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# The Quantity and Variety Across Domains of Psychological and Social Assets Associated With School Victimization

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**Objective:** Studies on protective factors for school victimization are rare and usually focus on specific assets. The current study examined the association between quantity and variety of domains of developmental assets and school victimization in adolescence. **Method:** Data were drawn from the California Healthy Kids Survey (CHKS;  $N = 11,790$  high school students attending 17 schools). The Social and Emotional Health Survey–Secondary (SEHS-S) was administered as part of a federally funded school climate initiative in the spring of 2013. A mixed-effects modeling approach tested associations between configurations of assets and school victimization. **Results:** Adolescents reporting a higher quantity of assets in multiple domains had a lower likelihood of experiencing physical and relational victimization and fear of being victimized in school compared to youth having zero assets. **Conclusions:** Results supported the importance of considering the quantity of psychological and social assets and also the variety of assets across multiple domains. Interventions promoting multiple protective factors in multiple areas of youths' lives may have the highest likelihood of impacting adolescent well-being.

**Keywords:** configuration protective model, developmental assets, resilience, school victimization, Social Emotional Health Survey

Victimization in schools encompasses a range of behaviors that occur in the school setting, including physical aggression (e.g., being pushed or hit) and nonphysical behaviors such as being verbally abused and social isolation (Swearer, Espelage, Vaillancourt, & Hymel, 2010). Previous studies of school violence have mostly focused on risk factors and consequences of violence perpetration, with fewer studies giving attention to factors that protect youths from victimization's effects. Studies that have focused on protective factors typically examine their independent associations with victimization, without considering their combined influences. To develop effective interventions to prevent school victimization, there is a need to better understand the characteristics of the array of assets adolescents need to reduce their odds of victimization. Assets are defined as the skills, competences, relationships, and behaviors that nurture adolescents' well-being and enable them to develop into successful adults.

Recently, scholars questioned the protective power of single assets as insufficiently reflecting the array of assets adolescents need to face complex modern-day challenges. According to Larson and Tran (2014), the integration between youths' skills and dispositions allows them to better understand and cope with many

developmental challenges. This theoretical conceptualization of positive development argues against single protective assets, and for sets of competences that allow youths to navigate complex life challenges, thus buffering them against the development of behavioral and emotional problems and promoting their well-being. Because there is no consensus on which specific assets are negatively associated with school victimization, and given recent theoretical perspectives (Larson & Tran, 2014) that propose that complex and flexible sets of assets are needed by adolescents to face the challenges of modern society, in the present study we examined how the quantity and variety of domains of psychological and social assets protect youths from school victimization. Based on previous research (e.g., Gini, 2008), we distinguished between different forms of victimization, by examining physical violence, relational violence, and the fear of victimization in schools. More specifically, two aspects of the array of psychological and social assets are considered: their quantity (i.e., the total number of single assets possessed by an adolescent) and their variety across domains (i.e., having assets pertaining to multiple social-emotional domains). Adolescents' assets were selected based on the covitality model, which encompasses 12 internal and external assets included in four social-emotional health domains and has been positively associated with positive development in adolescence (Furlong, You, Renshaw, Smith, & O'Malley, 2014). The current study examined whether there are ideal combinations of the covitality assets (in terms of quantity and variety across domains) that are particularly effective in protecting youths from various types of school victimization.

Although young people are victims of serious violent crime less often in school than in other contexts (Mayer & Furlong, 2010), minor victimizations are common in schools. For example, accord-

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ing to the 2013 United States Youth Risk Behavior Survey, 8.1% of students in grades 9 through 12 reported having been involved in a physical fight on their school campus during the year preceding the survey, and 3.1% reported having been injured (i.e., injuries treated by a doctor or nurse) during these fights (Kann et al., 2014). A broad range of adverse short- and long-term consequences for both adolescent victims and perpetrators are associated with youth violence. Specifically, school victimization has detrimental impacts on youth educational success (Esbensen & Carson, 2009), health (Gini & Pozzoli, 2013), and psychosocial adjustment (e.g., Reijntjes, Kamphuis, Prinzie, & Telch, 2010); increases students' risk of dropping out of school (Peguero, 2011); and is associated with more frequent alcohol and marijuana use (Wright, Fagan, & Pinchevsky, 2013). The school context is critical for adolescents' development, yet school violence is a worldwide social problem (Berkowitz, 2014). Schools also represent a microcosm of public life, where adolescents learn how to deal with aggression and violence, and schools are where most interventions to prevent youth violent victimization are implemented. For these reasons, we examined the association between multiple configurations of psychological and social assets (in terms of quantity and variety across domains) and adolescent violent victimization within the school environment (operationalized as physical victimization, relational victimization, and fear of victimization from peers).

### Risk and Protection for School Victimization

School violence emerges from the interplay of influences within a social-ecological framework (Espelage & Swearer, 2004). Within this framework, along with individual characteristics (such as self-esteem and personal beliefs about violence), different social contextual risk factors increase the likelihood of violence involvement, and protective factors make violent behaviors less likely (Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002). Empirical studies of resilience that examined risk and protective factors for violence involvement (Luthar, Cicchetti, & Becker, 2000) have mostly focused on how risk factors (or the absence of them) are associated with violent behaviors. However, there is emerging empirical evidence that psychological and social assets can protect youth from involvement in violent behaviors. Scholars refer to *external assets* when examining resources of the environments in which adolescents are embedded (e.g., family support), and to *internal assets* when analyzing assets within the individual (e.g., empathy).

### External Assets: Social Resources

Good family functioning and cohesion (Gorman-Smith, Henry, & Tolan, 2004) and supportive family structure (Losel & Bender, 2014) protect youth from violence perpetration and victimization in school. In addition, prosocial peer networks are protective against involvement with violence, and are associated with high levels of peer social support (Rothon, Head, Klineberg, & Stansfeld, 2011), reduced risk-taking behaviors, and/or buffering the negative consequences of violence exposure on adolescents' well-being. In contrast, association with antisocial peers is one of the strongest predictors of an adolescent's antisocial and violent behavior (Sijtsema, Rambaran, Caravita, & Gini, 2014).

### Internal Assets: Psychological Resources

At the individual level, violence-avoidance beliefs have been found to be negatively associated with perpetrator and perpetrator-victim status, along with self-efficacy, self-esteem, problem-solving, and coping skills (Logan-Greene, Nurius, Herting, Walsh, & Thompson, 2010). Other individual factors that protect against youth violence include prosocial activities, low neuroticism, high levels of empathy, and interpersonal competence (Polan, Sieving, & McMorris, 2013). Besides the influence of single social skill assets, social-emotional intelligence (SEI) is gaining recognition as a protective factor against violence. SEI is a constellation of competences—capability to express oneself, empathy for others' feelings, capability to develop and maintain social relationships, and effective coping with everyday difficulties (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Several studies documented negative associations between emotional intelligence and violent behavior (e.g., Lomas, Stough, Hansen, & Downey, 2012), which demonstrates that protective factors could also have a cumulative protective effect against violence.

