Protective Effects of Self-Esteem and Family Support on Suicide Risk Behaviors among At-Risk Adolescents

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PROBLEM: If and how family support and self-esteem might interact to protect against adolescent suicide risk is not well understood.

METHODS: Hierarchical multiple regression was used to examine the moderating effect of family support on the relationship between self-esteem and suicide risk behaviors among potential high school dropouts (N = 849), using questionnaires and in-depth assessment interviews.

FINDINGS: Family support moderated the impact of self-esteem on suicide risk; the ameliorating effect of self-esteem was stronger among adolescents with low versus high family support.

CONCLUSIONS: Self-esteem influences adolescent suicide risk behaviors for youth with low as well as high family support. Interventions designed to strengthen both self-esteem and support resources are appropriate.

Search terms: Adolescent, family support, protective factor, self-esteem, suicide risk

Suicide among young people is a tragic experience for the individual, the family, and the community (Eskin, Ertekin, Dereboy, & Demirkiran, 2007). It ranks as the third leading cause of death among youth aged 15–24 years (Belfer, 2008; Centers for Disease Control and Prevention [CDC], 2007). According to the Youth Risk Behavior Surveillance conducted by Eaton et al. (2006), 16.9%, 13%, and 8.4% of students seriously considered suicide, had a plan, and made a suicide attempt in the last 12 months, respectively. In an effort to understand and prevent suicide in adolescents, researchers have investigated both intrapersonal and interpersonal variables that might be considered risk factors for suicidal behaviors (Flouri & Buchanan, 2002; Gutierrez, 2006). One identified risk factor for suicidal tendencies among youth in particular is academic problems (Borowsky, Ireland, & Resnick, 2001; Martin, Richardson, Bergen, Roeger, & Allison, 2005). In this regard, Fergusson, Beautrais, and Horwood (2003) and Thompson, Moody, and Eggert (1994) reported that youth experiencing school difficulties in terms of grades, attendance, and behavior-related problems were at increased risk for suicide. Walsh and Eggert (2007) noted that adolescents’ lack of academic progress and/or disruptiveness often attract the attention and concern of parents and school personnel, distracting from recognition of their potential suicide risk. Accordingly, identifying and reaching out to this at-risk group before they become overwhelmed and engage in suicidal behaviors as a “rational” means of solving problems is a concern of all healthcare professions.

Assessment of suicide risk that is based on risk factors alone ignores the fact that risk is a balance between risk factors and protective factors (Fergusson et al., 2003). Appleby (1992) stated that protective factors are not simply the mirror image of risk factors, but they are circumstances that, in the presence of considerable risk, act preventively without altering the risk factors themselves. Accordingly, a key aspect of resilience—the process of overcoming the nega-
tive effects of risk exposure, coping successfully with traumatic experiences, and avoiding the negative trajectories associated with risks—is the presence of factors that either help bring about a positive outcome or reduce or avoid a negative outcome (Fergus & Zimmerman, 2005). Hollister-Wagner, Foshee, and Jackson (as cited in McLaren, Gomez, Bailey, & Van Der Horst, 2007) suggest that maladjustment is related to the interaction of risk and protective factors. More specifically, relative to low levels of protective factors, high levels of protective factors are predicted to have stronger buffering effects on the relationship between risk factor and maladjustment. Thus, the resiliency model suggests the need to search for positive factors that moderate or reduce the effects of risk on negative outcomes. In fact, relatively few studies have investigated the inverted question of what stops individuals from killing themselves, counterbalancing an otherwise substantial risk (Bertolote, 2004; Borowsky et al., 2001).

Studies have reported that self-esteem is a powerful internal protective factor against adolescent suicide behaviors (Eskin et al., 2007; Grøholt, Ekeberg, Wichstrøm, & Haldorsen, 2005). Fergusson et al. (2003) found that resiliency to suicidal behaviors was associated with increased self-esteem among young people. Researchers have argued that external resources in terms of availability of social support, especially from the family, can reduce the risk for suicidal behavior and can be invaluable during periods of increased stress (Compton, Thompson, & Kaslow, 2005; Meadows, Kaslow, Thompson, & Jurkovic, 2005). In this context, Harris and Molock (2000) found that higher levels of family cohesion and family support were associated with lower levels of suicidal ideation among African American college students. Flouri and Buchanan (2002) documented that adolescents who attempted suicide tended to report lower self-concept and parental involvement compared with adolescents who had not attempted suicide.

