Risk and Promotive Factors in Families, Schools, and Communities: A Contextual Model of Positive Youth Development in Adolescence

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ABSTRACT

OBJECTIVE. Emerging evidence about optimal youth development highlights the importance of both reducing negative behavior and promoting positive behavior. In our study we tested a contextual model derived from positive youth-development theory by examining the association of family, school, and community risk and promotive factors, with several outcome indices of both positive and negative adolescent development.

METHODS. A sample of 42,305 adolescents aged 11 to 17 (51% girls) was drawn from the 2003 National Survey of Children’s Health. Survey item composites were formed representing promotive and risk factors in the family (eg, closeness, aggression) and school and community (eg, community connectedness, school violence). Outcome composites reflected positive (social competence, health-promoting behavior, self-esteem) and negative (externalizing, internalizing, academic problems) developmental outcomes. Ordinary least squares regression was used to test the overall model.

RESULTS. Between 0.10 and 0.50 of the variance in each outcome was explained by the contextual model. Multiple positive family characteristics were related to adolescent social competence and self-esteem, as well as lowered levels of internalizing and externalizing behavior and academic problems. Family communication, rules about television, and parents’ own healthy behavior were related to adolescent health-promoting behavior. School and community safety were associated with increased social competence and decreased externalizing behavior. School violence was related to adolescent internalizing and externalizing behavior, as well as academic problems and lower self-esteem.

CONCLUSIONS. Our results support the proposition that healthy adolescent development has roots in multiple contexts. Youth who were involved in contexts that provided positive resources from important others (ie, parents, schools, and com-
munities) not only were less likely to exhibit negative outcomes, but also were more likely to show evidence of positive development. These findings provide important implications for intervention and prevention efforts and, more generally, for the promotion of positive, competent, and healthy youth development.

Comprehensive theoretical models of adolescent problem behavior propose risk and promotive factors at multiple levels of the social environment, including the family, peer, school, and neighborhood contexts. In addition, growing attention is focused on promoting positive youth development, encouraging health-promoting behavior, and investing in resources for youth. Thus, a holistic and comprehensive approach to optimizing adolescent development requires an understanding of factors related to both reducing problem behavior and increasing positive, competent youth behavior.

Research related to optimal youth development has begun to delineate critical dimensions of important social contexts. For example, some researchers propose 3 basic experiences (ie, connection, regulation, and autonomy) to define youth’s main associations with their environment that can be measured across multiple settings. Others have articulated similar concepts and expanded the number of dimensions to include characteristics, such as adequate nutrition, health, and shelter; physical and psychological safety; adequate and appropriate supervision and motivation; supportive relationships; support for efficacy and opportunities for skill building; and integration of family, school, and community efforts.

Empirical research generally substantiates these concepts. For example, multiple aspects of parenting including warmth, discipline, modeling of healthy behavior, monitoring, and supervision have been related to both positive and negative developmental outcomes. Other research has shown positive outcomes for youth positively connected to school and negative outcomes from associating with delinquent peers. More distally, research has shown that community investments in youth (through structural resources, appropriate mechanisms of control, and connectedness) are related to lower levels of risky behavior in the community and greater opportunity for health-promoting behavior and positive youth development.

Together, this work provides evidence that resources at multiple levels are important for both reducing negative behavior and promoting positive, healthy development. However, concerns remain. First, much of the previous research focuses on single contexts, rather than understanding how factors in multiple contexts coexist to promote and detract from ideal outcomes; and, of those studies that include multiple contexts, few simultaneously include both risk and promotive factors in them. Second, many studies include either positive or negative dimensions of adolescent development but not both, especially when considered from a multilevel contextual framework. Third, again with exceptions, much of this work has been conducted with smaller, nonrepresentative samples.

We use the 2003 National Survey of Children’s Health (NSCH) to assess the simultaneous impact of family, school, and community risk and promotive factors on several commonly studied positive (social competence, self-esteem, health-promoting behavior) and negative (externalizing and internalizing behavior, academic problems) developmental outcomes. Sociodemographic characteristics were included as controls in the models on the basis of numerous studies that document associations between these markers and behavioral outcomes. Multiple indicators of positive (eg, closeness, safety) and negative (eg, aggression, negative influence) dimensions of family, school, and community contexts were included on the basis of previous research.