### Cumulative Effects of Risks and Assets

Youths who possess multiple risk factors in multiple domains (e.g., individual and social environmental) have the highest odds of involvement in violence (Esbensen, Peterson, Taylor, & Freng, 2009). Esbensen et al. (2009) identified different *tipping points* at which the number of risk factors made it much more likely for the risk behavior to occur. For example, the odds of violence and gang membership were twice as high for youth with seven versus six risk factors. Esbensen et al. (2009) also found that having risk factors in multiple domains (e.g., school and family), rather than a single domain (e.g., community), increased the odds of violence and gang membership. These results indicate that the quantity and/or the variety of risk factors have a role in increasing the risk of violent behavior.

The cumulative-risk framework has been extended to a cumulative-assets framework, which has been adopted to study a wide range of youth quality of life outcomes. For example, the Search Institute's 40 Developmental Assets model has shown that a higher number of external (e.g., supportive parents and social cohesion in the neighborhood) and internal (e.g., self-efficacy and social competences) assets is positively associated with positive outcomes such as academic achievement and subjective well-being, and negatively associated with risk behaviors such as substance use and violence perpetration and victimization (Scales, Benson, Roehlkepartain, Sems, & Van Dulmen, 2006). However, some limitations have been highlighted in relation to the 40 Developmental Assets model. Although the extensiveness of the model makes it comprehensive, it also hampers its validity for research (because of its limited parsimony) and program implementation (e.g., by requiring a time-consuming psychological assessment instrument and comprehensive interventions targeting a high quantity of assets; Furlong, You, et al., 2014). The current study was designed to examine whether a more efficient number of assets possessed by an adolescent, and their variety across domains, might contribute to understanding youths' vulnerability to, or protection from, violence victimization at school.

### The Covitality Model

Integrating the social–cognitive model, risk and resilience theory, and positive psychology concepts, Furlong, You, et al. (2014) developed and tested a model of youth developmental status comprised of four first-order core social-emotional health domains: *belief-in-self*, *belief-in-others*, *emotional competence*, and *engaged living* (Renshaw et al., 2014). These four domains are based on the social–cognitive assumption that the meanings of adolescents’ experiences become more important as adolescents’ cognitive skills become more complex (Berzonsky, 2011), and the positive psychology’s perspective that social-emotional competencies are fundamental to live engaging and meaningful lives (e.g., Gillham et al., 2011). The first domain, *belief-in-self*, which consists of constructs drawn primarily from the social-emotional learning (SEL) literature, includes self-efficacy, self-awareness, and persistence (e.g., Durlak et al., 2011). The second domain, *belief-in-others*, comprises school support, peer support, and family coherence, constructs mostly derived from the research on childhood resilience (e.g., Masten, 2001). Emotional regulation, empathy, and behavioral regulation are the constructs included in the third domain: *emotional competence*, which is also drawn from the SEL literature (e.g., Zins, Bloodworth, Weissberg, & Walberg, 2007). The fourth domain, *engaged living*, is composed of constructs primarily deriving from the positive youth psychology research, and includes gratitude, zest, and optimism (e.g., Furlong, Gilman, & Huebner, 2014). Similar to the developmental assets framework, these four social emotional health domains include both psychological (*belief-in-self*, *emotional regulation*, *engaged living*) and social (*belief-in-others*) assets (items measuring the different assets and domains are reported in Table 1). Research has found that a latent trait (called “covitality”), comprising the combination of these four social-emotional health domains, and measured by the Social Emotional Health Survey–Secondary (SEHS-S), was significantly associated with positive developmental conditions including subjective well-being and higher academic success (Furlong et al., 2014). Although the covitality index and its components have been related to positive youth outcomes, additional research is needed to better understand how these social-emotional assets are associated with negative life experiences, such as school victimization.

### Study Aims and Hypotheses

Studies have generally focused on specific risk or protective assets and evaluated their independent effects, but no studies have evaluated how configurations of the covitality assets organized by their quantity and/or variety across domains are associated with a reduced likelihood of violence victimization at school. Recognizing the need to consider more than one asset at a time, the current study aimed to set the basis for, and build a better understanding about, the number of social-emotional assets and variety of assets across domains needed to reduce the likelihood of school victimization (conceptualized as physical victimization, relational victimization, and fear of victimization in the school environment). More specifically, similar to what was found for the accumulation of risk model (Esbensen et al., 2009), we hypothesized that adolescents who possess multiple protective assets (*quantity*) and have protective assets in multiple domains (*variety of domains*) have a lower risk of being victimized. By testing the role of quantity and

variety of domains of assets in protecting from violence victimization, we wanted to find empirical support for Larson and Tran’s (2014) perspective that adolescents need an array of assets (operationalized in this study as number of assets and their variety across domains) to manage the challenges of modern society.

To test the hypotheses, the association between the assets and domains and school victimization was examined by considering the *quantity* (from 0 to 12) of individual protective assets, and computing the *variety* (from 0 to 4) of protective assets across domains. Finally, although gender is not necessarily associated with the likelihood of victimization in school (Card, Stucky, Sawalani, & Little, 2008), evidence shows that boys are more commonly victims of physical and direct forms of aggression, whereas girls tend to experience relational victimization (e.g., Archer, 2004); for this reason, gender was included as a control variable. Moreover, considering that the frequency of victimization as well as its forms varies across ages (e.g., Sentse, Kretschmer, & Salmivalli, 2015), age group was also included in the analyses.

## Method

### Participants

Data for the present study were collected at 17 high schools as part of a biannual statewide requirement to complete the California Healthy Kids Survey (CHKS), a surveillance assessment of youth strengths, risks, and well-being that is administered by the California Department of Education (CDE) and WestEd (Hanson & Kim, 2007; available from <http://chks.wested.org>). The participants in this study attended one of 17 high schools located in eight urban and suburban California school districts. These high schools had a total enrollment of 22,703 students. All students were eligible to complete the surveys, with 12,040 (53.0% of the total potential sample pool<sup>1</sup>) providing usable responses for the variables included in the analyses for this present study (the main factors involved in nonparticipation were random incomplete distribution to students, absenteeism, and student time conflicts). The analyses evaluating the association between the different indicators of protective assets (quantity and variety of domains) and school victimization were performed on a sample of 11,790 participants after listwise deletion from original data to have the same number in all models.

The sample was balanced across grades (22.7% to 24.9% across grade levels), gender (51.4% females), with a mean age of 16.0 years ( $SD = 1.2$ ). Given California’s diverse school population, questions are asked about a student’s general racial identification and Hispanic or Latino/a heritage. A majority of the students identified as Blended (two or more sociocultural groups; 31.6%, which is common in California) followed by White (21.2%), Black

<sup>1</sup> The 53% is compared with official enrollment across all of the high schools. Unfortunately, the survey collection procedures implemented by the State Department of Education did not include information about nonresponders, so that a comparison between the excluded and included subsamples is not possible. However, the schools distributed surveys to students without awareness of or regard to this analysis being done, so there was no chance that any systematic bias was involved in the completion of the survey by any individual students.

