection (Romero-Canyas, Downey, Berenson, Ayduk, & Kang, 2010). Social cognition also includes the skills of empathy and perspective taking. The development of empathy is relatively plastic during childhood and adolescence (e.g., MLERN, 2012), and school-based efforts such as the Roots of Empathy program (Gordon, 2007) or conflict resolution/peer mediating programs may aid in the promotion of healthier interpersonal appraisal processes and empathic and socially responsible behavior. For instance, meta-analyses show that the school-wide use of conflict resolution education (CRE) programs and peer mediation programs reduces antisocial behavior, especially during early and middle adolescence as compared to childhood (Burrell, Zirbel, & Allen, 2003; Garrard & Lipsey, 2007).

In sum, school-based efforts that target these kinds of malleable psychological processes that are common to health, mental health, and school functioning in different subgroups of students are one way to build more efficacious and effective school-based interventions in the future. In the next section, we address in greater detail the roles that schools can play in fostering social-emotional development in all students and meeting the needs of those who face significant health and mental health-related barriers to success in school.

Investing in Human Health and Development From “Cradle to Career”

The long-term educational costs of ignoring or inadequately addressing physical and mental health problems among those in the school-aged population are substantial (Institute of Medicine, 2009). Kessler, Foster, Saunders, and Stang (1995) estimated that early-onset psychiatric disorders (especially conduct disorders in males and anxiety disorders in females) are related to truncated educational attainments in approximately 7.2 million Americans. There are significant losses in earnings for the individual, loss of productivity for society, and increased burdens on social welfare and criminal justice systems for those who develop serious mental illnesses (Kessler et al., 2008). The costs of early-onset problems to society are so large that they have spurred economists to develop models of the potential return on investments to a society that are possible if governments invested in human health in an early and ongoing way.

In one approach, Heckman (2007) outlined his human capital (HC) approach to health economics—an approach with the goal of maximizing human health through governmental investments in empirically validated programs that stretch from cradle to career (Kania & Kramer, 2011). Heckman (2007) outlined nine empirically supported propositions of the human capital investment model: (1) health and life success are strongly reliant upon human abilities, and it is the lack of abilities such as self-control that leads to educational failure, lower earnings, and greater involvement in the criminal justice and healthcare systems; (2) human abilities are manifold in nature and include both cognitive and noncognitive
(social-emotional) abilities; (3) the promotion of a
focus on prevention/intervention requires an understanding of human abilities as produced in development through gene–epigenome–environment transactions; (4) gaps in cognitive and non-cognitive abilities implicated in human health, education, and well-being arise and widen between individuals and socioeconomic status groups early in human development well before individuals arrive to school; (5) there are critical and sensitive periods in the development of various cognitive (e.g., language) and noncognitive (e.g., emotion regulation) abilities; (6) despite low returns on investment for interventions targeting disadvantaged adolescents, the empirical literature shows high economic returns for remedial investments targeting disadvantaged young children; (7) early investments in disadvantaged children’s health and well-being need to be followed with later investments or the effects of early investment will fade; (8) the effects of poverty on child development depend on timing, with family economic hardship having the most detrimental impacts on young children; and (9) noncognitive social-emotional skills promote cognitive skills, healthy behaviors, and school readiness and are an important product of successful families and successful interventions in socioeconomically disadvantaged families. On the basis of this summary, Heckman proposed that governments should invest in the “health stocks” of young citizens in a particular way. Specifically, governments should invest in empirically validated programs that cultivate early social-emotional abilities in young children and their families as a way of supporting the development of future cognitive abilities necessary for school readiness and life success (e.g., Ramey & Ramey, 2004). Heckman (2007) estimated an 8–to–1 return on investment to governments that focus their efforts in a scientifically-validated, intense and on-going way on human health, early childhood, and families in poverty. His basic message is clear: abilities are necessary for human health, school achievement, and life success. To maximize these goods in society, abilities must be invested in as early as possible with particular attention on children in disadvantaged families and with sustained support at later periods in children’s and adolescent’s lives through the collective and developmentally cumulative impact of government investments in family, school- and community-based programs (Kania & Kramer, 2011).

