

# Positive Psychology in Practice

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Edited by  
P. Alex Linley and Stephen Joseph



John Wiley & Sons, Inc.

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Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

Published simultaneously in Canada.

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**Library of Congress Cataloging-in-Publication Data:**

Positive psychology in practice / edited by P. Alex Linley and Stephen Joseph.

p. cm.

Includes bibliographical references.

ISBN 0-471-45906-2

1. Positive psychology. I. Linley, P. Alex. II. Joseph, Stephen.

BF204.6P67 2004

150—dc22

2004043375

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

## CHAPTER 32

# Fostering the Future: Resilience Theory and the Practice of Positive Psychology

TUPPETT M. YATES and ANN S. MASTEN

**M**ORE THAN 30 YEARS ago, investigators studying children in high-risk environments observed that many children achieve positive developmental outcomes despite adverse experiences (Garmezy, 1974; Murphy & Moriarty, 1976; Rutter, 1979; Werner & Smith, 1982). Individuals who achieve these better-than-expected outcomes have been labeled *survivors*, *resilient*, *stress-resistant*, and even *invulnerable*. Repeated observations of such youth inspired a generation of research on resilience. As a result, the study of resilience has emerged as a distinct domain of empirical and theoretical inquiry in psychology, particularly in developmental psychopathology (Sroufe & Rutter, 1984). Pioneers in the systematic study of resilience recognized the potential importance of this work for practice. They believed that understanding naturally occurring resilience would inform interventions and policies aimed at fostering successful development among children growing up with heavy burdens of risk or adversity.

Prevention scientists and advocates of a positive approach to psychology have touted the resilience framework for its potential to inform efforts to foster positive developmental outcomes among disadvantaged children, families, and communities. Indeed, the promise of valuable implications for prevention, intervention, and social policy motivates much resilience research. However, there has been little evaluation of progress in applying a resilience framework to practice, and even less consideration of the reciprocal role that practice may play in the advancement of resilience theory and research.

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Preparation of this chapter was facilitated by a graduate research fellowship from the National Science Foundation awarded to the first author. The second author's work on resilience has been supported by grants from the National Institute of Mental Health, the National Science Foundation, the William T. Grant Foundation, and the University of Minnesota.

In this chapter, we examine the reciprocal translation between resilience research and the practice of positive psychology. We begin by introducing the resilience framework, its key concepts, and core models. Next, we highlight the implications of a resilience framework for practice and encourage a complementary appreciation for the application of resilience-based practice to the evaluation and refinement of resilience theory. Finally, we discuss several impediments to effective translations between theory and practice, and provide suggestions for surmounting obstacles to a mutually informing relation between the science of resilience and the practice of positive psychology.

### A RESILIENCE FRAMEWORK

The resilience framework emerged within a broader transformation in theory and research on psychopathology that created developmental psychopathology (Cicchetti, 1984; Masten, 1989; Sroufe & Rutter, 1984). A core tenet of developmental psychopathology is that investigations of positive and negative adaptation are mutually informative (Sroufe, 1990). A resilience framework is consistent with this perspective in its assertion that the study of developmental processes under extraordinary conditions can inform our understanding of both typical and atypical development.

Scholarly attention to resilience in the late twentieth century rekindled interest in positive psychology because these investigators studied, wrote, and spoke about the human capacity for positive adaptation and achievement in the face of adversity (Masten, 2001). The resilience perspective stressed the importance of *promoting competence* through positive models of intervention and change, in addition to reducing or ameliorating the effects of adversity on children. Thus, these early pioneers encouraged greater attention among researchers and practitioners to positive models and processes, and to the strength of individuals, families, communities, and societies.

#### KEY CONCEPTS FOR UNDERSTANDING RESILIENCE

The study of risk and resilience sprang from the observation that some individuals in populations exposed to incontrovertible adversity nevertheless achieve positive developmental outcomes. The lives of these individuals exemplify patterns of resilience reflecting "the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances" (Masten, Best, & Garnezy, 1990, p. 426). Resilience is predicated on exposure to significant threat or adversity, and on the attainment of good outcomes despite this exposure (Luthar, Cicchetti, & Becker, 2000). Thus, identifying resilient patterns of adaptation requires the operationalization of several related concepts, including competence, adversity, asset, and risk. Contemporary definitions of these concepts reflect the rising prominence of developmental systems and organizational theories of development in developmental psychology generally (Lerner, 1998), and resilience theory specifically (Luthar, 2003).

*Competence and Adversity* Within a developmental perspective, *competence* is conceptualized as the adaptive use of resources, both within and outside the organism, to negotiate age-salient developmental challenges and achieve positive

outcomes (Waters & Sroufe, 1983). In studies of resilience, successful outcomes are often evaluated in terms of a track record of success in the age-salient developmental tasks that adults in a particular society, historical time, and culture expect children of a given age period to achieve (Masten & Coatsworth, 1998). Thus, in a Western context, a competent infant may be one who develops a secure attachment in the early caregiving relationship, a competent adolescent may be one who succeeds in the areas of academic achievement and positive peer relationships, and a competent adult may be one who successfully transitions into a romantic partnership and gainful employment.

