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THE RELATIONSHIP BETWEEN PEER VICTIMIZATION AND POST-TRAUMATIC STRESS SYMPTOMATOLOGY IN A RURAL SAMPLE

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Peer victimization (PV) has been associated with a number of negative psychological sequelae. Few studies, however, have examined the relationship between PV and the symptomatology of post-traumatic stress disorder, and no studies to date have examined this relationship in a rural sample. Adapted versions of the SEQ-SR and the TSCC were used to assess the relationship between PV and post-traumatic stress symptomatology in a sample of 244 rural youths (ages 10–14) in two school districts in a south-central area of the United States. In addition to a positive relationship between PV and post-traumatic stress symptomatology, the results indicated relatively high rates of adult presence and peer bystanding during PV experiences. Limitations and implications for practice are discussed. © 2010 Wiley Periodicals, Inc.

Peer victimization (PV) has been a growing concern among youths, professionals, and parents, and there is considerable evidence to suggest that it is a frequent experience for many children and adolescents (e.g., see Bradshaw, Sawyer, & O'Brennan, 2007). Its prevalence is worrisome because negative psychosocial symptomatology is often associated with the experience of PV; in some cases, increased suicidality is associated with PV experiences (e.g., Brunstein-Klomek, Marrocco, Kleinman, Schonfeld, & Gould, 2007). Moreover, the current school-wide anti-bullying interventions commonly implemented in schools seem to often yeild nonsignificant results in reducing self-reported victimization and bullying (Smith, Schneider, Smith, & Ananiadou, 2004). These findings support the need for additional research, both on school-wide interventions and on the impact of PV on both those who engage in bullying as well as those who are targeted.

Rural populations have received scant attention in the PV literature. Although the term "rural" is often thought to connote an indication solely of population size, geographic locale (i.e., proximity to an urban center, including four locale categories [city, suburban, town, and rural]) is becoming an increasing factor in determining the "rurality" of a community. In 2006, the National Center for Education Statistics (NCES) revised its definition of rural after working with the United States Census Bureau (NCES, 2006). In this revision, schools are assigned to locale categories (e.g., suburban, rural) based on their actual addresses and their proximity to larger urban areas. In data collected from 2005–2006, the NCES (2006) indicated that a total of 8,038 school districts (56.74%) were classified as rural under this urban-centric locale classification system.

Despite the current reliance on the NCES definition of rural, it is important to note that "rurality" is a term that is composed of a broader cluster of characteristics that influence daily living, behaviors, and attitudes. Beebe-Frankenberger (2008) discusses several important characteristics of rural schools and communities that should be noted. The small-town image that many have of the rural setting is often an asset for community members, resulting in a sense of belongingness. The power of these close relationships, generational roots, and small communities should therefore be considered positive attributes (Beebe-Frankenberger). It must also be noted, however, that rural community members are at similar or greater risk for high-risk behaviors (e.g., carrying weapons) and suicide, and rural *schools* have higher rates of students with disabilities and higher poverty rates

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than their suburban counterparts and an increasing number of English-language learners (Beebe-Frankenberger).

With such a sizable proportion of schools being designated as rural, as well as noted rural problems (such as isolation from metropolitan resources and higher poverty rates than urban settings; Dulmus, Sowers, & Theriot, 2006), the study of stressors (such as PV) in these populations seems particularly important. Furthermore, in light of the economic disadvantages previously mentioned, access to valuable resources may be limited as well. It is therefore imperative that not only more information be gathered regarding the frequency and nature of victimization experiences (e.g., presence of bystanders) of rural youths, but also of the negative psychological sequelae and other relevant perceptions (e.g., self-efficacy in coping with victimization experiences) reported by victims in these settings.