Research generally supports the view that secure attachment with parents in infancy, childhood, and adolescence is linked with positive representations of the self, including high levels of self-esteem and self-efficacy (Arbona & Power, 2003; Laible, Carlo, & Roesch, 2004). There is, however, a paucity of literature addressing the interaction between family support and self-esteem and suicidal behaviors. In this regard, Thompson, Kaslow, Short, and Wychoff (2002) reported that among African American women who experienced abuse, the association between self-efficacy and suicide attempt status was partially accounted for by the mediating roles of perceived social support from friends and family and perceived effectiveness of obtaining social and material resources. In a longitudinal study of interactions among parents, peers, and school relations and of suicide attempts among adolescents, Kidd et al. (2006) documented that exploring potential patterns of protective moderation may provide direction; if one or more social domains is proven to be resistant to intervention, it might be helpful to intervene in another domain.

To date, whether support from the family supplements or interacts with self-esteem to ameliorate the risk of suicide still needs to be examined. The current study addresses this knowledge gap by extending the current research that focuses on factor identification to a focus on the interaction of factors that might counteract suicidal behaviors among adolescents. The central aim of the present study was to examine the interaction between self-esteem and family support and its role in mitigating suicide risk among adolescents experiencing school performance problems.

We hypothesize that, independently, self-esteem and family support will have a negative influence on suicide risk behaviors and that family support will moderate the effect of self-esteem on suicide risk behaviors (Figure 1). High family support, compared with low family support, is expected to be a powerful resource for enhancing the protective effect of self-esteem on suicide risk. Elucidating knowledge about the interactive effects of self-esteem and family support could offer insight into refining approaches to suicide prevention by incorporating and strengthening the joint effects of factors safeguarding against suicide risk.

Methods

Study Design and Subjects

A cross-sectional survey design was used to examine the influence of selected protective factors on suicide risk behaviors. Data for this secondary analysis were drawn from a

Figure 1. Hypothesized Interaction Effects of Self-Esteem and Family Support on Suicide Risk Behaviors. Reduced family support is hypothesized to attenuate the protective effects of self-esteem on suicide risk; increased family support is hypothesized to strengthen the relationship between self-esteem and suicide risk behaviors.

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study in which adolescents were recruited from 15 high schools that agreed to participate in the study. Ten schools were located in a metropolitan area in the Pacific Northwest and five in Northern New Mexico. Participants included 849 at-risk youth (potential high school dropouts) in grades 9–12.

Measures

The data were collected using two multidimensional assessment instruments with established reliability and validity, the High School Questionnaire (HSQ) (Eggert, Herting, & Thompson, 1994; Thompson et al., 1994) and the Measure of Adolescent Potential for Suicide (MAPS) (Eggert, Thompson, & Herting, 1994). The reliability coefficients reported here are from measures used in this study and fully consonant with estimates from other studies utilizing these instruments with over 5,000 adolescents (e.g., Eggert, Herting, & Thompson, 1996; Thompson, Herting, Walsh, Hooven, & Pike, 2008).

The HSQ (Eggert, Herting, et al., 1994) is a multidimensional measure of adolescent behaviors, experiences, and risk. Embedded within this instrument is the Suicide Risk Screen (SRS) used as a preliminary means for identifying adolescents with suicide risk. The SRS includes three sets of empirically based criteria measuring (a) suicidal behavior, (b) depression, and (c) drug involvement. Preliminary construct, discriminant, and predictive SRS validity was established in previous studies (Eggert, Herting, et al., 1994; Thompson & Eggert, 1999).