*Adversity* refers to negative experiences that have the potential to disrupt adaptive functioning or development. Adverse experiences may operate by temporarily overwhelming all the adaptive resources of an individual, by damaging the adaptive capacity of an individual in the short or long term, or by undermining the development of an individual's adaptive systems, with lasting consequences. Adversity may be acute (e.g., natural disaster) or chronic (e.g., child neglect), arise within the environment (e.g., interparental conflict, political violence) or within the person (e.g., brain tumor), but on some level it has the potential to disrupt development and thwart positive adaptation.

*Assets and Risks* In the general population, assets (resources) and risks are associated with positive and negative outcomes, respectively. *Assets* refer to resources in a population that enhance the likelihood of positive developmental outcomes independent of risk status (e.g., good schools, problem-solving skills, family cohesion). Assets can take the form of human capital (i.e., resources within the person) or social capital (i.e., resources stemming from connections and relationships with other people and social organizations). *Risks* refer to events or conditions that increase the probability of an undesired outcome in a group of people with the risk factor (e.g., premature birth, impoverished neighborhood, lead exposure). A risk factor generally predicts worse outcomes in a group of individuals who have the risk factor, but not necessarily for every individual in the group. For example, very low birth weight is generally associated with a variety of developmental problems, but many children go on to develop well despite a history of low birth weight.

Assets and risks rarely occur in isolation in the real lives of children. They tend to pile up, leading to the idea of *cumulative risks or assets* (Seifer & Sameroff, 1987). Risks and assets may counterbalance each other, such that assets may compensate for risks, yielding a kind of *net risk*. As cumulative risk or adversity levels rise, positive outcomes tend to decrease in frequency. Yet, even among individuals whose lives are marked by many risks and adversities, outcomes are often diverse, with some individuals exhibiting positive adaptation. The challenge to account for such variation has led to more complex, interactive models of resilience that emphasize vulnerability and protective processes in development.

*Protective Processes and Vulnerabilities* At the level of the individual, protective and vulnerability factors *moderate* the effect of adversity on developmental outcomes. Whereas an asset has a comparably beneficial effect in both high- and low-risk environments, a *protective factor* is disproportionately salient under conditions of adversity. For example, active parental monitoring and restrictive rules may buffer a young adolescent from the risks in a dangerous neighborhood, but such

monitoring is not necessary in a safe neighborhood and may even be detrimental to development (Baldwin, Baldwin, & Cole, 1990). A *vulnerability factor* is associated with negative outcomes, particularly when the individual is exposed to adversity. For example, children who encounter frightening and intrusive caregiving in infancy may fail to develop an organized pattern of relating to the caregiver (i.e., disorganized attachment). In the face of future trauma, children with a history of disorganized attachment may be especially susceptible to developing dissociative symptoms (Liotti, 1992). Thus, disorganized attachment is a *vulnerability factor* for dissociation because its negative influence is magnified in the context of adversity. Protective and vulnerability factors represent interaction effects whereby a given factor has an especially beneficial, or harmful, influence under high-risk conditions. Identifying assets, risks, protective factors, and vulnerabilities is an important first step in understanding resilience. However, to apply a resilience framework in practice or policy, we need to know much more about the *processes* involved in resilience.

#### PROTECTIVE FACTORS: WHAT MAKES A DIFFERENCE?

Decades of research on a variety of at-risk populations have converged on several specific factors that are consistently associated with resilient patterns of adaptation. As summarized in Table 32.1, a subset of assets and protective factors has coalesced with marked stability over time. Early research identified three categories of resources that protect children in the face of adversity: (1) child characteristics, (2) family characteristics, and (3) community characteristics (Garmezy, 1985; see also Anthony & Cohler, 1987; Rolf, Masten, Cicchetti, Neuchterlein, & Weintraub, 1990). At the level of the child, for example, children who are able to develop flexible coping strategies and a locus of control that allows them to attribute negative experiences to external factors, while retaining the capacity to value their own strengths and assets, fare better in the face of adversity. Intelligence and a sense of humor are associated with flexible problem-solving skills, as well as with academic and social competence. Children who thrive in the face of adversity also tend to be socially responsive and are able to elicit positive regard and warmth from their caregivers. At the level of the family, children who attain positive developmental outcomes emerge from warm, sensitive, and cohesive intrafamilial exchanges and similarly nurturant kinship networks. Protective resources in the community consistently derive from high-quality educational milieus, nurturing and attentive teacher-child relationships, safe housing and neighborhoods, and available adult models of prosocial involvement (e.g., mentors). Surprisingly, though a similar list of assets and protective factors has emerged from diverse studies of risk and resilience, efforts to elucidate the processes that underlie resilience have only recently begun.