Table 1  
*Domains, Assets and Items Included in the Social and Emotional Health Survey-Secondary*

Domains	Assets	Items	Alpha
Belief-in-self	Self-efficacy	1. I can work out my problems	.85
		2. I can do most things if I try	
		3. There are many things that I do well	
Belief-in-others	Self-awareness	4. There is a purpose to my life	.85
		5. I understand my moods and feelings	
		6. I understand why I do what I do	
Belief-in-others	Persistence	7. When I do not understand something, I ask the teacher again and again until I understand	.76
		8. I try to answer all the questions asked in class	
		9. When I try to solve a math problem, I will not stop until I find a final solution	
Belief-in-others	School support	<i>At my school, there is a teacher or some other adult. . .</i>	.86
		10. . . who always wants me to do my best	
		11. . . who listens to me when I have something to say	
Belief-in-others	Family coherence	12. . . who believes that I will be a success	.92
		13. My family members really help and support one another	
		14. There is a feeling of togetherness in my family	
Belief-in-others	Peer support	15. My family really gets along well with each other	.93
		16. I have a friend my age who really cares about me	
		17. I have a friend my age who talks with me about my problems	
Emotional competence	Emotional regulation	18. I have a friend my age who helps me when I'm having a hard time	.84
		19. I accept responsibility for my actions	
		20. When I make a mistake I admit it	
Emotional competence	Empathy	21. I can deal with being told no	.88
		22. I feel bad when someone gets their feelings hurt	
		23. I try to understand what other people go through	
Emotional competence	Behavioral self-control	24. I try to understand how other people feel and think	.76
		25. I can wait for what I want	
		26. I don't bother others when they are busy	
Engaged living	Gratitude	27. I think before I act	.94
		<i>Select the answer that best describes how much you have experienced this feeling "since yesterday"</i>	
		28. Grateful	
Engaged living	Zest	29. Thankful	.93
		30. Appreciative	
		<i>How much do you have this feeling right now?</i>	
Engaged living	Optimism	31. Energetic	.89
		32. Active	
		33. Lively	
Engaged living	Optimism	34. Each day I look forward to having a lot of fun	.89
		35. I usually expect to have a good day	
		36. Overall, I expect more good things to happen to me than bad things	

Note. For information about the SEHS-S, see [www.michaelfurlong.info/social-emotional-health.html](http://www.michaelfurlong.info/social-emotional-health.html).

(9.0%), Asian (7.4%), Native Hawaiian/Pacific Islander (2.0%), Alaskan/Native American (2.2%), and no response (26.5%). In addition, more than one half of these students (57.5%) also identified as having a Hispanic or Latino/a background. This sample is generally representative of California's high school demographics, although it slightly overrepresented Latino/a students, who make up 50.7% of the statewide student population (California Department of Education, 2013). The percentage of English Learners ranged from 7% to 68% ( $Md = 23\%$ ), and 38% to 92% ( $Md = 51\%$ ) of the students were listed as being from families that were considered to be economically disadvantaged.

## Measures

**School victimization.** This study used three school victimization items (physical victimization, relational victimization, and fear of victimization) from the CHKS. The CHKS survey is modeled on and includes items from the U.S. Youth Risk Behavior

Surveillance Survey (Eaton et al., 2012). *Physical victimization* was measured with the item: "During the past 12 months, how many times on school property have you been pushed, shoved, slapped, hit, or kicked by someone who wasn't just kidding around?" *Relational victimization* was measured with the item: "During the past 12 months, how many times on school property have you been made fun of because of your looks or the way you talk?" The subjective perception of the *fear of violence* was measured with the item: "During the past 12 months, how many times on school property have you been afraid of being beaten up?" Responses options were as follows: 1 = 0 times, 2 = 1 time, 3 = 2-3 times, 4 = 4 + times. Students were classified as having experienced school victimization if they reported being victimized two or more times in the past year (as in Felix, Sharkey, Green, Furlong, & Tanigawa, 2011).

**Protective assets.** The protective assets and domains were measured using the Social and Emotional Health Survey-

Secondary (SEHS-S; Furlong, You, et al., 2014). Each of the 12 individual assets (e.g., self-efficacy) includes three items, for a total of 36 items (nine items for each of the four domains; see Table 1 for a listing the 12 assets, four domains, and item response options). The hierarchical second-order factor structure of the SEHS was established using both exploratory and confirmation factor analysis (Furlong, You, et al., 2014) and replicated with independent samples (You, Furlong, Dowdy, Renshaw, Smith, & O'Malley, 2014; You et al., 2015). The factor structure is invariant for males and females (Furlong, You, et al., 2014), older and younger adolescents (You et al., 2015), and across sociocultural groups (You et al., 2015). The subscales measuring the 12 social-emotional protective assets had good internal reliability in the current study with alphas ranging from .76 in *persistence* and *self-control* to .94 in *gratitude* (see Table 1). The alpha for the covitality index was .95, comparable (.93–.95) to previous studies (Furlong, You, et al., 2014; You et al., 2014, 2015).

Based on the literature on risk factors (Esbensen et al., 2009; Farrington & Loeber, 2000), each of the 12 individual assets was scored as a continuous variable. We then classified individuals as possessing the asset if their score fell in the top 25% of all respondents on that particular measure (0 = score 1st–74th percentiles and 1 = 75th–99th percentiles). This classification approach is based on the fact that dichotomization allows equating the sensitivity of measurement across all variables, which makes it possible to compare the strengths of the association between different configurations of assets and school victimization. Finally, because we were testing new hypotheses, we chose this approach because it allowed the use of odds ratio (a more realistic and interpretable measure of strength of association as contrasted to, e.g., the percentage of explained variance), which simplified the presentation of results and made the findings easier to interpret by a wider audience. Two different measures were created to test the study hypotheses:

1. *Quantity* of individual covitality assets (range 0–12) was computed by summing the 12 dichotomous variables measuring the different assets and creating 12 dummy variables (to compare youth having a different number of assets to youth having zero assets).
2. *Variety* of covitality domains (range 0–4) was computed by creating dichotomous variables differentiating between youth having at least one individual asset within the four different domains (*belief-in-self*, *belief-in-others*, *emotional competence*, and *engaged living*) and youth having zero assets in that particular domain. These variables were then summed and four dummy variables were computed (to compare those having at least one asset in one to four domains to those not having assets in any of the domains).

## Procedures

The CHKS and the SEHS-S were administered to students at participating schools in a group format, during regular schools hours in spring of 2013. The procedures to obtain informed consent and to administer the surveys followed standard CHKS protocol (see [chks.wested.org/administer/instructions](http://chks.wested.org/administer/instructions)). Eleven schools administered the SEHS-S using an online ( $n = 6,758$ ), anonymous survey

portal created by WestEd and six used paper surveys with an accompanying Scantron response sheet ( $n = 5,282$ ). The student participation rate (compared with total student enrollment) at schools that completed the online (64.7%) and paper (60.3%) formats was comparable. In addition, the effect size differences found when comparing the students who completed the survey via online and paper formats were negligible in terms of grade level (Cramer's  $V = .04$ ), gender (Cramer's  $V = .01$ ), and mean total SEHS-S raw score ( $\eta^2 = .003$ ). All responses were processed by WestEd and combined into a SPSS file. Whenever the CHKS is processed, each student's responses are evaluated against seven checks for response consistency and extreme responding (see Furlong, Ritchey, & O'Brennan, 2009). Data were made available to the researchers after they completed a data sharing agreement required by the CDE that provided confidentiality and data security assurances. Analyses of these anonymous data were exempt from the University Institutional Review Board on the use of human subjects.

