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RUNNING HEAD: Social Support and Peer Victimization

Peer Victimization and Social-Emotional Outcomes: The Role of Teacher and Peer Support

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**Abstract**

The relation between peer victimization, risk of social, emotional, and behavioral difficulties, and school-based sources of social support for students in elementary and middle school were examined.  Participants included 649 students in third to eighth grade from one school district.  Results indicated that peer support mediated the relation between peer victimization and risk of social, emotional, and behavioral difficulties, but teacher support did not mediate this relation.  Conditional indirect effects analyses revealed that the indirect effect of peer support varied as a function of school level (i.e., intermediate and middle school).  The implications and limitations of the current study are discussed, as well as directions for future research.


Keywords: victimization, social support, emotional outcomes, social outcomes

**Peer Victimization and Social-Emotional Outcomes: The Role of Teacher and Peer**

**Support**

Approximately 50% of students are targets of bullying at least twice per month (Wang,

Iannotti, & Nansel, 2009), and a smaller portion are targets of bullying much more frequently.

This is problematic because peer victimization is associated with numerous social, emotional,

and behavioral problems (Card, Stucky, Sawalani, & Little, 2008; Hawker & Boulton, 2000).

Social problems include academic issues, school problems, and difficulties with personal

adjustment and peers, and emotional problems are characterized by symptoms of depression

and/or anxiety (Kaltiala-Heino, Rimpela, Rantanen, & Rimpela, 2000).  Externalizing problems

include inappropriate observable behavior such as aggression, hyperactivity, and/or impulsivity.

Researchers have found that social support helps to mediate the association between peer

victimization and risk of social, emotional, and behavioral problems (Malecki, Demaray, &

Davidson, 2008; Pouwelse, Bolman, Lodewijkx, & Spaa, 2011).  It is important to understand

the process by which peer victimization may or may not be associated with social support and

risk of social, emotional, and behavioral problems, because there is evidence that even short-term

peer victimization negatively impacts both social-emotional functioning and academic

achievement (Rueger, Malecki, & Demaray, 2011; Totura, Karver, & Gesten, 2013).  Moreover,

the negative effect on social-emotional functioning continues even after peer victimization has

ceased (Kochenderfer & Ladd, 1996; Rueger, Malecki, & Demaray, 2011).  Decades of research

show that social support can help individuals of all ages (Cohen & Wills, 1985) and access to

supportive people can diminish the negative effects of peer victimization (Davidson & Demaray,

2007; Malecki et al., 2008; Pouwelse et al., 2011; Rosenfeld, Richman, & Bowen, 2000).

**Social Support**

Social support is the feeling that one is cared for, esteemed, and has access to a network of concerned people (Pearson, 1986).  Peer victimization can disrupt the victim's social network or hinder them from accessing individuals who provide social support, particularly supportive individuals at school, such as classmates and teachers (Demaray & Malecki, 2003; Pouwelse et al., 2011; Rigby, 2000).  In fact, several researchers have shown that targets of bullying also perceive less social support from their social network (Conners-Burrow, Johnson, Whiteside-Mansell, McKelvey, & Gargas, 2009; Demaray & Malecki, 2003; Furlong, Chung, Bates, & Morrison, 1995; Holt & Espelage, 2007).  Social support can come from different sources in an individual's social network, such as their parents, teachers, and peers.  When peer victimization occurs at school, youth are likely to seek out support from people who are readily available, which would likely be school-based sources of support (i.e., teacher and peers). Thus, examining the association between school-based sources of support, peer victimization, and social, emotional and behavioral outcomes is important.

The main effect model of social support assumes that social support is needed by all individuals regardless of the presence or absence of stressors (Cohen & Wills, 1985).  Social support may affect the outcome of peer victimization in a variety of ways.  Social support may (1) prevent bullying situations from occurring (e.g., students with friends are less likely to be a target of bullying; Wang et al., 2009), (2) directly impact the mental health of individuals being bullied (e.g., access to a supportive network of people is related to better outcomes; Cohen & Wills, 1985), and (3) have an indirect effect on mental health during and after bullying incidents (e.g., supportive individuals can help others cope with stressful situations; Cohen & Wills, 1985).

Using the main effect model of social support as a framework, Malecki et al. (2008) found that social support partially mediated the association between self-reported peer

victimization and indicators of maladjustment.  Support from peers and teachers were predictive of adaptive, appropriate adjustment, thus are particularly important sources of support.  Pouwelse et al. (2011) found social support to mediate the relation between peer victimization and depressive symptoms, particularly for boys.  Further research is needed to understand the influence of social support on the association between peer victimization and social emotional functioning.