#### ORDINARY ADAPTATION DESPITE EXTRAORDINARY CIRCUMSTANCE: A DEVELOPMENTAL MODEL OF RESILIENCE

Contemporary resilience research departs from a hard-earned recognition that there is no single pattern of resilient adaptation, and that multiple mechanisms and processes are involved in shaping these developmental pathways. Consistent with the tenets of developmental psychopathology, resilience researchers recognize that

**Table 32.1**  
Examples of Assets and Protective Factors That Promote Positive Development

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**Policy**

- Policies that promote universal access to resources that facilitate positive adaptation
  - Preventive healthcare
  - Adequate nutrition
  - Affordable, safe housing
  - Prevention of, and protection from, political violence and persecution
  - Environmental protections (e.g., lead paint, pollution)
  - Equal access to economic and political sources of power and opportunity

**Community**

- Safe neighborhoods
  - Low community violence
  - Absence of drug trafficking
- Connections to prosocial organizations
  - Boys' and girls' clubs
  - Libraries
- Connections to competent, caring, and prosocial adult models (e.g., mentors)

**Education**

- High-quality schools
  - Attentive, trained, and compensated teachers
  - After-school programs
  - School recreation resources (e.g., sports, music, art)

**Family**

- Stable and organized home environment
  - Close relationship to a responsive caregiver
  - Positive sibling relationships
  - Supportive kinship networks
- Socioeconomic advantage
- Faith and religious affiliation

**Individual**

- A history of positive adaptation
    - Secure attachment in infancy
    - Positive peer relationships
    - Effective emotional and behavioral regulation strategies
  - Positive view of self (e.g., self-confidence, self-esteem, self-worth, hopefulness)
  - Features valued by society and self (e.g., appealing personality, talents)
  - Good intellectual and problem-solving skills
- 

"mechanisms involved in causation might entail dynamic processes operating over time, that indirect chain effects might often be present, and that there might be several different routes to the same outcome" (Rutter & Sroufe, 2000, p. 268). Increasingly, researchers are attempting to identify developmental processes that underlie resilient patterns of adaptation.

Process-oriented studies of resilience consistently implicate fundamental adaptational systems (e.g., attachment and parenting quality, mastery-motivational systems, emotional and behavioral self-regulatory systems) underlying resilient patterns of adaptation (Yates, Egeland, & Sroufe, 2003). These data support recent interpretations of resilience as a reflection of ordinary adaptive processes operating normally under extraordinary conditions (Masten, 2001). An important corollary of this proposition is that adversity will cause the greatest and most enduring damage if it harms or undermines the development of these core systems.

If the road from adversity to maladaptation is mediated by the disruption of basic adaptational processes, the road from adversity to positive developmental outcomes is mediated by factors that preserve, scaffold, or restore these systems (Egeland, Carlson, & Sroufe, 1993; Masten & Coatsworth, 1998). Resilience is not a trait, nor is it a cause of children's faring well in the face of adversity. Rather, resilience is what happens when adaptive systems that have developed in the lives of individual children, within themselves, their relationships, and their environments, work effectively to maintain or restore competence in development. These basic systems have evolved in the course of biological and cultural evolution to protect and promote human development and survival.

Process-oriented models of resilience are especially powerful for two reasons. First, they are more intellectually productive than earlier static trait models because they encourage the elucidation of causal mechanisms in the development of at-risk children. As Rutter (1990) observed:

We need to ask why and how some individuals manage to maintain high self-esteem and self-efficacy in spite of facing the same adversities that lead other people to give up and lose hope. How is it that some people have confidants to whom they can turn? What has happened to enable them to have social supports that they can use effectively at moments of crisis? Is it chance, the spin of the roulette wheel of life, or did prior circumstances, happenings, or actions serve to bring about this desirable state of affairs? (p. 183)

Second, a better understanding of causal processes in resilient adaptation will contribute to effective practice and policy programs. Identifying causal processes in resilience is essential to effective practice because interventions must manipulate causal processes to effect desired change (Cicchetti & Hinshaw, 2002; Masten & Coatsworth, 1998).

#### RECIPROCITY BETWEEN RESILIENCE RESEARCH AND THE PRACTICE OF POSITIVE PSYCHOLOGY

The study of positive psychology encourages a shift in emphasis from a preoccupation with the reparation of defect to the building of defense, from a focus on disease and deficit to the strength and virtue in human development (Seligman, 2002; Seligman & Csikszentmihalyi, 2000). Traditional disease models do little to advance this agenda because they emphasize abnormality over normality, maladjustment over adjustment, sickness over health. Although changing gradually, disease models still locate disorder within the individual, rather than within the transactional exchanges between the individual and many other systems at multiple levels



(e.g., family, peers, school, media, neighborhood) that could play a role in adaptive and maladaptive developmental pathways. With a growing body of research specifying the processes by which children negotiate salient developmental challenges despite adversity, the resilience framework is ripe for an active role in the applied practice of positive psychology. In turn, the most powerful tests of protective processes will derive from studies of prevention and intervention efforts that aim to alter the course of development.