## Analytic Approach

Prevalence of school victimization, as well as protective assets, were estimated and compared by gender using chi-square tests. Because data were nested, with adolescents having been sampled within schools, a mixed-effects modeling approach was used (Jaeger, 2008; Pinheiro & Bates, 2000). Specifically, for each dichotomous dependent variable two logistic mixed-effects models (i.e., one for each protective asset indicator: quantity of assets and quantity of domains/variety) were performed, with age and sex used as control variables, and school as a random effect. As a measure of effect size, we calculated odds ratios for the model parameters. Analyses were performed using the package *lme4* (Bates, Maechler, & Bolker, 2013) of the statistical software R (R Development Core Team, 2013).

Based on the work of Esbensen et al. (2009), and to obtain the odd ratios of school victimization associated with different quantity and variety of assets across domains, predictors were operationalized as dummy variables: this allowed for separate regression coefficients to be matched for each possible value of the discrete variable. For example, in relation to quantity of assets, dummy variables identifying each group were included simultaneously as predictors in the model and categorized as follows: one asset (1 = 1 asset; 0 = all the other categories); two assets (1 = 2 assets; 0 = all the other categories), and so forth. By simultaneously including the 12 dummy variables representing youths possessing 1 to 12 assets in the mixed-effects model, each group was automatically compared with youth having zero assets. Dummy variables representing groups of youths with the same number and variety of assets across domains were created to identify potential tipping points associated with a different likelihood of school victimization (instead of estimating the association between assets and victimization by considering assets as ordinal variables); the omnibus test for the three ordinal independent variables was also performed and the  $\chi^2$  values are presented in Table 3. These three models were independently evaluated and compared using the three different indicators of school victimization as dependent variables (physical victimization, relational victimization, and fear of victimization). For each dependent variable, two different models (i.e., quantity and variety of assets across domains) were

compared using the Bayesian Information Criterion (BIC; see, Wagenmakers, 2007). BIC compares non-nested and nested models, especially for large samples. Given a set of models that share the same null model, the model with the smallest BIC represents the best fitting model. Furthermore, to quantify and interpret the evidence of the best fitting model against the competing models, the differences between model BICs were evaluated. According to Raftery (1995; see also Wagenmakers, 2007), a difference in BIC between 0 and 2 indicates weak evidence, a difference between 2 and 6 indicates positive evidence, a difference between 6 and 10 indicates strong evidence, and a difference larger than 10 indicates very strong evidence for the best fitting model.

## Results

### Preliminary Analyses

Descriptive statistics are in Table 2. Relational victimization was the most common form of school victimization, followed by physical victimization, and fear of being victimized. There was a positive association between the three forms of school victimization examined: physical victimization—fear of victimization,  $r = .34$ ,  $p < .001$ , physical victimization—relational victimization,  $r = .29$ ,  $p < .001$ , and relational victimization—fear of victimization,  $r = .29$ ,  $p < .001$ .

Table 2 shows that 18.9% of the students were rated as not having a high level (in the top 25%) on any of the 12 individual assets with a gradually decreasing trend from students having one to 12 of the individual assets. In relation to the variety of the domains, there was an equal distribution of students reporting to have at least one individual asset in one to four domains or no assets.

### Association Between Assets and School Victimization

To evaluate the study hypotheses, we ran two independent logistic regression models with physical victimization, relational victimization, and fear of victimization in school as dependent variables. In the first model (Regression Model A), the quantity of assets was included as a predictor; in the second model (Regression Model B), the three indicators of school victimization were regressed on the variety of covitality domains.

**Quantity of assets.** Table 3 shows the results of the three regression models for each dependent variable. Regression Model A presents the association between the quantity of assets and the likelihood of being a victim of the different forms of violence examined (all participants with 1 to 12 assets were compared with those having no assets). The findings revealed a general decrease in the odd ratios (OR) of being victimized when the students reported more assets; however, the pattern was not always regular. Overall, participants reporting between 4 and 9 assets had significantly lower odds of being victimized compared to youth having zero assets (with slight differences among the three indicators of victimization). Moreover, reporting a high level on all 12 assets appeared to be protective for the different forms of violence examined: students reporting all 12 assets were almost two times<sup>2</sup> more likely to *not* be victims of physical violence (OR = 0.53), about 2.4 times more likely to *not* be a victim of relational violence (OR = 0.41), and more than four times more likely to *not* report

fear of victimization in school (OR = 0.24). We also note that having 10 to 11 assets protected students from relational violence (OR = 0.50 and 0.41, respectively), but not other forms of victimization.

**Variety of assets across domains.** Regression Model B shows the results of the association between the variety of assets across domains and school victimization. In these analyses, participants reporting assets in zero domains were compared with those reporting assets in one to four domains. Overall, we observe a clear decreasing pattern in the ORs of being victimized as a result of reporting a higher number of domains. More specifically, students having at least one asset in three and four domains had about a 1.3 to 1.5 times lower likelihood of being victims of physical and relational violence (OR = 0.74 and 0.72 for students with assets in three domains, OR = 0.66 for four domains). For fear of victimization, the protective effect of the variety of assets across domains appears to be stronger: (a) students having an asset in at least two domains were about 1.4 times less likely (OR = 0.74), (b) those having at least one asset in three domains were about 1.5 less likely (OR = 0.65), and (c) participants with at least one asset in all the four domains were more than 2 times less likely (OR = 0.47) to report that they had felt fear of victimization.

As shown in Table 3, Model B (testing variety of assets across domains, respectively) showed a better fit than Model A (as measured by the Bayesian Information Criterion), thus giving support to the importance of the variety of assets across domains in predicting adolescent victimization.

## Discussion

The current study examined the associations among different configurations of psychological and social assets and school related violent victimization in adolescence (operationalized as physical victimization, relational victimization, and fear of victimization on school property). Overall, our findings gave support to the main hypotheses of the study by demonstrating that adolescents possessing a higher quantity of assets and reporting protective assets in multiple domains tended to have a lower odds of victimization.

Relational victimization was the most common form of violence experienced in the school environment—more commonly experienced among females than males. Physical violence in school was a more common experience for males. These results are consistent with prior research. Though gender may not necessarily be a predictor for aggressive behavior (Card et al., 2008), past findings indicated that males are commonly victims and perpetrators of direct forms of aggression, whereas females tend to experience indirect or relational bullying (e.g., Archer, 2004).

There are a number of ways in which the psychological assets included in the covitality model might prevent youths from being victimized: for example, the assets comprised in the *belief-in-self*

<sup>2</sup> When the results are reported in terms of percent difference in likelihood, they have been obtained by subtracting the ORs from 1.0. When they are reported in terms of “ $n$  times less likely,” they have been obtained by the following calculation:  $1.0/\text{OR}$ . We chose to alternate these two ways of reporting results because by studying protective factors our findings are mostly composed of ORs lower than 1.0, which are generally less interpretable and intuitive in quantifying the strength of the associations than ORs above 1.0.