**Teacher Support.** In the school setting, youth have access to adults that can serve as a source of support.  Whether with a lone teacher or with several teachers during the day, youth spend many hours each day with adults that can be a source of support.  Though parents are a significant source of support (Rueger, Malecki, Pyun, Aycock, & Coyle, 2016; Rueger et al., 2014), access to supportive adults at school is associated with increased academic success, effective coping skills, and fewer somatic symptoms in response to peer victimization (Rigby, 2000).  Reddy, Rhodes, and Mulhall (2003) suggested teacher support was significantly related to students' level of depression and self-esteem in a middle-school population; however, in isolation, teacher support may not be as effective as other sources of support.  Rosenfeld et al. (2000) argued that teacher support was a necessary, but not sufficient condition for positive social and behavioral outcomes at school.  These authors found when teacher support was combined with parent or friend support, participants experienced better outcomes than when only teacher support was reported.  This could be due to a shift in the perceived frequency and importance in adult sources of support during the middle school years.  Though support from parents and teachers remain important, youth gradually perceive and place more value in peer support in early adolescence (Colarossi & Eccles, 2003).  This suggests that teacher support is

more important to youth in elementary school and begins to taper off as youth enter middle school.

      **Peer Support.**  Students' peer social networks may also influence the relation between peer victimization and negative outcomes.  Wang et al. (2009) reported a negative correlation between number of friendships and peer victimization, which suggests that social inclusion may provide protection from becoming a target of bullying.  Support from peers is associated with better psychosocial adjustment (Rueger, Malecki, & Demaray, 2008), self-concept, self-image, and adaptive skills (Demaray & Malecki, 2002; Demaray, Malecki, Davidson, Hodgson, & Rebus, 2005), as well as academic outcomes and school attendance rates (Tanigawa, Furlong, Felix, & Sharkey, 2011).  Although internalizing problems can be more difficult for school personnel to identify than externalizing problems, professionals can more easily identify students who are distant from peers or those who have not established positive peer relationships.

      Given that support from peers is beneficial for social and emotional health, it is especially troubling that youth who are targets of bullying and bully-victims report receiving significantly less peer support than other youth (Demaray & Malecki, 2003).  Moreover, youth who are both targets and perpetrators of bullying also placed higher importance on peer support than perpetrators of bullying (Demaray & Malecki, 2003).  This is troublesome because students who are aware of a discrepancy between the importance and frequency of support are more at risk for negative outcomes (Demaray, Malecki, Rueger, Brown, & Summers, 2009).

      Researchers have also investigated whether there are sex differences in perceived peer support.  Several studies have shown that girls report higher levels of perceived classmate support than boys (Colarossi & Eccles, 2003; Holt & Espelage, 2007).  Peer support may also uniquely predict certain student outcomes.  For instance, in their longitudinal study, Rueger et al.

(2008) found that classmate support predicted lower depressive symptoms and moderately

positive school attitudes for boys but not for girls.  This finding is interesting given the evidence

that suggests boys perceive lower levels of peer support than their female counterparts.  They

also found that classmate support predicted higher conduct problems and lower social skills for

girls, but was not a unique predictor for boys.  This may be problematic because girls have

reported higher levels of classmate support, which might increase the number of conduct

problems observed in girls.

**Research Questions**

We first sought to examine the association between peer victimization and risk of social,

emotional, and behavioral problems, and the potential indirect effect of perceived peer and

teacher social support on this association (see Figure 1a).  Based on the model, we predicted that

peer support and teacher support (Colarossi & Eccles, 2003; Malecki et al., 2008; Pouwelse et

al., 2011) would have an indirect effect on the association between peer victimization and risk of

social, emotional, and behavioral problems, though peer support would have a stronger indirect

effect than teacher support (Colarossi & Eccles, 2003).  The second goal was to examine whether

the indirect effect of peer and teacher social support varied as a function of gender and school

level (i.e., intermediate including third to fifth grades, and middle school including sixth to

eighth grades).  To test this, we ran a conditional indirect effect model (i.e., moderated

mediation; see Figure 1b).  Although girls seem to report more social support (Colarossi &

Eccles, 2003; Holt & Espelage, 2007), it was not clear if the indirect effect of social support

would be stronger for girls.  Additionally, teacher support may be less important as youth enter

the middle school grades (Colarossi & Eccles, 2003; Reddy et al, 2003; Rosenfeld et al., 2000),

so it was predicted that classmate support would have a stronger indirect effect for middle school students than intermediate students.