PV in Rural Settings

As discussed by Bradshaw and colleagues (2007), increasing awareness of PV (i.e., its nature as well as its negative impact on victims) along with effective training on addressing bullying will make it more likely that staff will effectively intervene. Some research highlights particularly high levels of violence and victimization among rural youths (e.g., see Johnson et al., 2008, for a discussion). The social and geographic isolation often inherent in rural locales contributes to a "'frontier' or 'folk' sense of justice" (p. 18; Dulmus et al., 2006) that seems to authorize the use of violence for the resolution of conflicts and disputes (Schwaner & Keil, 2003). Furthermore, Dulmus and colleagues state that "such pervasive attitudes about violence" (p. 18) likely contribute to violence in rural communities, as well as to bullying and violence in rural schools. Of particular importance are findings that reactive aggression (or "fighting back"; Kochenderfer & Ladd, 1997, p. 59) is associated with continuing victimization. These potentially socially promoted behaviors are therefore quite ineffective for many individuals in responding to PV effectively.

Despite these previously noted findings and commentaries, the extant literature base on rural PV seems lacking. As discussed by Dulmus and colleagues (2006, p. 18), the research on PV in rural schools is "inconclusive and hindered by methodological discrepancies." Dulmus and coworkers further note, however, that the available data on PV in rural settings (e.g., reports indicated that from 11% to 83% of children are victimized) suggest that this void in the literature is certainly in need of additional attention.

In addition to the need for research targeting underrepresented populations in the literature (e.g., rural youths), it is also important to target those who are perhaps most severely affected, such as those at risk for post-traumatic stress disorder. An understanding of PV and its potential impact on children and adolescents is therefore imperative to developing more effective anti-bullying interventions, as well as to developing effective treatment modalities for victims (Storch & Esposito, 2003). School psychologists, in particular, are integral figures in the development and implementation of such interventions, and it is therefore essential that they (along with experts in other applied areas [e.g., child trauma]) play a primary role in the research in this area. In rural settings, it seems that school psychologists may be in one of the best positions to provide services to children with such mental health needs (e.g., those experiencing post-traumatic stress). As noted by Merwin, Hinton, Dembling, and Stern (2003), there is a short supply of mental health care providers in rural areas, and opportunities for early intervention are therefore quite limited. Therefore, school psychologists may be the most accessible and well-trained professionals for providing services to these youths.

Although there are many definitions of PV in the literature, most definitions include certain elements (Smith & Myron-Wilson, 1998). Generally, PV may be characterized as repeated, unprovoked verbal, physical, or psychological attacks or intimidation intended to cause fear or to

otherwise harm a victim (Farrington, 1993; Smith & Myron-Wilson, 1998). Additionally, an actual or perceived power differential is present between the bully and the victim. These elements also seem to be prevalent across cultures (Smith & Myron-Wilson, 1998). In much of the PV literature (e.g., Martin, Huebner, & Valois, 2008; Storch & Esposito, 2003), as with the current investigation, victimization is assessed via self-report instruments that elicit responses regarding the reception of behaviors of both overt and relational aggression. Additionally, several authors (e.g., Nansel et al., 2001; Nylund, Bellmore, Nishina, & Graham, 2007) have indicated that the middle school years (i.e., approximately Grades 6–8) are a particularly important period for examining PV. Furthermore, reports of victimization seem to peak at approximately the sixth grade and tend to decrease in the subsequent years (Nylund et al., 2007). In light of these findings, it would seem particularly advantageous to use a sample composed of participants across this range of middle-school grades.

An Aggression Typology and the Role of Gender in Victimization

Many researchers distinguish between the types of victimization that individuals may experience. Two main types may be seen throughout the literature: overt and relational aggression. Relational aggression harms others through manipulation of peer relationships or friendships (e.g., through social exclusion), whereas overt aggression harms others through actual physical damage or the threat of such damage (Crick & Bigbee, 1998). The recent surge of interest in relational victimization has helped researchers to broaden their definition and conceptualization of aggression (Espelage, Mebane, & Swearer, 2004). The result has been a unique understanding of relational victimization and its role within the context of victim gender.