Table 2  
*Descriptive Statistics for the Variables Included in the Study by Gender*

Variable	Total % (N = 12,040)	Males % (n = 5,846)	Females % (n = 6,194)	$\chi^2$	$\phi$
Physical victimization (2+ times)	10.4	11.4	9.4	13.41***	.03***
Relational victimization (2+ times)	19.8	15.8	23.6	113.41***	.10***
Fear of victimization (2+ times)	5.2	5.0	5.3	.08	.01
Number of covitality assets: Quantity					
0 assets	18.9	21.3	16.5	44.32***	.06***
1 asset	17.5	17.4	17.5	.01	.00
2 assets	14.2	12.4	15.8	29.81***	.05***
3 assets	11.6	11.5	11.8	.28	.00
4 assets	8.5	7.7	9.3	9.25**	.03**
5 assets	7.4	7.0	7.7	2.73	.01
6 assets	5.4	5.0	5.8	3.47	.02
7 assets	4.1	3.9	4.3	1.61	.01
8 assets	3.5	3.6	3.3	.81	.01
9 assets	2.8	2.8	2.8	.004	.00
10 assets	2.4	2.6	2.3	.73	.01
11 assets	2.3	3.0	1.6	27.75***	.05***
12 assets	1.5	1.8	1.1	10.18**	.03**
Number of covitality domains: Variety					
0 domains	18.9	21.3	16.5	44.32***	.06***
1 domain	22.1	22.0	22.3	.11	.00
2 domains	21.2	19.4	22.9	22.82***	.04***
3 domains	18.0	17.4	18.6	2.87	.01
4 domains	19.8	19.9	19.7	.12	.00

\*\*  $p < .01$ . \*\*\*  $p < .001$ .

(i.e., school support, peer support, and family coherence; Cook, Williams, Guerra, Kim, & Sadek, 2010) and *engaged living* (i.e., gratitude, zest, optimism; Deptula, Cohen, Phillipsen, & Ey, 2006) domains might discourage violent behaviors because adolescents having that combination of assets do not represent easy targets; generally, bullies or aggressive adolescents often choose their victims among shy and insecure students (e.g., Olweus, 1995). Moreover, having emotional competencies such as the ability to regulate one's own emotions and behaviors and empathy might together help adolescents react appropriately to aggressive attitudes and behaviors, thus reducing the likelihood of being targeted as victims of violent acts. Similarly, perceiving social support from different environments (family, peer, school support) might decrease the risk of being victimized because of the consistent support others provide in coping with violent behaviors (Cook et al., 2010; Faris & Felmlee, 2014). Although each one of the psychological and social assets examined in the current study is theoretically associated with a reduced likelihood of being victimized, our study examined the importance of having a quantity and variety of psychological and social assets across domains to avoid school victimization.

Our findings partly supported the first hypothesis regarding the *quantity* of assets—when compared with adolescents having no assets (not classified in the top quartile in any of the 12 assets), adolescents reporting a greater number of psychological and social assets had a lower likelihood of being victimized. More specifically, a general decreasing trend in the risk of being a victim of violence can be detected—having more assets was associated with lower odds of school victimization; however, this trend did not follow a regular pattern across types of victimization. The protective role of the quantity of psychological and social assets was similar for physical victimization and the fear of victimization in

school. The findings show that students reporting between 4 and 9 protective assets also reported to have been victimized less frequently and have a lower likelihood of fearing victimization in school. Although there was not a pronounced decrease in the risk of physical victimization for adolescents having 4 to 8 assets, a more gradual trend was detected for perceived fear of victimization. Although it is possible to observe a general trend where more assets correspond to a lower risk of feared or actual physical victimization in school, there were some exceptions that were not easy to interpret; for example, possessing two assets appeared to be enough to protect students from fearing school victimization, whereas having three or four assets was not significantly associated with the fear of victimization. Similarly, it is not easy to interpret why the OR of fearing school victimization is higher for adolescents having nine assets when compared to adolescents having eight assets (OR = 0.56 and 0.35, respectively), although both had a protective effect. Regarding relational victimization in school, certain quantities of assets seemed to be equally protective: students reporting between 4 and 6 individual assets had a similar reduction in the likelihood of becoming a victim of this form of violence (ranging from 28% and 24%). However, when the number of psychological and social assets increased, the odds of experiencing school relational victimization gradually decreased. On the other hand, reporting high levels on all 12 assets appears to be beneficial for all forms of violence examined, with the strongest association in the fear of victimization (characterized by a 76% reduced likelihood of being victimized). Overall, the findings on the association between quantity of assets and school victimization gave only partial support to one of the main assumptions of the cumulative-assets framework (and, indirectly, to the cumulative-risks framework; Esbensen et al., 2009): that a higher number of external and internal assets promotes adolescent positive develop-

Table 3

Multilevel Random-Coefficient Model (Random Effect Was School) Showing the Association Between Quantity, Variety, and Configuration of Building Blocks and Violence Victimization (N = 11,790)

Model	Physical victimization	Relational victimization	Fear of victimization
Model A: Quantity			
Gender			
Male	1.00	1.00	1.00
Female	.81 [.72, .91]***	1.64 [1.49, 1.80]***	1.08 [.92, 1.28]**
Age group	.81 [.77, .86]***	.94 [.91, .98]**	.90 [.84, .96]
Number of covitality assets	$\chi^2_{(12)} = 33.2, p = .001$	$\chi^2_{(12)} = 68.6, p = .001$	$\chi^2_{(12)} = 45.2, p < .001$
0 assets	1.00	1.00	1.00
1 asset	.93 [.77, 1.12]	.93 [.80, 1.08]	.88 [.69, 1.13]
2 assets	.93 [.76, 1.14]	.95 [.81, 1.11]	.69 [.52, .91]**
3 assets	1.01 [.82, 1.24]	.99 [.84, 1.17]	.83 [.62, 1.10]
4 assets	.73 [.57, .95]*	.76 [.63, .92]**	.78 [.56, 1.07]
5 assets	.74 [.57, .97]*	.72 [.59, .89]**	.52 [.35, .77]**
6 assets	.64 [.47, .88]**	.72 [.57, .91]**	.49 [.31, .78]**
7 assets	.68 [.48, .97]*	.87 [.68, 1.11]	.41 [.23, .72]**
8 assets	.50 [.33, .77]**	.66 [.49, .87]**	.35 [.18, .66]**
9 assets	.71 [.48, 1.07]	.68 [.50, .92]*	.56 [.31, 1.00]*
10 assets	.77 [.50, 1.18]	.50 [.35, .72]***	.56 [.30, 1.05]
11 assets	.71 [.46, 1.12]	.41 [.27, .63]***	.60 [.32, 1.13]
12 assets	.53 [.29, .97]*	.41 [.25, .68]***	.24 [.08, .77]*
Bayesian information criterion	7873.99	11650.52	4863.41
Model B: Variety			
Gender			
Male	1.00	1.00	1.00
Female	.81 [.72, .91]***	1.65 [1.51, 1.82]***	1.09 [.92, 1.28]
Age group	.81 [.77, .85]***	.94 [.91, .98]**	.90 [.84, .96]**
Number of covitality domains	$\chi^2_{(4)} = 27.3, p < .001$	$\chi^2_{(4)} = 52.0, p < .001$	$\chi^2_{(4)} = 45.2, p < .001$
0 domains	1.00	1.00	1.00
1 domain	.89 [.75, 1.07]	.92 [.80, 1.06]	.85 [.67, 1.07]
2 domains	.99 [.83, 1.18]	.99 [.86, 1.14]	.74 [.58, .94]*
3 domains	.74 [.61, .91]**	.72 [.62, .84]***	.65 [.50, .84]**
4 domains	.66 [.54, .80]***	.66 [.56, .76]***	.47 [.35, .62]***
Bayesian information criterion	7804.96	11592.18	4799.75

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

ment (Scales et al., 2006). Moreover, the minimum number of assets showing a protective role against all the three forms of school victimization examined was five.

