

Adolescent Resilience: Promotive Factors That Inform Prevention

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ABSTRACT—*Resilience theory provides a framework for studying and understanding how some youths overcome risk exposure and guides the development of interventions for prevention using a strengths-based approach. In this article, we describe basic concepts of the theory, such as promotive factors, and distinguish assets and resources that help youths overcome the negative effects of risk exposure. We also present three models of resilience theory—compensatory, protective, and challenge—and review empirical research on three promotive factors—ethnic identity, social support, and prosocial involvement—that include individual, family, and community levels of analysis and have modifiable qualities for informing interventions. Finally, we present examples of how research findings from the three promotive factors can be translated into interventions to enhance youth development.*

KEYWORDS—*resilience; prevention*

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Resilience theory focuses on positive youth development in the face of risk and provides a conceptual framework for studying and understanding why some youths grow up to be healthy adults despite exposure to risk (Garmezy, 1991; Masten, 1994; Rutter, 1987; Werner & Smith, 1982; Zimmerman & Brenner, 2010). Resilience occurs when environmental, social, and individual factors interrupt the trajectory from risk to pathology. Such variables have been called *promotive factors* (Fergus & Zimmerman, 2005) because they are associated with positive development and help youths overcome adversity. Resilience theory also emphasizes a strengths-based approach to developing preventive interventions because it concentrates on enhancing promotive factors instead of on reducing exposure to risk or ameliorating deficits in youths.

Three basic conceptual models—compensatory, protective, and challenge—have guided resilience research (Fergus & Zimmerman, 2005; Garmezy, Masten, & Tellegen, 1984; Masten, Cutuli, Herbers, & Reed, 2007). These models provide frameworks for understanding how promotive factors may operate in the presence of risk or with each other to reduce negative outcomes or enhance positive development. The *compensatory model* describes a process in which promotive factors counteract exposure to risk through an opposite, direct, and independent effect on outcomes. This can be assessed by examining the main effects of the promotive factor in a regression equation. In one study, youths with friends who got into fights (risk factor) were more likely to engage in violent behaviors themselves. However, mothers' support compensated for this risk factor because it predicted less violent behavior independent of friends' behavior (Zimmerman, Steinman, & Rowe, 1998).

The *protective factor model* refers to processes in which promotive factors moderate the negative effects of risks for predicting negative outcomes. In this model, promotive factors are called protective factors to distinguish them from promotive factors that only compensate for risk exposure. Protective factors, unlike compensatory factors, modify the effects of risks in an



interactive fashion (Rutter, 1987). Protective effects can be tested by including a multiplicative term of the risk and promotive factors in a regression equation. In one study, for example, the association between socioeconomic status (SES) and stress was reduced for urban youths who reported active coping (Schmeelk-Cone, Zimmerman, & Abelson, 2003). Thus, active coping was a protective factor for physiological stress associated with lower SES. Protective factors may also operate to enhance other promotive factors in a protective–protective model. In another study, self-esteem enhanced the positive effects of enculturation (i.e., connection to traditional culture) for predicting less adolescent alcohol use among Native American youths (Zimmerman, Ramirez, Washienko, Walter, & Dyer, 1995).

The *challenge model* operates as inoculation, with exposure to average levels of risk actually helping youths overcome subsequent exposure. The initial exposure to risk must be challenging enough to help youths develop the coping mechanisms to overcome its effects, but not so taxing that it overwhelms their efforts to cope. For example, interpersonal conflict that is resolved amicably can help youths overcome social tensions to avoid a violent response in a later, more heated social disagreement. The challenge model has not been studied extensively because it requires testing the quadratic term using growth curve modeling with longitudinal data and knowledge of variation in risk exposure over time.

Theorists have elaborated these three basic models (Luthar, 2006; Masten et al., 2007), focusing on different pathways after trauma (Masten & Narayan, 2012) and the role of early resilience on long-term developmental outcomes (Masten & Cicchetti, 2010; Masten, DesJardins, McCormick, Kuo, & Long, 2010). Research that does not use a theoretically driven model of resilience can result in cataloging factors associated with positive youth development but fail to identify mechanisms of change. This omission is a critical oversight because resilience theory implies use of data analytic strategies to test specific models, such as those described earlier, that detail mechanisms by which different types of promotive factors operate (e.g., offsetting or interacting with risks).

