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Resilience in Development

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Around 1970, a pioneering group of developmental scientists turned their attention to the observable phenomenon of children at risk for problems and psychopathology who nonetheless succeed in life (Masten, 1999). These investigators argued that understanding such phenomena, the study of “resilience,” held the potential to inform programs, policies, and interventions directed at promoting competence and preventing or ameliorating problems in the lives of children. These pioneers inspired three decades of research on resilience in development that has provided models, methods, and data with implications for theory, research, and intervention.

The goal of this chapter is to highlight the results of this first generation of work and its implications and to consider where it is leading researchers, practitioners, and policy makers. We begin with a brief history of resilience research in psychology. In the next section, we describe the conceptual models and corresponding methods that have characterized the research on resilience to date. Results of this research then are summarized in terms of the protective factors and processes suggested by diverse studies of resilience, which bear a striking resemblance to many of the chapter titles of this volume. We conclude that resilience arises from human adaptational systems and discuss implications of these findings for theory, interventions, policy, and future research.

History of the Study of Resilience in Psychology

The idea of individual resilience in the face of adversity has been around for a very long time, as evident in myths, fairy tales, art, and literature over the centuries that portray heroes and heroines (Campbell, 1970). When psychology began to develop as a systematic science in the 19th and early 20th centuries, there clearly was an interest in individual adaptation to the environment, which can be seen in theories ranging from natural selection to psychoanalytic ego psychology (Masten & Coatsworth, 1995). Freud (1928), for example, noted the remarkable human capacity to triumph over adversity even on the way to execution, describing gallows humor as “the ego’s victorious assertion of its own invulnerability.” In addition to the ego, early concepts of mastery motivation, competence, and self-efficacy in 20th-century psychology focused on positive aspects of adaptation in development (Masten & Coatsworth, 1999). In contrast, the study of children and adolescents...
with problems or hazardous environments during much of the 20th century was dominated by research on risk and the treatment of symptoms. In 1962, Lois Murphy decried the negative focus of research on individual differences in children: "It is something of a paradox that a nation which has exulted in its rapid expansion and its scientific-technological achievements should have developed in its studies of childhood so vast a 'problem' literature" (p. 2).

Murphy's words were a harbinger of change. A decade later, the systematic study of resilience in psychology emerged from the study of children at risk for problems and psychopathology (Masten, 1999; Maren & Garnezy, 1985). By the 1960s, psychologists and psychiatrists interested in the etiology of psychopathology had begun to study children over time who were believed to be at risk for serious problems because of their biological heritage (e.g., a parent with schizophrenia), perinatal hazards (e.g., premature birth), or their environments (e.g., poverty). Some of these investigators were struck by the observation that there were children purportedly at high risk for problems who were developing quite well. Subsequently, these psychiatrists and psychologists began to write and speak about the significance of these children (Anthony, 1974; Garnezy, 1971, 1974; Murphy, 1974; Murphy & Moriarty, 1976; Rutter, 1979; Werner & Smith, 1982). Their observations were a call to action for research on the phenomenon of doing well in the context of risk.

In the early publications on resilience and in the press about such phenomena, successful high-risk children were referred to variously as "invulnerable," "stress-resistant," or "resilient." Eventually, resilient became the most prominent term for describing such individuals.

### Conceptual Models of Resilience

#### Defining Resilience

In research on children over the past three decades, resilience generally refers to a class of phenomena characterized by patterns of positive adaptation in the context of significant adversity or risk. Resilience must be inferred because two major judgments are required to identify individuals as belonging in this class of phenomena. First, there is a judgment that individuals are "doing OK" or better than OK with respect to a set of expectations for behavior. Second, there is a judgment that there have been extenuating circumstances that posed a threat to good outcomes. Therefore, the study of this class of phenomena requires defining the criteria or method for ascertaining good adaptation and the past or current presence of conditions that pose a threat to good adaptation.

The meaning of resilience and its operational definition have been the subject of considerable debate and controversy over the years (Luthar, Cicchetti, & Becker, 2000; Masten, 1999; Wang & Gordon, 1994). Nonetheless, there is little dispute that there are individuals whom most people would consider "resilient" by almost any definition. Moreover, despite considerable variation in operational definitions of resilience, findings from a diverse literature point to the same conclusions with compelling consistency. Given the considerable degree of debate and confusion about defining resilience and related concepts, a glossary of how these terms are used in this chapter is provided in Table 6.1.

