Resilience and Vulnerability

Adaptation in the Context of Childhood Adversities

Edited by

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A Resilience Framework for Research, Policy, and Practice

Ann S. Masten and Jenifer L. Powell

It was a search for understanding the nature and origins of schizophrenia that brought Norman Garmezy to the study of children at risk for psychopathology, a pursuit that eventually led to the Project Competence studies of competence, adversity, and resilience (Garmezy, 1973). During the 1940s and 1950s, Garmezy developed an interest in the significance of competence in the history and prognosis of patients with serious mental disorders, with a particular focus on premorbid functioning in patients with schizophrenia (Garmezy & Rodnick, 1959). Eventually, the search for antecedents of psychopathology led Garmezy and others to study children of mentally ill parents because of their elevated risk of developing disorders. After his move to the University of Minnesota in 1961, Garmezy began to focus his work on children, and subsequently played a leading

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role in an international consortium of investigators who adopted the *risk strategy* for uncovering clues to the etiology and possible prevention or treatment of serious mental disorders (Watt, Anthony, Wynne, & Rolf, 1984).

It was not long before Garmezy's interest in competence resurfaced. He became intrigued with observations that many children at risk for psychopathology were developing surprisingly well. By the early 1970s, he and his students turned their attention to the study of competence in children at risk due to parental mental illness and other risk factors, including poverty and stressful life experiences. At this time, Garmezy named his research program Project Competence.

The search for understanding how problems develop during childhood and how they might be prevented required collaboration across disciplines that were well represented at the University of Minnesota, including clinical psychology, developmental psychology, behavior genetics, and psychiatry. The work of Garmezy and his students was influenced by outstanding scientists and colleagues from multiple disciplines at Minnesota, as well as by Garmezy's connections to the international consortium of risk investigators. This rich scientific climate not only gave rise to Project Competence, but also played a major role in the emergence of developmental psychopathology, the study of mental health problems in the full context of human development (Cicchetti, 1984, 1990; Masten & Braswell, 1991).

An influential group of investigators, including Norman Garmezy, E. James Anthony, Lois Murphy, Michael Rutter, and Emmy Werner, began to speak and write about the significance of children developing well despite their risk status or exposure to adversity (Masten, 1999, 2001). The insight of these pioneers extended beyond the observation of good adaptation or development when one might expect problems or disorder. Their achievement was in realizing, and then convincing others, that understanding what would come to be called *resilience* in individual development had the potential to inform policy, prevention programs, and interventions. Their work and ideas inspired others to undertake studies of competence and mental health in the lives of children threatened by significant risk or adversity, with the ultimate goal of improving the chances and development of future generations of children faced with such risks.

In this chapter, we describe a resilience framework for research, policy, and practice that evolved in the Project Competence studies during the first generation of research on resilience. First, we discuss the conceptual

framework for Project Competence, highlighting findings from the core longitudinal study that began in the late 1970s. Second, we embed these findings in the broader resilience literature to discuss their meaning in terms of adaptive processes for human development. Finally, we discuss a resilience framework for policy and practice emerging from research on resilience, including implications for conceptualizing the missions, models, measures, and methods of intervention.

PROJECT COMPETENCE

As captured by the name, concepts of competence have been central to the Project Competence studies at the University of Minnesota from their inception. This emphasis was unusual in the 1970s because medical models that focused on symptoms and negative outcomes dominated the study of psychopathology and risk at the time. Competence was a coherent theme of Garmezy's work, extending back to his early experiences with Phillips and Rodnick in the 1940s and 1950s. Phillips, in his classic 1968 book *Human Adaptation and Its Failures*, wrote, "The key to the prediction of future effectiveness in society lies in asking: 'How well has this person met, and how well does he now meet, the expectations implicitly set by society for individuals of his age and sex group?'" (p. 3). This perspective on competence was closely related to the concept of *developmental tasks* that would later become a central theme of both Project Competence and developmental psychopathology.

Early work on the measurement of competence in school children by Garmezy and his students set the stage for a study planned in 1976–1977, the year Ann Masten joined Project Competence as a graduate student. When it was implemented in 1977 and 1978, this study was directed at understanding the linkages between competence, adversity, internal functioning, and a host of individual and family attributes in a normative school cohort of 205 children (29% of ethnic/racial minority heritage). These children were attending third to sixth grades in two urban Minneapolis elementary schools, chosen in collaboration with the school superintendent and principals because they were representative of the public school population of the district at the time, which was diverse in socioeconomic status (SES) and approximately 27% minority. The study began as a cross-sectional investigation, but it soon became clear that following the children over time would provide better data on competence and resilience. Follow-up studies were undertaken after 7, 10, and 20 years, with excellent retention of the original cohort.