The MAPS (Eggert, Thompson, et al., 1994) includes measures of suicide risk behaviors and multiple protective factors. Overall, the MAPS measures showed strong content, criterion, and construct validity (Eggert, Thompson, et al.). The measure of suicide risk behaviors, the dependent variable, was from the MAPS instrument; the measures of self-esteem and family support (protective factors) were from the HSQ. Measures in both the HSQ and the MAPS, unless otherwise indicated, were measured using a 7-point, Likert-type scale. For most scales, a mean score was calculated; the higher the score, the greater the level of the measured construct.

Suicide risk behaviors was measured in the MAPS using a scale based on a posited theoretic framework and content analysis of existing scales (Beck, Kovacs, & Weissman, 1979; Derogatis, Rickels, & Rock, 1976; Hoff, 1984; Linehan, Goodstein, Nielsen, & Chiles, 1983; Los Angeles Suicide Prevention Center, 1982; Rudd, 1989). The scale measures seven facets of direct suicide risk behaviors, including attitude/beliefs toward suicide (5 items, \( \alpha = 0.83 \)); suicide ideation (frequency, 5 items and intensity 6 items, \( \alpha = 0.87 \)); suicide threats (3 items, \( \alpha = 0.77 \)); planning/preparation (14 items, \( \alpha = 0.92 \)); number of prior attempts (1 item); lethality of prior suicide attempt(s) (14 items, \( \alpha = 0.91 \)); and present versus past suicide risk (6 items, \( \alpha = 0.75 \)). Cronbach’s alpha for the overall Suicide Risk Behaviors Scale that incorporates each of these dimensions was 0.88.

Self-esteem was measured using a brief adapted version (\( \alpha = 0.75 \)) of Rosenberg’s (1965) Self-esteem Scale using four items to assess perceived self-worth and positive qualities, feeling useful, and taking a positive attitude toward self.

Family support was assessed using two measures: amount of support provided by family members (father, mother, brother, and sister) and sense of family support satisfaction. Adolescents rated the amount of support and help received from each family member using a 21-point scale ranging from \(-10 \) (nonsupportive) to 0 (neutral) to +10 (supportive). The total amount of support provided across multiple support sources was computed. The Family Apgar Scale (Smilkstein, Ashworth, & Montano, 1982) was used to assess perceived satisfaction with family help, support, and communication (5 items, \( \alpha = 0.89 \)). The two measures correlated at 0.50. Thus, an index of family support was created by summing the amount of support and support satisfaction measures.

Peer support was included as a covariate. Adolescents rated the amount of peer (best friend and classmate) support and help received using a 21-point scale ranging from \(-10 \) (nonsupportive) to 0 (neutral) to +10 (supportive). The total amount of support provided from each peer source was computed by summing the ratings. Sense of support satisfaction from friends (3 items, \( \alpha = 0.76 \)) was assessed using a Likert-type rating scale. The amount of support received and the corresponding sense of satisfaction were summed to create an index of peer support.

Demographic and academic variables were used for descriptive and as control variables; these included age, sex, ethnicity, living situation, parent’s education, adolescents’ perception of their family’s financial status, grades, number of school moves in junior and senior high school, and school performance problems based on grades, attendance, and probability of school dropout.

Procedures

All study procedures were approved by the University of Washington Institutional Review Board. Written informed assent/consent was obtained from each student and his or her parent/guardian. A three-stage process, described below, was used to identify at-risk adolescents who were also at suicide risk.

Stage 1: Identification and Invitation to Study

A pool of potential high school dropouts was identified from each school district’s database using a validated selection model (Herting, 1990) based on the following criteria: (a) below expected credits earned from current grade level, in
the top 25th percentile for days absent per semester and pattern of declining grades with a grade point average (GPA) less than 2.3 or a precipitous drop in GPA greater than 0.7 from the prior semester; or (b) prior school dropout status; or (c) referral from school personnel for being in jeopardy of school failure or dropout and meeting at least one of the criteria in (a). From this population, adolescents were randomly selected and personally invited into the school-based prevention study program. At invitation, procedures, time commitment, confidentiality, and limits to confidentiality were reviewed with the student and the parent/guardian, and written and verbal assent/consent were obtained from both the student and a parent/guardian.