## Method

**Participants**

Participants for the current study included a total of 656 students (333 boys and 322 girls) enrolled in the Illinois public school system.  Data were collected at an intermediate school (third to fifth grade) and middle school (sixth to eighth grade) within the same school district.  In the total sample, 69 students were enrolled in Special Education programs and 57 students received Title 1 services; therefore, 522 students were in general education only.  The intermediate school sample consisted of 317 students (104 3rd, 114 4th, and 99 5th graders).  Most students (96.4%) enrolled at the intermediate school were White and 53.4% of students were classified as low-income (e.g., eligible to receive free or reduced lunch).  At the middle school, the sample consisted of 330 students (120 6th, 106 7th, and 104 8th graders).  Most students (97.1%) enrolled at the middle school were White, while 53.1% of students' families were considered low-income. The ethnicity and socioeconomic status of the school was representative of the community in which the school was housed.

**Procedures**

Data were collected as part of a school-wide evaluation of social-emotional issues in the schools, therefore the participation rate was very high (98%).  Active parental consent was provided at the beginning of the year for all school-wide social, emotional, and academic evaluations.  Student assent was collected the day of the data collection.  Instructions for completing the rating scales were read aloud.  Instructions indicated completing the surveys was

optional, their parents approved of them completing the surveys, and they could stop if they felt

uncomfortable.  All students were told that the school counselor was available to speak with

them if they felt uncomfortable or had questions after completing the surveys.  Institutional

Review Board approval was obtained to use the data for research purposes and no identifying

information was contained in the dataset.  At the intermediate school, students stayed in their

classrooms during Physical Education to complete surveys.  Middle school students completed

surveys during their Physical Education class in a large group in the gym.  Research assistants

were available to answer questions during all data collection times.  Survey items were read

aloud by a teacher to any student receiving special education services or students receiving

supplemental instruction for reading.

**Measures**

   **Bullying Participant Behavior Questionnaire (BPBQ; Summers & Demaray, 2008).**

The BPBQ is a rating scale used to assess behavior associated with five different bullying

participant roles: Bully, Assistant, Victim, Defender, and Outsider (Summers & Demaray, 2008).

In the current study, only the Victim subscale was used.  The Victim subscale has 10 items that

assess the frequency of peer victimization within the last 30 days using a 5-point rating scale (0 =

*Never,* 1 = *1 to 2 times,* 2 = *3 to 4 times,* 3 = *5 to 6 times,* 4 = *7 or more times*), for example

"People have tried to make others dislike me."  The total summed score was used in the analyses.

Possible scores range from 0 to 40.  Demaray, Summers, Jenkins, and Becker (2014) reported

evidence of reliability and validity for the BPBQ on a sample of 800 middle school students.

Factor analyses supported the five-factor structure of the BPBQ, which accounted for 60% of the

variance with item loadings ranging from .49 to .89.  Confirmatory factor analysis also resulted

in an acceptable fit for the proposed structure.  Internal consistency alpha coefficients were .93

for the Victim subscale, with item to subscale correlations ranging from .73 to .84.  Alpha

coefficient was .93 for the Victim subscale in the current sample as well.  Grade level readability

was 1.3 as calculated using the Flesch-Kincaid readability formula.  There were four participants

that had three or more items missing on the Victim subscale and were excluded from analyses.

**Behavioral and Emotional Screening System – Student Form (BESS; Kamphaus &**

**Reynolds, 2007).**  The BESS was used to assess risk of social, emotional, and behavioral

problems.  Students completed each of the 30 items using a 4-point scale (e.g., *never, sometimes,*

*often, almost always*).  Items assess a range of positive behavior and behavioral problems,

including internalizing problems, externalizing problems, school problems, and adaptive skills,

for example "I get into trouble for not paying attention" and "I worry about what is going to

happen."  Possible scores range from 0-90.  Psychometric evidence for the BESS Student Form

is strong.  Per the manual, internal consistency estimates are excellent and ranged from .90 to .93

across norm-types and age groups per the manual (.96 in current study).  For more detailed

information, see the manual (Kamphaus & Reynolds, 2007).  The manual reported that grade

level readability was 1.8 as calculated using the Flesch-Kincaid readability formula.  There were

no missing data for the BESS in the current sample.

**Child and Adolescent Social Support Scale (CASSS; Malecki, Demaray, & Elliott,**

**2000).**  The CASSS assesses perceptions of social support from multiple sources.  Only the

Classmate Support and Teacher Support subscales were administered.  Each subscale consists of

12 items that measure four different types of social support (e.g., emotional, informational,

appraisal, and instrumental).  Students rate the frequency of each item using a 6-point scale

ranging from 1 (*never*) to 6 (*always*), for example "My classmates treat me nicely" (Classmate)

and "My teachers care about me" (Teacher).  The total frequency scores were used during the

analyses.  Possible scores for Classmate Support and Teacher Support can range from 12 to 72.