Historically, because many studies of PV include primarily male samples and a sole focus on physical victimization, many subtle variations in victimization have been excluded. This failure to address alternative types of victimization has resulted in a lesser understanding of the types of aggression with which females may be involved (i.e., as victims and/or perpetrators). If the definition of PV is expanded to include other types of victimization, the results may elucidate the potentially unique experiences across gender in different populations (Crick & Grotpeter, 1996; Espelage et al., 2004). Therefore, measures of PV must include measures of both overt and relational victimization. As this perspective has been increasingly adopted, the recent PV literature has been focused on differences in victimization experiences between genders. Much of this focus has been directed toward the type of victimization experienced. If differences in victimization experiences do exist between the genders, interventions from professionals should be constructed accordingly.

Several studies (e.g., Crick & Bigbee, 1998; Leenaars, Dane, & Marini, 2008) have demonstrated these differences between genders. Boys have been shown to be more overtly victimized than girls. Conversely, girls have often been shown to be more frequently relationally victimized than boys. Crick and Grotpeter (1996) posited that relational aggression may be used more often in girls' peer groups because these strategies are particularly harmful to the establishment of close dyadic ties, an important social goal for girls. Other studies, however, have shown no gender differences based on victimization type. For example, Storch and Esposito (2003) found that boys and girls did not differ on their reports of relational victimization. Clearly, the relationship between gender and victimization is in need of additional research.

Psychological Impact of PV

In recent years, there has been a dramatic increase in the number of studies examining psychopathological correlates of PV (i.e., internalizing symptomatology, anxiety, or depression). It is not only important to ensure that these problems do not go unrecognized (Hawker & Boulton, 2000), but it is also important to note that adults' beliefs about the impact of PV may influence their rate of

intervention (Craig, Henderson, & Murphy, 2000). In the context of developing effective interventions, researchers must be able to effectively understand the psychological variables associated with or resulting from PV to communicate this impact to parents and teachers, the primary implementers of such interventions.

Both theory and empirical evidence seem to support a hypothesis that victims may suffer more maladjustment than do nonvictims (Hawker & Boulton, 2000). Many theorists have argued that negative social experiences are related to the development of depression and other forms of psychosocial maladjustment. Furthermore, Hawker and Boulton highlighted how certain types of maladjustment are positively related to social difficulties such as submissiveness, social withdrawal, and unpopularity, all of which are associated with PV. Both males and females who report being victimized by their peers have also been shown to report higher levels of anxiety and lower self-worth than their nonvictimized peers do (Grills & Ollendick, 2002). In sum, although many studies yield conflicting findings about the type of pathology associated with victimization, there is sufficient evidence to suggest that many victims do experience some type of internalizing distress (e.g., Grills & Ollendick, 2002; Hawker & Boulton, 2000; Swearer, Grills, Haye, & Cary, 2004).

PV and Post-Traumatic Stress

Although there is sufficient evidence to support the hypothesis that PV is associated with psychological and psychosocial problems, little research has been conducted to support a hypothesis that victimization may also be associated with the symptoms of Post-Traumatic Stress Disorder (as described in American Psychiatric Association [APA], 2000). It is important that post-traumatic stress be distinguished from other types of internalizing problems (e.g., depression, generalized anxiety) because it is specifically conceptualized as a range of anxiety symptoms associated with a traumatic stressor. This conceptualization of PV as a traumatic event(s) (i.e., increased internalizing distress associated with PV) therefore seems particularly appropriate. Furthermore, the existing studies in the PV literature do support a link between PV and post-traumatic stress.

In a study of English students in a secondary-school setting, higher scores on a measure of subjective stress were predicted by victimization and the belief that social control lies with others (Mynard, Joseph, & Alexander, 2000). This relationship between PV and post-traumatic stress has been observed even in adult populations. In a study in the workplace, Mikkelsen and Einarsen (2002) found a high prevalence of analogue post-traumatic stress among victims of bullying at work. Although these findings do seem to support the hypothesis that victims of bullying may experience post-traumatic stress symptomatology, the number of studies in the literature on this topic are few and include primarily European samples. Furthermore, as Storch and Esposito (2003) state, relational victimization is often missing from assessments of PV in such studies.

