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Social-Cognitive Moderators of the Relationship between Peer Victimization and Suicidal Ideation among Psychiatrically Hospitalized Adolescents

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Abstract

Peer victimization among children and adolescents is a major public health concern, given its widespread individual and societal ramifications. Victims of peer aggression often face significant levels of psychological distress and social difficulties, such as depression, suicidal ideation, suicide attempts, and social rejection. The purpose of the present study was to examine whether cognitive distortions and perceptions of social support moderate the association between peer victimization and suicidal thoughts among psychiatrically hospitalized adolescents. Participants included 183 psychiatrically hospitalized adolescents (ages 13–18). In multiple regression analyses that controlled for gender, social and cognitive factors served as significant resources factors. Cognitive factors also moderated the relationship between peer victimization and suicidal ideation.

Keywords

victimization; suicide; cognitions; social support; adolescents; peers

Peer victimization among children and adolescents is a major public health concern, given its widespread individual and societal ramifications. Among youth, peer victimization is quite common, with approximately 50% of adolescents experiencing bullying at some point during their schooling and roughly 10% experiencing repeated bullying (Delfabbro et al., 2006). In addition, victimization by peers has a range of serious correlates, including depression, loneliness, and lower global self-worth (Prinstein, Boergers, & Vernberg, 2001). Most concerning is the well established link between peer victimization and suicidality. In a recent review, Kim and Leventhal (2008) identified 15 studies of community samples that examined the link between being bullied and suicidal ideation (SI). In 12 of the 15 studies, victims of bullying experienced increased risk of SI, with odds ratios ranging from 1.4 to 5.6. The relationship between being bullied and SI has been documented in large nationally representative studies across 16 countries (e.g., Delfabbro et al., 2006; Kim, Leventhal, Koh, & Boyce, 2009; Russell & Joyner, 2001). Moreover, being victimized has been shown to not

only place individuals at risk for SI, but also increase their risk for suicide attempts (Klomek, Marrocco, Kleinman, Schonfeld, & Gould, 2007).

Despite a relatively large body of research documenting this association in community samples, a relatively recent review found only two studies of peer victimization and adolescent suicidality among clinical samples (King & Merchant, 2008). Both studies found a significant relationship between bullying and suicidality (Davies & Cunningham, 1999; Prinstein, Boergers, Spirito, Little, & Grapentine, 2000), highlighting the importance of better understanding this relationship in community and clinical samples alike. Identifying moderators of the relationship between peer victimization and suicidality is especially important in order to elucidate factors that might serve to increase (risk factors) or decrease (protective factors) the strength of this association among high risk youth.

Joiner's (1999, 2005) social-interpersonal theory may help to identify risk and protective factors that affect the strength of the relationship between peer victimization and suicidality. This theory suggests that SI is more likely when an individual experiences two negative interpersonal cognitive sets: lack of belongingness and feelings of burdensomeness. Lack of belongingness has been defined as a sense of disconnection or alienation from others (e.g., low perceived social support). Meanwhile, perceived burdensomeness has been defined as the perception that one is a burden on loved ones. In the following sections, we review the empirical evidence documenting the relationship between these constructs, peer victimization, and suicidality in youth.

Lack of Belongingness: Peer and Family Support

Prior research has consistently linked measures of social support with adolescent suicidality, with some differences emerging by specific type of social support (e.g. family and peer support). In addition, the buffer hypothesis (Cohen, 1985) suggests that social support may have protective effects against negative health outcomes, such that those with the highest levels of stress benefit most from social support. Consistent with this hypothesis, it is possible that youth who experience high levels of victimization (a major source of stress) and low levels of social support would experience the greatest risk for suicidality.

With regard to peer support, Prinstein and colleagues (2000) found that higher levels of perceived peer rejection and lower levels of close friendship support were associated with more severe SI in a sample of 96 psychiatrically hospitalized adolescents. Others have reported similar findings, wherein a lack of peer social support or peer rejection has been linked to increased suicidality in inpatient samples (Groholt, Ekeberg, Wichstrom, & Haldorsen, 2000) and in clinical/referred populations (Esposito & Clum, 2003). Prior studies have also documented a relationship between low peer social support, peer victimization, and suicidality, although results have provided mixed support for the buffer hypothesis (Bollmer, Milich, Harris, & Maras, 2005). A study by Friedman and colleagues (2006) found that peer support had an independent effect on suicidality among adolescent gay males, but did not have a buffering effect on the relationship between victimization and suicidality. By contrast, in a large community sample of 2,000 adolescents, Rigby and Slee

(1999) found a buffering effect of peer support such that the relationship between bully-victim problems and SI was the strongest among adolescents with low social support.