Malecki and Demaray (2002) reported evidence of reliability and validity for the CASSS.

There is evidence of a five-factor structure and item to subscale correlations ranged from .55 to

.78 for teachers and .72 to .86 for classmates. Validity was examined by correlating CASSS

scores with scores from similar measures (see Malecki & Demaray [2002] for more detail).  For

the current study, alpha coefficients were .90 and .87 for the Classmate and Teacher scales,

respectively.  Grade level readability was 3.2 for the Classmate and 3.1 for the Teacher scales as

calculated using the Flesch-Kincaid readability formula.  There were three participants on the

Classmate scale and two participants on the Teacher scale that had three or more items missing

and were excluded from analyses. Mean imputation was used for two participants with two or

less items missing on the Teacher scale.

**Data Analyses.**  All research questions were addressed utilizing analyses conducted with

the PROCESS macros for SPSS (Hayes, 2013).  Mediational analyses were utilized to address

the first research question examining the indirect effect of perceived peer and teacher social

support in the relation between peer victimization and risk of social, emotional, and behavioral

problems (see Figure 1a).  To address the second research question, moderated mediation

analyses were utilized to examine if the indirect effects of perceived peer and teacher social

support varied as a function of gender (girls, boys) and school level (intermediate, middle

school).  See Figure 1b for the conceptual model of this conditional indirect effect.  Preacher and

Hayes' (2004) recommended procedures for testing direct and indirect effects with bootstrapping

were used.  Bootstrapping allows the sample to be treated as the population from which small

samples are drawn, analyzed, and then replaced. This process is repeated numerous times (5,000

iterations for the current study).  Gender was dummy-coded (0 = Girls, 1 = Boys).

# Results

Means and standard deviations of all variables are presented in Table 1.  See Table 2 for

intercorrelations of all variables by gender.

## Indirect Effects

To address the first research question (regarding the indirect effect of Peer Victimization

on the BESS score through Classmate Support and Teacher Support) Hayes' (2013) Model 4

PROCESS technique was used to evaluate indirect effects.  In this model, Peer Victimization (X)

was specified as the independent variable, Classmate Support ($M_1$) and Teacher Support ($M_2$) as

the mediators, and BESS Total (Y) as the dependent variable.  Bootstrapping was used for 5,000

samples to correct any biases in confidence intervals.  An effect is determined significant if the

95% bias corrected confidence interval does not include the value zero.  The prediction for this

research question was partially supported.  The direct effect of Peer Victimization on the BESS

score was significant ($p < .001$).  The indirect effect of Peer Victimization on the BESS score

through Classmate Support was also significant ($B = .22$, *Boot SE* = .04, 95% *BC CI* [.16, .30]);

however, the indirect effect of Peer Victimization on the BESS score through Teacher Support

was not significant ($B = -.00$, *Boot SE* = .02, 95% *BC CI* [-.05, .04]).  Direct effects, standard

errors, and 95% confidence intervals of this model are reported in Table 3.  Peer Victimization,

Classmate Support, and Teacher Support accounted for 9% of the variance in BESS Total ($R^2$

=.09).

## Conditional Indirect Effects

Hayes' (2013) Model 9 PROCESS technique was used to evaluate conditional indirect effects (i.e., moderated mediation) for the second research question (i.e., whether an indirect effect of Victimization on the BESS score through Classmate Support and Teacher Support varied as a function of Gender and School Level).  In this model, Peer Victimization (X) was specified as the independent variable, Classmate Support ($M_1$) and Teacher Support ($M_2$) as the mediators, Gender (W) and School Level (Z) as moderators, and BESS (Y) as the dependent variable.  The prediction for this research question was partially supported (see Table 4).  Like results in the first research question, there was not a significant indirect effect of Peer Victimization on the BESS score through Teacher Support by Gender or School Level.  The indirect effect of Peer Victimization on the BESS score through Classmate Support as a function of gender was also not significant.  Specifically, the significant indirect effect of Peer Victimization on the BESS score through Classmate Support was similar for both boys and girls. The indirect effect of Peer Victimization on the BESS score through Classmate Support was significant as a function of School Level.  Although the indirect effect of Peer Victimization on the BESS score through Classmate Support was significant for both intermediate and middle school students, the indirect effect was stronger for middle school students.  The Index of Moderated Mediation for Perceived Classmate Support was .16 (*Boot SE* = .05, 95% BC CI [.08, .26]), providing further evidence for a significant indirect effect of Classmate Support as a function of School Level.  Direct effects, conditional indirect effects, standard errors, and 95% confidence intervals of this model are in Table 5.

