Resilience Research for Prevention Programs

Competence and Resilience Research: Lessons for Prevention

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What works in prevention? This is the critical question substance abuse prevention programs face. Such inquiry invites new research agendas and leads to effective prevention programs. Working together, researchers and practitioners are discovering the answers. The success of this collaboration depends on admitting forthrightly what is not known. Knowing enough to know what is unknown about prevention is essential.

Eminent resilience researcher Ann Masten from the University of Minnesota s Institute for Child Development has spent a lifetime researching and writing about resilience. She joined forces with colleague J. Douglas Coatsworth from the University of Miami s School of Medicine to discover what the vast bodies of research on both resilience and competence offer the field of prevention. Their exhaustive synthesis, The Development of Competence in Favorable and Unfavorable Environments: Lessons From Research on Successful Children published in a 1998 issue of *American Psychologist* outlines lessons to guide policy and prevention program planning.

Defining Prevention and Intervention

In their study, Masten and Coatsworth define intervention as a protective process by which one deliberately attempts to steer development in a more favorable direction. Further, Prevention at its best represents both an effort to foster competence and to prevent problems (p. 216).

According to their study, Converging evidence shows the same powerful adaptive systems operate in both favorable and unfavorable environments to protect the development of children (p. 205). In other words, the presence or absence of risk alone does not determine youth outcomes.

Evolving Research

In tracing the history of the relevant research, Masten and Coatsworth note that prevention strategies have evolved from risk-focused to resource-focused to process-focused. The initial research, competence promotion studies, emphasized building singular or core sets of skills [assertiveness, problem solving, resistance and life skills]   The consequences for adjustment [caused by these programs] were small in magnitude when it came to reducing youth risk behavior (p. 214). Botvin s *Life Skills Training* is one example of this approach to prevention.

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Later research on competence-enhancement programs shifted in focus and scope to more developmental, ecological and multicausal models. These resource-focused efforts included early intervention programs (Perry Preschool Project and Head Start), efforts to enhance cognitive and social competence (Social Development Project), and programs that changed family interactions (Parent-Child Development Center). These strategies can have long-term cumulative protective effects, resulting in prevention of antisocial behavior and delinquency (pp. 214-215).

Masten and Coatsworth suggest the newest and least understood but most promising prevention initiatives yet to be explored are process-focused:

 We still lack data on specific effects We have little understanding of the process by which change and protection occur. Parenting, attention regulation, and peer affiliations all appear to influence the course of antisocial development, and interventions have been designed to alter their effects The full potential of intervention, however, will not be realized until there is greater integration of what we know about the normal development of competence, the development of psychopathology, and resilience (p. 215).

In the future, process-focused studies may explore brain development, self-regulation systems, culture, trauma and adversity exposure. Longitudinal studies and multi-disciplinary research may make it possible to integrate biological, psychological, anthropological and sociological perspectives on adaptation and development (p. 216). Fiscal constraints and the narrow scope of research and prevention programs have generally prevented researchers and practitioners from implementing and studying complex and costly comprehensive prevention programs.

Pinpointing Unknowns in Resilience-Based Prevention

Masten and Coatsworth s study serves to show the evolving nature of our understanding of resilience, especially in terms of its causes and consequences. Although the research team presents characteristics of resilient children and adolescents gleaned from the literature, Masten and Coatsworth say these qualities are only known to be associated with resilience and are not necessarily causal influences. These attributes, in fact, could be consequences of success rather than causes of it. This distinction is critical for intervention [i.e., prevention], because to effect change, one must in some way manipulate a causal process (p. 213).

Michael Rutter (1987) also speaks to the unknown nature of resilience and specifically protective mechanisms. These can include thinking processes operating within the individual that may make a life experience seem hopeful or hopeless, healthy or unhealthy, stressful or productive. The quality of self-regulation of attention, emotion and behavior; parent-child attachment relationships; and good cognitive development or intellectual functions (according to Masten and Coatsworth, the three most important human adaptive systems in fostering and protecting development in all environments) all involve the process of thinking.

Understanding and distinguishing existential (internal) and phenomenological (external) resilience processes and mechanisms might, for example, appropriately be included in future research agendas to discover what works in prevention and how mental health and well-being are realized from the inside out (Marshall, 1998; Pransky, 1998; Mills, 1995).