Similar to peer support, lack of family support is another social factor that may serve to attenuate the relationship between victimization and suicidality. In studies where peer social support has not been found to covary with suicidality, family support has emerged as a more robust protective factor (Rigby & Slee, 1999). For instance, O'Donnell, O'Donnell, Wardlaw, & Stueve (2004) identified family closeness, not peer social support, as a protective factor against suicidality in a sample of urban, ethnic minority adolescents. Other studies have documented a relationship between low perceived family support and suicide outcomes among adolescents in the community (Bearman & Moody, 2004; O'Donnell, Stueve, Wardlaw, & O'Donnell, 2003) and among adolescents hospitalized for mental health concerns (Groholt, Ekeberg, Wichstrom, & Haldorsen, 2000; Kerr, Preuss, & King, 2006). Consistent with the buffer hypothesis, there is some evidence that family support can influence the relationship between victimization and suicidality. For example, Hershberger and D'Augelli (1995) found that high but not low levels of family support ameliorated the negative effects of victimization on suicidality in a sample of 194 adolescents aged 15–21 ($M = 19.35$, $SD = 1.42$) in a community sample.

Taken together, prior research suggests that low perceived support by peers and family members is associated with increased suicidality. These findings are consistent with Joiner's social-interpersonal theory (1999) to the extent that perceiving oneself to have few peer and family supports likely reflects a lack of belongingness. In addition, much but not all prior research is consistent with the buffer hypothesis to the extent that high levels of social support appear to be protective against the negative effects of victimization on suicidality. Building on these theories, a primary aim of this study is to test the influence of perceived peer and family social support on suicidality in a sample of psychiatrically hospitalized inpatients. In addition, we examine whether higher levels of perceived support buffers the relationship between peer victimization and suicidality, which to our knowledge, has never been tested in a clinical sample of adolescents.

Burdensomeness: Cognitive underpinnings

Joiner's social-interpersonal theory also suggests that perceived burdensomeness, a form of cognitive distortion, increases the likelihood that adolescents will report SI. The degree to which an individual believes that he/she is a burden on others is likely affected by how he/she thinks about him/herself as well as the degree to which he/she perceives the environment to be rejecting. This may be exemplified through negative self-talk or views and cognitive errors (e.g., catastrophizing, overgeneralization, personalization, selective abstraction). For example, an adolescent who experiences a lot of negative self-talk (e.g., I am a failure) and personalizes negative events (e.g., it is all my fault), may be more likely to believe that he/she is a burden on others relative to an adolescent without these cognitive distortions. Consistent with this theory, there exists some evidence to suggest that these types of cognitive distortions underlie the development of suicidality in adolescence. One study found that suicidal adolescent inpatients with mood disorders had higher levels of catastrophizing, personalization, selective abstraction, overgeneralization, and total

cognitive errors than non-suicidal adolescents with a mood disorder (Brent, Kolko, Allan, & Brown, 1990). Research has also shown that adolescent suicide ideators and attempters tend to have lower self-esteem (Kingsbury Hawton, Steinhardt, & James, 1999; Pinto & Whisman, 1996) than non-suicidal controls.

Both empirical and theoretical research suggests that cognitive distortions contribute to increased suicidality among adolescents. These data are also consistent with Joiner's theory of suicide to the extent that frequent cognitive distortions, such as negative self-talk and cognitive errors, are likely a strong indicator of perceived burdensomeness. However, no research to date has directly examined the relationship among peer victimization, cognitive distortions, and suicidality. Therefore, another primary aim of this study is to test the impact of negative self talk and cognitive errors on suicidality in a sample of psychiatrically hospitalized inpatients, and to examine whether these measures of cognitive distortions moderate the relationship between peer victimization and suicidality.