## Discussion

We predicted that peer support and teacher support would have an indirect effect, though peer support would have a stronger indirect effect than teacher support (e.g., Conners-Burrow et

al., 2009; Demaray & Malecki, 2003; Holt & Espelage, 2007), which was partially supported. Peer support was found to have a significant indirect effect on the relation between peer victimization and risk of social, emotional, and behavioral problems, but there was not a significant indirect effect of teacher support.

Rosenfeld et al. (2000) noted that teacher support may be a necessary, but not sufficient condition for youth to experience positive school outcomes.  When teacher support was combined with either parent or friend support, participants experienced better outcomes than when only teacher support was present.  Flaspohler, Elfstrom, Vanderzee, and Sink (2009) found weak associations between peer victimization and quality of life when students perceived high peer support with lower levels of support from their teachers.  Interestingly, if students only reported high levels of teacher support, there was no association between the three variables. These findings in combination with the current study, suggest that teacher support may still be important, but that perceptions of teacher support in isolation may not be enough to impact the association between peer victimization and social-emotional outcomes.  However, we found that peer support in isolation appears to be strong enough to impact this relation.  This is consistent with previous studies reporting a positive relation between peer support and psychosocial adjustment (Demaray et al., 2005; Rueger et al., 2008).  Overall, peer support plays an important role in social emotional health for targets of bullying; thus, peer support should be integrated into bullying prevention and intervention practices.

**Conditional Indirect Effects of Peer and Teacher Support**

Our second research question was, does the indirect effect of peer and teacher social support vary as a function of gender and school level (i.e., intermediate and middle school)?  We predicted that peer support would have a stronger indirect effect for middle school students.

There was not a significant indirect effect of teacher support as a function of gender and school level.  There was a significant indirect effect of peer support as a function of school level, but not gender.  This indicates that the significant indirect effect of peer support was similar for both boys and girls.  Although research supports the notion that girls are more likely to report higher levels of peer support than boys (Colarossi & Eccles, 2003; Holt & Espelage, 2007), it remains unclear how gender may impact social emotional outcomes for students.  Findings of the current study further establishes the importance of peer support in the social emotional health of both boys and girls.

In regards to school level, a significant indirect effect of peer support was found for both intermediate and middle school students, but the indirect effect was stronger for middle school students.  This is consistent with previous findings suggesting that peer support may be increasingly important as youth transition to middle school (Colarossi & Eccles, 2003). Adolescents seek independence from adults and spend a considerable more amount of time with their peers during this developmental stage.  Fostering high-quality, supportive relationships with peers is crucial for positive social-emotional outcomes for middle school students, particularly those that experience bullying, during adolescence.

**Implications and Future Directions**

The current investigation has clear implications for bullying prevention and intervention practices, particularly regarding the role of peer support.  Peer support was found to have a significant impact on the association between peer victimization and social emotional outcomes for both girls and boys, as well as for both intermediate and middle school students.  Therefore, helping youth foster supportive, high-quality relationships with their peers is essential.  This could be done through school-wide approaches that target social skills and peer relationships.

There is a growing body of empirical support for school-based social emotional learning (SEL) programs that address skills related to emotional awareness and regulation, appreciating the perspectives of others, making responsible decisions, and handling interpersonal situations effectively (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).  These skills are critical for developing positive peer relationships and programs focused on SEL have been found to reduce rates of peer victimization (Espelage, Low, Polanin, & Brown, 2015).  SEL implementation typically includes coordinated, systemic school-wide SEL programming that involves incorporating SEL standards into school curriculum (Greenberg et al., 2003).  Although SEL is not a program in itself, there are several curricula available that focus on SEL and promoting peer support, such as Caring School Community (Schaps, 2009) and Strong Start/Strong Kids/Strong Teens (Merrell, Carrizales, Feuerborn, Gueldner, & Tran, 2007).  These curricula include lessons on empathy, interpersonal skills, and how to give and receive help with their peers.  Classroom teachers also can assist in the development of social skills and positive peer relationships by incorporating structured social opportunities in the classroom, such as cooperative learning groups, group celebrations, and class meetings (San Antonio & Salzfass, 2007).

Although this approach may be universal and preventative in nature, more targeted approaches for students that are experiencing peer victimization could include teaching them to seek out help and support, particularly from their peers.  The social support literature describes various types of support that include emotional (feeling loved and cared for), instrumental (providing tangible resources), informational (providing advice or ideas), and appraisal (providing feedback) support (Tardy, 1985).  Researchers should continue to explore the impact that various types of social support may have on those experiencing peer victimization.  For

example, emotional support may be more important than instrumental support for those who are targets of bullying.