Masten and Coatsworth note, Children who have good internal and external resources tend to get off to a good start in school, become connected to normative peers, maintain positive self-perceptions, and face the developmental tasks of adolescence with the advantages of success in these domains (p. 216). The researchers also

acknowledge the importance of preventive environmental strategies and supports:

Given the high likelihood of multiple risks occurring in a child s life, prevention and intervention programs will probably be more effective if they target multiple risks for elimination or amelioration and boost multiple assets and protective factors. However, it is also important to conduct smaller-scale, highly focused interventions to find out quickly whether a probable protective factor can be manipulated to change child development outcomes (p. 214).

As practitioners begin to have opportunities to undertake these critical small scale interventions to foster quickly the resilience of children and youth, Masten and Coatsworth s work is invaluable. In addition to forthrightly acknowledging the yet-unknown internal protective processes, they lay out clear and sound evidence of what does work in prevention. Prevention practitioners will not be surprised there are no simple, quick, single-strategy solutions for substance abuse and other high-risk behaviors.

Charting a Course for Prevention: Risk and Resilience

Clearly, successful prevention involves balanced emphasis on both environmental risk prevention and personal resilience promotion. In an interview with the *Minneapolis StarTribune*, Masten pointed to the importance of the risk model in helping her accomplish her research goals.

 We have had a tremendous impact providing prenatal care and nutrition, as well as education about the dangers of smoking and drug use during pregnancy These risk-focused strategies have prevented many premature births. We also have prevented many diseases by inoculating children. Promoting healthy development requires more than one strategy (September 19, 1997, p. E1).

Resilience research, traditionally closely aligned with the field of developmental psychopathology, has focused on successful adaptation despite

risk and adversity (Masten, 1994, p. 3). This body of research is currently making a profound contribution to the prevention, education, and youth-development fields.

Many writers, including Werner and Smith (1992), have articulated the parallel findings of resilience research and other studies of healthy child development. This work moves beyond the popularized resilient-child-as-super-kid perspective to one normalizing resilience as the process of healthy human development. Others have even shown the parallel between environmental protective factors and the characteristics of healthy families, effective schools, competent communities, and even prevention programs that have resulted in positive individual outcomes (Benard, 1991).

Findings

Masten and Coatsworth are the first to trace the convergence of studies of competence and resilience in both high- and low-risk environments. This review summarizes the implications for prevention policy and practice. Moreover, they make the case that the same developmental process occurs in children no matter what environment they grow up in, that all children need the same basic developmental supports and opportunities, and that it is the responsibility of parents and social policymakers together to ensure that all children become competent adults and productive citizens (Masten and Coatsworth, p. 205).

Project Competence, pioneered by Norman Garmezy and now directed by Masten at the University of Minnesota, has studied resilience in terms of *external* adaptation using the measure *competence.* Masten and Coatsworth define competence as a pattern of effective adaptation in the environment, either broadly defined in terms of reasonable success with major developmental tasks expected for a person of a given age and gender in the context of his or her culture, society, and time, or more narrowly defined in terms of specific domains of achievement, such as academics, peer acceptance, or athletics (1998, p. 206). From this perspective, resilience is then defined as manifested competence

in the context of significant challenges to adaptation or development (1998, p. 206). Definitions of resilience based on the criteria of competence can, therefore, vary from culture to culture.

The criteria for judging competence are based on this broad definition of competence, which focuses on certain psychosocial milestones, referred to as *developmental tasks* [see Figure 1].

Competence

The authors summarize critical developmental tasks in the three stages of childhood: early, middle, and adolescence. In *early childhood,* two of the systems necessary for development are *relationships with caring adults* (the attachment system) and *self-regulation* (a self-system of gaining control over attention, emotions, and behavior). Both are highly predictive of success in later developmental tasks. Interestingly, each influences the other. For example, Sensitive and consistent caregiving and warm but firm parenting styles have been associated with the development of self-control and compliance to social rules (Masten and Coatsworth, 1998, p.˚209).

The research on self-regulation makes clear that this attribute, while influenced by innate temperament, is also influenced by experience. More-

over, if self-regulation can be influenced by experience, then there is a window of opportunity in early childhood to strengthen skills that will be important for multiple domains of competence. The key strategy at this stage is fostering strong and healthy relationships between children and their caregivers (Masten and Coatsworth, 1998, p. 208-209).