Consistent with Joiner's social-interpersonal theory, we hypothesize that low perceived support in family and peer relationships (lack of belongingness) and frequent cognitive distortions (perceived burdensomeness) will increase adolescent suicidality. We further hypothesize that the association between peer victimization and suicidality would be relatively stronger among adolescents with lower perceived support and higher cognitive distortion relative to adolescents with higher perceived support and lower cognitive distortion, respectively.

Methods

The methods used in this study have been described in a prior publication (reference masked for review). Participants in the original study included 201 psychiatrically hospitalized adolescents between the ages of 13 and 18. Adolescents and their parents were recruited from a psychiatric inpatient facility in the northeastern United States. All adolescents admitted to the unit were eligible for study participation, provided that they spoke English, were in their parents' custody, and had sufficient cognitive functioning to complete a structured interview (i.e., no active psychosis and a Verbal IQ estimate ≥ 70 as assessed by the Kaufman Brief Intelligence Test; Kaufman & Kaufman, 1990).

Consistent with institutional review board (IRB) approved procedures, families were invited to participate in this study shortly after admission to the unit. Adolescents and their parents provided written assent and consent, respectively, and were then given a comprehensive assessment battery. A bachelor's level research assistant administered the self-report assessment battery and a trained master's or doctoral level clinician administered the diagnostic interview. The parent version of the diagnostic interview and assessment measures were administered in a 120 min session. The adolescent diagnostic interview and assessment measures were administered in two separate 60–120 min sessions. As compensation for participation, parents were given \$50 and adolescents were given four movie tickets.

Eighteen adolescents did not complete the full assessment battery after enrollment. Thus, the sample for the current analyses consisted of 183 participants (71.6% female; mean age = 15.02, $SD = 1.32$). Approximately 84% of adolescents identified themselves as Caucasian, 2.7% African American, 2.2% Asian, 3.8% Native American, and 7% other racial background. Approximately 9% of the sample identified themselves as Hispanic/Latino. Family income varied widely from less than \$10,000 to greater than \$100,000 per year with a mean income range of \$50,000 to \$60,000. Based on consensus diagnoses of parent and child endorsed symptoms on the Schedule for Affective Disorders and Schizophrenia for School Age Children, Present and Lifetime Version (K-SADS-PL; Kaufman, Birmaher, Brent, Rao, & Ryan, 1997), 74.3% of the sample met criteria for a mood disorder, 64.5% were diagnosed with an anxiety disorder, and 45.4% were diagnosed with oppositional defiant disorder or conduct disorder.

Measures

Revised Peer Experiences Screening Questionnaire (RPEQ; Vernberg, 1999)—

The RPEQ is an 18-item self-report measure designed to assess levels of peer victimization, bullying, and prosocial behavior. Participants rate how often each type of behavior occurred over the last year using a 5-point Likert scale ranging from 1 (Never) to 5 (A few times a week). Each question is asked twice, first in relation to the participants behavior toward peers and then again in relation to the peers behavior toward them. The RPEQ has strong internal consistency, construct validity, and concordance with peer ratings (Prinstein, Boergers, & Vernberg 2001; De Los Reyes & Prinstein, 2004). In the present study a mean item score for the total peer victimization score was used. Internal consistency was high in this sample at .90.

Survey of Children's Social Support (SOCSS; Dubow & Ullman, 1989)—

The SOCSS is a 9-item self-report measure of peer, family, and teacher support. The measure assesses the adolescent's perception of how he or she is valued and esteemed by others. Each item is rated on a 5-point scale (1 = always, 5 = never). High internal consistency and validity has been reported for this measure (Dubow & Ullman, 1989). For the purposes of the current study, the peer and family subscales were used to represent peer support and family support, respectively. Internal consistency scores for the peer ($\alpha = .77$) and family ($\alpha = .88$) subscales were acceptable in the present sample.

Negative Affect Self-Statement Questionnaire (NASSQ; Ronan, Kendall, & Rowe, 1994)—

The NASSQ is a 39-item self-report questionnaire designed to assess the frequency of anxious and depressive self-statements experienced by children and adolescents within the past week. Each item is rated on a 5-point Likert scale ranging from 0 (not at all) to 5 (all the time). The total score was used as an indicator of negative self-talk, with higher scores reflecting more frequent negative self-talk. Adequate internal consistency, test-retest reliability, and convergent/divergent/construct validity have been demonstrated in child and adolescent populations (Ronan, Kendall, & Rowe, 1994; Lerner et al., 1999). Internal consistency in the present sample was high at .96.