In a more recent examination of these variables in school-age populations, a positive relationship was found between PV and post-traumatic stress. In their sample of male and female fifth- and sixth-graders in an urban school setting, Storch and Esposito (2003) found positive relationships of medium effect size among overt and relational aggression and post-traumatic stress. As the authors mentioned, however, it must also be considered that the sample was drawn from an urban setting in which the students were reported to have a higher likelihood of having experienced another traumatic event. In addition to the noted problem with potential trauma that victims may have experienced in the sample from Storch and Esposito, it is also imperative to expand the literature to other locales, including those distinguished as rural. It is possible that such an expansion could reveal important differences in the experience of victimization and negative psychological sequelae (e.g., post-traumatic stress symptomatology). Despite the noted limitations, however, the above studies lend support to the hypothesis that there is a link between PV and post-traumatic stress.

In sum, despite the relatively few studies examining the relationship between PV and post-traumatic stress symptomatology, both theoretical and empirical support makes their posited relationship logical. Specifically, based on the extant literature in this area, it was posited that PV would be positively related to post-traumatic stress symptomatology. The focus of the current study, therefore, is to examine the relationship of PV (including items based on physical, verbal, and relational types of victimization) to post-traumatic stress symptomatology within a rural sample. Furthermore, descriptive data on the frequency of experiences of victimization, as well as perceptions of adult and peer presence at the time of victimization (i.e., bystanding) were examined. The goal of this study is twofold. First, it is the goal of the authors to inform school-based decision making and interventions that are meaningful to youths. Second, the authors intend to enhance the extant PV literature with a study of its impact on the psychological functioning of youth in the rural school setting, while additionally examining the reported frequency of victimization experiences and reports of adult and peer presence or bystanding during PV in a rural sample.

Method

Participants

Participants were recruited from two rural public schools, one in Northern Oklahoma (fifth through seventh grade) and another in Western Texas (sixth through eighth grade). Participation was open to all students in the school, and letters were sent home to parents of all students. The definition of "rural" for this study was based on the United States Department of Education Institute for Education Sciences' locale categories, released in 2006 (NCES, 2006). The sample was composed of 244 students, ages 10–14, with a mean age of 11.7 years (standard deviation [*SD*] = 1.05). Gender representation was generally balanced, with 45% females and 55% males. Ethnic representation was as follows: 88% White, 5% Native American, 5% Hispanic, 2% Black, and 1% Asian-American. Finally, participant distribution across grade level was as follows: 21% fifth grade, 30% sixth grade, 37% seventh grade, and 12% eighth grade. Results of analyses of variance indicated no significant differences between the sites on student reports of PV.

Instruments

The participants completed three adapted questionnaires, which included the Social Experience Questionnaire–Self Report (SEQ-SR; Crick & Grotpeter, 1996), the Trauma Symptom Checklist (TSCC; Briere, 1996), and a personal data information form, which included items related to the participants' demographic characteristics, as well as items related to their general experiences with PV in their respective schools. The TSCC and the SEQ-SR were chosen because they are commonly used instruments in the assessment of post-traumatic stress and PV, respectively (e.g., see Martin et al., 2008; Storch & Esposito, 2003). Furthermore, the results of the current study should be somewhat comparable to those of Storch and Esposito (2003), who used the same scales to evaluate the relationship between post-traumatic stress symptomatology and PV in an urban sample. Items on the personal data information form included general items related to location of victimization experiences, potential onlookers or witnesses of victimization, and feelings of effectiveness in handling victimization. The experiential items were elicited in part from Hunter and Boyle's demographic questionnaire (2004).