Bully prevention programs often include a bystander component that encourages bystanders to defend peers; the current findings further establish the importance of bystander behavior (Polanin, Espelage, & Pigott, 2012). A more targeted approach may also involve school staff (e.g., the school psychologist, school social worker, or school counselor) coordinating structured small group settings where students that have experienced peer victimization may be able to share their experiences with each other in a safe and supportive environment. A structured small group may also serve as an appropriate setting to allow targets of bullying additional opportunities to practice SEL skills, such as assertive communication and social problem solving (Rodkin & Hodges, 2003).

Although the current study focused on school-based sources of support, it may be important to examine the association among parent support, peer victimization, and social-emotional outcomes. For example, Tanigawa et al. (2011) found parent support was negatively associated with depressive symptoms among youth; however, further research is needed. Helsen, Vollebergh, and Meeus (2000) suggested that perceptions of high peer support may not compensate for the lack of parent support in regards to students' negative outcomes. Rosenfeld et al. (2000) suggested that teacher support was more effective when combined with other sources of support, such as parent and classmate support. Sources of social support in combination may better protect youth from experiencing negative social-emotional outcomes.

**Limitations**

Several limitations of the current study should be noted. Although there was a large sample ($N = 656$), there was little ethnic diversity in the sample (95% White). In addition, the

sample resided in one rural community.  Research on prevalence rates of peer victimization in urban, suburban, and rural schools is equivocal. Nansel et al. (2001) found no statistically significant differences between urban, suburban, and rural school prevalence rates, but other smaller studies have reported much higher rates of peer victimization, ranging from 33% (Price, Chin, Higa-McMillan, Kim, & Frueh, 2013) to 82.3% (Dulmus, Theriot, Sowers, & Blackburn, 2004), when compared to national aggregated prevalence rates.  Smokowski, Cotter, Roberson, and Guo (2013) conducted a study with over 4,000 youth in rural areas and found that prevalence rates ranged from 11% to 38% at different schools, which is slightly higher than other studies reporting prevalence rates of 10.6% to 27.8% nationally (Nansel et al., 2001; Robers, Kemp, & Truman, 2013).  Overall, there may be differences in prevalence rates in rural, urban, and suburban schools, but differences are not drastic.  Youth in rural communities may experience or witness more serious peer victimization and have unique risk factors that impact social, emotional, and behavioral outcomes (Atav & Spencer, 2002; Smokowski et al., 2013) which underscores the necessity of examining social support as a mediator of negative outcomes for rural students, in particular.

Second, the study was cross-sectional in nature.  More studies utilizing longitudinal designs are needed to explain causality.  Also, the current study relied solely on student self-reports of peer victimization.  Reliance on self-report measures for peer victimization and negative social-emotional outcomes may result in underreported levels due to individuals' tendency to provide socially desirable responses.  Adult and peer report may add additional perspective when examining the link between peer victimization, social support, and social-emotional outcomes.  Furthermore, only a small amount of variance in social-emotional outcomes was explained by peer victimization and peer and teacher support.  There are likely

other variables not included in the analyses that should be considered, such as perceived parent support, stress, school climate, and academic achievement.  Given that a composite of social-emotional outcomes was utilized as the indicator of social, emotional, and behavioral problems, future research may benefit from examining these relations separately, particularly related to internalizing and externalizing behavior.

Despite these limitations, current findings provide further evidence regarding the importance of peer support for youth experiencing peer victimization, particularly for students in middle school grades.  It is imperative that research on bullying continues to evolve to understand the complexity of bullying situations and how to best support those being bullied. The current findings underscore the importance of bystanders and peer relationships for bullying prevention efforts.  This will enable policymakers and educators to design more effective interventions for protecting and enhancing the well-being of children and adolescents experiencing peer victimization.