The second assumption of the cumulative-assets framework was examined with the second hypothesis of the current study regarding the *variety* of psychological and social assets across domains. According to the model, adolescents having protective assets in multiple domains (individual, social, environmental) have a lower likelihood of being involved in violence. Our findings show that there was a general decreasing pattern in the risk of being victimized when youths reported assets in a higher number of domains.

The protective role of variety of assets across domains was similar for physical and relational violence. Adolescents reporting at least one asset in one or two domains do not seem to be at a lower risk of being victims of physical or relational violence as compared with adolescents reporting zero assets. To be at lower risk of physical and relational victimization at school, our results demonstrated that adolescents need a wide variety of psychological and social assets across domains, that is, at least one asset in three different domains. In addition, adolescents reporting the highest degree of variety across domains (i.e., having at least one asset in an additional domain) had the lowest likelihood of being victimized at school. For both physical and relational victimiza-

tion, adolescents reporting assets in all four domains were 34% less likely to have been victims of violence at school.

Looking at the results of perceived fear of victimization in school, the protective role of the variety of assets across domains appears to be more pronounced—having at least one asset in two domains seems to make a difference and reduces the risk of fearing victimization by 26%. The likelihood of reporting fear of victimization at school was lower as the number of domains increased. It is plausible that the awareness of having psychological and social assets has a stronger effect on the subjective perception of being victimized in school, with respect to the frequency of actual victimization. In general, these findings highlight that having asset(s) in a single domain did not make a difference in terms of likelihood of being victimized compared to not having assets, thus emphasizing the importance of having a variety of strengths across domains (Esbensen et al., 2009; Scales et al., 2006). In other words, to be protected from the risk of being victimized in school, it does not appear sufficient to be very competent, for instance, in the emotional domain (i.e., reporting high levels of emotional regulation, empathy and behavioral self-control); instead, perceiving high levels of self-efficacy and peer support and reporting high levels of empathy (i.e., possessing a more varied array of assets) was associated with a lower risk of victimization at school. These

results are aligned with the SEI literature (Peters et al., 2009), by suggesting that the importance of protective factors might be related to a combinatorial effect. In addition, it appears that adolescents need to possess assets in at least three domains to be at a lower risk of the three forms of victimization.

Overall, in line with what Esbensen et al. (2009) found in relation to risk factors, our findings showed that both quantity of psychological and social assets, and their variety across domains, are associated with a lower risk of being victimized in school. The examination of quantity and variety of assets across domains underlined the protective role of having psychological and social assets in at least three domains and a certain amount of single assets (five) against the different forms of school victimization considered. These results give partial support to the cumulative-assets framework and point the need to expand the theoretical model in order to better analyze the role of the variety of assets across domains. In addition, the current findings provide empirical support to Larson and Tran's theoretical perspective (2014) that the integration between sets of competences in different domains allows adolescents to better navigate the life challenges characterizing modern society.

### Limitations

The current study added information on cumulative-risk/assets frameworks and protective factors against school victimization; however, limitations need to be addressed. This study is cross-sectional, which prevents drawing conclusions on the direction of effects. Future longitudinal studies are needed to examine how different assets configurations predict later school victimization. Because the analyses relied on self-report measures, there is risk for a social desirability bias. Multiinformant research studies should be designed that collect data on school victimization and protective factors from multiple sources. Additionally, we focused on the general configuration of assets by examining their quantity and variety across domains, but did not take into account specific strengths or domains (e.g., Evans, Marsh, & Weigel, 2010). Different configurations of quantity and variety of assets across domains might have a different impact on school victimization based on the specific clusters of assets. Finally, the study focused solely on school-based victimization; additional studies are needed to focus on other important environments, such as peer violence off school grounds, to enhance generalizability across settings.

### Research Implications

The current study has theoretical and empirical implications for future research analyzing protective factors against youth violence and elucidating the utility of the cumulative-assets/risk frameworks by showing how the general configuration of psychological and social assets might nurture adolescent positive development. Future research needs to deepen the understanding of the best configurations of assets for adolescent development; for example, by analyzing how specific clusters of assets (e.g., individual/internal and environmental/external) interact with the quantity of strengths in predicting youth violence, or by identifying the ideal balance between number of assets (quantity) and number of domains (variety). Studies examining the role of developmental assets in protecting adolescents from multiple forms of victimiza-

tion (e.g., physical and relational) are also needed. In addition, future research should examine the association between assets configuration and adolescent development by analyzing other outcomes such as adolescent substance abuse, depressive symptoms, life satisfaction, and academic achievement.

### Clinical and Policy Implications

These findings are particularly valuable when considering implementation of interventions because the findings can be summarized in general guidelines for practice. The situations where violence occurs are varied and complex, as are the social interactions that precede or follow them. Hence, a wide range of assets might help adolescents cope with different situations, for example, by establishing supportive relationships able to prevent school victimization or appropriately reacting to aggression when it occurs. A wide variety of psychological and social assets and a high quantity of strengths appear to be particularly relevant in protecting adolescents from relational victimization in school. Relational violence episodes tend to be more subtle and nuanced when compared to physical aggression (e.g., Coyne & Archer, 2005) and a more complex array of assets might be needed to cope with those forms of school victimization.

Violence prevention programs implemented in schools and communities should target a sufficient amount of developmental assets (at least five) pertaining to different domains (at least three). For example, an effective program to reduce school violence would aim to foster school and peer support (environmental assets included in the *belief-in-others* domain), and nurture emotional regulation, empathy (psychological assets included in the *emotional competence* domain), and self-efficacy (psychological asset included in the *belief-in-self* domain). The general goal of this kind of intervention strategy would be to promote positive development with its cornerstone in at least one domain (where youths possess 2–3 assets) but complemented by assets pertaining to other domains. However, the choice of the specific combination of assets to target should be based on a complete assessment of resources and needs at the school/neighborhood level (Hawkins et al., 2008) and the developmental stage of the youths. For instance, when working with adolescents it might be particularly relevant to promote supportive relationships with peers and self-efficacy as having friends to turn to and a feeling of efficacy is fundamental to appropriately reacting to or recovering from episodes of school victimization (e.g., Fitzpatrick & Bussey, 2014). In conclusion, the different configurations of quantity and variety across domains examined in this study serve as a foundation for further scholarship and practice to better understand the importance of attending to both the quantity and variety of psychological and social assets across domains when working to improve youth outcomes.