The core longitudinal study did not involve a high-risk sample. Instead, it was designed to examine competence among a normative school cohort of children who had experienced many kinds and levels of adversity. Other Project Competence studies initiated at around the same time focused on risk samples (Garmezy & Tellegen, 1984). These included a cohort of children born with congenital heart defects and another cohort with physical handicaps. More recent studies in Project Competence have focused on high-risk samples of children living in homeless shelters and young war refugees. Although diverse in many ways, these studies have all focused on competence, risk, and resilience. A general framework for conceptualizing and operationalizing the study of resilience evolved from this body of work, along with conclusions about the key question of "What makes a difference?" in the lives of children threatened by adversity or burdened by risk.

The Two Fundamental Judgments Required for Defining Resilience

Resilience refers to patterns of positive adaptation in the context of significant risk or adversity. Resilience is an inference about a person's life that requires *two fundamental judgments*: (1) that a person is "doing okay" and (2) that there is now or has been significant risk or adversity to overcome (Masten & Coatsworth, 1998). When a person is called resilient, whether in casual conversation or systematic research, a diagnosis in effect has been made, involving explicit or implicit criteria and a judgment call about a person matching characteristic features of resilience. Technically, to call a person resilient would be improper in diagnostic terminology because resilience is a description of a general pattern, whereas diagnosis occurs when the individual is matched to the pattern. It might be more appropriate to say that "This person has a resilient pattern" or "This person shows the features of resilience." It is also important to keep in mind that identifying resilience from explicit or implicit diagnostic criteria is not assumed to describe people in totality or to define their lives at all times. Hence, one would expect individuals who meet the criteria for resilience to differ in many other ways, and one would not expect a resilient person, however defined at one point in time, to be doing well every minute of the day, under all imaginable circumstances, or in perpetuity. Resilience is not a trait of an individual, though individuals manifest resilience in their behavior and life patterns.

Competence in Developmental Perspective

In Project Competence, the criteria for the first fundamental judgment – "doing okay" – have centered on the concept of *psychosocial competence* (Masten & Coatsworth, 1998). We have defined competence in terms of a track record of effective performance in developmental tasks that are salient for people of a given age, society or context, and historical time (Masten et al., 1995, 1999). For example, in American society, it is widely expected that school-age children will achieve in school (academic competence), get along with other children and make friends (social competence), and follow rules of conduct in the home, school, and community (conduct). These three broad developmental tasks are important throughout middle childhood and adolescence, but the actual expectations for behavior change with age and development. For example, adolescents would be expected to have more intimate friendships and more advanced academic performance than younger children. Moreover, as individuals grow older, new domains of competence become salient. Assessment of both current and emerging domains is important in a longitudinal study of adaptation over time. Thus, for adolescence, our assessments included indicators of romantic and work competence, which are key criteria of adult competence but are just starting to become important domains of functioning during adolescence. There also are domains of competence that become *less* salient as development unfolds. For example, at the 20-year follow-up, at around age 30, school performance was less salient than it was during the school years, though the repercussions of earlier low or high academic attainment were still evident for many members of the cohort.

In the longitudinal study, it was necessary to develop and refine ideas and methods for assessing competence, because so little attention had been given to positive aspects of adaptation prior to the 1970s, particularly for children. At the outset and for each subsequent follow-up, we aimed to assess multiple developmentally appropriate domains of competence with two or more informants and multiple methods. In the first assessment period, informants included parents, the child, teachers, peers, and multiple test administrators (Garmezy, Masten, & Tellegen, 1984; Garmezy & Tellegen, 1984; Masten et al., 1988, 1995, 1999). Methods included interviews, questionnaires, peer nominations, the gleaning of grades and test scores from records, and the administration of a variety of standardized tests and newly created instruments. Our assessments have utilized standardized tests scored with national age or grade norms,

measures scored in comparison to a natural peer group (e.g., scores standardized within the classroom for peer reputation), and measures with scores standardized within the study sample. In our definitions of competence, "doing okay" does not require outstanding achievements, but instead refers to behavior within or above the expected average range for a normative cohort.

Competence assessments during the elementary school years focused on academic achievement, peer relations, and socialized conduct (compliance and rule-abiding behavior versus antisocial or rule-breaking behavior in different contexts), though we also collected information about many other aspects of positive adaptation, such as participation in sports and other activities. Data were also collected on internal adaptation, including well-being and symptoms of distress. Although our definition of competence focused on an observable track record of effective adaptation in the child's world of home, school, and neighborhood, we have had a keen interest in understanding how positive or negative aspects of internal functioning and traditional measures of behavioral and emotional symptoms are related to competence in age-salient developmental tasks.