#### TRANSLATING RESILIENCE RESEARCH INTO PRACTICE

Prevention and intervention efforts are tools for preventing deviations from adaptive developmental pathways *and* for righting or redirecting maladaptive developmental courses toward more positive outcomes. Resilience research can inform prevention science across multiple levels by clarifying program goals, identifying theoretical variables expected to bring about positive change, guiding the measurement of target variables, and providing a conceptual framework in which findings may be interpreted. Thus, a resilience framework can inform the development, implementation, and evaluation of prevention, intervention, and policy programs to promote positive adaptation among at-risk populations in important ways (Cicchetti & Garmezy, 1993; Cicchetti, Rappaport, Sandler, & Weissberg, 2000; Luthar & Cicchetti, 2000).

*Competence-Promoting Interventions* Studies of resilience validate earlier calls to articulate the goals of intervention efforts in terms of promoting health, competence, and wellness, in addition to reducing illness and remediating deficiencies (Cowen, 1985; Strayhorn, 1988; Wyman, Sandler, Wolchik, & Nelson, 2000). A resilience framework recognizes that children possess the potential for positive development if the relational, familial, communal, structural, and sociocultural contexts within which their development is embedded adequately scaffold the development and operation of normative adaptational processes. A competence focus shifts emphasis in intervention toward the promotion and protection of basic adaptational systems that provide the individual with resources to meet the developmental expectations of a given society (Masterpasqua, 1989). Although competence-based interventions continue to address specific threats and vulnerabilities that confer risk for particular problems, they also target desired developmental outcomes and the processes likely to produce them.

*Multifaceted Interventions* Cumulative models of risk and protection support interventions that ameliorate multiple risks and promote successful adaptation in several settings (Masten & Wright, 1998; Wyman et al., 2000; Yoshikawa, 1994). A resilience-based approach to practice emphasizes multiple goals, including the amelioration of extant problems, the prevention of new problem development, the prevention of a decline in existing skills and resources, and the promotion of new competencies (Coie et al., 1993). The realization of these varied goals necessitates collaboration among multiple levels of ecological influence ranging from family-focused service provision, to community involvement, to social policy.

*Context-Sensitive Interventions* Practical applications of a resilience framework recognize that the effectiveness of a particular intervention will be influenced

by the psychosocial context and the nature of the child. The influence of a given factor as either protective- or vulnerability-enhancing is moderated by the context in which it is embedded and the developmental stage at which it is introduced. In Ferguson's (2001) ethnographic study of African American schoolboys, a teacher aptly illustrates the contextual specificity of risk and protection when she observes of one boy:

He's very loud in the classroom, very inappropriate in the class. He has a great sense of humor, but again it's inappropriate . . . But other than that [dry laugh] he's a great kid. You know if I didn't have to teach him, if it was a recreational setting, it would be fine. (p. 92)

The salience of different contexts shifts over development as do individual vulnerabilities and the significance of particular assets and risks. Ultimately, what works for one group of children in a particular context may not work for a similar group of children in a different context, or for different children in the same context. Adaptive outcomes at given stages of development derive from transactional exchanges between the child and her or his environment. Over time, the salient components of that environment evolve from an exclusive emphasis on the parent-child relationship to other influences such as peer networks, school settings, and the broader community (Carlson & Sroufe, 1995). Effective interventions target developmental contexts that are salient for a particular group or subgroup of at-risk individuals.

*Empowerment Models of Intervention* In a resilience framework, the promotion of competence involves the strengthening of individuals, as well as of families, communities, and broader social contexts (Cowen, 1991). Moreover, this approach to practice recognizes that powerful sources of healing, strength, restoration, and regeneration are embedded within complex external contexts, not only within individuals. Resilience-based approaches to prevention are consistent with empowerment models, which encourage the incorporation of local assets and resources into practice protocols (Wiley & Rappaport, 2000). This approach recognizes:

If the "golden child" stands in the ghetto, it is because the ghetto is not a purely negative environment. It is, instead, a rich and complex mixture of family dysfunction and family support, of the breakdown of values and of strong traditions, of both anti-social and prosocial attitudes and beliefs. (Beauvais & Oetting, 1999, p. 102)

It is critical that researchers and practitioners understand that every environment consists of a complex array of potential assets, risks, protections, and dangers. Within a resilience framework, successful prevention and intervention programs direct attention beyond deficits in need of restorative attention to the strengths and potential assets in the child, family, and community (Iscoe, 1974; Luthar & Cicchetti, 2000; Masterpasqua, 1989).