Stage 3: Comprehensive Assessment Protocol

Adolescents willing to participate in the study completed the HSQ, a paper-and-pencil instrument. The HSQ was completed in small groups of 10–12 students, with seating arranged so students could not see each other’s answers. Code numbers were used instead of names to ensure confidentiality of responses. Students were instructed to speak individually with a research staff member if they had any questions, and these conversations were private. Data collection took approximately 1–1.5 hr. All youth in the study were assessed for suicide risk using the MAPS interview. Following screening, all adolescents were further assessed using a computer-assisted interview, the MAPS (Eggert, Thompson, et al., 1994). This interview provides in-depth assessment of direct suicide risk behaviors, related suicide risk factors, and protective factors. Each interview was conducted on a 1:1 basis in a private office at the school, requiring about 1.5–2 hr to complete. As a part of this MAPS assessment, each adolescent was personally “connected” with an adult in the school serving as a case manager. With the youth’s permission, a parent or guardian was called following the interview. If appropriate, the adolescent’s parent or guardian was notified about the adolescent’s suicide risk status (not all youth were at risk), as well as the youth’s apparent strengths and need for support and appropriate referrals as necessary. All follow-up procedures were reviewed at invitation, at consent, and at the beginning of the MAPS interview.

Analysis

Descriptive statistics were computed to examine data distributions and to summarize data. Pearson correlation coefficients were used to examine associations between suicide risk and specific protective factors. ANOVA and t tests were used to examine associations between suicide risk and socio-demographic and academic factors.

Multiple regression analysis was used to test the independent and interaction effects of self-esteem and family support on suicide risk behaviors. Other factors significantly correlated with suicide risk behaviors were included in the regression equations as control variables. These were age, sex, ethnicity, number of school moves, school performance problems, and peer support. Three hierarchical regression models were tested. In the first model, the hypothesized independent variables were entered into the equation. In the second model, the control variables were added to examine for the stability of the effects of the independent variables on suicide risk. The third model tested the moderating role of family support by including an interaction term for family support × self-esteem. The values of family support and self-esteem were centered to minimize the multicollinearity between these two predictors and the interaction term.

Standard procedures for evaluating moderating effects were used (Baron & Kenny, 1986; Bennett, 2000; Mackinnon, Fairchild, & Fritz, 2007). We first examined for evidence of a significant interaction term. A nonsignificant interaction term would indicate that the interaction model was not plausible and that the second model, without an interaction term, should be interpreted. On the other hand, if the interaction term was significant, the results would imply that the effect of self-esteem was moderated by family support. To further describe this moderating effect, we used a median split on family support to create two groups—low and high family support—and then to examine the effects of self-esteem on suicide risk separately for the high versus low family support groups, controlling for the identified covariates. We also examined for the separate effects of amount of family support and family support satisfaction on the relationship between self-esteem and suicide risk behaviors. The results were congruent with the model using the constructed index of family support (sum of the amount and sense of support satisfaction). Thus, the results reported are based on the family support index described earlier. Reported p values are two-tailed, with the level of significance set at p < .05. All analyses were conducted using SPSS Version 15.

Results

Description of Sample

Students’ ages ranged from 14 to 21 years (M = 15.9 years, SD = 1.21) with 34% and 25.4% of the adolescents enrolled in the 10th and 11th grade, respectively. Slightly more than one half of the sample (54.3%) was male. The sample was ethnically diverse, with 37.9% being White and 21.1%, 16.6%, 10%, 8.6%, and 5.8% being Hispanic/Latino, African American,
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Asian Pacific Islander, American Indian, and mixed ethnicity, respectively. Approximately 40% of the adolescents lived with both biological parents and 54% of the adolescents reported a history of school moves ranging from 1 to 10 with a mean of 1.23 moves (SD = 1.64). Close to half (45%) of the participants perceived their family’s financial status as much better than that of other youth. Consonant with the metropolitan demographics, 55% of female and 62% of male parents/guardians reported having had some college education, with 25% and 34%, respectively, having earned a college degree or higher.