We hypothesized that, controlling for sociodemographics, negative contextual factors would be associated with negative behavioral outcomes and inversely related to positive outcomes; contextual promotive factors would be associated with positive outcomes and inversely related to negative outcomes; and when entered simultaneously in the model, both family, school, and community contexts would be significantly associated with the outcomes.

Methods
The survey design of the 2003 NSCH is described briefly in the article by Kogan and Newacheck in this issue; more in-depth information can be found elsewhere. Human subjects review was not required for this study.

Study Sample
Surveys were identified for 42,305 adolescents between the ages of 11 and 17 years (weighted mean: 13.94 years; SE: 0.017 years); 51% were girls. As rated by parents (0 = poor to 4 = excellent), adolescents were relatively healthy (mean: 3.38; SE: 0.008); however, 21% met screening criteria that identified a special health care need. Nineteen percent were black, 81% were white or other, and 15% were Hispanic. The highest level of education in the household was more than high school for 62% of families. Most families (56%) had incomes between 100% and 400% of the federal poverty level (FPL), with 16% below 100% FPL and 28% above 400% FPL. Fifty-three percent of the adolescents lived in 2-parent households (Table 1).
Missing Data

Several composite variables were created from subsets of individual survey items. In some cases, some items within a composite were missing. When at least half of the items within that subset had valid responses, the missing items were estimated as the average of the valid responses. The greatest amounts of missing data were for poverty level (20% of cases). Poverty level was imputed from state, highest household education, total number of children in household, and total number of adults in household, using hot-decking techniques to maximize use of that variable in analyses. Variable Composition

All items were parent report. For some constructs, single items were used. When multiple items were available that addressed a similar construct, composites were created by summing the respective items. Higher scores on each variable reflect more of that dimension.

Outcome Variables

Positive Outcomes

Social competence included 4 items about the extent (0 = never, 3 = always) to which the adolescent shows respect for teachers and neighbors, gets along with other kids, tries to empathize, and tries to resolve conflicts (mean: 9.29; SE: 0.021; range: 0–12). Health-promoting behavior involved 3 dichotomized items indicating the number of days the adolescent got enough sleep (1 = 7 days, 0 = 0–6 days) and got aerobic exercise (1 = 4–7 days, 0 = 0–3 days), as well as BMI (1 = healthy weight; 0 = not healthy weight) (mean: 2.32; SE: 0.009; range: 0–3). Self-esteem was assessed by a single item reflecting concerns about self-esteem (reversed coded: 0 = a lot of concern, 2 = not at all; mean: 1.12; SE: 0.008).

Negative Outcomes

Externalizing behavior was the sum of 6 items: 2 items that parents received a professional report of conduct problems (0 = no, 1 = yes) or problems with emotion or getting along with others (0 = no, 1 = yes), and 4 items about extent (0 = never, 3 = always) of arguing, bullying or cruelty, disobedience, and sullenness (mean: 0.18; SE: 0.038; range: 0–14). Internalizing behavior was the sum of parents’ receipt of a professional report of depression or anxiety (0 = no, 1 = yes), parental concern about child’s depression (2 = a lot, 0 = not at all), and 3 items reflecting parent reports of child’s feelings of worthlessness, inferiority or depression, unhappiness, and withdrawal (0 = never, 3 = always; mean: 0.03; SE: 0.031; range: 0–12). Academic problems included 4 items about problems at school (0 = parent contacted by school 0–1 times, 1 = parent contacted ≥2 times); concerns about achievement and learning difficulties (0 = none or a little, 1 = a lot); and grade repetition (1 = yes, 0 = no; mean: 0.93; SE: 0.010; range: 0–4).
Predictor Variables

Sociodemographic Controls
Sociodemographic indicators included adolescent age (in years), gender (1 = female, 0 = male), general health status (0 = poor, 4 = excellent), presence of special health care need (1 = yes, 0 = no), race (1 = black, 0 = white or other), and ethnicity (1 = Hispanic, 0 = non-Hispanic). Also included were highest level of household education (1 = above high school, 0 = high school or below), family income level as % FPL (≤100%, 101%–400%, ≥400%), and household status (1 = 2-parent, 0 = other).