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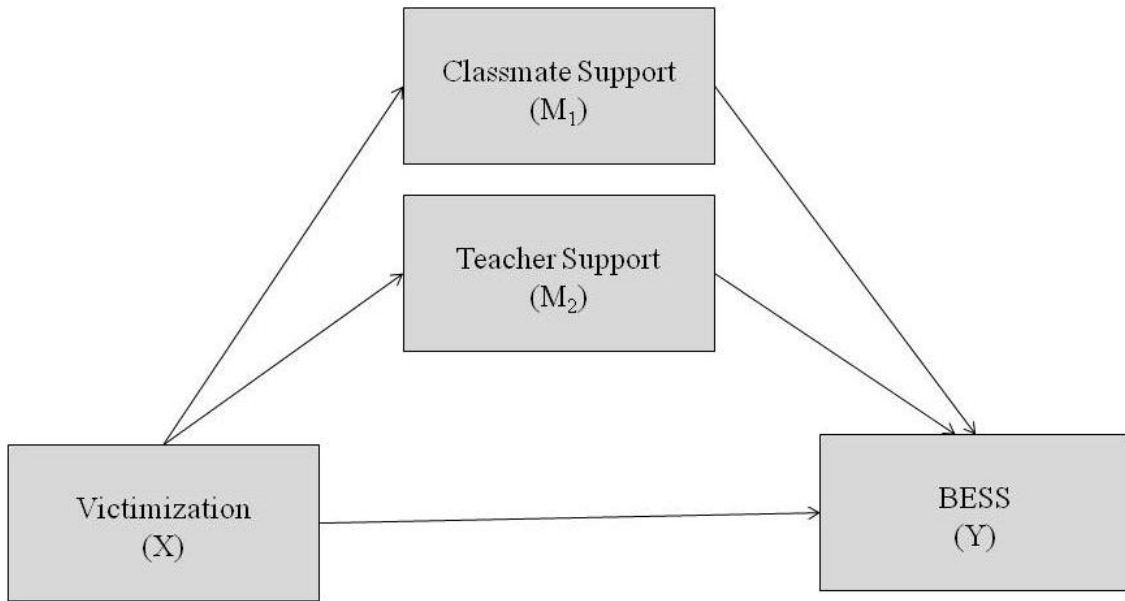
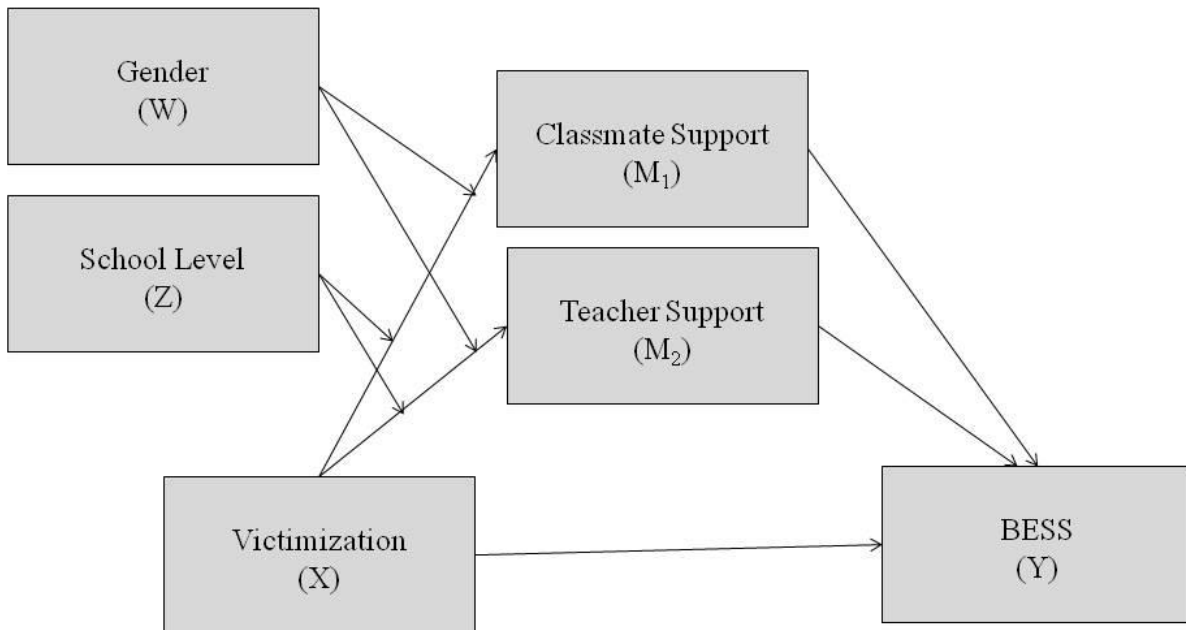*Figure 1a.* Conceptual Model for the Indirect Effects of Classmate Support and Teacher Support