Associations among Key Variables

Thirty-seven percent of adolescents were identified at suicide risk. Suicide risk was significantly and positively associated with age (r = 0.08, p < .05). Female adolescents had significantly more suicide risk behaviors than males (M = 3.03 and 1.74, respectively), t(688.92) = -4.49, p < .001. American Indian youth reported the highest mean score of suicide risk (M = 3.15), while African American youth reported the lowest mean score (M = 1.28), F (5, 835) = 3.26, p < .001. These findings are consonant with national statistics (CDC, 2007). The number of school moves and school performance problems were significantly and positively associated with suicide risk (r = 0.14, p < .001; and r = 0.11, p < .01, respectively). With respect to the protective factors, self-esteem, family support, and peer support were negatively correlated with suicide risk (r = -0.47, -0.25, and -0.30, respectively; p < .001).

Regression Analyses

Table 1 summarizes results from tests of the three regression models used to examine the interactive effect of self-esteem and family support on suicide risk. Results from Model 3, testing the interaction of self-esteem and family support, revealed a significant interaction term (B = 0.03, β = 0.13, t = 4.27, p < .001). Model 3 explained 28% of the variance in suicide risk, and inclusion of the interaction term yielded a significant increase in R², Fchange (1, 770) = 18.20, p < .001. These findings indicate that the influence of self-esteem on suicide risk is moderated by family support and argued for examining the models separately for adolescents with low versus high family support.

To examine the interaction effects, the sample was divided into two groups based on the median value of family support, creating a low family support group and a high family support group. The family support variable ranged from −30 to +46 with a median of 22. Adolescents with high family support reported significantly higher levels of self-esteem than those with low family support, t(837.2) = -7.49, p < .001. Separate regression tests for low versus high family support revealed that the hypothesized negative effect of self-esteem on suicide risk was significant for adolescents with high and with low family support. The results revealed, contrary to our hypothesis, that the effect of self-esteem on suicide risk was stronger for adolescents with low family support (B = -1.40, β = -0.39, t = -8.28, p < .001) than for adolescents with high family support (B = -0.79, β = -0.31, t = -6.07, p < .001). The amount of variance explained in suicide risk among adolescents with low versus high family support was 28% and 16%.

Table 1. Hierarchical Multiple Linear Regression Analysis of Interaction Effect of Self-esteem and Family Support on Suicide Risk Behaviors

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SEB</td>
<td>B</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>-1.29***</td>
<td>0.10</td>
<td>-1.05***</td>
</tr>
<tr>
<td>Family support</td>
<td>-0.04***</td>
<td>0.01</td>
<td>-0.03**</td>
</tr>
<tr>
<td>Age</td>
<td>0.29**</td>
<td>0.10</td>
<td>0.27**</td>
</tr>
<tr>
<td>Sex (1 = male, 2 = female)</td>
<td>1.02***</td>
<td>0.26</td>
<td>0.98***</td>
</tr>
<tr>
<td>Ethnicity (0 = White, 1 = non-White)</td>
<td>0.37</td>
<td>0.26</td>
<td>0.40</td>
</tr>
<tr>
<td>School moves</td>
<td>0.19*</td>
<td>0.08</td>
<td>0.17*</td>
</tr>
<tr>
<td>School performance problems</td>
<td>0.16</td>
<td>0.13</td>
<td>0.20</td>
</tr>
<tr>
<td>Peer support</td>
<td>-0.06**</td>
<td>0.02</td>
<td>-0.06**</td>
</tr>
<tr>
<td>Self-esteem × family support</td>
<td>0.03***</td>
<td>0.01</td>
<td>0.03***</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td></td>
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</tbody>
</table>

*p < .05; **p < .01; ***p < .001.

†Standardized regression coefficients (β) are shown for Model 3 only.
respectively. Thus, it appears that the ameliorating effect of self-esteem on suicide risk is slightly stronger for adolescents with low versus high family support, although this is a significant effect.

