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Change in protective factors across adolescent development☆,☆☆

B.K. Elizabeth Kim [a,*], Sabrina Oesterle [b], Richard F. Catalano [b], J. David Hawkins [b]

[a] University of California, Berkeley, School of Social Welfare, United States
[b] Social Development Research Group, School of Social Work University of Washington, United States

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ABSTRACT

Understanding the developmental changes in protective factors that lead to healthy youth development provides important information on the appropriate timing and targets for community-based prevention. This study used a control sample of 2002 individuals from 7 states to examine the normative development of protective factors. Data come from the Community Youth Development Study, a community-randomized trial of Communities That Care. Multilevel models estimated the change in protective factors from 5th to 12th grade, controlling for individual characteristics. Gender difference and school transitions were examined. Findings suggest that most protective factors decline through middle school but start increasing during high school, with some declining at slower rates than in middle school. Although females reported higher levels of protective factors than males, the transitional point did not differ by gender. Community initiatives that seek to bolster protective factors should start early and continue through high school.

Adolescence is a time of social, emotional, physical, and cognitive changes, a time during which changes occur much more drastically than at any other stage in life aside from infancy (Steinberg, 1999). With increasing independence and expanding social domains of influence (i.e., peers, schools, communities), adolescents experiment with various risky behaviors, including substance use and delinquency (Arnett, 1999). Studies have shown that early development of these behaviors puts young people at greater risk for future chronic smoking and crime as well as other mental, physical, and behavioral health problems (Buchmann et al., 2013; Catalano et al., 2012; DeLisi, Neppl, Lohman, Vaughn, & Shook, 2013; Kendler, Myers, Damaj, & Chen, 2013; Sampson & Laub, 2003; Sawyer et al., 2012).

The emerging science of prevention (Coie et al., 1993) emphasizes the importance of identifying and targeting precursors that predict the likelihood of adolescent problem behaviors, namely risk and protective factors (Catalano et al., 2012; Coie et al., 1993; Fraser, 2004), to effectively prevent the occurrence of these behaviors (Hawkins, Catalano, & Miller, 1992) before they become less amenable to change. As empirical evidence verified a range of risk factors for problem behaviors, preventive interventions were developed that successfully reduce risk and prevent problem behaviors (Fraser, 2004; Hawkins et al., 1992; Welsh & Farrington, 2007). In the context of adolescent development, researchers argued that reducing risk is an effective strategy to prevent problem behaviors (Farrington, 2000; Welsh & Farrington, 2007), noting that risk exposure increases during adolescence (Catalano et al., 2012; Masten & Cicchetti, 2010). However, despite the growing research evidence demonstrating that protective factors mitigate the development of problem behaviors (Bowers et al., 2011; Hartman, Turner, Daigle, Exum, & Cullen, 2009; Hawkins et al., 1992; Lösel & Farrington, 2012; O'Donnell, Hawkins, & Abbott, 1995), little is known about how protective factors change as youth develop (Fraser, 2004; Van Der Put et al., 2011). Understanding whether adolescents experience an increase or decrease in protective factors can provide important information about how and when to increase protection during adolescence to prevent problem behaviors and promote healthy behaviors. This study uses longitudinal data to examine the developmental changes in a theoretically driven set of protective factors across adolescence.

Conceptualizing protective factors: The social development model

In the last two decades, researchers and practitioners have become increasingly interested in understanding protective factors (Fraser, 2004). However, researchers have used various terms, such as promotive factors (Sameroff, 2006; Zimmerman et al., 2013) or assets (Mannes, Roehlkepartain, & Benson, 2004) to identify their positive function and role in youth development. For simplicity, in this paper we will use the term protective factors to refer to factors that decrease the likelihood of

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* Corresponding author at: Center for Prevention Research in Social Welfare, University of California, Berkeley, 120 Haviland Hall, #7400, Berkeley, CA 94720-7400, United States.
E-mail address: bkelizabethkim@berkeley.edu (B.K.E. Kim).

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problem behaviors and increase the likelihood of positive behaviors (Catalano et al., 2012). To conceptualize and identify protective factors, we use the social development model (SDM) that outlines a causal relationship of how protective factors work to prevent problem behaviors.

The SDM (Catalano & Hawkins, 1996; Hawkins & Weis, 1985) is an integrated theory of social control theory, social learning theory, and differential association theory, that explains the development of pro- and antisocial behaviors by specifying predictive relationships and processes across developmental contexts and stages (Catalano & Hawkins, 1996). In the antisocial path, the SDM hypothesizes that antisocial behaviors develop as a result of antisocial opportunities, involvement or interaction with antisocial others, and rewards for involvement with antisocial others, as well as in some cases through bonding to antisocial others, and in some cases through belief in antisocial values.

Similarly, on the prosocial path, the SDM hypothesizes that providing individuals with opportunities for involvement or interaction with prosocial others, teaching the skills to participate in prosocial activities, and recognizing or reinforcing individuals for skillful participation in prosocial activities will lead to the development of social bonds between the individual and the socializing unit providing the prosocial opportunities, skills, and recognition. If these social bonds are well established and the standards for prosocial behavior of the socializing unit(s) are clear, it is expected that the youth will engage in prosocial behaviors as a result, which in turn contributes to prosocial development in the next developmental phase. These opportunities for involvement or interaction, skills, recognition, bonding, and beliefs are protective factors. They are hypothesized to operate in a similar manner in different socializing units (e.g., peers, family, school, community) with greater exposure to protection across multiple social units expected to predict greater likelihood of prosocial behaviors. To illustrate, when families provide opportunities for children to contribute to family life and reward children for their skillful participation, children are expected to become bonded to their families and to be more likely to adopt the behavioral standards of their families. If the families communicate prosocial standards and norms, bonded children are likely to adopt these norms and to engage in prosocial behaviors and avoid behavioral health problems.