#### Defining and Assessing Good Developmental Outcomes

Diverse criteria have been used for judging good adaptation in studies of resilience. These include positive behavior such as the presence of social and academic achievements, the presence of other behaviors desired by society for people of this age, happiness or life satisfaction, or the absence of undesirable behavior, including mental illness, emotional distress, criminal behavior, or risk-taking behaviors. In the developmental literature, many investigators define good outcomes on the basis of a track record of success meeting age-related standards of behavior widely known as developmental tasks.

Developmental tasks refer to expectations of a given society or culture in historical context for the behavior of children in different age periods and situations (Elder, 1998; Masten & Coatsworth, 1995, 1998). These are the social milestones for development, presumed to guide socialization practices. They may vary from one culture to another to some degree, but these broad tasks presumably depend on human capabilities and societal goals that will be widely shared across cultures. For example, toddlers are expected to learn to walk and talk and to obey simple instructions of parents. In most societies, older children are expected to learn at school, to get along with others, and to follow the
rules of classroom, home, and community. In
the United States and many other economically
developed countries, successful youth are ex-
pected to graduate from high school and gain the
education and occupational skills needed for econ-
omic independence, to abide by the law, to have
close friends and romantic relationships, and to
begin to contribute to society. Resilient
children and youth manage to meet develop-
mental task expectations even though they have
faced significant obstacles to success in life.

One of the ongoing debates in the resil-
ence literature has focused on whether the
criteria should include good *internal* adaptation (pos-
tive psychological well-being versus emotional
distress and problems) as well as good *external*
adaptation. Both camps agree that external adaptation standards define resilience. Some in-
spectors, however, include indicators of emo-
tional health and well-being as additional defin-
ing criteria, whereas others study the internal
dimensions of behavior as concomitants or pre-
dictors of resilience. This debate reflects the dual
nature of living systems (Masten & Coatesworth,
1995, 1998). Human individuals are living or-
ganisms that must maintain cohesion and or-
ganization as a unit and also function as part of
larger systems, such as families and commu-
nities. Almost a century ago, Freud described
the role of the ego in dualistic terms: with the
goal of maintaining internal well-being (self-
preservation) while also tending to the expec-
tations of life in society (Freud, 1923/1960).

A second issue is whether to expect resil-
ient children to function in the normative range (OK
or better) or to excel. Stories of heroic survival
or media accounts of resilient people tend to
highlight outstanding achievements in the face
of adversity. However, most investigators have
set the bar at the level of the normal range, no
doubt because their goal is to understand how
individuals maintain or regain normative levels
of functioning and avoid significant problems in
spite of adversity—a goal shared by many par-
tents and societies.

In studies of resilient children and youth,
typical measures of good outcome assess the fol-
lowing: academic achievement (e.g., grades
and test scores, staying in school, graduating
from high school); conduct (rule-abiding behav-
ior vs. antisocial behavior); peer acceptance and
friendship; normative mental health (few symp-
toms of internalizing or externalizing behavior
problems); and involvement in age-appropriate
activities (extracurricular activities, sports, com-
munity service). Most studies also include mul-
tiple indicators of good functioning or outcome,
rather than a single domain of functioning.

Until recently, there has been little empirical
attention given to the criteria by which parents,
teachers, researchers, and societies decide if a
child is "doing OK," even though these criteria
are likely to have a critical role in socialization practices and policies or interventions designed to promote good development (Dubrow, Pena, Masten, Sesma, & Williams, in press). It is possible to study the implicit criteria by which people assess the progress of children and compare those criteria to the standards used by investigators, and more work is needed in this area. Nonetheless, there is considerable agreement about what should be assessed in studies of resilience, and these trends to include the domains widely viewed as developmental tasks in the developmental literature.

Good outcomes are not enough to define resilience, however. Such children could be called competent, well-adjusted, or simply “normal.” Resilient children must have overcome some kind of threat to development, which requires a second kind of criterion.

Defining and Assessing Threats to Good Adaptation or Development

Many different kinds of threats and hazards to individual functioning and development have been the target of investigation in studies of resilience (Masten, Best, & Garmezy, 1990; Glantz & Johnson, 1999). These include premature birth, divorce, maltreatment, motherhood in unwed teenagers, parental illness or psychopathology, poverty, homelessness, and the massive (community-level) trauma of war and natural disasters. Such threats are well-established risk factors for development; there is good evidence that such experiences or conditions elevate the probability of one or more problems in the development of children.

Initially, in the study of resilience, many investigators focused on a single indicator to define risk. It was quickly apparent, however, that risk factors often co-occur and pile up over time, and that different risk factors often predict similar problems, partly because they tend to co-occur over time (Masten & Wright, 1998). As a result, there was a shift to studying cumulative risk.