Competence in *middle childhood* as well as adolescence is measured by three basic criteria: social competence with peers, socially appropriate conduct, and academic achievement. *Social competence with peers* how well children get along with other children has been associated with better achievement, higher IQ, and many other positive attributes, including a history of positive parenting (Masten and Coatsworth, 1998, p. 209). Similarly, peer rejection relates to a plethora of negative outcomes such as aggression, ADHD and conduct disorder, poor achievement, and a history of negative parenting.

According to Masten and Coatsworth, While developmental theorists have argued that peer relationships have roots in family relationships much less attention has been given to the bi-directional influence of peers and family on the development of social competence (1998, p.˚209). (This situation may now be changing due to the publication of Judith Harris book *The*

Nurture Assumption (1998), which makes the case for the power of peers independent of parental influence.) Other researchers, including Werner and Smith (1992), have documented the protective role peers and friends play in development. In any case, *Encouraging children to become part of prosocial peer groups* or to develop friendships with rule-abiding and socially competent children may be good intervention strategies; however, interventions that group deviant peers together may well be counterproductive (Masten and Coatsworth, 1998, p. 210).

In terms of *socially appropriate conduct,* a consistent research finding has been the stability over time of childhood aggression and antisocial behavior. Similarly, the connection between academic achievement and rule-governed behavior is strong yet differs between childhood and adolescence. For older children and adolescents the preponderance of data supports a conduct-to-academic direction of influence more than the reverse...For younger children, academic problems may play a larger role in the development of conduct problems (Masten and Coatsworth, 1998, p. 210). The authors suggest that *early tutoring* could produce both positive behavioral and academic outcomes.

Academic achievement is predicted by the systems just discussed: quality of caregiving, self-regulation skills, and cognitive functioning. Much research has also examined both the individual resources and the social resources family, school, and peer systems associated with school success. Individual resources include cognitive abilities (usually operationalized as IQ and problem-solving skills), motivation, and beliefs. Successful students typically attribute their successes to hard work and their failings to lack of effort (Masten and Coatsworth, 1998, p. 211).

Social resources include schools with clear missions, high-quality instruction, attention to staff development, and careful monitoring of student progress. Family resources include parent involvement and warm, firm, high-expectation parenting style. Peer resources include having high-achieving peers and being around friends parents. Parents of academically competent

peers also reinforce achievement and provide an ecological net supporting educational achievement (Masten & Coatsworth, p. 211). Implied interventions in the academic area are many, especially school reform, parent-involvement strategies, and positive peer influence programs (peer helping, cooperative learning).

Two last systems relevant to adolescence competence are experience in the work domain and after-school activities. Both areas need more research but early findings show that *school-to-work* and *early work-experience programs* that are linked to career aspirations as well as *after-school programs* that meet adolescent developmental needs play a role in the development of positive outcomes.

Resilience

The authors summarize resilience research according to the following list of individual, family, and extra-familial assets [Figure 2]:

FIGURE 2. **Characteristics of Resilient Children and Adults**

SOURCE/CHARACTERISTIC

Individual
- ➤ Good intellectual functioning
- ➤ Appealing, sociable, easygoing disposition
- ➤ Self-efficacy, self-confidence, high self-esteem
- ➤ Talents
- ➤ Faith

Family
- ➤ Close relationship to caring parent figure
- ➤ Authoritative parenting: warmth, structure, high expectations
- ➤ Socioeconomic advantages
- ➤ Connections to extended supportive family networks

Extra-familial context
- ➤ Bonds to prosocial adults outside family
- ➤ Connections to prosocial organizations
- ➤ Attending effective schools

[*Masten and Coatsworth, 1998, p. 212*]

Masten and Coatsworth offer prevention specialists a solid perspective on resilience research by making the following points:

➤ Both the *internal and external assets or resources identified in the competence research on normal development are the same as those identified in resilience research* on development in the face of adversity.

➤ *All people have the capacity for resilience.* Resilient children do not appear to possess mysterious or unique qualities: rather, they have retained or secured important resources representing basic protective systems in human development (p. 212).