Children's Negative Cognitive Errors Questionnaire (CNCEQ; Leitenberg, Yost, & Carroll-Wilson, 1986)—The CNCEQ is a 24-item self-report measure that assesses four major cognitive distortions: catastrophizing, overgeneralization, personalizing, and selective abstraction. Each item includes a hypothetical situation followed by a possible negative interpretation. Participants are asked to respond using a five-point Likert scale ranging from “almost exactly like I would think” to “not at all like I would think.” Total CNCEQ scores range from 24–120, with higher scores representing greater likelihood to catastrophize, overgeneralize, personalize, and use selective abstraction. Good internal consistency ($\alpha = .77-.84$ for subscales) has been demonstrated for the CNCEQ in a sample of adolescents (Weems, Berman, Silverman, & Saavardal, 2001). Internal consistency for the CNCEQ total score used in the present study was high ($\alpha = .95$).

Suicide Ideation Questionnaire (SIQ; Reynolds, 1985)—The SIQ is a 30-item self-report instrument designed to assess thoughts about suicide experienced by adolescents during the prior month. The SIQ was used as the primary outcome measure in all of the analyses. Participants respond to items using a 7-point Likert type scale ranging from 0 (I never had this thought) to 6 (almost every day). Higher scores reflect greater severity of SI. The scale was developed based on field testing with over 2,400 participants. The SIQ has excellent internal consistency and construct validity (Reynolds, 1985). Internal consistency in this sample was .98.

Analysis Plan

A series of four hierarchical regression analyses were conducted to explore the combined effect of peer victimization and social-cognitive factors on SI. In each analysis, gender was controlled for as a covariate and past month SI served as the independent variable. To control for experiment-wise error, we adjusted the significance criterion for the hierarchical regression analyses using the Bonferroni correction ($p = .0125$). Variables were entered in a series of three steps. SI was regressed onto gender in the first step, followed by peer victimization and the potential social-cognitive moderator in the second step. The interaction variable (e.g. Peer Victimization X the Moderator) was entered in the third and last step. As recommended by Holmbeck (2002), the main effect variables were centered before entering them in the model to reduce multicollinearity between the two predictors and their interaction term. Following Holmbeck's (1997) guidelines, significant moderation was deemed present if a significant interaction was found after controlling for main effects. Significant interactions were probed using simple slopes, consistent with the recommendations of Aiken and West (1991). Specifically, the significant interaction predicting SI was interpreted by plotting the simple regression lines for +1 SD, mean, and -1 SD values of the moderator.

Results

Preliminary analyses

Means and standard deviations for the measures are presented in Table 1. One hundred thirty six adolescents (74.3%) reported clinically significant SI in the past month (SIQ score ≥ 41). The majority of adolescents also endorsed some form of victimization. Specifically, 51.9%

endorsed overt victimization, 67.8% endorsed relational victimization, and 74.9% endorsed reputational victimization. T-tests were conducted to explore gender differences among variables and are included in Table 1. Results demonstrated that, relative to males, females had significantly higher rates of SI, negative self talk, and cognitive errors but did not differ in rates of peer victimization. ANOVAs indicated that there were no significant differences in SI or cognitive errors among adolescents as a function of race or age. Because significant gender differences were found in some of the key study variables, gender was controlled in all analyses of moderation.

Table 2 illustrates correlations among victimization, cognitive distortions (i.e. negative self talk and cognitive errors), perceived social support (i.e. family and peer support), and SI. In line with past research, results indicated that peer victimization, greater negative self statements, cognitive errors, lower perceived family support, and lower perceived friend support were significantly associated with more severe SI.

Perceived Family Support as a Moderator

The first model tested the prediction that the association between peer victimization and SI would vary as a function of family support. As shown in Table 3, after controlling for significant effects of gender, both perceived family support and peer victimization had significant main effects on suicidality. The interaction term was not significant indicating that perceived family support did not serve as a significant moderator of the relationship between peer victimization and SI. Thus, family support served as a resource factor (a main effect), but did not affect the strength of the association between peer victimization and suicidal ideation in this sample.