SEQ-SR. The SEQ-SR (Crick & Grotpeter, 1996) is a self-report measure of relational and overt victimization that has yielded moderate to high reliability levels throughout the literature (e.g., $\alpha = .74$ and .82, for the overt and relational scales, respectively [Storch & Esposito, 2003]; also see Crothers & Levinson [2004] for a review of the SEQ-SR, along with other assessment approaches for PV). The SEQ-SR has been used in studies of the relationship between post-traumatic stress

symptomatology and PV (see Storch & Esposito), and in its original form, it consists of three scales (five items each) assessed via Likert scaling.

The first scale, *Relational Aggression*, assesses how often peers attempt to harm or threaten relationships. The second scale, *Overt Aggression*, includes measures of physical victimization. We felt that the addition of items including content related to "being forced" (through victimization behaviors) to comply with the victimizer's demands and the inclusion of items related to property theft or destruction were warranted. Therefore, each of these scales (i.e., relational and overt) were adapted via the inclusion of an additional three items each. Additional item content was based in part on work by Mynard and Joseph (2000), and included experiences such as property destruction (overt), being physically forced to comply with peer requests (overt), and being forced to comply with peer requests because of rumor spreading (relational).

In addition to the relational and overt victimization scales included in the SEQ-SR, verbal aggression is noted throughout the literature to be a component of PV. Therefore, we added seven items (comprising a "verbal" scale) to address this component. The content of these items was based on the inclusion of verbal aggression in definitions of PV throughout the literature (e.g., Farrington, 1993; Olweus, 1993; Smith & Myron-Wilson, 1998), and included items inquiring about being victimized through threats, name-calling, and other verbally aggressive acts. It should be noted that verbal and physical aggression are often included under the umbrella term "overt" victimization. To clarify the experiences targeted on each scale used in this study, "overt" indicates physical aggression and attacks on property and "verbal" indicates victimization through direct verbal aggression. We acknowledge the similarly direct or "overt" nature of these experiences, yet felt that differential examination was warranted. The adapted SEQ-SR therefore consisted of a total of 23 items, with an overall alpha coefficient of .96.

Furthermore, we acknowledge that the addition of items to the SEQ-SR presents some potential psychometric threats (e.g., threats to reliability and content validity). To assess the content validity of these items, three subject-matter experts (graduate student members of a PV research team) were provided with the aforementioned definitions of each type of victimization and were instructed to sort each of the items (separated onto index cards) into the appropriate category of victimization (i.e., overt [physical], relational, and verbal). Sorting occurred with 100% accuracy across all raters. Additionally, internal consistency coefficients equaled or exceeded .90 for each of these scales. A third scale included in the original version of the SEQ-SR, *Prosocial Attention*, measures how often individuals experience prosocial acts from their peers. Due to the nature of the primary variables of interest (i.e., a focus on individuals' experiences with victimization, as opposed to the target's receipt of prosocial behaviors from peers), this scale was not used in the current study. For the current study, total scale scores for each scale were used in the analyses. These scores were elicited by creating sum (i.e., total) scores for the overt, relational, and verbal items, as well as summing each of these subscale scores (i.e., for a total scale score), respectively. Finally, it should be noted that higher scores on the SEQ-SR indicate higher reporting rates of PV.

TSCC Post-Traumatic Stress Subscale—Revised. Consistent with Storch and Esposito (2003), post-traumatic stress symptomatology was assessed using the Post-traumatic-Stress subscale (10 items) of the TSCC (Briere, 1996). Participants rated themselves using a Likert scale from 0 to 3 (i.e., 0 = Never to 3 = Almost All the Time). This subscale measures a variety of post-traumatic stress symptomatology including intrusive thoughts, dissociative experiences, nightmares, and avoidance of stimuli. The TSCC clinical scales have demonstrated good reliability (e.g., an alpha value of .93 for Post-Traumatic Stress Disorder-Total, with an average value of .87 across clinical scales) and have demonstrated prediction of exposure to childhood sexual abuse, physical abuse, and witnessing domestic violence (Briere et al., 2001).