Risk and resilience are operationalized in relation to culturally prescribed expectations for normative behavior. Therefore, it is important to clarify the ways in which adversity and competence vary across different ecological and cultural contexts. Programs that incorporate culturally congruent values, norms, and resources

will be more readily accepted, used, and integrated into the community structure (Black & Krishnakumar, 1998; Cicchetti et al., 2000; see also Sagiv, Roccas, & Hazan, Chapter 5, this volume). A resilience framework encourages researchers and practitioners not to speak on behalf of disadvantaged youth and families, but to facilitate the power of these groups and communities to speak for themselves (e.g., through focus groups and community collaboration).

*Life-Span Approaches to Intervention* Applied positive psychology is likely to be most efficacious if interventions are initiated early and maintained over time. Positive adaptation in one developmental period provides the child with a foundation that enables successful encounters with subsequent stage-salient challenges (Sroufe, Egeland, & Kreutzer, 1990; Waters & Sroufe, 1983). Conversely, maladaptation at a prior stage of development may compromise the child's capacity to negotiate future developmental challenges successfully. Thus, developmental patterns are magnified across time by virtue of the coherence with which both maladaptive and adaptive behaviors are organized. A corollary to this principle is that the longer an individual is on a particular developmental pathway, the less likely it becomes that he or she will deviate from that course (Sroufe, 1997).

The practical implications of a developmental understanding of resilience are twofold. First, early intervention efforts may exert a disproportionate influence on later development because they can prevent initial derailments from positive adaptive pathways. Second, children require ongoing support, opportunities, and resources to thrive. Therefore, it is unlikely that one-shot interventions in early childhood will ensure positive adaptation over time, particularly if applied to problems that do not arise in early childhood (e.g., AIDS prevention). Interventions must focus on the initiation of positive developmental pathways, as well as on their maintenance over time. Early competence promotion efforts scaffold success that, in turn, provides a platform on which future developmental achievements are built. Yet, resilience at one point does not guarantee resilience at another. Undoubtedly, early intervention is important and powerful, but development can go awry at any time. A resilience framework justifies interventions across the developmental continuum, not just in early childhood. As discussed in the next section, a resilience framework also offers guidance as to when intervention efforts may prove most efficacious.

*Developmental Transitions as Intervention Targets* As suggested by developmental theory, organisms may be particularly sensitive to outside influence during major developmental transitions (Lerner, 1998), which may include transitions in context (e.g., school entry), in the self (e.g., puberty), or in social expectations (e.g., adolescence and autonomy). During developmental transitions, the individual undergoes a major reorganization and integration of adaptive capacities, such that new skills are more likely to be incorporated into (or separated out from) the individual's adaptive repertoire (Luthar & Cicchetti, 2000). Thus, efforts to induce positive developmental change may be most potent if implemented during periods of developmental reorganization and integration.

The emergent literature on *turning points* as conduits of resilient adaptation also speaks to the enduring capacity for change throughout development (Rutter, 1996; Wheaton & Gotlib, 1997). Turning point experiences induce lasting alterations (either positive or negative) in a developmental pathway. Lives can take

dramatic turns at any point in development, for example, as a result of trauma, a developmental crisis, a conversion experience, or a significant change in physical appearance. Individuals, families, and communities who are destabilized by crisis may be more open to intervention-induced transformational change. Interventions, particularly those that target periods of developmental reorganization, may provide powerful inducements to change, creating turning point experiences. For example, Rutter suggests that interventions in the first five years of life may provide positive turning point opportunities because this period is especially sensitive to the influence of modifiable protective processes (e.g., high-quality caregiving or education). However, while recognizing the value of early intervention efforts for later positive adaptation, a resilience framework also highlights later periods of developmental reorganization (e.g., transitions into adolescence or adulthood) as important opportunities for effective intervention.

*Summary* Resilience research has the potential to inform and foster practical applications of positive psychology by highlighting how interventions may operate as protective processes in development. A resilience-based approach shifts the emphasis of intervention research toward primary prevention and competence promotion, in addition to symptom alleviation and disease mitigation. Resilience-based approaches to intervention and prevention complement extant disease/deficit models because they direct practitioners toward mechanisms that may mediate positive developmental change. It is here, perhaps, that we can see the reciprocal connection between developmental psychopathology and resilience theory in that both emphasize the mutually informative relation between typical and atypical development, between the promotion of health and the prevention of disease.

A resilience framework makes explicit guiding principles for practice that effective practitioners implicitly know and use. For example, many of the implications suggested by a resilience framework (e.g., integrating interventions into the community infrastructure; using comprehensive, multilevel intervention approaches; facilitating community participation to promote community capacity building) are subsumed by extant approaches to community intervention (see Altman, 1995, for discussion). In this chapter, we begin to clarify and specify these principles to render them more accessible for the development and training of a new generation of practitioners. Applying a resilience framework to practice will inform future intervention and prevention efforts by emphasizing the value of competence promotion, cumulative protection, contextual specificity and sensitivity, empowerment, and the ongoing garnering of resources to foster positive adaptation among disadvantaged groups.