### References

- Archer, J. (2004). Sex differences in aggression in real-world settings: A meta-analytic review. *Review of General Psychology, 8*, 291–322. <http://dx.doi.org/10.1037/1089-2680.8.4.291>
- Arthur, M. W., Hawkins, J. D., Pollard, J. A., Catalano, R. F., & Baglioni, A. J., Jr. (2002). Measuring risk and protective factors for substance use, delinquency, and other adolescent problem behaviors. The Communities That Care Youth Survey. *Evaluation Review, 26*, 575–601.

- Bates, D., Maechler, M., & Bolker, B. (2013). *lme4: Linear mixed-effects models using Eigen and Eigen++*. Retrieved from <http://CRAN.R-project.org/package=lme4>
- Berkowitz, R. (2014). Student and teacher responses to violence in school: The divergent views of bullies, victims, and bully-victims. *School Psychology International, 35*, 485–503. <http://dx.doi.org/10.1177/0143034313511012>
- Berzonsky, M. D. (2011). A social-cognitive perspective on identity construction. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 55–76). New York, NY: Springer. [http://dx.doi.org/10.1007/978-1-4419-7988-9\\_3](http://dx.doi.org/10.1007/978-1-4419-7988-9_3)
- Card, N. A., Stucky, B. D., Sawalani, G. M., & Little, T. D. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development, 79*, 1185–1229. <http://dx.doi.org/10.1111/j.1467-8624.2008.01184.x>
- California Department of Education. (2013). *Enrollment by ethnicity for 2012–13*. Retrieved from <http://www.cde.ca.gov/ds/sd/sd/filesenr.asp>
- Coyne, S. M., & Archer, J. (2005). The relationship between indirect and physical aggression on television and in real life. *Social Development, 14*, 324–338. <http://dx.doi.org/10.1111/j.1467-9507.2005.00304.x>
- Cook, C. R., Williams, K. R., Guerra, N. G., Kim, T. E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence. *School Psychology Quarterly, 25*, 65–83. <http://dx.doi.org/10.1037/a0020149>
- Deptula, D. P., Cohen, R., Phillipsen, L. C., & Ey, S. (2006). Expecting the best: The relation between peer optimism and social competence. *The Journal of Positive Psychology, 1*, 130–141. <http://dx.doi.org/10.1080/17439760600613685>
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*, 405–432. <http://dx.doi.org/10.1111/j.1467-8624.2010.01564.x>
- Eaton, D. K., Kann, L., Kinchen, S., Shanklin, S., Flint, K. H., Hawkins, J., . . . the Centers for Disease Control and Prevention (CDC). (2012). Youth risk behavior surveillance—United States, 2011. *Morbidity and Mortality Weekly Report. Surveillance Summaries (Washington, D.C.: 2002)*, 61, 1–162.
- Esbensen, F., & Carson, D. C. (2009). Consequences of being bullied: Results from a longitudinal assessment of bullying victimization in a multi-site sample of American students. *Youth & Society, 41*, 209–233. <http://dx.doi.org/10.1177/0044118X09351067>
- Esbensen, F. A., Peterson, D., Taylor, T. J., & Freng, A. (2009). Similarities and differences in risk factors for violent offending and gang membership. *Australian and New Zealand Journal of Criminology, 42*, 310–335. <http://dx.doi.org/10.1375/acri.42.3.310>
- Espelage, D. L., & Swearer, S. M. (2004). *Bullying in American schools: A social-ecological perspective on prevention and intervention*. Mahwah, NJ: Erlbaum.
- Evans, W. P., Marsh, S. C., & Weigel, D. J. (2010). Promoting adolescent sense of coherence: Testing models of risk, protection, and resiliency. *Journal of Community & Applied Social Psychology, 20*, 30–43. <http://dx.doi.org/10.1002/casp.1002>
- Faris, R., & Felmlee, D. (2014). Casualties of social combat school networks of peer victimization and their consequences. *American Sociological Review, 79*, 228–257. <http://dx.doi.org/10.1177/0003122414524573>
- Farrington, D. P., & Loeber, R. (2000). Some benefits of dichotomization in psychiatric and criminological research. *Criminal Behaviour and Mental Health, 10*, 100–122. <http://dx.doi.org/10.1002/cbm.349>
- Felix, E. D., Sharkey, J. D., Green, J. G., Furlong, M. J., & Tanigawa, D. (2011). Getting precise and pragmatic about the assessment of bullying: The development of the California Bullying Victimization Scale. *Aggressive Behavior, 37*, 234–247. <http://dx.doi.org/10.1002/ab.20389>
- Fitzpatrick, S., & Bussey, K. (2014). The role of perceived friendship self-efficacy as a protective factor against the negative effects of social victimization. *Social Development, 23*, 41–60. <http://dx.doi.org/10.1111/sode.12032>
- Furlong, M. J., Gilman, R., & Huebner, E. S. (Eds.). (2014). *Handbook of positive psychology in schools*. New York, NY: Routledge.
- Furlong, M. J., Ritchey, K., & O'Brennan, L. (2009). Developing norms for the California Resilience Youth Development Module: Internal assets and school resources subscales. *The California School Psychologist, 14*, 35–46. <http://dx.doi.org/10.1007/BF03340949>
- Furlong, M. J., You, S., Renshaw, T. L., Smith, D. C., & O'Malley, M. D. (2014). Preliminary development and validation of the Social and Emotional Health Survey for secondary students. *Social Indicators Research, 117*, 1011–1032. <http://dx.doi.org/10.1007/s11205-013-0373-0>
- Gillham, J., Adams-Deutsch, Z., Werner, J., Reivich, K., Coulter-Heindl, V., Linkins, M., . . . Seligman, M. E. P. (2011). Characters strengths predict subjective well-being during adolescence. *The Journal of Positive Psychology, 6*, 31–44. <http://dx.doi.org/10.1080/17439760.2010.536773>
- Gini, G. (2008). Associations among overt and relational victimization and adolescents' satisfaction with friends: The moderating role of the need for affective relationships with friends. *Journal of Youth and Adolescence, 37*, 812–820. <http://dx.doi.org/10.1007/s10964-007-9236-9>
- Gini, G., & Pozzoli, T. (2013). Bullied children and psychosomatic problems: A meta-analysis. *Pediatrics, 132*, 720–729. <http://dx.doi.org/10.1542/peds.2013-0614>
- Gorman-Smith, D., Henry, D. B., & Tolan, P. H. (2004). Exposure to community violence and violence perpetration: The protective effects of family functioning. *Journal of Clinical Child and Adolescent Psychology, 33*, 439–449. [http://dx.doi.org/10.1207/s15374424jccp3303\\_2](http://dx.doi.org/10.1207/s15374424jccp3303_2)
- Hanson, T. L., & Kim, J. O. (2007). *Measuring resilience and youth development: The psychometric properties of the Healthy Kids Survey*. (Issues & Answers Report, REL 2007–No. 034). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory West. Retrieved from <http://ies.ed.gov/ncee/edlabs>
- Hawkins, J. D., Brown, E. C., Oesterle, S., Arthur, M. W., Abbott, R. D., & Catalano, R. F. (2008). Early effects of communities that care on targeted risks and initiation of delinquent behavior and substance use. *Journal of Adolescent Health, 43*, 15–22. <http://dx.doi.org/10.1016/j.jadohealth.2008.01.022>
- Jaeger, T. F. (2008). Categorical data analysis: Away from ANOVAs (transformation or not) and towards logit mixed models. *Journal of Memory and Language, 59*, 434–446. <http://dx.doi.org/10.1016/j.jml.2007.11.007>
- Kann, L., Kinchen, S., Shanklin, S. L., Flint, K. H., Kawkins, J., Harris, W. A., . . . the Centers for Disease Control and Prevention (CDC). (2014). Youth risk behavior surveillance—United States, 2013. *Morbidity and Mortality Weekly Report. Surveillance Summaries (Washington, D.C.: 2002)*, 63, 1–168.
- Larson, R. W., & Tran, S. P. (2014). Invited commentary: Positive youth development and human complexity. *Journal of Youth and Adolescence, 43*, 1012–1017. <http://dx.doi.org/10.1007/s10964-014-0124-9>
- Logan-Greene, P. L., Nurius, P. S., Herting, J. R., Walsh, E., & Thompson, E. A. (2010). Violent victimization and perpetration: Joint and distinctive implications for adolescent development. *Victims & Offenders, 5*, 329–353. <http://dx.doi.org/10.1080/15564886.2010.509655>
- Lomas, J., Stough, C., Hansen, K., & Downey, L. A. (2012). Brief report: Emotional intelligence, victimisation and bullying in adolescents. *Journal of Adolescence, 35*, 207–211. <http://dx.doi.org/10.1016/j.adolescence.2011.03.002>