Understanding how promotive factors operate in conjunction with risk is also vital for intervention research. Promotive factors have been identified as *assets* or *resources* (Fergus & Zimmerman, 2005). Assets are factors within individuals such as efficacy, identity, and orientation to the future. Resources are factors that are external to the individual such as adult mentors and opportunity structures. Promotive assets and resources can be integrated through involvement in prosocial activities because participation requires both individual initiative and external opportunity structures. Thus, assets, resources, and their integration provide youths with the individual and contextual attributes needed to promote healthy development in the face of risk. We present empirical examples from our research on ethnic identity, social support, and prosocial involvement as examples of promotive assets, resources, and their integration,

respectively. These three promotive factors were selected because they cut across ecological levels, have modifiable qualities, and helped inform two interventions we describe.

ASSET: RACIAL IDENTITY

Researchers have examined ethnic identity as an individual promotive factor (asset) as it relates to different youth outcomes (Quintana, 2007). For youths of color, developing an ethnic, cultural, or racial identity is a critical developmental task that must be negotiated while becoming independent from parents and navigating changes associated with puberty. Youths of color must resolve two primary ethnic identity conflicts: (a) stereotyping and prejudice toward themselves and their group, and (b) confronting two sets of norms and values—their own culture and that of the larger society (Phinney, Lochner, & Murphy, 1990). The significance *and* meaning individuals attribute to being Black may be critical to their psychological well-being (Caldwell, Zimmerman, Bernat, Notaro, & Sellers, 2002). In a study supporting the risk-protective model of resilience, the negative effects of discrimination on distress were moderated by adolescents' feelings that being Black was central to their identity (Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003). In a study of racial discrimination and violent behavior, racial identity was a protective factor—racial identity moderated the negative effects of risks (Caldwell, Kohn-Wood, Schmeelk-Cone, Chavous, & Zimmerman, 2004): For African American males, the negative effects of discrimination on violent behavior were diminished among the young men for whom race was central to their identity. These studies suggest that ethnic identity can be a vital asset to help non-White youths overcome exposure to risk that is associated with racial injustice.

RESOURCE: RELATIONSHIPS WITH ADULTS

Relationships with caring adults have been identified as critical promotive resources for children and adolescents. These relationships can include connections to parents (or caregivers) and other caring adults such as mentors. Several researchers have found that parent–family connectedness and support help compensate for exposure to risk across a range of negative outcomes. In a test of the compensatory model of resilience, parental support and family involvement counteracted the negative effects of economic disadvantage for predicting condom use among urban African American youths (Elkington, Bauermeister, & Zimmerman, 2011). In another study, fathers' support protected youths from the negative effects of depression on suicide ideation (Tarver, Wong, Neighbors, & Zimmerman, 2004). Similarly, mothers and fathers helped reduce the influence of peers' violent behavior for predicting their child's violent behavior (Zimmerman et al., 1998). In that study, more support from parents was associated with less violent behavior in youths who had witnessed a lot of violence. In an example of a protective–

protective model where two promotive factors interact to enhance outcomes, yet another study found that positive attitudes about African Americans enhanced the positive effects of fathers' support for predicting less alcohol use among African American adolescents (Caldwell, Sellers, Bernat, & Zimmerman, 2004).

Mentoring relationships (i.e., supportive, encouraging, and helpful nonfamily adults) also help youths overcome exposure to risk. Natural mentors had a compensatory effect on problem behaviors for African American youths (Zimmerman, Bingenheimer, & Notaro, 2002). Mentors also had a protective (moderating) effect on the negative influences of friends on school attitudes. In a study of African American adolescent mothers, having a natural mentor moderated the effects of stress on mental health problems over time, supporting the risk-protective model of resilience (Hurd & Zimmerman, 2010). In another study, relationships with natural mentors promoted more positive long-term educational attainment by enhancing the effects of racial identity on participants' attitudes about the importance of doing well in school for future success (Hurd, Sanchez, Zimmerman, & Caldwell, 2012). Overall, these findings support the critical role caring adults play in helping youths overcome adversity in their lives.