Four Roles for Schools in the Mental Health of Students

A developmental social policy such as Heckman’s human capital (HC) approach to health economics seems particularly important for helping schools to successfully educate students by sharing the burden of addressing health and mental health problems in the school-aged population. The poverty-linked vulnerabilities that characterize a significant minority of the school-aged population today, as well as the lack of community-based services that are available to address these vulnerabilities so they do not undermine school readiness, create enormous challenges for school administrators and teachers who are charged with educating all students to higher standards of academic proficiency. These challenges are especially formidable in poor urban school districts where significant family and emotional/behavioral problems characterize a large proportion of the student population (Adelman & Taylor, 2009).

In the context of these various societal demands, we see four main roles that schools can play in the mental health of children and adolescents—ranging from intervention to prevention to health promotion approaches (Institute of Medicine, 1994; 2009). These roles include (1) crisis intervention; (2) provision of school-based health, mental health, and educational services; (3) provision of universal social-emotional learning programs for students and professional development for educators in this regard; and (4) the creation and maintenance of school environments that are safe, supportive, and focused on academic and social-emotional learning.

Crisis Intervention in Schools

In the aftermath of 9/11 and numerous school shootings, the role of schools in crisis intervention is recognized as an efficient means of helping...
students and their families deal with tragedy and trauma (Christner et al., 2009; Love & Cobb, 2012). School-aged children are exposed to trauma at significant rates, especially but not only in children in poor urban environments, with predictable negative consequences on their school attendance, ability to sustain attention on learning, and school performance (Hurt, Malmd, Brodsky, & Giannetta, 2001; Thompson & Rippey Massat, 2005). For instance, between 20 and 25% of America’s children report having directly experienced or witnessed violence by the age of 13 (Koenen, Roberts, Stone, & Dunn, 2010).

Crisis intervention involves planning for crises and providing services aimed at stabilizing and enhancing students’ resilience and coping in the aftermath of community tragedy or personal trauma. Preparing for crisis intervention services requires school leadership. A recent survey of public school superintendents showed that (1) most school leaders have an evacuation plan for emergencies but rarely practice it, (2) plans for special needs students and post-disaster counseling services are lacking in about 25% of surveyed schools, and (3) urban schools are better prepared for disasters than rural ones (Graham, Shir, Liggin, Aitken, & Dick, 2006). Program evaluation research has demonstrated that professional development activities can enhance school personnel’s crisis planning and intervention-related attitudes and knowledge (Brock, Nickerson, Reeves, Savage, & Wotaszewski, 2011).

**School-Linked Services**

The untreated health and mental health problems that characterize a substantial minority of the school-aged population necessitate that schools attempt to address such issues through direct service provision as part of their broader mandate (Adelman & Taylor, 2009; Dryfoos, 1994). Today, approximately 50% of US middle and high schools have mental health counseling services available on-site. Approximately 11% have mental health counseling, physical examinations, and substance abuse counseling available on-site. Rural schools, small schools, and schools in the Midwest and the South are most likely to have no services (Slade, 2003). A few schools deliver mental health and social services through school-based health centers. Arrangements with providers not located on school property are more common (Brener, Weist, Adelman, Taylor, & Vernon-Smiley, 2007). There remains relatively little research on the effectiveness of so-called full service schools (Evans, 1999), though pilot studies have shown some promising results for student mental health (e.g., Walter et al., 2011).