Family Context
Positive Dimensions
Family engagement included 3 items: how often the parent attended the adolescent’s activities (0 = never, 3 = always), how many of the adolescent’s friends the parent had met (0 = none, 3 = all), and the number of days in the past week that the family ate dinner together (mean: 9.26; SE: 0.026; range: 0–13). Three items made up family closeness: concerns about having time with the child and concerns about the relationship with the child (both reverse coded; 2 = not concerned, 0 = concerned a lot) and closeness of the parent-child relationship (3 = very close, 0 = not close; mean: 5.08; SE: 0.015). Healthy role modeling included 4 items reflecting mothers’ and fathers’ health and mental health (4 = excellent, 0 = poor), and 2 items about mothers’ and father’s aerobic exercise in past month (1 = yes, 0 = no; mean: 15.38; SE: 0.045; range: 0–18).

Household rules about television (1 = yes, 0 = no; mean: 0.79; SE: 0.004), communication skills (3 = talk very well, 0 = not very well; mean: 2.68; SE: 0.005), child safety at home (3 = always, 0 = never; mean: 2.83; SE: 0.005), coping with parenthood (3 = coping very well, 0 = not coping well; mean: 2.50; SE: 0.05), and emotional support available (1 = yes, 0 = no; mean: 0.86; SE: 0.003) were each measured with a single item.

Negative Dimensions
Family aggression (mean: 2.58; SE: 0.016; range: 0–12) included 3 items measuring the extent (4 = always, 0 = never) to which family members talk calmly (reverse-coded), yell, and hit or throw things during arguments. Four items measured parent aggravation36: difficulty in caring for the adolescent, being bothered by things the adolescent does, sacrifices for the child, and anger (0 = never, 3 = always; mean: 2.68; SE: 0.018; range: 0–12). A single item assessing whether anyone in the home smoked (1 = yes, 0 = no) was used to proxy negative health modeling (mean: 0.32; SE: 0.004).

School and Neighborhood Context
Positive Dimensions
Neighborhood connectedness included 4 items reflecting the degree to which people in the neighborhood help each other out, watch out for each other’s children, count on each other, and are trusted to help each other’s children (3 = definitely agree, 0 = definitely disagree; mean: 9.57; SE: 0.025; range: 0–12). Neighborhood and school safety involved 2 items measuring parents’ feelings that the adolescent was safe at school and safe in the neighborhood (0 = never, 3 = always; mean: 4.65; SE: 0.013; range: 0–6).

Negative Dimensions
Parents’ concerns (2 = a lot, 0 = not at all) that the adolescent was bullied by classmates and about violence in school were summed to create school violence (mean: 0.93; SE: 0.012; range: 0–4). A single item about bad influences in the neighborhood was used to assess negative neighborhood influence (3 = definitely agree, 0 = definitely disagree; mean: 1.45; SE: 0.011).

RESULTS
Analyses were run by using the survey regression procedure in Stata 8.237 by using sample weights. All variables were entered simultaneously into each model.
As seen in Table 2, between 0.10 and 0.50 of the total variance in each outcome was explained by the overall model. The pattern of results related to the sociodemographic predictors can be seen in Table 2; because these results are not germane to this study’s research questions, they are not discussed further.

With respect to promotive factors in the family context, family engagement, closeness, communication, and parental healthy role modeling were significantly related to adolescent social competence, health-promoting behavior, and self-esteem, as well as less internalizing and externalizing behavior. Family closeness was related to fewer academic problems. Family communication, rules about television, and parents’ own healthy behavior were related to adolescent health-promoting behavior. The extent to which parents reported that the youth feels safe at home did not impact any of the positive behavioral outcomes but was associated with less externalizing and internalizing behavior. However, somewhat counterintuitively, it should be noted that academic problems were related to parents’ reports of greater coping and support resources for them as parents, and communication was related to lower self-esteem.

A number of negative findings emerged as well. Family aggression and parent aggravation were associated with less social competence, health-promoting behavior, and self-esteem, and greater externalizing, internalizing, and negative academic behavior. Finally, adolescents engaged in less health-promoting behavior, greater externalizing behavior, and had greater academic problems.
TABLE 2  Regressions of Adolescent Positive and Negative Outcomes on Sociodemographic, Family Context, and School and Community Measures