Tests of the SDM hypotheses have shown great utility in understanding the causal processes and correlates of many youth outcomes, such as child problem behaviors (Catalano, Oxford, Harachi, Abbott, & Haggerty, 1999; Fleming, Catalano, Oxford, & Harachi, 2002; Kosterman, Haggerty, Spoth, & Redmond, 2004; Laundra, Kiger, & Bahr, 2002; Sullivan & Hirschfield, 2011), as well as prosocial learning (Duerden & Witt, 2010), civic engagement (da Silva, Sanson, Smart, & Toumbourou, 2004), and positive adult social engagement (Kosterman et al., 2014). Furthermore, several studies have validated the theoretical constructs as well as the developmental risk and protective processes of the SDM with diverse populations (Catalano et al., 1999; Fleming et al., 2002; Roosa et al., 2011; Sullivan & Hirschfield, 2011). However, no study to date has empirically tested all social development constructs among all social domains across more than two developmental periods.

A strong theoretical framework that explains human development is important because developmental theories lay a strong foundation for prevention (Coie et al., 1993). In fact, prevention programs with a theoretical basis are shown to be more effective than those simply based on common sense (Ammerman, Lindquist, Lohr, & Hersey, 2002; Legler et al., 2002; Noar, Benac, & Harris, 2007). By explaining how human behaviors develop, developmental theories provide a foundation for how behaviors can be changed (Glanz & Bishop, 2010). This informs prevention programs on what influential factors to target and when these programs will have maximal impact (Nation et al., 2003).

The SDM is explicitly developmental in its explication of onset, escalation, maintenance, and desistance of both problem and healthy behaviors. The theory addresses developmental specific submodels using major transitions in the environment, namely school transitions, and integrates salient socialization units of the individual to explain etiological processes across the developmental phases (Catalano & Hawkins, 1996). As children develop, the importance of these socializing contexts as well as each SDM construct change. The SDM asserts that the socialization process from an earlier developmental period influences the later socialization process. For example, opportunities and recognition from earlier development can influence the level of involvement and bonding later. By examining these SDM constructs separately across development can unveil the developmental salience of each construct. These developmentally specific social context and SDM constructs are potential focus of intervention.

The SDM has theoretically guided the development and implementation of many prevention programs that aim to reduce problem behaviors and increase healthy behaviors (e.g., Seattle Social Development Project, Raising Healthy Children, Guiding Good Choices, Staying Connected with Your Teen, and Communities That Care). These programs have sought to increase prosocial opportunities, involvement or interaction, and recognition for children in communities, families, schools, and among peers, and enhance skills to participate in prosocial activities so that recognition is more likely. The increase in prosocial opportunities, recognition, and skills is expected to increase bonding with prosocial others from whom children adopt prosocial beliefs, and lead them to behave in a prosocial manner. The constructs and processes on the prosocial path comprise the social development strategy (Catalano & Hawkins, 1996). Evaluations of quasi or experimental trials of SDM-driven interventions demonstrated that these interventions had positive effects on the SDM constructs as well as later behavioral outcomes such as substance use, delinquency, and mental health (Abbott et al., 1998; Catalano, Kosterman, Haggerty, Hawkins, & Spoth, 1998; Hawkins, Catalano, Kosterman, Abbott, & Hill, 1999; Mason, Kosterman, Hawkins, Haggerty, & Spoth, 2003).

The SDM, thus, provides a useful framework for understanding risk and protective factors and how risk and protective processes contribute to adolescent development over time across multiple socializing units. The developmental trajectories of protective factors specified by the SDM can provide empirical evidence for understanding various components of the development of prosocial behaviors. Practically, this can provide important information for the timing of preventive interventions across youth development. For example, preventive programs can target reducing risk and increasing protection early in a child's life to decrease the harm of accumulated risk (Masten, 2001), but also counter increasing levels of risk exposure and problem behaviors in adolescence by building protection during adolescence (Catalano et al., 2012; Toumbourou & Catalano, 2005). In this paper we seek to answer two questions: 1) How do protective factors develop in the context of school transitions? and 2) Do these developmental trajectories vary by gender?

Developmental turning point: Transitions across adolescence

Youth encounter new social and environmental contexts (e.g., family, peer, school, community) as they develop, and need to adapt to multiple transitions that occur across and within these different contexts — one of which is school transitions (Benner & Graham, 2009; Eccles, 2004; Eccles et al., 1993; Roeser, Eccles, & Sameroff, 2000). School transitions during adolescence are naturally occurring transitions for most U.S. students who receive public education as they transition from the home to elementary school, from elementary to middle school, and from middle to high school, although there are some differences in these transition patterns. As individuals are introduced to new settings, new rules, new peers, and new teachers, the mismatch between social settings and individual development (Eccles et al., 1993) can create distress (Benner, 2011). Thus, transitions across these social settings can provide important opportunities for behavioral continuity or change (Elder, 1998), especially during adolescence.

The SDM, using the life course perspective, identifies four developmental phases based on school transitions as the naturally occurring contextual changes: birth to school entry, elementary, middle, and