What about school-based counseling and psychotherapy services? Several groups have concluded that group-oriented, cognitive–behavioral programs aimed at preventing internalizing and externalizing problems show success only if a specific set of implementation criteria is met (Rones & Hoagwood, 2000). These include (1) consistent program implementation; (2) inclusion of parents, teachers, or peers; (3) use of multiple modalities (e.g., the combination of psychoeducation with cognitive–behavioral skill training); (4) integration of program content into classroom curriculum; (5) developmentally appropriate program components; and (6) a focus on specific processes related to self-regulation, self-representation, and social cognition (Conduct Disorder Prevention Research Group, 1999; Rones, & Hoagwood, 2000). Unfortunately, research shows a general scarcity of such systemic efforts. Instead, there is evidence that the delivery of evidence-based intervention services of any kind in schools is challenging, constrained by many barriers, and often marginalized from everyday school routines and structures (Adelman & Taylor, 2009; Langley, Nadeem, Kataoka, Stein, & Jaycox, 2010).

Academic tutoring or mentoring programs, especially those that target children struggling to learn basic literacy skills, are empirically validated ways schools can prevent failure among vulnerable students (Eby, Allen, Evans, Ng, & DuBois, 2008; Ritter, Barnett, Denny, & Albin, 2009). Tutors can be trained volunteers, paraprofessionals, or even students themselves (McLaughlin, 2000). In the Valued Youth Partnership program in Texas, for instance, secondary school students at risk of dropping out were given an opportunity to serve as tutors of younger children. Researchers found that of the
100 at-risk adolescents who joined the program, 848
94 remained in school, while only six dropped 849
out (see Roth & Brooks-Gunn, 2003).
849
Another role schools can play in the mental 850
health of children and adolescents involves using 851
buildings during after-school hours to host safe 852
after-school activities (Eccles & Gootman, 853
2002). A recent meta-analysis showed “small but 854
statistically significant positive effects of out-of- 855
school time (OST) on both reading and mathe- 856
matics student achievement and larger positive 857
effect sizes for programs with specific character- 858
istics such as tutoring in reading” (Lauer, Akiba, 859
Wilkerson, Snow, & Martin-Glenn, 2006, p. 860
275). Mahoney and Cairns (1997) found that 861
participation in extracurricular activities is 862
related to lower rates of school dropout, particu- 863
larly for high-risk youth. By and large, organized 864
activities and service-learning settings are good 865
for adolescents because (1) doing good things 866
with one’s time takes time away from opportuni- 867
ties to get involved in risky activities; (2) one can 868
learn good things (like specific competencies 869
and prosocial values) while engaged in construc- 870
tive and/or service-learning activities; and (3) 871
involvement in organized activity settings 872
increases the possibility of establishing positive 873
social networks and values (Mahoney, Larson, & 874
Eccles, 2005).

Social-Emotional Learning
A third approach to mental health in the schools 885
involves provision of universal social-emotional 886
learning programs. Over the past three decades, 887
scholars have been developing the scientific and 888
practical case for the notion that schools are most 889
successful when they integrate universal efforts 890
to promote children’s academic, social, and emo- 891
tional learning (Zins et al., 2004). Social and 892
emotional learning (SEL) has been defined as 893
“the process through which children enhance 894
their ability to integrate thinking, feeling, and 895
behaving to achieve important life tasks. Those 896
competent in SEL are able to recognize and man- 897
age their emotions, establish healthy relationships, 898
set positive goals, meet personal and social needs, 899
and make responsible and ethical decisions” (Zins et al., 899
2004, p. 6). SEL aims at “teaching children to be self-aware, socially cognizant, able 900
to make responsible decisions, and competent in 901
self-management and relationship-management 902
skills so as to foster their academic success” (Zins et al., 903
2004, p. 6). Furthermore, SEL aims 904
to transform the totality of school and classroom 905
learning environments to make them safe, sup- 906
portive, and conducive to learning and well- 907
being, knowledge and ethical conduct, and 908
achievement and harmonious and caring social 909
relationships (Zins et al., 2004).
Reviews and meta-analyses of SEL programs 910
delivered in classrooms provide evidence that 911
they can reduce substance abuse (Gottfredson & 912
Wilson, 2003), antisocial behavior (Wilson, 913
Gottfredson, & Najaka, 2001), and mental health 914
problems (Durlak & Wells, 1997). A recent meta- 915
analysis (Durlak, Weissberg, Taylor, & Dymnicki, 916
2011) examined the outcomes of over 250 experi- 917
mental studies of SEL programs for all students. 918
Of the 27 programs that examined indicators of 919
academic achievement at the post-intervention 920
period, student receiving SEL programs showed 921
significant and meaningful improvements on 922
achievement test performance—the effect was 923
equivalent to an approximately 10% point gain. 924
Further, program students were significantly more 925
likely to attend school, less likely to be disci- 926
plined for misbehavior, and received better 927
grades. The incorporation of cultural issues into 928
SEL programs, and a focus not just on self-
regulation and well-being but also on ethical responsibilities to others in these programs, represents important future directions in SEL programs in US schools (Hoffman, 2009; Waterhouse, 2006). Work on how the social-emotional competence (SEC) of the teacher may affect SEL program implementation and effectiveness is also beginning (Brown, Jones, LaRusso, & Aber, 2010; Jennings & Greenberg, 2009).