Table 1
Means, Standard Deviations, and Alpha Levels for the Primary Variables of Interest

Scale	Total Score Mean	Standard Deviation	Alpha
SEQ-SR Total	44.87	19.45	0.96
SEQ-SR Overt (Physical)	14.43	6.62	0.90
SEQ-SR Relational	16.12	7.06	0.91
SEQ-SR Verbal	14.24	6.98	0.90
TSCC	5.40	6.46	0.90

Individual items were adapted to orient the participants to their experiences with PV, rather than global traumatic experiences. Specifically, the 10 items assessing traumatic experiences were rephrased to specifically orient the participants with PV experiences. A total score was yielded by summing the responses for each of the 10 items. Finally, although the adaptation of these items was deemed necessary by the authors, it is important to note that these changes also may have influenced the psychometric properties of the instrument.

Procedure

Following institutional review board approval as well as approval from individual school districts, consent forms were sent home to all parents in packets with the children. From the packet, the parents were asked to indicate whether they consented for their child to participate in a study of school bullying, frequency, and effect on children. Written assent was also obtained from each participant prior to his or her completion of the measures. The response rate for consent/assent was 45% (i.e., with 244 of 540 consent forms being returned by parents), and all individuals for whom assent and consent were given participated in the study.

Data were collected at the individual school campuses in a large-group format. The principal investigators distributed the instruments to the participants, and clearly described the assessment instructions and procedures. After the participants read and completed the questionnaires individually, the forms were collected by the researchers. To elicit more accurate and valid responses from the participants about their perceptions and experiences, data were collected anonymously (i.e., no names were on the protocols and, therefore, no follow-up procedures for intervention were implemented). The individual protocols were coded (i.e., assigned a number) and placed within an aggregated package for each participant, who in turn, returned the packets directly to the authors upon completion. Participant names were, therefore, unassociated with the responses on coded protocols.

RESULTS

Prior to analysis, these data were examined for outliers or other spurious data points. Means (M), SD values, and alpha coefficients of the PV and post-traumatic stress symptomatology scores are reported in Table 1, and zero-order correlations are reported in Table 2. Both of the scales

Table 2
Correlation Coefficients for Primary Variables of Interest

	SEQ Total Score	SEQ Overt (Physical)	SEQ Verbal	SEQ Relational
TSCC Total Score	.66*	.59*	.64*	.64*

*Coefficient is significant at the .001 level.

had high internal consistency (i.e., $\alpha = .96$ for the SEQ-SR total and .90 for the TSCC-Adapted). Subsequently, descriptive statistics were run on the sample to assess the various demographic characteristics of the participants. Furthermore, bivariate correlations were run on the variables of interest (i.e., PV as assessed by the SEQ-SR and the total scores on trauma [TSCC]). One-way analyses of variance (ANOVAs) were conducted to assess for differences across grade levels as well as between the two sites on reported experiences of PV. To address the question of gender differences on reports of PV, a one-way ANOVA was conducted to test for gender differences on the PV total score, the indirect victimization score, and the direct victimization score.

Of the 244 participants surveyed, 13.5% reported that they were victimized by peers at least once per week. Furthermore, these episodes were not private events. Thirty-five percent of the participants reported that adults were present at least "sometimes" when they were bullied. Sixty-six percent reported that they have watched someone being bullied at least once during the current school year (i.e., a 2-month time period, due to Fall data collection). Furthermore, 21% reported "bully-bystanding" at least once per week. There were no differences between sites ($F[1, 241] = 3.54$, $p > .06$) or between grades ($F[3, 237] = 0.22$, $p > .88$) on reports of victimization.

As hypothesized, overt (physical items; $r = .59$, $p < .001$), relational ($r = .64$, $p < .001$), and verbal ($r = .64$, $p < .001$) PV were positively correlated with post-traumatic stress symptomatology in the total sample, and these relationships were higher than those obtained by Storch and Esposito (2003) for overt and relational items ($r = .37$ and $r = .33$, respectively). The rates of victimization (i.e., all three types) encountered by boys and girls were also assessed. Girls ($M = 2.24$) experienced higher levels of relational victimization than boys did [$M = 1.86$; $F(1, 240) = 9.18$, $p < .003$], but there were no significant differences on physical or verbal victimization (as assessed by the overt and verbal scales, respectively). Furthermore, girls ($M = 7.01$) reported higher levels of post-traumatic stress symptomatology than boys did [$M = 4.17$; $F(1, 227)$ 11.21, $p = .001$].