<table>
<thead>
<tr>
<th>Variables</th>
<th>Positive Outcomes</th>
<th>Negative Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Social Competence</td>
<td>Health-Promoting Behavior</td>
</tr>
<tr>
<td>Sociodemographic controlsa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child’s age</td>
<td>0.07 (0.01)d</td>
<td>−0.04 (0.01)d</td>
</tr>
<tr>
<td>Child’s gender (1 = female)</td>
<td>0.51 (0.04)d</td>
<td>−0.03 (0.02)</td>
</tr>
<tr>
<td>Household education level (1 = more than high school)</td>
<td>0.04 (0.04)</td>
<td>0.06 (0.02)</td>
</tr>
<tr>
<td>Child’s health</td>
<td>0.07 (0.03)d</td>
<td>0.13 (0.01)d</td>
</tr>
<tr>
<td>Special healthcare need (1 = yes)</td>
<td>−0.37 (0.05)d</td>
<td>−0.01 (0.02)</td>
</tr>
<tr>
<td>Race (1 = black)</td>
<td>0.02 (0.06)</td>
<td>−0.03 (0.03)</td>
</tr>
<tr>
<td>Ethnicity (1 = Hispanic)</td>
<td>0.30 (0.07)d</td>
<td>0.01 (0.03)</td>
</tr>
<tr>
<td>&lt;100% FPL</td>
<td>−0.06 (0.01)</td>
<td>−0.05 (0.03)</td>
</tr>
<tr>
<td>&gt;400% FPL</td>
<td>−0.15 (0.08)b</td>
<td>−0.01 (0.04)</td>
</tr>
<tr>
<td>Family structure (1 = 2 parents)</td>
<td>0.18 (0.04)d</td>
<td>0.03 (0.02)</td>
</tr>
<tr>
<td><strong>Family characteristicsa</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Positive dimensions</strong></td>
<td></td>
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</tr>
<tr>
<td>Engagement</td>
<td>0.07 (0.01)d</td>
<td>0.04 (0.00)d</td>
</tr>
<tr>
<td>Closeness</td>
<td>0.10 (0.01)d</td>
<td>0.02 (0.01)d</td>
</tr>
<tr>
<td>Role models</td>
<td>0.04 (0.01)</td>
<td>0.03 (0.01)d</td>
</tr>
<tr>
<td>Rules</td>
<td>0.09 (0.05)</td>
<td>0.11 (0.02)d</td>
</tr>
<tr>
<td>Communication</td>
<td>0.78 (0.04)b</td>
<td>0.05 (0.03)</td>
</tr>
<tr>
<td>Safety</td>
<td>0.10 (0.06)</td>
<td>0.04 (0.02)</td>
</tr>
<tr>
<td>Parents’ coping</td>
<td>0.16 (0.04)d</td>
<td>0.08 (0.02)d</td>
</tr>
<tr>
<td>Parents’ support</td>
<td>−0.12 (0.07)</td>
<td>−0.01 (0.04)</td>
</tr>
<tr>
<td><strong>Negative dimensions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family aggression</td>
<td>−0.10 (0.01)d</td>
<td>−0.04 (0.01)d</td>
</tr>
<tr>
<td>Parent aggravization</td>
<td>−0.25 (0.01)d</td>
<td>−0.02 (0.01)d</td>
</tr>
<tr>
<td>Negative health role model</td>
<td>−0.06 (0.04)</td>
<td>−0.04 (0.02)b</td>
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<tr>
<td><strong>School and neighborhood characteristicsa</strong></td>
<td></td>
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<tr>
<td><strong>Positive dimensions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School and neighborhood safety</td>
<td>0.11 (0.02)d</td>
<td>−0.00 (0.01)</td>
</tr>
<tr>
<td>Neighborhood connectedness</td>
<td>0.05 (0.01)d</td>
<td>0.01 (0.00)b</td>
</tr>
<tr>
<td><strong>Negative dimensions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative neighborhood influence</td>
<td>−0.03 (0.02)</td>
<td>−0.03 (0.01)</td>
</tr>
<tr>
<td>School violence</td>
<td>0.05 (0.02)d</td>
<td>0.01 (0.01)</td>
</tr>
<tr>
<td><strong>Total model R²</strong></td>
<td>0.28d</td>
<td>0.10d</td>
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</table>

*Values tabulated for each predictor in the model are regression coefficients, SEs, and significance level (|P < 0.05; |P < 0.01; |P < 0.001). All variables were entered simultaneously.

when there was a negative health role model in the house.