Cumulative risk assessment has taken two major forms: risk indices and stressful life experience scores. Cumulative risk scores often sum the number of risk factors present in a child’s life, whereas life stress scores typically add up the number of negative life events or experiences encountered during a period of time. On the adversity side of the resilience equation, resilient children often are defined by high levels of cumulative risk in their distant or recent histories.

Issues abound in the assessment of adversity and risk, and most are beyond the scope of this chapter. Examples of controversies include whether to count stressful experiences that depend on the behavior of the individual, whether to assign severity weights to events or simply add them up, whether to consider subjective perceptions or objective judgments about the stressfulness of experiences, and whether life-event reports are reliable (Dohrenwend, 1998; Zimmerman, 1983).

Assessing Assets, Resources, and Protective Factors

The study of resilience also must address the question of what makes a difference. To do so requires examination of the qualities of individuals and their environments that might explain why some people fare better than others in the context of adversity. The concepts of assets, resources, protective factors, and related processes have been operationalized and studied in efforts to explain resilience (see glossary of terms in Table 6.1). Assets are the opposite of risk factors, in that there is evidence that their presence predicts better outcomes for one or more domains of good adaptation, regardless of level of risk. Resource is a generic term for the human, social, and material capital utilized in adaptive processes. Protective factors are the qualities of persons or contexts that predict better outcomes under high-risk conditions; in effect, they are assets that matter when risk or adversity is high. Protective processes refer to how protective factors work; theoretically, these are the processes by which good outcomes happen when development is threatened.

Models of Resilience

Two major approaches have characterized the research on resilience in development. Variable-focused approaches examine the linkages among characteristics of individuals, environments, and experiences to try to ascertain what accounts for good outcomes on indicators of adaptation when risk or adversity is high. This method effectively draws on the power of the whole sample or the entire risk group, as well as the strengths of multivariate statistics. It is well suited to
searching for specific protective factors for particular aspects of adaptation. Person-focused approaches identify resilient people and try to understand how they differ from others who are not faring well in the face of adversity or who have not been challenged by threats to development. This approach reflects the perspective that resilience is configural, in that individuals are viewed as resilient because they are doing well in multiple ways, rather than just one. This approach is well suited to studying diverse lives through time.

Variable-Focused Models of Resilience

Illustrated in Figure 6.1 are several variable-focused models of resilience that have been tested in the empirical literature: additive models, interactive models, and indirect models. In the simplest model, the additive effects of risk factors, asset/resource factors, and bipolar asset/risk variables are examined in relation to a positive outcome. This kind of model is illustrated in the upper right quadrant of Figure 6.1. In this model, the assets and risks contribute independently to how well a child is doing in life on the outcome variable or criterion of interest. Pure risk factors have a negative effect on the outcome of interest when they occur but no effect if they are absent (like the loss of a parent). Pure assets have positive influences if they are present, but do not have negative effects if they are absent (like a fairy godmother or a musical talent). Many attributes operate along a continuum of risk-asset where more is good and less is bad for the outcome of interest (such as the ways intellectual skills and the quality of parenting may work for academic achievement). Assets can theoretically counterbalance high levels of risk in such models, hence the idea of "compensatory effects" (Garmezy, Masten, & Tellegen, 1984). Interventions that attempt to boost the presence of assets or reduce the number of risk factors are based on these additive models.

Risk/asset gradients also reflect additive models of this kind. A typical cumulative risk gradient is shown on the left side of Figure 6.2, where the level of a negative outcome is plotted as a function of the number of risk factors. Risk factors in such models often include well-established risks, such as a single-parent household, a mother who did not finish high school, a large family size, or income below the poverty level. Other gradients are formed by various levels on a single major indicator of disadvantage, such as socioeconomic status. Such risk indices predict a wide range of public health outcomes, including mortality rates, academic attainment, and physical and mental health across many societies (Keating & Hertzman, 1999).