Perceived Friend Support as a Moderator

The next model tested the prediction that the association between peer victimization and SI would vary as a function of perceived friend support, even after controlling for gender. As shown in Table 3, lower levels of perceived peer support were associated with greater suicidality. The interaction term was not significant indicating that perceived peer support did not serve as a significant moderator of the relationship between peer victimization and SI. Thus, peer support served as a resource factor (a main effect), but did not affect the strength of the association between peer victimization and suicidal ideation in this sample.

Negative Self Talk as a Moderator

The next model tested the hypothesis that negative self talk would moderate the relationship between peer victimization and SI, even after controlling for gender. Results indicated a significant main effect of negative self talk such that higher levels of negative self-talk predicted higher levels of SI. In addition, there was a significant interaction between peer victimization and negative self talk.

Analysis of simple slopes (Figure 1) revealed an interaction effect. However, contrary to that expected, higher levels of peer victimization was associated with higher levels of SI among those with *lower* levels of negative-self talk ($\beta = .24, p < .001$). This effect was significant and small to moderate in size. A significant relationship was not found between peer

victimization and SI among adolescents with *higher* levels of negative self-talk ($\beta = -.13$, $p > .05$).

Cognitive Errors as a Moderator

The last model tested the prediction that the association between peer victimization and SI would vary as a function of cognitive errors, even after controlling for gender. Cognitive errors had a significant main effect on SI, while peer victimization did not have a significant effect. In addition, there was a significant interactive effect of cognitive errors and peer victimization on SI.

Similar to the analyses of negative self-talk, the interaction was significant but in the opposite direction of that hypothesized. Higher levels of peer victimization was associated with higher levels of SI among those with *lower* levels of cognitive errors ($\beta = .34$, $p < .01$; see Figure 2). This effect was significant and small to moderate in size. A significant relationship was not found between peer victimization and SI among adolescents with *higher* levels of cognitive errors ($\beta = -.05$, $p = .48$).

Discussion

The current study sought to extend prior research by testing whether factors identified in Joiner's social-interpersonal theory of suicide (Joiner, 1999; 2005) influence the relationship between peer victimization and suicidality in a sample of psychiatrically hospitalized youth. Specifically, we aimed to evaluate whether feelings of belongingness (represented by measures of peer and family support) and perceived burdensomeness (represented by negative self-talk and cognitive errors) independently predicted SI, and whether these factors moderated the relationship between peer victimization and SI. Investigation of such questions is particularly important given the relatively high rates of peer victimization reported by psychiatrically hospitalized adolescents. For instance, rates of victimization in the current sample ranged from 51.9% to 74.9% depending on the type of bullying, versus rates of 9.8% to 41.0% in a recent national survey by Wang and colleagues (2009).

Results of the current study provided partial support of our hypothesized relationships among peer victimization, social-cognitive factors, and SI. With regard to belongingness, both family support and peer support were significantly associated with SI, such that lower perceived support was associated with higher levels of SI. These results are consistent with study hypotheses and prior research conducted with clinical samples (Esposito & Clum, 2003; Groholt, Ekeberg, Wichstrom, & Haldorsen; O'Donnell et al., 2004). However, contrary to study hypotheses, neither peer support nor family support was found to significantly moderate the relationship between peer victimization and SI. These results are inconsistent with the buffer hypothesis (Cohen, 1985), namely that higher perceived social support would buffer the negative effects of stressors, such as peer victimization, on mental health outcomes. However, they are consistent with one prior study conducted by Friedman and colleagues (2006) that failed to find significant buffering effect of social support on suicidality in a sample of gay adolescent males. To our knowledge, this study is the first to examine the effects of family or peer support on the relationship between peer victimization and SI in a sample of psychiatrically hospitalized adolescents. The current study indicates

that both peer victimization and social support are important variables to consider when working with psychiatrically hospitalized adolescents with SI. Though social support may not buffer against the negative effects of peer victimization in this sample of adolescents, it does have an effect on suicidality in this sample as a whole.