#### TRANSLATING RESILIENCE PRACTICE INTO RESEARCH

Optimistic expectations that advancing knowledge about resilient adaptation would contribute to the improvement of interventions that support positive adaptation in adverse conditions have, in large part, fueled the study of resilience. At the same time, however, evaluations of interventions designed to foster resilience offer a powerful way to test causal hypotheses about resilience, and development in general. Scientific progress emerges from the bidirectional influences of theory

and practice in a recursive process of theory formulation, testing, data collection, and theory revision (Sameroff, 1983). Theories and conceptual frameworks are often inspired initially by dramatic cases and observations in applied psychology. Systematic research then yields theories and data that can be translated back into practice. Although prevention scientists are increasingly incorporating resilience theory into their missions and models of intervention, the complementary path from practice to theory has been traversed all too infrequently, remaining largely uncharted, since the earliest observations of resilience in development (Howe, Reiss, & Yuh, 2002). In this section, we discuss the role of theoretically guided interventions and carefully conducted evaluations as opportunities to test hypotheses about risk, protection, resilience, and development.

*Case Studies* The origin of resilience theory in naturalistic observations of positively developing at-risk youth aptly illustrates how practice can inspire and inform resilience research. Informal translations from dramatic case studies of resilient patterns of adaptation to the beginnings of a resilience framework constituted an early form of practice-to-theory influence. Since this time, however, the translation from practice to research has steadily slowed, and the transition to more advanced levels of practice-to-theory translation has not yet materialized.

*Theory-Testing Interventions* Just as improved developmental theories yield more effective interventions, so, too, do theory-testing interventions foster more comprehensive and better informed theories. However, theory-testing interventions must be carefully designed and executed if they are to prove fruitful for resilience research in particular, and the domain of positive psychology broadly. As suggested by Coie and colleagues (1993), interventions "should be guided initially by developmental theory and yield results that reflexively inform and revise the original theory" (p. 1017). All too often, translations from practice to theory derive from overly simplistic, premature conclusions drawn from intervention practices with little or no empirical validation. For example, Hinshaw (2002) observes that researchers often commit a treatment-etiology fallacy, in which they make an erroneous assumption that the mechanism of treatment action (e.g., increasing income) causes observed change in the outcome of interest (e.g., better school attendance). In fact, Hinshaw notes, such relations may be mediated by other factors (e.g., reduced parental conflict due to less financial strain). Understanding causal processes that underlie positive change in children's lives will ensure that our intervention efforts are efficient and effective.

The most convincing evidence for theory comes from studies that demonstrate that changes in a hypothesized causal process (e.g., parenting quality) occur as a result of intervention (e.g., parent training) and are associated with corresponding changes in the outcome of interest (e.g., declining antisocial behavior). Studies that demonstrate the mediating function of conceptually predicted variables (e.g., improved parental discipline practices) in the relation between intervention and outcome (e.g., parent training and reduced antisocial behavior) yield important data for theory testing. Research must establish that the intervention can change both the proposed mediator *and* the outcome of interest. Further, theory confirmation requires that improvements in the outcome variable be explained, at least in part, by changes in the mediator.

*Evaluation Research* If practice is to inform and evaluate theory, it must, in its initial conceptualizations, be guided by theory. Similarly, if resilience theory is to inform effective practice, it must be guided by the lessons learned from careful evaluations of extant practice programs. Carefully conducted evaluation research with randomized group assignment and appropriate comparison groups will allow investigators to experiment with altering the course of human development in the context of identifiable and quantifiable adversity, and to evaluate causal hypotheses about resilience and development (Cicchetti & Toth, 1992; Kellam & Rebok, 1992; Luthar & Cicchetti, 2000; Sandler, Wolchik, MacKinnon, Ayers, & Roosa, 1997).

### BUILDING CONNECTIONS AMONG SCIENCE, PRACTICE, AND INDIVIDUALS

The mutually informing relation between science and practice has been articulated by many scholars (Cicchetti & Hinshaw, 2002; Masten, 1989; Rutter & Sroufe, 2000; Sameroff, 1983). However, translations of this appreciation into real-world implications for practice and theory have been slow to develop. Moreover, there remains little recognition of the valuable contributions that community-based resources and leaders may offer to intervention protocols and research.

In this chapter, we have outlined the implications of resilience theory for enhancing the well-being of at-risk populations. We have argued that practical applications of resilience theory can advance our knowledge of protective processes in adverse conditions. Finally, we have suggested that both practice and theory will be enhanced by the adoption of culturally sensitive, empowerment-oriented methods. As observed by Rutter (1993), however, "knowing what end you want to bring about and knowing *how* to achieve that objective are two very different things" (p. 630, *original italics*). In this final section, we offer suggestions to help researchers, practitioners, and other stakeholders (e.g., children, families, teachers) foster effective translations among resilience research, the practice of positive psychology, and, by extension, the well-being of at-risk youth, families, and communities.