Risk gradients can be inverted to produce asset gradients, as illustrated on the right in Figure 6.2. This is because most of the risk indicators are actually risk/asset predictors that have high and low ends and are arbitrarily labeled by the negative end of a continuum. A positive psychology perspective would emphasize that the children low on such risk gradients typically are those with more assets and advantages, with two better educated parents, good income, the benefits that go along with higher socioeconomic status, and so forth. Even in studies that measure pure risk factors (negative life events, for example), the low-risk children are likely to have unmeasured assets because negative events are less likely to occur in advantaged families with effective parenting, more education, safer neighborhoods, good medical care, and so on.
Interactive models can be seen in the bottom right quadrant of Figure 6.1. In these cases, there are moderating effects in which one variable alters the impact of the risk/adversity variable. Such moderators have been called "vulnerability" and "protective" factors. Two kinds of interaction effects are illustrated. One stems from the idea of an enduring quality of the individual or environment that increases or decreases the susceptibility of the individual to the threatening situation, the simple moderator. One of the most investigated moderator effects in the literature is the possibility that temperament or personality predisposes individuals to react with more or less distress or negative emotion to a given threat. Another kind of moderator portrayed in Figure 6.1 is the threat-activated protective system, akin to air bags in automobiles or emergency social services, that are triggered by the occurrence of threatening experiences. Effective parents who appear to buffer their children from the full impact of adversity as it occurs can be viewed as risk-activated in this way. A child's own coping efforts could operate this way as well, in that special attempts are made to reduce the impact of a particular threat to one's self. Interventions that attempt to improve how systems respond to threat in order to ameliorate the impact of hazards on the lives of individuals are based on this kind of model.

Indirect models of resilience are illustrated on the left side of Figure 6.1. Not all possibilities are included. The upper left quadrant illustrates the phenomenon of mediated effects, where a powerful influence on outcome is itself affected by risks and resources. A good example of this effect involves studies where the determinants of parenting are examined, as are the outcomes of parenting. Interventions in which there is an attempt to improve the quality of key predictors of child outcome, such as parental effectiveness, often are based on such mediator models. In a sense, these models include all of the direct effect models moved out a step from the target individual. The assumption here is that protection provided by the mediator can be changed in ways that will have consequences for the child's life.

One other indirect model, illustrated in the lower left quadrant of Figure 6.1, is the invisible effect of total prevention, when a powerful protective factor prevents the risk/threatening condition from occurring at all. For example, if premature birth were prevented by excellent prenatal care, then the risks associated with premature birth would be totally alleviated. Similarly, an alert parent may intervene to head off a negative event prior to its occurrence.

Figure 6.1 is a convenient way to illustrate various models of resilience, but it is a vastly oversimplified depiction of how resilience unfolds in lives through time. First, it is static. In life, the systems represented by the variable labels of risks and assets are continually interacting and often influencing each other. Thus, a child's behavior influences the quality of parenting she receives and the behavior of her
teachers; subsequently, the behavior of parents or teachers toward the child influences the child's behavior, and so on. In reality, there are few "one-way arrows" in life. Transactional models that capture the mutual influences over time resulting from the continual interaction of living systems, their environments, and their experiences are difficult to depict in static two-dimensional pictures.

Second, the variable-focused models that focus on a single aspect of "outcome" or one dimension of the criterion for good adaptation, will not capture the overall pattern of resilience in a person's life, which is multidimensional and configurational. Person-focused models attempt to get a handle on the holistic patterns.

**Person-Focused Models of Resilience**

Three types of person-focused models have played a key role in resilience research. One model derives from the single case study of individuals who have inspired larger scale investigations and illustrate findings from larger studies in which they are embedded. Case studies are not true conceptual models of resilience, but they do serve as models in the sense of demonstrating natural phenomena that serve a heuristic purpose. Case reports can be found throughout the resilience literature.

A second person-focused model of resilience is based on identifying very high-risk individuals who do well, a resilient subgroup. This is a classic approach in the resilience field, exemplified by the most important longitudinal study of resilience to date, the Kauai longitudinal study by Werner and Smith (1982, 1992). In this study of a large birth cohort that began in 1955, a high-risk group of children was identified according to multiple risk indicators that were present before the age of 2. Then the outcomes of these children, how well they were doing on multiple developmental and mental health markers at around 10 and 18, were examined to identify a subgroup of resilient children. Resilient children could then be compared with their peers in the high-risk group who did not fare well. Results indicated many differences beginning at an early age that favored the resilient group, including better quality of care in infancy, higher self-worth and intellectual functioning in childhood, and more support from "kin and kin."

This approach often results in evidence of striking differences in the assets, human and social capital, characterizing the lives of resilient versus maladaptive children from risky backgrounds; however, two key issues limit the contributions of such studies. First, the results often suggest that the resilient subgroup actually has been exposed to lower levels of risk or adversity; in effect, they come from a lower-risk level of a risk gradient. Second, even when risk levels are comparable, it is not clear whether the correlates of resilience are general predictors of good outcome, regardless of risk, or specifically protective moderators of risk, because the low-risk groups are missing from the analyses. This led to a third approach, which includes children from a general population, with the goal of comparing the resilient to lower risk peers as well as high-risk maladaptive peers.

Full diagnostic models of resilience classify children on the two major aspects of individual lives: good outcomes and adversity/risk. Figure 6.3 illustrates this model. In the Project Competence study of resilience (Masten et al., 1999), this strategy was used to complement the variable-focused analyses. Youth from a normative urban sample were classified as high, middle, or low on competence based on the pattern.