Discussion

The aims of this study were to examine the influence of self-esteem and family support on suicide risk behaviors and to investigate whether or not family support influences—or moderates—the impact of self-esteem on suicide risk behaviors. Collectively, the study findings mirror the process of resiliency, with intrapersonal (self-esteem) and interpersonal (family support) forces interacting to counteract suicide vulnerability. Self-esteem mitigates suicide risk among adolescents, a finding consistent with earlier studies (Eskin et al., 2007; Wilburn & Smith, 2005). Self-esteem appears to be a wide-ranging protective factor linked to psychological functioning and adjustment (Bal, Crombez, Van Oost, & Debourdeaudhuij, 2003). Appraisal of one’s self as competent and worthy creates a sense of self-acceptance, self-respect, and satisfaction with one’s self and life. These qualities enhance one’s ability to overcome defeating thoughts about self and one’s future in challenging and stressful contexts. Self-esteem may act as a prophylaxis against suicidal behaviors by decreasing a person’s vulnerability to depression. Congruent with this interpretation, Overholser, Adams, Lehnert, and Brinkman (1995) reported that low self-esteem was closely related to depression, hopelessness, and suicidal tendencies among adolescents. Persons with low self-esteem tend to accept negative feedback readily and to have difficulties generating positive feedback regarding their personal actions, both of which contribute to decreased feelings of competence (Josephs, Bosson, & Jacobs, 2003), and in turn can contribute to suicide risk behaviors.

The current findings are also consistent with studies that confirm the ameliorating effect of family support on risk of suicide behaviors for adolescents (Fleming, Merry, Robinson, Denny, & Watson, 2007; Kerr, Preuss, & King, 2006). Recent studies also confirm that increased social support is associated with better physical and mental health outcomes. Perceived social support appears to protect an individual from the negative impact of stressful events (Eisenberg, Ackard, & Resnick, 2007; Harris & Molock, 2000). Feelings of connectedness to the family are likely to reduce feelings of social isolation and loneliness, antecedents to suicide behaviors. Highlighting its relevance, Hall-Lande, Eisenberg, Christianson, and Neumark-Sztainer (2007) reported that for girls but not boys, family connectedness was the only protective factor that influenced the relationship between social isolation and suicide attempts. Feeling cared for, wanted, and loved by family members diminishes the likelihood that an adolescent will consider suicide as a “rational” alternative for solving problems (Cheng & Chan, 2007).

The emergent finding in the present study reveals that family support moderates the impact of self-esteem on suicide risk behaviors among adolescents. Self-esteem and family support had an interactive effect on mitigating suicide risk, but the results diverged from our initial hypothesis. High family support compared with low family support was hypothesized to bolster the effect of self-esteem on suicide risk. The results indicate, however, that the effect of self-esteem on reducing suicide risk was slightly stronger among adolescents with low versus high family support. That is, the relative impact of self-esteem on suicidal behaviors was greater for those reporting low family support. This finding must be qualified by the fact that adolescents with higher levels of family support also had significantly higher levels of self-esteem. Probably most interesting is that, even for adolescents who reported low family support, the impact of self-esteem on reducing suicide risk was significant, once again highlighting the relevancy of suicide risk as a protective factor.

But why would the impact of self-esteem be stronger for youth with low family support? One interpretation, made in light of the existential work of Frankl (2006), is that a paucity of social support resources can generate an intrapersonal search for the meaning of existence and through this process yield a concomitant discovery of personal strengths. Accordingly, some adolescents with low or perhaps unreliable family support may learn to trust themselves to resolve problems rather than to depend on others. Building self-reliance is likely to build confidence in personal competencies for generating alternative solutions to life problems, providing protection against suicide risk behaviors. Thus, self-esteem among adolescents with low family support might act as a resiliency factor that helps youth thrive despite lack of external family resources. Masten (as cited in Meadows et al., 2005) emphasized that a resilient individual compared with a nonresilient individual becomes less vulnerable to the effects of life challenge or stress by taking advantage of existing personal resources.