A novel approach to cultivating social-emotional competence among educators has been the introduction of mindfulness training for teachers and school leaders (Roese, Skinner, Beers, & Jennings, 2012). Mindfulness has been described as a mental state or trait characterized by focused attention, a calm and clear awareness of what is happening in the present moment, and an attitude of openness, curiosity, and acceptance in place of emotional reactivity, conceptual elaboration, or denial or rejection of what is actually happening (Kabat-Zinn, 2003). Evidence suggests that mindfulness is a trainable habit of mind that may contribute to the improvement of leadership, teaching, and learning in the schools (MLERN, 2012). Only a handful of such studies exist, however. Winzelberg and Luskin (1999) found that preservice teachers who participated in a 4-week, 3-h mindfulness training reported significant reductions in somatic, emotional, and behavioral indicators of stress. Kemeny and colleagues (2012) found that teachers' randomization to an eight-week, 42-h meditation/emotion regulation training was associated with declines in depression and anxiety, increases in positive affect, and improvement in a behavioral task requiring recognition of emotions. Benn, Akiva, Arel, and Roese (2012) found that randomization to a five-week, 35-h mindfulness/emotion regulation training for teachers and parents of children with special needs was associated with reductions in emotional distress and increases in well-being. Jennings, Snowberg, Coccia, and Greenberg (2011) reported positive, though less consistent, results with respect to training-related changes in teachers’ mindfulness and stress reduction. More research on potential educational benefits of mindfulness training for educators is needed (Meiklejohn et al., 2012).

Mindfulness and yoga programs for students are also beginning to form part of the array of SEL and other universal programs that schools offer directly to students in efforts to foster well-being and prevent problems (Block-Lerner, Holston, & Messing, 2009). The scientific investigation of the effects of mindfulness or yoga practice on child and adolescent development is also just beginning, however (Greenberg & Harris, 2012; MLERN, 2012; Zelazo & Lyons, 2012). In one study, children randomly assigned to a brief mindfulness training curriculum (administered in small groups in bi-weekly sessions over the course of five weeks) showed improved sustained attention and perspective taking but not cognitive flexibility (Johnson, Forston, Gunnar, & Zelazo, 2011). Flook and her colleagues (2010) found that children identified by teachers and parents as having problems with self-regulation showed significant improvement in teacher and parent ratings of self-regulation following an eight-week mindfulness program. In a study of 9- to 11-year-old boys and girls, a mindful yoga program was associated with decreases in youth self-reports of rumination, intrusive thoughts, and emotional arousal to stressful events (Mendelson et al., 2010). In a study of 8- to 12-year-old boys and girls in Canada, Schonert-Reichl and Lawlor (2010) found increases in student-reported optimism and reductions in teacher reports of students’ aggressive and oppositional behavior in the classroom. Broderick and Metz (2009) found a significant reduction in negative affect and a significant increase in feelings of relaxation, calm, and self-acceptance among 12th grade high school girls following a mindfulness program. In summarizing this emerging body of research, Greenberg and Harris (2012) noted “meditation and yoga may be associated with beneficial outcomes for children and youth, but the generally limited quality of research tempers the allowable conclusions” (p. 161).