![Figure 6.3 A full diagnostic model of resilience that identifies groups by two sets of criteria for (a) adversity level and (b) good outcome or competence on one or more criteria. Of greatest interest are comparisons of the "corner" groups: the resilient, who are high on both adversity and good outcomes; the maladaptive, who are high on adversity but have negative outcomes; the competent-unchallenged, who are low on adversity with good outcomes; and the vulnerable, who do not do well even though adversity is low.](image-url)
tern of success for three main developmental tasks for their age-group, including academic achievement, rule-abiding conduct versus antisocial behavior, and social competence with peers. Youth classified as high in competence had achieved at least average success on all three developmental tasks. They also were classified on the basis of lifetime adversity exposure, based on life histories of negative experiences out of their control (such as death of a parent or close friend, marital conflict, violence of an alcoholic parent, accidents or health crises of family members). Lifetime adversity was rated as high (severe to catastrophic exposure), average, or low (below-average levels of exposure for the cohort). The goal was to compare the four corner groups (see Figure 6.3). As found in other studies, however, there was nearly an "empty cell" for low adversity exposure and low competence. Thus, resilient youth were compared with two other groups, their maladaptive peers who shared a history of severe-to-catastrophic-level adversity but differed markedly in outcome, and their competent peers who were like them in achievements but differed markedly in having low adversity backgrounds. Results indicated that resilient youth have much in common with competent youth who have not faced adversity, in that they share many of the same assets, both personal ones like good intellectual skills and family ones like effective parenting. Both groups differed dramatically in resources from their maladaptive peers, who faced great adversity with much less human and social capital. Results of this study suggest that there are fundamental processes that not only lead to normative competence but also protect development in the context of adversity.

**Pathway Models**

Both the classic and the full diagnostic models of resilience implicitly span considerable amounts of time because the risks and achievements by which resilience is judged are not momentary phenomena but rather characterize experiences and functioning that unfold over time. Currently, there is growing interest in more systematic pathway models of resilience that address patterns of behavior over time in more explicit ways. This interest reflects a general trend in developmental theory toward more complex, dynamic system models that account for major patterns in the life course. This trend can be seen in studies of antisocial behavior (Loebner & Stouthamer-Loebner, 1998), as well as in normative life-span theory and research (Geer & Elder, 1998) and family systems theory and research (Burr & Klein, 1994).

Figure 6.4 illustrates three resilient pathways that could result from a host of cumulative influences. Life course is plotted over time with respect to how an individual is doing on a simple or complex index of good versus maladaptive development. Path A reflects a child growing up in a high-risk environment who nonetheless steadily functions well in life. Path B reflects a child who is doing well, is diverted by a major blow (perhaps a traumatic experience), and recovers. Path C reflects a late-bloomer pattern, in which a high-risk child who is not doing well is provided with life-altering chances or opportunities. Many Romanian children adopted into other countries from profound privation to normative or enriched rearing environments follow path C. Rutter and colleagues (1998) have described the consequent changes in their functioning as "spectacular." There are also reports of maladaptive high-risk youth who seek or respond to "second-chance opportunities," such as military service, romantic relationships, or religious conversions, and turn their lives in new directions (Rutter, 1970; Werner & Smith, 1992).

Developmental pathways are difficult to study, as lives unfold from myriad transactions among systems and in idiosyncratic ways. However, investigators are attempting to character-
ize major patterns through time by "longitudinal classification diagnosis" (Bergman & Magnusson, 1997) and utilization of new statistical methods, such as growth curve modeling.

Summary of Findings on Resilience in Development

Findings from a wide-ranging and diverse literature on resilience in children and youth converge with striking regularity on a set of individual and environmental attributes associated with good adjustment and development under a variety of life-course-threatening conditions across cultural contexts. This "short list" of salient protective factors in development was evident in earlier reviews and discussions of this class of phenomena in the 1970s and 1980s (Anthony, 1974; Garmezy, 1974, 1974, 1985, 1985; Masten, 1989; Masten & Garmezy, 1985; Murphy, 1974; Murphy & Moriarty, 1976; Rutter, 1979, 1985; Sameroff & Chandler, 1975; Werner & Smith, 1982) and has held up remarkably well since that time (Cicchetti & Garmezy, 1993; Egeland, Carlson, & Sroufe, 1993; Luthar & Zigler, 1991; Luthar et al., 2000; Masten, 1994, 1999; Masten, Best, & Garmezy, 1990; Masten & Coatsworth, 1995, 1998; Rutter, 1990; Werner & Smith, 1992; Wyman, Sandler, Wolchik, & Nelson, 2000).