Our findings in Project Competence have corroborated the multi-dimensionality of competence in childhood and adolescence, demonstrated the robust nature of these dimensions over time, and yielded extensive data on the correlates and consequences of competence in different domains for other aspects of behavior, ranging from personality to psychopathology (e.g., Gest, 1997; Masten, 1986; Masten et al., 1995, 1999; Morison & Masten, 1991; Neemann, Hubbard, & Masten, 1995; Pellegrini, Masten, Garmezy, & Ferrarese, 1987; Shiner, 2000). Just to highlight a few of these findings, competence in major developmental tasks has shown a strong pattern of association with past and future competence and also with adaptive resources, such as intellectual skills, effective parents, and socioeconomic advantages. The personality trait of negative emotionality, which appears to have early roots and shows considerable continuity across 10 years or more from late adolescence to young adulthood, has strong ties to competence problems in our study. Conduct is highly stable over time, from childhood to early adulthood, and becomes strongly linked with academic performance and attainment over time. In childhood, antisocial behavior appears to undermine academic achievement, which, in turn, appears to contribute to later problems in multiple competence domains and internal well-being – an apparent *cascade effect*. However, children who leave their conduct problems behind

in elementary school do not appear to have residual problems later in development, an encouraging observation for those engaged in efforts to intervene early with conduct problems.

The criteria by which "doing okay" is determined in studies of resilience have varied considerably. Definitions have ranged from simply an absence of disorder or mental health problems, to a focus on competence in developmental tasks (as with the Project Competence studies), to the inclusion of both competence criteria and an absence of symptoms (Masten, 2001). There is considerable debate about the best criteria for good adaptation or adjustment, particularly in regard to defining good adaptation in different cultural contexts, determining who should define these criteria, and deciding how to aggregate findings when different criteria were used (Luthar, 1999; Luthar, Cicchetti, & Becker, 2000; Masten 1999, 2001; Masten & Coatsworth, 1998; Rutter, 2000). Nonetheless, we would argue that an important contribution of the resilience framework is the attention it brings to positive outcomes, resulting in a more comprehensive approach to assessment and intervention.

Threats to the Development of Competence: Risk and Adversity

Premature birth, poverty, mental illness in a parent, divorce, war, maltreatment – many kinds of adversity experienced by children have been studied by investigators of risk and resilience (Garmezy & Rutter, 1983; Haggerty, Sherrod, Garmezy, & Rutter, 1994; Luthar, Burack, Cicchetti, & Weisz, 1997; Rolf, Masten, Cicchetti, Nuechterlein, & Weintraub, 1990). Such experiences are established risk factors for development in that there is good evidence that these conditions predict higher rates of negative or undesirable outcomes. Early studies of risk often focused attention on one risk factor. However, it was soon apparent that risk factors more typically co-occur with other risk factors, usually encompass a sequence of stressful experiences rather than a single event, and often pile up in the lives of children over time (Garmezy & Masten, 1994; Rolf et al, 1990; Rutter, 1979; Sameroff & Chandler, 1975; Sameroff & Seifer, 1983). As a result, many investigators shifted their attention to *cumulative risk*, studied either by aggregating information about stressful life experiences or by aggregating risk indicators.

In Project Competence, cumulative risk or adversity has been examined in a number of different ways. In the core study, for example, we have developed both life event questionnaires that tally negative experiences over the previous year and interview methods that assess the

nature of potentially stressful events in more detail over longer periods of time. Our most comprehensive strategy involved compiling all of the information from the longitudinal assessments into a computerized life history data base, creating life charts that could be judged by clinicians on severity rating scales with excellent reliability (Gest, Reed, & Masten, 1999).

In all our assessments of adversity, we have been careful to distinguish *nonindependent* events (events related to a person's own behavior, such as breaking up with a boyfriend or being expelled from school) from *independent* events (e.g., death of a parent) (Masten, Neemann, & Andenas, 1994). For most participants in the core study, the rates of nonindependent events increased as they grew older (Gest et al., 1999). This general developmental trend is not surprising, because adolescents make many more choices about activities, friends, and time use that can result in stressful life experiences. However, maladaptive youth displayed a larger increase in nonindependent events over time, suggesting that they were contributing to their own adversity at considerably higher rates than their competent peers (Gest et al., 1999).

Other Project Competence studies have focused on cumulative risk as indexed by tallies of known risk factors, such as low parental education, single-parent household, foster placement, or maltreatment. If behavior problems, academic achievement, or health outcomes are plotted as a function of risk tallies, striking risk gradients can be observed. Even among homeless families, in which all children are experiencing the major stressor of homelessness, risk gradients are evident: On average, the higher the number of risk factors, the more problems observed (Masten, Miliotis, Graham-Bermann, Ramirez, & Neemann, 1993; Masten & Sesma, 1999). On the other hand, homeless children with few or no risk factors often are much better behaved than their high-risk peers in school and at home, leading one to consider what *low risk* means on a risk gradient. In many cases, it means that a child has more assets and resources, because so many risk factors are actually bipolar indicators of high and low risks and advantages. Low risk often indicates better SES or parenting, for example, as well as fewer stressful life experiences. One of the drawbacks to the more comprehensive cumulative risk approaches to understanding risk and resilience is that aggregation, although resulting in a better overall prediction of outcome, obscures what may be important distinctions in the nature of the resources and threats children have faced and is not conducive to a search for specific processes of stress or adaptation (Masten, 1999; Windle, 1999).