**School-Wide Reform**

The fourth key role we see schools playing in students’ mental health is supporting the success of all students through school-wide reforms aimed
at creating safe, respectful, orderly, emotionally supportive, and motivating school climates for student learning. There is considerable evidence that everyday practices of leadership and teaching in the schools, as well as supportive relationships between educators and students contribute to the prevention of emotional/behavioral problems and the cultivation of positive academic and social-emotional development in students (Catalano et al., 2004; Hawkins, Kosterman, Catalano, Kill, & Abbott, 2008).

The context of schooling can be described as a complex social system ranging from macro- and distal (e.g., national educational policies) to micro- and proximal (design of particular academic task) levels of analysis and socialization processes that both indirectly and directly influence students’ development in school (Eccles & Roeser, 2010). A depiction of the various levels of analysis that constitute schools as a context of child and adolescent development is presented in Fig. 9.1. Regarding the role of schooling in the mental health of children and adolescents, we make five basic assumptions derived from developmental systems thinking: (1) the study of student mental health in the context of schooling in the USA necessitates a focus on the unique barriers to health, mental health, and school success facing students living in poverty and those from different racial/ethnic and linguistic family backgrounds; (2) the context of schooling is characterized by multiple levels of structure and organization, each of which is further characterized by specific socialization processes (e.g., schools and principal leadership styles, classrooms and teaching styles) that can influence students’ social and emotional/behavioral development; (3) it is in complex causal chains of socialization processes operating within and across levels of the school system that so-called school influences on children’s social-emotional and behavioral development are located; (4) the kinds of structures and processes associated with contexts of schooling “develop” as the growing child moves through the various institutions that comprise the school system (elementary, middle, and high schools), with contextual changes providing either a “fit” or a “mismatch” with the growing child’s stage-relevant and cultural needs; and (5) school socialization effects on students’ academic and social-emotional outcomes are mediated to a significant degree by students’ agency and subjective perceptions of their school contexts as either fitting with or being mismatched with their developmental and cultural needs. School environments that actually and subjectively “fit” stage- and culture-relevant needs of students are hypothesized to promote school bonding, learning, well-being, and prosocial behavior, whereas those that are “mismatched” with such needs are hypothesized to promote school alienation, disengagement, acting out, and dropping out (see Eccles & Roeser, 2010, 2011; Rutter & Maughan, 2002). In the next section, we briefly discuss particular malleable school system factors depicted in Fig. 9.1 that represent key targets for intervention because they address key student needs.

Malleable Ecological Factors as Targets for School-Wide Reform

School Scheduling

The regulation of time in schools and classrooms can affect the quality of students’ attention, engagement, behavior, and learning. Learning requires periods of mental activity and rest in alternation (Snow et al., 1996). Long periods of work with few breaks for physical activity can fuel student inattention. The use of frequent recess breaks has a salutary effect on children’s concentration and learning (Ramstetter, Murray, & Garner, 2010).

During adolescence, research shows puberty causes an increased need for sleep (Carskadon, 1990; Sadeh, Dahl, Shahar, & Rosenblat-Stein, 2009). Preferred diurnal patterns of sleep and wake cycles shift such that youth prefer to stay up later at night and to sleep later in the morning. During this same period, secondary schools typically begin earlier in the morning, necessitating earlier rise times for adolescent students (Carskadon, 1990). This creates a “developmental mismatch” that promotes adolescents’ day-
time sleepiness and undermines their ability to make it to school on time and ready to learn (Dewald, Meijer, Oort, Kerkhof, & Bögels, 2010). Sleep fatigue, created by early school start times that are mismatched with adolescent sleep needs, has been linked to poor concentration in school, symptoms of depression, aggression, and negative perceptions of classes (Wolfson & Carskadon, 1998). Schools should reconsider start times in light of this evidence.