- Lösel, F., & Bender, D. (2014). Aggressive, delinquent, and violent outcomes of school bullying: Do family and individual factors have a protective function? *Journal of School Violence, 13*, 59–79. <http://dx.doi.org/10.1080/15388220.2013.840644>
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development, 71*, 543–562. <http://dx.doi.org/10.1111/1467-8624.00164>
- Masten, A. S. (2001). Ordinary magic. Resilience processes in development. *American Psychologist, 56*, 227–238. <http://dx.doi.org/10.1037/0003-066X.56.3.227>
- Mayer, M. J., & Furlong, M. J. (2010). How safe are our schools? *Educational Researcher, 39*, 16–26. <http://dx.doi.org/10.3102/0013189X09357617>
- Olweus, D. (1995). Bullying or peer abuse at school: Facts and intervention. *Current Directions in Psychological Science, 4*, 196–200. <http://dx.doi.org/10.1111/1467-8721.ep10772640>
- Peguero, A. A. (2011). Violence, schools, and dropping out: Racial and ethnic disparities in the educational consequence of student victimization. *Journal of Interpersonal Violence, 26*, 3753–3772. <http://dx.doi.org/10.1177/0886260511403764>
- Peters, C., Kranzler, J. H., & Rossen, E. (2009). Validity of the Mayer—Salovey—Caruso Emotional Intelligence Test: Youth Version—Research Edition. *Canadian Journal of School Psychology, 24*, 76–81. <http://dx.doi.org/10.1177/0829573508329822>
- Pinheiro, J. C., & Bates, D. M. (2000). *Mixed-effects models in S and S-PLUS*. New York, NY: Springer. <http://dx.doi.org/10.1007/978-1-4419-0318-1>
- Polan, J. C., Sieving, R. E., & McMorris, B. J. (2013). Are young adolescents' social and emotional skills protective against involvement in violence and bullying behaviors? *Health Promotion Practice, 14*, 599–606. <http://dx.doi.org/10.1177/1524839912462392>
- Raftery, A. E. (1995). Bayesian model selection in social research. *Sociological Methodology, 25*, 111–164.
- R Development Core Team. (2013). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing.
- Reijntjes, A., Kamphuis, J. H., Prinzie, P., & Telch, M. J. (2010). Peer victimization and internalizing problems in children: A meta-analysis of longitudinal studies. *Child Abuse & Neglect, 34*, 244–252. <http://dx.doi.org/10.1016/j.chiabu.2009.07.009>
- Renshaw, T. L., Furlong, M. J., Dowdy, E., Rebelez, J., Smith, D. C., & O'Malley, M. D. (2014). Covitality: A synergistic conceptualization of adolescents' mental health. In M. J. Furlong, R. Gilman, & E. S. Huebner (Eds.), *Handbook of positive psychology in the schools* (2nd ed., pp. 12–32). New York, NY: Routledge.
- Rothon, C., Head, J., Klineberg, E., & Stansfeld, S. (2011). Can social support protect bullied adolescents from adverse outcomes? A prospective study on the effects of bullying on the educational achievement and mental health of adolescents at secondary schools in East London. *Journal of Adolescence, 34*, 579–588. <http://dx.doi.org/10.1016/j.adolescence.2010.02.007>
- Scales, P. C., Benson, P. L., Roehlkepartain, E. C., Sesma, A., Jr., & van Dulmen, M. (2006). The role of developmental assets in predicting academic achievement: A longitudinal study. *Journal of Adolescence, 29*, 691–708. <http://dx.doi.org/10.1016/j.adolescence.2005.09.001>
- Sentse, M., Kretschmer, T., & Salmivalli, C. (2015). The longitudinal interplay between bullying, victimization, and social status: Age-related and gender differences. *Social Development, 24*, 659–677. <http://dx.doi.org/10.1111/sode.12115>
- Sijtsema, J. J., Rambaran, J. A., Caravita, S. C. S., & Gini, G. (2014). Friendship selection and influence in bullying and defending: Effects of moral disengagement. *Developmental Psychology, 50*, 2093–2104. <http://dx.doi.org/10.1037/a0037145>
- Swearer, S. M., Espelage, D. L., Vaillancourt, T., & Hymel, S. (2010). What can be done about school bullying? Linking research to educational practice. *Educational Researcher, 39*, 38–47.
- Wagenmakers, E. J. (2007). A practical solution to the pervasive problems of *p* values. *Psychonomic Bulletin & Review, 14*, 779–804. <http://dx.doi.org/10.3758/BF03194105>
- Wright, E. M., Fagan, A. A., & Pinchevsky, G. M. (2013). The effects of exposure to violence and victimization across life domains on adolescent substance use. *Child Abuse & Neglect, 37*, 899–909. <http://dx.doi.org/10.1016/j.chiabu.2013.04.010>
- You, S., Furlong, M. J., Dowdy, E., Renshaw, T. L., Smith, D. C., & O'Malley, M. D. (2014). Further validation of the Social and Emotional Health Survey for high school students. *Applied Research in Quality of Life, 9*, 997–1015. <http://dx.doi.org/10.1007/s11482-013-9282-2>
- You, S., Furlong, M. J., Felix, E., & O'Malley, M. D. (2015). Validation of the Social and Emotional Health Survey for five sociocultural groups: Multigroup invariance and latent mean analyses. *Psychology in the Schools, 52*, 349–362. <http://dx.doi.org/10.1002/pits.21828>
- Zins, J. E., Bloodworth, M. R., Weissberg, R. P., & Walberg, H. J. (2007). The scientific base linking social and emotional learning to school success. *Journal of Educational & Psychological Consultation, 17*, 191–210. <http://dx.doi.org/10.1080/10474410701413145>

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