With regard to the measures suggestive of perceived burdensomeness, results indicated that both negative self talk and cognitive errors independently predicted SI. Furthermore, both cognitive measures significantly moderated the relationship between peer victimization and suicidality. However, contrary to that hypothesized, we found that higher levels of victimization were associated with greater severity of SI among adolescents with *lower* levels of cognitive distortion. This relationship was not found among youth with *higher* levels of cognitive distortion. These findings are likely associated with the sample composition, namely adolescents with psychiatric symptoms severe enough to warrant psychiatric hospitalization. Levels of SI for youth with high levels of cognitive distortion in this sample were within the high end of the clinical range of severity. Thus, our inability to find an association between peer victimization and SI at higher levels of cognitive distortion may have been limited due to ceiling effects. Another potential explanation is that adolescents with higher levels of cognitive distortion in this sample may have such distorted thinking that peer victimization does not further increase their risk of SI. However, the experience of victimization among psychiatrically hospitalized youth with relatively lower levels of cognitive distortion, which is still elevated relatively to normative adolescent populations, may be more fully processed and impactful, and thus associated with suicidal thinking. Overall, these results may suggest that psychiatrically hospitalized adolescents with a history of victimization may remain at risk for suicidal ideation even after treatment leads to a decrease in cognitive distortion.

Another notable finding is that the relationship between peer victimization, feelings of belongingness, and perceived burdensomeness remained significant even after controlling for gender. Prior studies have provided mixed data as to whether the effects of peer victimization differ by gender. For instance, Paquette and Underwood (1999) found that girls and boys experience similar rates of peer victimization, but that girls think about and report more distress related to the victimization than boys. Meanwhile, a recent study by Sinclair (2011) found that girls experienced more relational victimization than boys and boys experienced more physical victimization than girls, but the negative effects of victimization on cognitions was stronger in boys. Our study suggests that peer victimization as well as cognitive products representative of thwarted belongingness and perceived burdensomeness, are all associated with greater severity of SI regardless of gender.

Limitations

The results of the present study must be considered within the limitations of the research methods. First, this study used a cross-sectional design, and thus the direction of the relationships found cannot be determined. For instance, some prior studies have suggested that peer victimization increases the risk of psychopathology or suicidality (Kim & Leventhal, 2008), while other studies have suggested that youth with psychopathology may be more likely to be targeted for victimization (Turner, Finkelhor, & Ormrod, 2010). Still,

other studies have found support for a bi-directional relationship, providing evidence that peer victimization is both an antecedent and consequence of psychopathology (Reijntjes, Kamphuis, Prinzie, & Telch, 2010). Prospective data could provide more insight into the temporal relationships among peer victimization, measures of belongingness, measures of burdensomeness, and SI. The current findings also do not explore the relationship between SI and attempts. Future research should also explore whether the same pattern of moderation exists between peer victimization and suicide attempts.

Second, several of the variables used in the current study may be influenced by developmental changes throughout adolescence (i.e. shifts in the amount time spent with parents and the quality of the child-parent relationship, as well as a rise in SI). Thus, future studies should consider using analytic methods that enable the use of time-invariant covariates to adjust for development changes throughout the follow up period. Third, it is important to consider that all measures relied on self-report. This is particularly notable for the measure of peer victimization which might be subject to reporting bias. De Los Reyes & Prinstein (2004) found that adolescents' with depressive symptoms overestimated peer victimization on self-report, as compared to peer-reports, while adolescents' with conduct problems underestimated peer victimization. In the current sample, 74.3% of adolescents met criteria for a mood disorder and 45.4% were diagnosed with a conduct problem disorder. While it may be true that psychiatrically hospitalized youth experience higher rates of peer victimization, it is also possible that these youth differ in their reports of peer victimization relative to adolescents in the community. Future studies should include multiple informants and more objective assessment methodology.

Finally, our results are limited by characteristics of the study sample. The current sample consisted of psychiatrically hospitalized adolescents who were predominantly Caucasian and of non-Hispanic ethnicity. It is not certain whether results will generalize to adolescents across different settings or from different racial and ethnic minority groups.