Alternative hypotheses need to be considered regarding the results and the processes they reflect. For instance, excessive family involvement might increase adolescent dependency on family support resources (Minuchin, Rosman, & Baker, 1978). In such cases, over-involvement by parents has the potential to limit an adolescent’s ability to generate and evaluate alternative problem-solving strategies for managing life challenges. Adolescents need graduated opportunities to confront inevitable life challenges independently, opportunities fundamental for confirming personal competencies and for reducing suicide risk. Ross and Mirowsky (1989) reported that a high level of support may displace active problem solving with increased dependency on others. In their
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research, the investigators documented that talking about problems often meant dwelling on problems and reviving and rehearsing failures, uncertainties, injustices, and dysphoric feelings, all of which have been linked to increased depression. Miranda and Nolen-Hoeksema (2007) reported that ruminative thinking, the extent to which individuals repeatedly focus and dwell on the causes, meanings, and consequences of their distress, predicts suicidal ideation at 1-year follow-up among a community sample of adults. Thus, for some adolescents, family involvement might contribute to rumination and increased risk for depression and suicide risk.

The reduced impact of self-esteem on suicidal behaviors observed in this study reflects the combined importance of both self-esteem and family support. It is important to note that high family support did not reduce adolescent self-esteem and that high support was strongly associated with high self-esteem, as anticipated. Within the context of high family support, self-esteem appears to be relatively less important than in the context of low family support, although still important. In sum, results indicate that self-esteem is a salient protective factor among adolescents with low as well as high family support. Moreover, when external social resources such as family support are diminished, high self-esteem can act independently to ameliorate the risk of suicide among adolescents.

Study Strengths and Limitations

The strengths of the current study arise from using a comprehensive, reliable, and valid measure of suicide risk and a standardized measure for subject selection, which minimized subject bias and resulted in a high participation rate for eligible subjects. Also, focusing on protective factors and suicide risk behaviors emphasizes the promise of assisting youth in their potential even in the presence of a risk factor (academic turmoil).

A number of study limitations should be noted. First, because the data were cross-sectional, it was not possible to assess changes in the dependent variable across time. Second, including only adolescents at risk for dropout in the current study may limit the generalization to other populations. Third, the moderator effect (family support) should be interpreted cautiously until further studies examine dimensions of family support such as whether support encourages adolescent independence or fosters family enmeshment. Finally, this study did not examine the interaction between other internal protective factors (e.g., personal control, problem-solving coping) and external protective factors (e.g., family, peer, and school support). The results highlight the need to develop a comprehensive model to integrate different types of modifiable protective factors against suicide risk behaviors.

Implications for Nursing Practice and Research

The findings suggest potential pathways for developing effective adolescent suicide prevention and intervention strategies. First, it is critical to identify youth at risk for suicide and to provide interventions specific to their needs. Programs that teach skills such as self-esteem enhancement and strategies to mobilize support are likely to benefit youth at risk for suicide. Enhancing adolescents’ awareness of personal assets and positive aspects of self is fundamental to building intrapersonal skills for coping with intrusive suicidal thoughts in the context of low external support resources.

Connections with a parent or another caring adult are almost universally central to positive mental health outcomes. Thus, the relevance of collaborating with parents in ways to help adolescents increase self-esteem, problem solving, communication, and help seeking cannot be underestimated. Importantly, as parents work with their teens to build life skills, they simultaneously increase support. Thus, in the context of “coaching” parents, interventions should highlight parenting strategies to increase parent–child communication and support. Involving parents in interventions requires that the program be highly relevant and accessible (Hooven, Walsh, & Salazar, 2009). Adaptive interventions that are flexible enough to address parents’ individual concerns and that present material in a collaborative style provide parents with the necessary support for working with youth at risk for suicide.

This study represents one of only a few studies to examine the interaction of protective factors for suicide risk reduction. More longitudinal studies are needed to examine the direction and the strength of the effects, the cumulative effect of other moderators (i.e., family history of suicidal behavior, adolescent–family relationship, and so forth), and the stability of the measured variables across time.

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