A list of the most commonly reported potential protective factors against developmental hazards found in studies of psychosocial resilience is presented in Table 6.2. These protective factors include differential attributes of the child, the family, other relationships, and the major contexts in which children and youth develop, such as school and neighborhood. The most salient individual characteristics index cognitive capabilities of the child and personality traits that suggest effective problem solving and adaptability to stress (e.g., IQ scores, attentional skills, a not-readily upset or "easy" temperament). It is worth noting that many of these characteristics that have been found to predict good adaptation in the context of risk are addressed by chapters in this volume, including, for example, self-efficacy, self-worth, problem solving, positive relationships, faith or spirituality, and humor.

The most widely reported family attributes are related to the quality of parenting available to the child and the socioeconomic status (SES) of the family and all the advantages conveyed by high SES. Parenting adults who provide love and support, as well as structure and high expectations, appear to protect child development across a wide variety of situations and cultures. Relationship bonds to other competent and involved adults and also to prosocial peers are widely reported correlates and predictors of resilience. And, in the larger arenas in which children grow up, there are protective factors representing multiple contexts providing structure, safety, opportunities to learn and to develop talent, adult role models, support for cultural and religious traditions, and many other social capital resources. "Collective efficacy" refers to neighborhoods that combine social cohesion with informal social control (Sampson, Raudenbush, & Earls, 1997).

The attributes on this list, many of which have been implicated as predictors of good development in low-risk children as well, strongly suggest that there are fundamental human adaptational systems that serve to keep behavioral development on course and facilitate recovery from adversity when more normative conditions are restored (Masten & Coatsworth, 1998). Some of these systems have been the subject of extensive theoretical and empirical study in psychology, whereas others have been left to other disciplines or neglected. Systems that have received some attention in psychology would include the following: attachment relationships and parenting; pleasure-in-mastery motivational systems; self-regulatory systems for regulating emotion, arousal, and behavior; families; and formal education systems, cultural belief systems, and religious organizations. In the case of some systems, such as cultural beliefs and organizations, other disciplines may have contributed more than psychology to date, including anthropology and sociology.

Within the resilience field of study, the processes underlying specific protective factors identified in resilience research have not been the subject of much systematic study to date, though there have been numerous calls for such research (Luthar et al., 2000; Masten et al., 1996; Rutter, 1990). The most powerful tests of the processes implicated by the list will be found in efforts to change the course of development by influencing hypothesized processes, in well-designed prevention and intervention trials. Pioneering examples are provided in the next section. However, as the present volume attests, there is an extensive foundation of work on some of the processes that may be behind the...
Table 6.2 Protective Factors for Psychosocial Resilience in Children and Youth

<table>
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<tr>
<th>Within the Child</th>
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<tr>
<td>Good cognitive abilities, including problem-solving and attentional skills</td>
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<td>Easy temperament in infancy; adaptable personality later in development</td>
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<tr>
<td>Positive self-perceptions; self-efficacy</td>
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<tr>
<td>Faith and a sense of meaning in life</td>
</tr>
<tr>
<td>A positive outlook on life</td>
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<tr>
<td>Good self-regulation of emotional arousal and impulses</td>
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<tr>
<td>Talents valued by self and society</td>
</tr>
<tr>
<td>Good sense of humor</td>
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<tr>
<td>General appeal or attractiveness to others</td>
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<tr>
<th>Within the Family</th>
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<tbody>
<tr>
<td>Close relationships with caregiving adults</td>
</tr>
<tr>
<td>Authoritative parenting (high on warmth, structure/monitoring, and expectations)</td>
</tr>
<tr>
<td>Positive family climate with low discord between parents</td>
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<tr>
<td>Organized home environment</td>
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<tr>
<td>Postsecondary education of parents</td>
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<tr>
<td>Parents with qualities listed as protective factors with the child (above)</td>
</tr>
<tr>
<td>Parents involved in child’s education</td>
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<tr>
<td>Socioeconomic advantages</td>
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<table>
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<tr>
<th>Within Family or Other Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close relationships to competent, prosocial, and supportive adults</td>
</tr>
<tr>
<td>Connections to prosocial and rule-abiding peers</td>
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<table>
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<tr>
<th>Within the Community</th>
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<tbody>
<tr>
<td>Effective schools</td>
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<tr>
<td>Ties to prosocial organizations, including schools, clubs, scouting, etc.</td>
</tr>
<tr>
<td>Neighborhoods with high “collective efficacy”</td>
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<tr>
<td>High levels of public safety</td>
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<tr>
<td>Good emergency social services (e.g., 911 or crisis nursery services)</td>
</tr>
<tr>
<td>Good public health and health care availability</td>
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Resilience appears to arise from the operation of many of the same systems that foster normative development and that have been studied under rubrics other than “resilience.”