The time at which school ends also has implications for adolescents’ mental health. In communities where few structured after-school opportunities exist, adolescents are more likely to be involved in high-risk behaviors such as substance use, crime, and sexual activity between 2 and 8 pm when parents are still working (Carnegie Corporation, 1992). Keeping schools open later for activities is one prevention strategy indicated here.

**Teacher Quality**

Teachers’ educational qualifications are associated with the amount their students learn across their development (Rowan, Correnti, & Miller, 2002). Unfortunately, poor children and English language learners (ELLs) are disproportionately exposed to unqualified teachers across their development (Darling-Hammond, 1997). Beyond teacher qualifications, the quality of teachers’ instruction is also linked to student achievement gains (Pianta & Hamre, 2009). Instructional quality is often mediocre in US public schools, however, especially if schools have a high proportion of poor students (Pianta, Belsky, Houts, & Morrison, 2007). Chetty, Friedman, and Rockoff (2011) found that students assigned to a high-quality teacher were more likely to attend college, attended higher-ranked colleges, earned higher salaries, lived in higher SES neighborhoods, and saved more for retirement. They were also less likely to have children as teenagers. Replacing a relatively poor-quality teacher with an average-quality teacher was estimated to increase lifetime earnings by more than $250,000 for the average classroom in the study. Improving teacher qualifications and the quality of teaching through reforms in teacher education, mentorship programs for new teachers, high-quality teacher professional development, and teacher licensure are several teacher-focused approaches to improving schools and reducing student failure and dropout (Darling-Hammond & Bransford, 2005).

**Teacher–Student Relationships**

Emotionally supportive teachers are a critical foundation for students’ motivation to learn, and especially for poor and ethnic minority youth...
who often experience “belonging uncertainty” in schools that can undermine their motivation and achievement (e.g., Walton & Cohen, 2007). The promotion of positive teacher-student relationships is an essential ingredient for all school reform and universal school-based prevention strategies (Catalano et al., 2004; Schaps, 2003). Individualized interventions designed to foster positive dyadic relationships between teachers and challenging students have proven effective (Pianta, Stuhlman, & Hamre, 2011). Intervention work done by the Child Development Project (CDP) in California takes a school-level approach to fostering relationships and student bonding to school. Central to this approach are practices that directly engage students in community-building activities, including cooperative learning projects, classroom management strategies that rely on student participation in norm setting and decision making, teaching of conflict resolution skills, and curricula that focus on themes of care. Evidence shows such practices foster a “community of care” that positively influences students’ motivation to learn, belonging, and prosocial behavior (Schaps, 2003).

School Climate

The overarching social climate of the school also matters for students’ motivation, learning, and prosocial vs. antisocial behavior. Both the Seattle Social Development Project (SSDP) and the Raising Healthy Children (RHC) Project used a school-based universal prevention program aimed at promoting student mental health and academic success through the creation of a healthy social climate in the school and positive school-family connections. Randomized trials of these programs showed that changes in the school social climate promoted changes to students’ school bonding, which, in turn, increased their engagement in prosocial behavior and decreased their engagement in antisocial behavior over time (Catalano et al., 2004; Hawkins et al., 2008). Such preventative approaches can be contrasted with relatively more punitive ones. For instance, many US schools have adopted Zero Tolerance policies with regard to violence—do they work? In 2008, the American Psychological Association released its report that concluded the evidence for the effectiveness of Zero Tolerance policies is weak at best (APA, 2008). Furthermore, such policies were found often to result in higher rates of suspension, particularly for minority students, poor students, and students with disabilities, without leading to improvements in school safety. The report suggests alternative approaches for intervention aimed at changing the school culture, reconnecting alienated students, increasing school bonding, developing a planned continuum of steps to be followed with at-risk students, and increasing the collaboration between the various community, school, and family stakeholders. Research on anti-bullying programs has come to the same conclusions: the most promising programs involve multilevel, school-wide approaches in which the existence of rules and consequences for bullying are salient, where conflict resolution strategies are in place, and where teachers are trained on bullying issues (Vreeman & Carroll, 2007). In both cases, recommendations to reduce violence and bullying point towards the kind of school-wide preventative programs described above by the Child Development Center and Seattle Social Development and Raising Healthy Children (RHC) projects (Catalano et al., 2004; Hawkins et al., 2008).