With respect to the school and community system variables, the results showed that school and community safety were associated with greater social competence and less externalizing behavior. Adolescents in neighborhoods who were more closely connected had greater social competence. Negative neighborhood influence was associated with greater externalizing behavior. School violence was related to adolescent externalizing, internalizing, and negative academic behavior, as well as lower self-esteem. Counterintuitively, school violence was also positively related to social competence.

A series of follow-up regressions examined the moderating effects of adolescent age, gender, race, ethnicity, and household status by creating a series of interaction terms for each of the family and school/community variables that involved, separately, each of these sociodemographic variables. There was no evidence of systematic variation in the findings based on sociodemographic characteristics.

**DISCUSSION**

The purpose of this study was to test a contextual model by examining the simultaneous association of family, school and community risk and promotive factors with several aspects of both positive and negative adolescent development. Using data from the 2003 NSCH, results provided support for the notion that adolescents in contexts that provided positive resources not only were less likely to engage in problem behavior but also were more likely to actively engage in socially competent and health-promoting behavior. Consistent with positive youth-development theory, this study provides evidence in support of examining youth development holistically (ie, by focusing on both problem and competent behavior), as well as ecologically (ie, by considering positive and negative dimensions of multiple contexts simulta-
neously). In particular, 3 themes emerged across context: interpersonal connection, safety, and health promotion.

First, consistent with research that demonstrates positive connections between positive characteristics of families and child outcomes, family closeness, connection, communication, and engagement were related to both more positive outcomes, as well as less negative outcomes. Thus, “mundane” aspects of family life such as talking to one another, having dinner together, and knowing about the adolescents’ friends seem to matter positively across multiple indicators of adolescent well-being. On the other hand, congruent with research about the consequences of family conflict, family aggression and negative parenting emotions were strongly associated with decreased positive and increased negative behavior, along multiple dimensions. Whereas previous work draws associations to problem behavior, our analyses show implications for competence and health promotion as well. Moreover, the salience of interpersonal connection extended beyond the family as well, with neighborhood positive connectedness associated with socially competent behavior and neighborhood negative influence associated with externalizing behavior. Again, these findings are congruent with other work illustrating the effects of neighborhoods and communities.

Second, issues about safety and violence also emerged. For example, our findings showed that home safety was associated with less externalizing and internalizing behavior. External to the family, school and neighborhood safety was associated with greater social competence and less externalizing behavior. School violence had negative implications for adolescent development in terms of self-esteem, externalizing, internalizing, and negative academic outcomes. A number of recent studies highlight the negative outcomes related to violence, along multiple dimensions.

Finally, the current study highlights several aspects of health that may be influenced by social learning and provides support for public efforts to promote youth health by engaging parents in the effort. For example, parents who modeled healthy behavior reported their offspring to have greater social competence and engage in health-promoting behavior themselves. Parents who set rules about television had adolescents who engaged in greater health-promoting behavior. Negative health role modeling, indicated by the presence of household smokers, was associated with less health-promoting behavior, as well as greater externalizing and academic problems. Thus, the behavior that parents model seems to influence both positive and negative aspects of adolescent development.

LIMITATIONS
Despite broad strengths of the study that include the size and representativeness of the sample and the breadth of information in the survey, this study has several limitations. First, the analyses are cross-sectional and do not allow conclusions of direction or cause. For example, our finding that parents’ coping and support were positively related to adolescents’ academic problems may indicate that parents seek support and activate coping skills when their child has problems; alternatively, school problems may manifest themselves when parents are dealing with a problem that requires external support and active coping. Second, the survey relies on parent report; the extent to which parent report is valid and reliable is a concern. Moreover, it is possible that associations detected in these analyses are attributable, in part, to shared method/shared respondent variance. Finally, we were limited to the items in the survey as the means for operationalizing study constructs. The items, although chosen with great care, may or may not be the most sensitive or appropriate measure of that construct. This is a common and typically tolerable concern in secondary data analyses, particularly given the offsetting advantages of this national study.

CONCLUSIONS
Our findings add support to the growing literature stressing the importance of interpersonal resources and connections for youth, safety and absence of violence, and healthy role-modeling in reducing problem behavior and increasing positive behavior. Together, our findings suggest that the most productive efforts to both ameliorate problem behavior, as well as promote healthy and competent behavior, need to include multiple salient contexts: those close to the adolescent in their family relationships, but also more broadly in mobilizing and supporting schools and communities to support youth.

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