**Fostering Resilience: Implications for Policy and Practice**

The findings on resilience suggest that the greatest threats to children are those adversities that undermine the basic human protective systems for development. It follows that efforts to promote competence and resilience in children at risk should focus on strategies that prevent damage to, restore, or compensate for threats to these basic systems. For example, prenatal care, nutritional programs, early childhood education, adequate medical care, and good schools all promote the protection of brain development, attention, thinking, and learning that appear to play a powerful role in the lives of children who successfully negotiate challenges to development.

Programs and policies that support effective parenting and the availability of competent adults in the lives of children also are crucial. The best-documented asset of resilient children is a strong bond to a competent and caring adult, who need not be a parent. For children who do not have such an adult involved in their lives, this is the first order of business.

Resilience models and findings suggest that programs will be most effective when they tap into powerful adaptational systems. One example is provided by the mastery motivational system. When development is proceeding normally, humans are motivated to learn about the
environment and derive pleasure from mastering new skills. This is why infants delight in flinging food off the high chair and glow with pride when they toddle across the room for the first time. Children need opportunities to experience success at all ages. This means that families, schools, and communities have a responsibility to provide such opportunities and to ensure that the talents of an individual child are developed. One of the great differences in the lives of children growing up in the middle class versus poverty is in the richness of opportunities for achievement that feed the mastery motivation system. Feelings of self-confidence and self-efficacy grow from mastery experiences. Children who feel effective persist in the face of failure and achieve greater success because of their efforts (Bandura, 1997).

Much has been written about programs that work for children at risk, such as Lisbeth Shorr’s 1988 book, *Within Our Reach: Breaking the Cycle of Disadvantage*. Based on the resilience literature, we would hypothesize that a careful look at programs that work for children at risk would reveal that they tap into basic but powerful protective systems for human development. Recent prevention efforts to promote "wellness" in children and youth reflect this belief as well (Cicchetti, Rappaport, Sandler, & Weissberg, in press; Cowen, in press).

**Strategies for Fostering Resilience**

The models and lessons arising from research on resilience suggest a new framework for planning prevention and intervention programs, as well as three major kinds of change strategies. Conceptually, the work on resilience suggests that we need to move positive goals front and center. *Promoting healthy development and competence is at least as important as preventing problems and will serve the same end.* As a society, we will do well to nurture human capital, to invest in the competence of our children. This means understanding how the capacity for academic achievement, rule-abiding behavior, or good citizenship develops. It is important to identify risks and prevent them whenever possible, but it is also important to identify assets and protective systems and to support these to the best of our knowledge. Three basic strategies for intervention are suggested by resilience research, as illustrated in Table 6.3.

**Table 6.3 Strategies for Promoting Resilience in Children and Youth**

<table>
<thead>
<tr>
<th>Risk-Focused Strategies: Preventing/Reducing Risk and Stressors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevent or reduce the likelihood of low birth weight or prematurity through prenatal care</td>
</tr>
<tr>
<td>Prevent child abuse or neglect through parent education</td>
</tr>
<tr>
<td>Reduce teenage drinking, smoking, or drug use through community programs</td>
</tr>
<tr>
<td>Prevent homelessness through housing policy or emergency assistance</td>
</tr>
<tr>
<td>Reduce neighborhood crime or violence through community policing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Asset-Focused Strategies: Improving Number or Quality of Resources or Social Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide a tutor</td>
</tr>
<tr>
<td>Organize a Girls or Boys Club</td>
</tr>
<tr>
<td>Offer parent education classes</td>
</tr>
<tr>
<td>Build a recreation center</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process-Focused Strategies: Mobilizing the Power of Human Adaptational Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build self-efficacy through graduated success model of teaching</td>
</tr>
<tr>
<td>Teach effective coping strategies for specific threatening situations, such as programs to prepare children for surgery</td>
</tr>
<tr>
<td>Foster secure attachment relationships between infants and parents through parental-sensitivity training or home visit program for new parents and their infants</td>
</tr>
<tr>
<td>Nurture mentoring relationships for children through a program to match children with potential mentors, such as Big Brothers/Big Sisters of America</td>
</tr>
<tr>
<td>Encourage friendships of children with prosocial peers in healthy activities, such as extracurricular activities</td>
</tr>
<tr>
<td>Support cultural traditions that provide children with adaptive rituals and opportunities for bonds with prosocial adults, such as religious education or classes for children where elders teach ethnic traditions of dance, meditation, etc.</td>
</tr>
</tbody>
</table>
Risk-Focused Strategies

These strategies aim to reduce the exposure of children to hazardous experiences. Examples of risk-focused strategies include prenatal care to prevent premature births, as well as school reforms to reduce the stressfulness of school transitions for young adolescents or community efforts to prevent homelessness through housing policies. Here the intent is to remove or reduce threat exposure.