Part of a safe school culture that is being discussed more and more in relation to US schools today concerns the norms and practices that exist (or do not) in a school with regard to respect for cultural and sexual diversity and the unacceptability of discrimination in any form. Treuba (1988) outlined five key issues for schools in this regard, including (1) a school-wide recognition of the significance of culture in student learning; (2) the development of policies and practices that prevent stereotyping of minorities; (3) the resolution of disputes around cultural diversity in an open, fair, and caring manner; (4) improvement of home-school connections; and (5) a focus on the development of students’ linguistic competencies so that all students could participate meaningfully in
classroom learning. Relatively, others have argued that the sexual diversity climate of secondary schools can be improved for all students through inclusive policies, the education of students and staff on sexual diversity issues, and the establishment of and support for gay-straight alliances (e.g., Szalacha, 2003).

**School Physical Environment**

The physical environment of the school also can affect students’ emotional/behavioral development. Rutter and colleagues in their London study found that observer ratings of building cleanliness and the presence of plants, pictures, the display of student work and other decorations inside the school buildings predicted less student misconduct (after accounting for their social background—Rutter & Maughan, 2002). The “broken windows” theory of delinquency and crime (Wilson & Kelling, 1982) posits that unmaintained or abandoned physical spaces convey a message of a lack of ownership and, in a sense, a lack of moral structure. Such spaces may therefore become tacit seedbeds for misconduct and antisocial activity. Astor, Meyer, and Behre (1999) found that most violent events reported by students occurred in “undefined public spaces” of the school—spaces such as parking lots, bathrooms, and hallways where no adults assumed supervisory jurisdiction. These spaces were undefined in terms of adult monitoring of student behavior, and thus were the frequent sites for fights, unwanted sexual attention, and other negative interactions. Maintaining the physical environment of schools and reclaiming so-called undefined spaces represent strategies for improving school safety.

**School Size**

Barker and Gump (1964) theorized that smaller secondary schools affect young people’s social and academic development by providing various opportunities not available in larger schools—opportunities that include (a) closer relationships between teachers and students, (b) greater adult monitoring of and responsibility for student progress, and (c) a particularly favorable roles-to-people ratio with respect to school extracurricular activities and the need for many students in the school to participate to fulfill those roles. By affecting these mediating processes, school size was hypothesized to affect student outcomes. Research has consistently verified these hypotheses (e.g., Crosnoe, Johnson, & Elder, 2004). The creation of smaller learning communities is implicated by these findings. However, studies on school size agree that although smaller learning communities provide a student with benefits around belonging and participation, they must also provide high-quality instruction if increased student learning is to flourish as well in such schools (Ready & Lee, 2008).

**Family–School Connections**

Parent involvement in their child’s schooling has consistently emerged as a positive factor in students’ academic achievement and social-emotional well-being. Parent involvement also helps to establish a “safety net” of concerned adults (parents and teachers) that can support children’s academic and social-emotional development and assist children if adjustment problems should arise (cf. NRC/IOM, 2004). Evidence suggests that home-school connections are relatively infrequent during the elementary school years and become almost nonexistent during the middle and high school years (NRC/IOM, 2004).