INTEGRATED ASSETS AND RESOURCES: PROSOCIAL INVOLVEMENT

Prosocial involvement refers to participation in organized activities that promote healthy development. This type of participation integrates assets and resources because it involves individual behavior in external structures that provide opportunities for participation. Participation in extracurricular activities in school, church, and community settings holds promise for promoting healthy youth development because these activities occur in safe and structured environments, expose youths to positive peer and adult role models, help them develop a sense of community, and offer opportunities to explore areas of interest, acquire skills, develop talents, and experience success (Lerner, Almerigi, Theokas, & Lerner, 2005; Mahoney, Larson, & Eccles, 2005). Prosocial involvement also has positive effects on health behavior and is associated with fewer problem behaviors (Eccles, Barber, Stone, & Hunt, 2003; Lerner et al., 2005). In a study of protective factor models, youths living in disadvantaged neighborhoods were less likely to smoke cigarettes if they were involved in prosocial activities (Xue, Zimmerman, & Caldwell, 2007). Participating in positive activities enhances youths' resilience by providing the circumstances to develop cognitive and behavioral assets that help overcome adversity, and resources that create the opportunity structures for youth involvement.

APPLICATIONS FOR PREVENTION

A resilience approach to prevention is a strengths-based method that focuses on enhancing both assets and resources. Resilience

research on the compensatory and protective effects of ethnic identity, adult support, and prosocial involvement helped inform the development of an after-school program for preventing youth violence (Zimmerman, Stewart, Morrel-Samuels, Franzen, & Reischl, 2011). The program, Youth Empowerment Solutions for Peaceful Communities (YES), was designed to help middle school youths strengthen their African American identity, work with adults, and develop and implement community improvement projects. Consistent with empirical findings and resilience theory, the curriculum focuses on supporting and building youths' assets and resources, and creating opportunities for youths to learn through action and working with adults. YES involves youths in the process of changing community physical and social environments through both ethnic identity socialization and working with adults to implement their change projects. The after-school activities include six units of interactive workshops that help youths develop personal assets and social resources. They learn skills for planning and implementing a community improvement project, and they learn about their ethnic background and history (for more information about the curriculum, see <http://prc.sph.umich.edu/research/yes/curriculum/>). The curriculum also includes working with adults to develop supportive relationships with nonfamily adults and create settings for natural mentoring relationships to develop.

We found preliminary evidence of effectiveness of the YES after-school program for community-level outcomes (Reischl et al., 2011). Areas around project sites had fewer police incidents when the project was completed than before the project was started. Property ratings of lots adjacent to project sites were slightly improved after the project compared to before. Youths in the program also reported more conflict resolution behaviors and more conflict avoidance behaviors than youths not in the program.

Another resilience-based intervention that focuses on ethnic identity, adult support, and prosocial behavior is the Fathers and Sons Project (Caldwell et al., 2011). This program focuses on nonresidential African American fathers and their 8- to 12-year-old sons. The intervention, designed to strengthen the father-son bond and to promote positive youth development, includes cultural awareness, communication skills, and service learning that involves father-son dyads working together on a community improvement project. The fathers and sons also collaborate on creating culturally inspired products during the intervention (for more information, see <http://prc.sph.umich.edu/research/fathers-and-sons/>). This program includes 45 contact hours over 15 sessions and a booster session for graduates. In an evaluation that compared 158 intervention dyads to 129 wait-listed father-son pairs, the intervention increased father-son communication and race-focused socialization (Caldwell, Rafferty, Reischl, De Loney, & Brooks, 2010). Sons in the intervention also reported more monitoring by their fathers compared to sons in the nonintervention control group, and intervention fathers reported more monitoring of their sons' behaviors than dads in the control group.

Other youth violence prevention interventions have also incorporated ethnic identity, social support, and prosocial involvement, either implicitly or explicitly. The Aban Aya Youth Project focused on preventing externalizing behaviors among African American youths by incorporating components for ethnic identity, social support, and prosocial involvement (Flay, Graumlich, Segawa, Burns, & Holliday, 2004). This intervention included activities that addressed African American cultural values; featured history and literature; promoted healthy, supportive relationships between parents and youths; and engaged youths in prosocial community activities. Youths in the Aban Aya Youth Project served on a coalition with parents, community members, and researchers to inform program implementation, change school policies, and to garner support of community organizations for local changes (Ngwe, Liu, Flay, & Segawa, 2004). Youths who participated in the intervention that included all three promotive factors reported less violent behavior, drug use, and sexual intercourse than youths in the comparison group (Flay et al., 2004).