In light of the limitations of this study, it is important to recognize the ways in which this study adds to the growing body of research of peer victimization and SI among adolescents. This study examines the association between peer victimization, social-cognitive factors, and SI in a psychiatrically hospitalized population, which has not been studied in prior research. A single hospitalization for suicidal concerns represents a serious risk for later completed suicide (Crandall, Fullerton-Gleason, Agüero, & LaValley, 2006), highlighting the importance of studying predictors of suicidality in this population. This study also highlights the importance of considering context, in this case clinical setting, when interpreting research in the areas of interpersonal trauma and suicidality among adolescents.

Results of the current study provide preliminary evidence that training in cognitive restructuring and enhancing social support may be important components of suicide prevention and intervention programs for adolescents with a history of victimization. In particular, attention to cognitive distortion representative of thwarted belongingness and perceived burdensomeness may help improve intervention outcomes. Study results also suggest that risk for suicidal ideation remains heightened for psychiatrically hospitalized

adolescents with a history of peer victimization who appear to have relatively clearer thinking patterns, thus vigilant attention this this group is warranted.

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Figure 1.
Interaction between negative self talk and peer victimization on suicidal ideation (NASSQ Scores)

Figure 2.
Interaction between negative cognitions and peer victimization on suicidal ideation (CNCEQ Scores)

Table 1

Descriptive Statistics

Variable	Total		Female		Male		t-test	
	M	SD	M	SD	M	SD	t	df
Suicidal Ideation	62.80	50.93	69.55	51.29	46.22	44.96	-2.92**	186
Support of Family	3.75	1.01	3.73	1.04	3.77	.94	.21	182
Support of Friends	4.04	.82	4.06	.80	4.04	.86	-.13	182
Cognitive Errors	52.69	21.42	55.27	21.96	45.67	18.59	-2.79**	183
Negative Self Statements	93.46	38.28	98.92	39.18	80.02	32.34	-3.14**	185
Peer victimization	1.79	.70	1.82	.71	1.68	.66	-1.27	183

Note:

* $p < .05$,

** $p < .01$

Table 2
Bivariate Correlations among the Cognitive Variables, Social Support Variables, Peer Victimization, and Suicidal Ideation

Variable	1	2	3	4	5	6
1. Peer Victimization	-	.30**	.47*	.45*	-.16*	-.46**
2. Suicidal Ideation		-	.53**	.68**	-.38**	-.29**
3. Cognitive Errors			-	.68**	-.22**	-.42**
4. Negative Self Statements				-	-.35**	-.39*
5. Support of Family					-	.20**
6. Support of Friends						-

Note:

*
 $p < .05$,
**
 $p < .01$

Table 3

Hierarchical Regression Analyses Predicting the Effects of Peer Victimization and Social-Cognitive Moderators on Suicidal Ideation (N=183)

Predictors	B	SE(B)	β	t	R ² Change	F Change
Step 1					.05	8.83*
Gender	24.26	8.16	.22*	2.97		
Step 2					.19	21.94*
Peer Victimization	16.41	4.85	.23*	3.39		
SOCSS Family	-17.0	3.33	.34*	-5.10		
Step 3					.00	.93
Peer Victimization X SOCSS Family	.44	4.85	.01	.09		
Step 1					.05	8.83*
Gender	24.26	8.16	.22*	2.97		
Step 2					.11	12.20*
Peer Victimization	12.66	5.68	.17	2.23		
SOCSS Friend	-13.76	4.83	-.22*	-2.85		
Step 3					.02	4.22
Peer Victimization X SOCSS Friend	10.15	4.94	.15	2.06		
Step 1					.05	8.83*
Gender	24.26	8.16	.22*	2.97		
Step 2					.41	68.35*
Peer Victimization	-.64	4.48	-.01	-.14		
NASSQ	.88	.08	.66*	10.55		
Step 3					.04	15.75*
Peer Victimization X NASSQ	-.35	.09	-.23*	-3.97		
Step 1					.05	8.83*
Gender	24.26	8.16	.22*	2.97		
Step 2					.25	32.04*

Predictors	B	SE(B)	β	t	R ² Change	F Change
Peer Victimization	4.28	4.48	5.17	.83		
CNCEQ	1.14	.08	.17	6.68		
Step 3					.04	11.63*
Peer Victimization X CNCEQ	-.64	.09	-.23*	-3.41		

Note: The Bonferroni correction was used to control for experiment-wise error.

* $p < .0125$