*Figure 1b.* Conceptual Model for Conditional Indirect Effects

Table 1

*Means and Standard Deviations of All Variables by Gender and School Level*

| | Gender | | | | | | School Level | | | | | | | | |
| | Girls | | | Boys | | | Intermediate | | | Middle | | | Total | | |
| | *M* | *SD* | *N* | *M* | *SD* | *N* | *M* | *SD* | *N* | *M* | *SD* | *N* | *M* | *SD* | *N* |
| Victimization range: 0-41 | 8.70 | 9.50 | 322 | 7.60 | 8.11 | 329 | 8.87 | 9.23 | 313 | 7.42 | 8.36 | 330 | 8.13 | 8.83 | 652 |
| Classmate Support range: 12-72 | 51.73 | 13.50 | 319 | 50.55 | 12.97 | 333 | 49.97 | 13.01 | 314 | 52.24 | 13.29 | 329 | 51.13 | 13.23 | 653 |
| Teacher Support range: 12-72 | 61.35 | 10.81 | 320 | 59.26 | 11.86 | 330 | 60.50 | 11.56 | 315 | 60.19 | 11.14 | 327 | 60.31 | 11.39 | 651 |
| BESS Total range: 0-73 | 28.86 | 14.01 | 322 | 28.55 | 13.68 | 333 | 34.81 | 8.46 | 317 | 23.05 | 15.50 | 330 | 28.70 | 13.83 | 656 |

*Note.* Reported ranges are based on sample.

Table 2

*Correlation Matrix of Main Study Variables by Gender*

| | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Victimization | 1 | -.48** | -.33** | .48** |
| 2. Classmate Support | -.42** | 1 | .56** | -.53** |
| 3. Teacher Support | -.30** | .64** | 1 | -.33** |
| 4. BESS Total | .44** | -.38** | -.24** | 1 |

*Note.* Correlations above diagonal are for girls and below diagonal are for boys.
**p < .01

Table 3

*Direct Effects of Victimization, Classmate Support, and Teacher Support (Research Question 1)*

| | Effect | SE | p | Lower Limit | Upper Limit |
|---|---|---|---|---|---|
| | | | | 95% CI | |
| BESS | | | | | |
|    Victimization | .50 | .06 | *** | .38 | .61 |
|    Classmate Support | -.34 | .05 | *** | -.43 | -.25 |
|    Teacher Support | .01 | .05 | .92 | -.09 | .10 |
| Classmate Support | | | | | |
|    Victimization | -.66 | .05 | *** | -.77 | -.56 |
| Teacher Support | | | | | |
|    Victimization | -.39 | .05 | *** | -.49 | -.30 |

*Note.* CI = Confidence Interval.
***$p < .001$.

Table 4

*Direct Effects of Victimization, Classmate Support, Teacher Support, Gender, and School Level (Research Question 2)*

| | Effect | SE | p | Lower Limit | Upper Limit |
|---|---|---|---|---|---|
| | | | | 95% CI | |
| BESS | | | | | |
|    Victimization | .51 | .06 | *** | .39 | .62 |
|    Classmate Support | -.34 | .05 | *** | -.43 | -.25 |
|    Teacher Support | -.01 | .05 | .86 | -.11 | .09 |
| Classmate Support | | | | | |
|    Victimization | -.46 | .08 | *** | -.62 | -.29 |
|    Gender | -2.10 | 1.26 | .10 | -4.56 | .37 |
|    School Level | 5.28 | 1.25 | *** | 2.82 | 7.75 |
|    Victimization*Gender | .02 | .11 | .83 | -.18 | .23 |
|    Victimization*School Level | -.48 | .10 | *** | -.68 | -.27 |
| Teacher Support | | | | | |
|    Victimization | -.30 | .08 | *** | -.46 | -.15 |
|    Gender | -1.99 | 1.17 | .09 | -4.28 | .30 |
|    School Level | .62 | 1.17 | .59 | -1.67 | 2.91 |
|    Victimization*Gender | -.06 | .10 | .53 | -.25 | .13 |
|    Victimization*School Level | -.16 | .10 | .10 | -.35 | .03 |

*Note.* CI = Confidence Interval.
***$p < .001$.

Table 5

*Conditional Indirect Effect of Victimization on BESS through Classmate Support and Teacher Support by Gender and School Level*

| Mediator | Gender | School Level | *Effect* | *Boot SE* | 95% CI | |
|---|---|---|---|---|---|---|
| | | | | | *Lower Limit* | *Upper Limit* |
| Classmate Support | Girls | Intermediate | .15 | .04 | .09 | .24 |
| Classmate Support | Girls | Middle | .32 | .05 | .22 | .42 |
| Classmate Support | Boys | Intermediate | .15 | .04 | .08 | .23 |
| Classmate Support | Boys | Middle | .31 | .06 | .21 | .43 |
| Teacher Support | Girls | Intermediate | .00 | .02 | -.03 | .04 |
| Teacher Support | Girls | Middle | .00 | .03 | -.04 | .06 |
| Teacher Support | Boys | Intermediate | .00 | .02 | -.03 | .04 |
| Teacher Support | Boys | Middle | .01 | .03 | -.05 | .07 |