#### COLLABORATION

Ultimately, "a system dependent on outside experts, who prescribe culturally and ecologically irrelevant mental health services, has more risks than benefits for vulnerable children" (Fantuzzo & Mohr, 2000, p. 346). The connection between science and prevention must be forged through collaborative endeavors involving scientists, practitioners, and community members from diverse settings (Cowen, 1991). However, fostering these relationships remains a formidable challenge.

Traditionally, practitioners and researchers train in isolation from one another. Growing efforts to bridge this chasm through scientist-practitioner training programs and collaborative learning environments represent one avenue toward fostering connections between science and practice. However, fundamental differences remain between scientist and practitioner paradigms. For example, scientists operate on extended time schedules with rigid adherence to protocols and methods. In contrast, practitioners typically focus on here-and-now solutions with little patience for the time and rigidity required to empirically validate applied work through systematic research and evaluation. More challenging still are the barriers that prevent

scientists and practitioners from connecting with the individuals they seek to understand and assist.

The challenge to transcend longstanding barriers among scientists, practitioners, and community stakeholders is formidable, but much can be learned from exemplar projects that have successfully moved toward collaborative and integrative models of research and practice. The Child Development-Community Policing (CD-CP) Program is an excellent example of collaborative efficacy (Marans, Berkowitz, & Cohen, 1998). In this program, the Yale University Child Study Center combined forces with the New Haven Department of Police Service to improve service delivery to child perpetrators, witnesses, and victims of violent crime. This collaborative approach to practice is now being replicated in several communities across the United States. Programs such as the CD-CP recognize that no single group of professionals is able to address the multiple needs of high-risk children and families (Marans et al., 1998).

#### METHODOLOGICAL FIDELITY VERSUS ECOLOGICAL VALIDITY

One of the quandaries that researchers and practitioners face is the invariable tradeoff between methodological fidelity and ecological validity (Sandler et al., 1997). A resilience framework recognizes that the importance of methodological fidelity and manualized intervention strategies is tempered by the need for bottom-up development efforts that depart from a collaborative relationship with the community to ensure cultural and ecological validity (Cicchetti et al., 2000). Methodologically sound evaluation research may help resolve the fidelity versus validity dilemma. Evaluation research may distinguish the core constituents of an intervention that require methodological fidelity to ensure efficacy from those components that may be modified to fit the needs of a particular population without compromising effectiveness.

#### CONCEPTUAL CLARIFICATION

A competence-promotion agenda requires consistent definitions of adversity and competence, as well as clear specification of target variables. Many studies assume risk status without verifying the magnitude of risk exposure (Richters & Weintraub, 1990). Similarly, the identification of competence and, by extension, of resilient patterns of adaptation, depends on how positive adaptation is operationalized. Given the multidimensional nature of competence, it is important to specify the domains to which we are referring when we label various states of adaptation as positive (or, in the context of adversity, resilient; Luthar et al., 2000). Researchers and practitioners must also clearly operationalize specific factors targeted by a given study or intervention. Perhaps most importantly, however, these target variables must encompass sources of protection and vulnerability that are relevant to the population of interest.

#### METHODOLOGICALLY SOUND EVALUATION RESEARCH

The growth in research on risk and protective factors has contributed to preventive interventions aimed at enhancing adaptation under conditions of adversity. However, questions remain as to how and why they work, for whom they are most

effective, and to what extent their positive influences endure over the developmental course (Sandler et al., 1997). Although applying a resilience framework to intervention and prevention allows for the integration of theoretically modifiable mediators into intervention protocols, these interventions must be carefully evaluated to ascertain their efficacy and to test developmental hypotheses (Mrazek & Haggerty, 1994).

Evaluation research fosters increased accuracy, efficiency, and efficacy in both science and practice. First, evaluation research provides important scientific information about mediating and moderating processes in resilience. Thus, evaluation research offers a tool with which scientists can test causal hypotheses about adaptive processes in high-risk environments. Second, empirically sound efficacy evaluations inform cost-benefit analyses that encourage and justify federal and state expenditures for practical applications of positive psychology (Luthar & Cicchetti, 2000). Finally, evaluation research may reveal moderators of treatment effects and provide insight into subgroups of individuals who may respond more or less favorably to a particular intervention (Hinshaw, 2002). In these varied ways, evaluation research has the capacity to benefit all stakeholders in the process of promoting competence among children, families, and communities.

#### PROTECTION AND VULNERABILITY AS UNIVERSAL PROCESSES

A resilience framework recognizes that all communities, families, and individuals are composed of multiple assets, risks, protective factors, and vulnerabilities that interact and transact to shape the course of development. Still, classist, racist, and gendered assumptions direct current research allocation either toward or away from needy populations, depending on the issue. We must attend to all children, including those in populations that have been historically viewed as low risk. Children from groups that are traditionally considered "privileged" may exhibit substantial psychopathology and maladaptation in response to significant life adversity (Luthar & D'Avanzo, 1999). Similarly, all youth, even those who appear competent at a given time, require guidance and nurturance to achieve their potential.