➤ *Nature has created an almost failsafe system of protection.* These systems appear to have enough redundancy and power to sustain reasonably good development under adversity, unless crucial adaptational systems are severely hampered or damaged, or the adversity exceeds the capacity of anyone to cope (p. 212).

➤ *Caregivers and attachment relationships are the bedrock of human adaptation and development.* Nature has created in ordinary parents a powerful protective system for child development (p. 213).

➤ *Intellectual functioning* (IQ and problem-solving skills) also operates as a protective factor for adaptation in threatening environments.

➤ The *characteristics associated with resilience are not the causes* of resilience, and could even be consequences and outcomes of success. Masten and Coatsworth illustrate this with the example of the attribute of an easygoing temperament, which is often identified as a trait of resilience. They cite a study of Masai infants, however, in which the difficult babies by Western eyes had better survival rates during an African drought!

➤ The above example also illustrates that *resilience is both dynamic and contextual.* It is not a fixed personality trait but is the process of doing what is necessary to survive in different contexts; this could entail being quiet and

Caveat to Policymakers

Successful children remind us that children grow up in multiple contexts—in families, schools, peer groups, baseball teams, religious organizations, and many other groups—and each context is a potential source of protective factors as well as risks. These children demonstrate that children are protected not only by the self-righting nature of development, but also by the actions of adults, by their own actions, by the nurturing of their assets, by opportunities to succeed, and by the experience of success. The behavior of adults often plays a critical role in children's risks, resources, opportunities, and resilience. Development is biased toward competence, but there is no such thing as an invulnerable child. ***If we allow the prevalence of known risk factors for development to rise while resources for children fall, we can expect the competence of individual children and the human capital of the nation to suffer*** **[italics added] (Masten and Coatsworth, 1998, p. 216).**

easygoing or being loud and persistent. Thus, resilience actually *looks* different in different contexts.

➤ *Resilience is dynamic also across developmental stages.* What serves to protect an infant is certainly not advanced skills but primary caregiving. While adolescents certainly have more adaptational skills, they also are vulnerable to the experiences of loss or devastation concerning friends, faith, schools, and governments, and what these mean for their future. Thus meaning-making the thought process creating life experience becomes a critical protective process.

➤ *Some survivors have paid a price for their resilience in terms of psychological distress; others have not.* This is a controversial issue in resilience research; that is, is it enough to be competent or should one also be happy as well? Identifying the protective processes at work in those who are able to transform suffering into satisfaction and despair into joy, for example, will provide a future direction for resilience research.

Lessons Learned

A major contribution of this theoretical study is the normalizing of resilience as a construct.
The authors clearly show that resilience is indeed a process of healthy human development. What supports challenged children will support all young people.

Their study also clarifies the dynamic nature of resilience.
Resiliency is not caused by a fixed competency, trait or asset; rather, its source varies among individuals, contexts and ages. Given the growing national interest in measuring resilience by measuring various competencies, this is a lesson still to be learned.

The researchers are unequivocal in their research-based belief that caregiving relationships are the foundation of human adaptation and development, forming the basis for both social and cognitive competence.
This is clearly a call to prevention and education to *make relationships the heart of interventions,* from early childhood on. Strategies that embed skill-building within the context of relationships, such as cooperative learning, peer helping, support groups, group process, community service, mentoring, tutoring, and adventure programs, clearly provide this motivating context.

While these researchers make no claims to be exploring the yet-unknown intrapersonal processes and mechanisms that are also discussed in the resilience literature, it may be precisely these internal matters that ultimately explain resilience.
Evidence from cognitive and neocognitive psychology (Seligman, 1990) as well as the field of psycho-neuro-immunology (Benson, 1996) suggests resilience is also attributional, that it depends ultimately on the meaning a person gives to his or her experience how one uses thought to react to the experience of life. Some evaluation data on Health Realization interventions, based on teaching individuals about their internal power to see themselves and their lives in new ways, also bears out this hypothesis (Marshall, 1999a, 1999b, Pransky, 1998, Mills, 1995).

> *Think About It!*
>
> Masten and Coatsworth have explored the relationship between competence and resilience. Caring relationships make a difference. How can caring adults point youth to their innate competence and natural resilience? What do adults need to know in order to do this?

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