Another intervention that included ethnic identity, adult support, and prosocial involvement was Understanding Violence (UV), a school-based violence prevention program in Boston-area communities with high rates of violence (Nikitopoulos, Waters, Collins, & Watts, 2009). Although the UV curriculum did not address explicitly ethnic identity, it included discussions of stereotypes and unique challenges facing African American adolescents. Youths also discussed with supportive, caring adults how violence and gangs affected their lives. Prosocial involvement was incorporated through a youth-led community event to raise awareness about the effects of violence on children and adolescents. This activity gave students an opportunity to build relationships and to organize as they sought support (Nikitopoulos et al., 2009). The program had positive effects on youths' attitudes and understanding of violence, and their ability to cope with community violence (Nikitopoulos et al., 2009).

The four programs we have described—YES, the Fathers and Sons Project, the Aban Aya Youth Project, and UV—focus on enhancing youth assets and resources by engaging in prosocial activities that help them develop ethnic identity and connect with adult allies.

LOOKING AHEAD

Resilience research has grown over the last decade, but several innovations must occur to move the field forward. First, longitudinal research that examines the effects of change over time in cumulative promotive factors would be informative. Longitudinal research could also focus on the developmental timing of different promotive factors for compensating or protecting against risks. This research could help identify the ages when some promotive factors may become more or less important. Second, we need more detailed analyses of cumulative effects by developing and testing different strategies for adding the effects of various

promotive factors. This might include the development of weighting schemes to identify factors that may be more influential than others. Combining longitudinal analytic strategies with more detailed analysis of cumulative effects could also provide a useful approach to a *cascade analysis* that examines influences on developmental outcomes across ecological domains (e.g., social and academic functioning; Masten & Cicchetti, 2010). Developmental cascades are the cumulative developmental effects that spread and interact across domains of influence (i.e., ecological levels of analysis) and over time (Masten et al., 2010). Thus, cascade analysis would include modeling and testing the effects of change over time in protective factors for different children and in different settings that could promote diverse developmental outcomes. It is likely, for example, that within families, fathers and mothers may have more or less influence on a cascading effect depending on the characteristics of the child (e.g., age, gender) and the outcome of interest (e.g., internalizing vs. externalizing behavior).

Resilience research has been somewhat limited because it largely includes analysis of single risk and promotive factors. In an examination of risk accumulation that created a cumulative risk score based on 10 environmental variables (e.g., stressful life events, poor parenting, family history of mental illness), exposure to multiple risks posed too great of a challenge for youths to overcome (Sameroff & Rosenblum, 2006). This cumulative approach to studying risk led researchers to begin to treat promotive factors in the same way. In a study of cumulative risk and promotive factors for predicting adolescent alcohol and drug use among urban African American youths, a cumulative promotive factor index that included factors across ecological levels (e.g., individual characteristics, peer influence, and familial influences) operated in a compensatory and protective fashion for reducing the effects of cumulative risks (which also included factors across ecological levels; Ostaszewski & Zimmerman, 2006). In other analyses of this sample, trajectory analysis was included to test the associations of trajectories of cumulative risk and promotive factors for predicting youths' violent behavior (Stoddard, Zimmerman, & Bauermeister, 2012). The promotive index change over time moderated the negative effects of cumulative risk index over time. A cumulative ecological approach for studying resilience is consistent with the notion of developmental cascades (Masten & Cicchetti, 2010; Sapienza & Masten, 2011), but this study did not examine how the ecological levels may have influenced each other over time as a cascade analysis would. A cumulative approach to resilience research that also considers longitudinal effects across ecological domains will further contribute to our understanding of the resilience process and inform more tailored interventions for youths.

CONCLUSIONS

Resilience theory is a strengths-based conceptual framework that focuses on how promotive factors help disrupt the path from

risk to negative outcomes. Resilience theory can also guide the development of prevention programs designed to enhance promotive factors that help youths overcome the deleterious consequences of risks. In this article, we focused on the promotive factors of ethnic identity, social support, and prosocial involvement because they represent individual, family, and contextual influences that can change. Prevention strategies that focus on resilience translate research into programs that help strengthen individual assets and contextual resources that help youths overcome adversity.

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