Nonetheless, a recent meta-analysis confirmed the continuing importance of parental involvement in school even during adolescence (Hill & Tyson, 2009). Specifically, these authors found that parents’ academic socialization of their child, including the communication of their valuing of education, their expectations for their child’s grades, strategies for learning, and the necessity of their child thinking about and planning for future educational and occupational goals were key aspects of parental support. Improving parental involvement is a key strategy in school-based mental health efforts, and...
research shows that when implemented faithfully, school-wide reforms can improve parent involvement and student outcomes (Cook, Murphy, & Hunt, 2000).

**Community-Based Service Learning**

Structured opportunities for service learning in community settings outside of school can positively influence students’ development. In 1989, the Turning Points report (Carnegie, 1989) recommended that every middle school include supervised youth service in the community or school as part of the core academic curriculum. Today 25% of elementary schools, 38% of middle schools, and 46% of all high schools have students participating in either mandatory or voluntary service-learning activities (NCES, 2006). Students who participate in well-designed service-learning programs do better than comparison groups on measures of problem solving, reading and mathematics achievement, social responsibility, and attitudes toward diverse groups in society (Eccles & Roeser, 2010). Service learning has also been related to reductions in academic and behavior problems and pregnancy (Kirby, 2002).

**School Transitions**

School transitions provide unique opportunities for school-based mental health efforts. Normative school transitions in early childhood, early adolescence, and middle adolescence are times of heightened risk for children and adolescents due to predictable and often temporary declines in felt safety and belonging, motivation to learn, and academic achievement (cf. Eccles & Roeser, 2011). For students with long-term academic and emotional/behavioral problems, the transitions to middle and high school are times of increasing disengagement and accelerating pathways towards school dropout (Rumberger, 2011). Ensuring that students who are older due to grade retention or other factors do not decide to drop out of school during secondary school transitions is essential for decreasing dropout (Neild, 2009). In addition, facilitating successful school transitions for all students requires attention to both (a) preparing students and their families for these transitions through outreach efforts, information sharing, and school tours and (b) ensuring that schools have reception and peer-support programs for welcoming new students and teaching them the routines of daily life in school (Anderson, Jacobs, Schramm, & Splittgerber, 2000; Benner, 2011).

In summary, malleable school system processes that affect students’ social and emotional/behavioral development exist at the various levels of the subcontexts of schooling depicted in Fig. 9.1. Focusing on these as key ecological targets in future school reform efforts may prove fruitful not only in improving academic success but also in preventing emotional/behavioral problems and promoting well-being and prosociality (Greenberg et al., 2003).

**Conclusion**

In this chapter, we have summarized the many ways in which schools can influence child and adolescent development and their mental health in particular. We described the current US school-aged population demographically, educationally, and in relation to health and mental health problems. We concluded that at least 25% of the school population suffers from health and mental health problems that interfere with readiness to learn, and we suggested that processes of self-regulation, self-representation, and social cognition represent key malleable psychological factors underlying co-occurring patterns of school, social, and emotional/behavioral problems. We suggested that these psychological factors represent key targets of school-based interventions. We described how poverty plays a role in these findings, disproportionately affects different racial/ethnic groups, and fuels achievement gaps well before students even begin schooling. We then outlined four roles that elementary and secondary schools can play in preventing emotional/behavioral problems and
fostering the academic and social-emotional development of students and their families, including (1) crisis intervention, (2) service provision, (3) provisions of social-emotional learning programs and educator professional development, and (4) school reform. The challenges facing the US school population due to poverty and other developmental risks necessitate that schools play a role in not only the education of students, but also in their mental health. Schools cannot address the problems of the school-aged population alone but represent a key cultural institution that can, in conjunction with reforms in health care, immigration, and social welfare policy, assist all children and their families in achieving a better future.

References