Asset-Focused Strategies

These approaches aim to increase the amount of access to, or quality of resources children need for the development of competence. Examples of resources that are assumed to have direct effects on children are providing a tutor or building a recreation center with programs for children. Other assets are assumed to operate indirectly on children, through strengthening the social or financial capital in a child's life. Examples include the establishment of literacy or job programs for parents, programs to foster parenting skills, and programs to provide teachers with more training or resources so they can be more effective in the classroom. The Search Institute has done extensive research and program development directed at this asset-building strategy (Benson, Galbraith, & Espeland, 1995).

Process-Focused Strategies

These strategies aim to mobilize the fundamental protective systems for development. In this case, efforts go beyond simply removing risk or adding assets but instead attempt to influence processes that will change a child's life. Examples include programs designed to improve the quality of attachment relationships and efforts to activate the mastery motivation system through a sequence of graduated mastery experiences that enable a child to experience success and build self-efficacy and motivation to succeed in life.

Comprehensive intervention efforts to change the life chances of children at risk include all three of these strategies. Examples include Head Start (Zigler, Taussig, & Black, 1992), the Abecedarian Project (Ramey & Ramey, 1998), the large-scale Fast Track prevention trial for conduct problems (Conduct Problems Prevention Research Group, 1999), and the Seattle Social Development Project (Hawkins, Catalano, Kosterman, Abbott, & Hill, 1999). In effect, these programs aim to prevent or reduce problems in development by promoting good adaptation. Each has a different model and emphasis, yet they all utilize multiple strategies to reduce risk and increase protection in children's lives. Findings from successful interventions, such as these, corroborate the findings from the resilience literature, implying highly similar protections and processes.

Conclusions and Future Directions for Resilience Research

The most striking conclusion arising from all the research on resilience in development is that the extraordinary resilience and recovery power of children arises from ordinary processes. The evidence indicates that the children who "make it" have basic human protective systems operating in their favor. Resilience does not come from rare and special qualities but from the operations of ordinary human systems, arising from brains, minds, and bodies of children, from their relationships in the family and community, and from schools, religions, and other cultural traditions.

Positive psychology, the focus of this handbook, represents a return to the study of how these systems and their interactions give rise to good adaptation and development as well as resilience. The interest in positive adaptation evidence in the early history of psychology is enjoying a renaissance that was rekindled in part by the study of resilient children in the 1970s and 1980s; now positive psychology is likely to inform theories and applications about resilience to the benefit of society.

The study of resilience in development has produced a "sea change" in the frameworks for understanding and helping children at risk or already in trouble. This shift is evident in changing conceptualization of the goals of prevention and intervention that now address competence as well as problems. It is also apparent in assessments that include strengths in addition to risks and problems. Theories about the etiology of behavior problems and mental illness must now account for why some people who share the risks and hazards believed to cause psychopathology nevertheless develop into competent and healthy individuals. Policy makers concerned about the large numbers of children at risk for problems,
now ask, What works? to prevent such problems and to promote favorable youth development; they also ask how this knowledge can be effectively harnessed to enhance the human capital of society.

Fortified by the groundwork of a first generation of work, investigators of resilience now must address some tough questions about how naturally occurring resilience works and whether these processes can be initiated or facilitated by design in policies or practice (Masten, 1999). The biological underpinnings of resilience, in brain development and functions, for example, are just beginning to be considered (Luthar et al., 2000; Maier & Watkins, 1998; Nelson, 1999). The study of healthy physical development must be integrated with the study of healthy psychological development, for children growing up under favorable and unfavorable conditions. There is little information linking psychological and physical resilience, though studies at the biosocial interface suggest important connections (Maier & Watkins, 1998). It also has become evident that the classification systems for psychopathology need an overhaul to address the role of positive adaptation more effectively in defining, assessing, and treating disorder (see Masten & Curtis, 2000).

It is not possible to prevent all of the hazards that jeopardize the lives and well-being of children and youth. Therefore, we must learn how to preserve, protect, and recover good adaptation and development that has been or will be threatened by adversity and risk exposure. That is the ongoing goal of resilience studies in psychology.

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