The recognition that all persons encounter a unique compilation of assets and risks may advance our understanding of resilience. Studies including low-risk comparison groups (rather than just adaptive and maladaptive groups within a high-risk sample) are needed to evaluate differences between competent (i.e., low adversity and positive adaptation) and resilient groups (i.e., high adversity and positive adaptation). Comparisons of resilient and competent individuals who differ only with respect to their prior adversity exposure are rare, but such analyses will allow us to better understand the processes underlying resilience.

#### CAVEATS

A competence-based approach to practice and research avoids controversial taxonomic definitions of health and illness because it negates popular misconceptions of resilience as a pick-yourself-up-by-the-bootstraps trait. Thus, it provides a less pejorative and more clinically relevant system of practice (Masterpasqua, 1989). Still, resilience has the potential to become yet another marker by which people are judged as fit or unfit, good or bad, special or banal. We must recognize that



resilience reflects basic developmental processes operating normally under extraordinary circumstances, not individual strength or deficiency.

Mounting evidence indicates that interventions can effect positive change in the lives of young people. We must be cognizant, however, that applying a resilience framework to practice carries the risk of suggesting that, if given appropriate services, children can surmount adversity and achieve resilient adaptation. Worse yet, some policymakers may erroneously conclude that resilience arises from within the child and use this misconception to justify the withdrawal of social welfare services. Interventions may foster positive developmental trajectories in the context of adversity, but no intervention can make a child *resilient*. There is no such thing as the resilient child. We must not revert to the conceptualization of decades past when terms such as *invulnerability* gained popularity at the expense of vulnerable youth.

As researchers, clinicians, parents, policymakers, and educators, we stand in awe of individuals who appear to overcome seemingly insurmountable odds, though research shows that they do not rise on their own. The urge to allow the remarkable capacities for human adaptation under adversity to distract us from the plight of children living in high-risk environments is tempting. However, the capacity for children to overcome adversity under the right circumstances does not justify either our continued collusion in the perpetuation of risk, or our omission of needed protections and supports for youth. Resilience is not a characteristic of the individual; it is a developmental process that is fostered or thwarted by the scaffolding provided by the individual's sociocultural and structural contexts, and ensuing transactions between the individual and multiple levels of ecological influence (Egeland et al., 1993; Luthar et al., 2000; Masten, 2001; Yates et al., 2003).

## CONCLUSION

Positive psychology emphasizes the study of human strength and virtue with the aim of understanding and facilitating positive developmental outcomes (Seligman & Csikszentmihalyi, 2000). A resilience framework offers a powerful tool for realizing the goals of positive psychology through research and practice because it justifies prior calls for wellness enhancement and competence promotion (Cicchetti et al., 2000; Cowen, 1991). This chapter has traced the origin of contemporary resilience theory and research from its roots in case studies and construct definitions to its current emphasis on developmental and interactive processes that highlight the reciprocal relation between the science and practice of resilience.

A resilience framework offers compelling implications for the design, implementation, and evaluation of intervention efforts with high-risk youth. Contemporary interventions routinely incorporate competence promotion into their stated missions (Masten, 2001). Many programs strive to enhance the asset base of children, as well as to reduce their adversity exposure. Evaluation outcomes often include measures of positive adaptation in addition to more traditional measures of distress and psychopathology. These changes are apparent in recent descriptions of contemporary intervention models, such as "cumulative competence promotion and stress protection" (Wyman et al., 2000). However, as efforts to promote the health and competence of future generations expand, they must be met with commensurate evaluative research to ascertain the specific features

of interventions that are effective and the validity of the theoretical hypotheses on which they were grounded.

Self-righting tendencies are a central feature of all living organisms (Sameroff & Chandler, 1975). As such, resilience, or at least the striving for it, is an expected feature of development in high-risk environments. Indeed, the absence of positive strivings among children, regardless of risk status, is atypical. Resilience describes patterns of positive adaptation that reflect the normative operation of fundamental developmental processes under nonnormative conditions. The enduring impact of adversity on development is mediated by disruptions in basic adaptational systems; therefore, interventions must aim to protect, restore, redirect, or reactivate such systems.

Resilience-informed practice recognizes that there is more to helping children than treating problems. As Seligman and Csikszentmihalyi (2000) have argued: "It is about identifying and nurturing their strongest qualities, what they own and are best at, and helping them find niches in which they can best live out these strengths" (p. 6). Based on a comprehensive science of adaptation and development, a resilience framework transcends pathology-focused models to promote basic adaptational systems that enable children to achieve positive developmental outcomes.

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