As a result of the aforementioned gender differences on the reported rates of relational aggression as well as on reports of post-traumatic stress symptomatology, the relationships between all victimization types and TSCC total scores were calculated, while controlling for gender. These partial correlation coefficients are reported in Table 3, and indicate consistency with those elicited from the previously calculated bivariate correlations (i.e., without controlling for gender). For the total, overt, relational, and verbal scales, $r = .67$, .62, .65, and .63, respectively.

Finally, among the general experiential items from the demographics questionnaire (Hunter & Boyle, 2004), the participants were asked: "How well do you think you can deal with bullying?" A negative relationship between post-traumatic stress symptomatology (i.e., TSCC Total Score) and perceived self-effectiveness in dealing with PV was obtained ($r = -.34$, $p < .001$). Males ($M = 2.94$) and females ($M = 2.48$) reported significantly different levels of perceived self-effectiveness based upon this item ($F[1, 236]$ 11.29, $p = .001$), with males indicating the perception that they could better "deal with" bullying. Therefore, the relationship between this item and the TSCC was reexamined (controlling for gender), yielding a coefficient of $-.31$ ($p < .001$).

Table 3
Partial Correlation Coefficients for Primary Variables of Interest: Controlling for Gender

	SEQ Total Score	SEQ Overt (Physical)	SEQ Verbal	SEQ Relational
TSCC Total Score	.67*	.62*	.65*	.63*

*Coefficient is significant at the .001 level.

Discussion

An examination of the relationship between PV and post-traumatic stress symptomatology is not only essential for improving our understanding of the significant sequelae experienced by some rural victims, but also entirely absent (to our knowledge) from the literature. Participants indicated that PV is a problem in their rural schools (i.e., >13% reported that they are bullied at least once per week), with PV being negatively related to an individual's perceptions of his or her ability to "deal with" bullying and with participants reporting that adults and peers are often present when the PV occurs. Furthermore, PV was positively related to post-traumatic stress symptomatology. As will be discussed later in text, these results are particularly valuable not only in supporting the conceptualization of PV as a potentially significant traumatic experience for some youths, but also in providing necessary information on revision and improvement in both individualized and school-wide approaches to reducing PV and its negative sequelae.

Due to the noted inconsistencies throughout the literature in gender differences and PV, reports of victimization in this sample were analyzed between genders. For physical and verbal, there were no significant differences between males and females. A significant difference was found, however, between the genders on indirect aggression (e.g., exclusion from social groups), with females reporting higher rates. These findings in gender differences are somewhat different than those found by Storch and Esposito (2003). Specifically, those authors found that boys reported higher rates of "overt" aggression than did girls, and that there were no gender differences regarding relational aggression.

In addition to the previously noted gender differences on relational aggression, girls also were found to report higher rates of post-traumatic stress symptomatology than were boys. The relationship between PV (relational type) and post-traumatic stress symptomatology remained consistent, however, with the original bivariate correlation ($r = .64$) after controlling for gender ($r = .63$). Essentially, these results seem to indicate that, although girls reported experiencing higher rates of both relational victimization and internalizing distress, the nature of the *relationship* between these two variables is relatively consistent across gender. (Such comparable relationships can be found across victimization types as seen in Tables 2 and 3.)

Storch and Esposito (2003) undertook perhaps the most informative study on the relationship between PV and post-traumatic stress symptomatology. Whereas the relatively few studies on the topic to date were drawn from European populations or were of single-subject design, Storch and Esposito used a relatively sizable American sample ($n = 205$). Their results indicated a positive relationship between these two variables of low strength ($r = .33–.41$, depending on victimization type and gender). The results of the current study support the findings of Storch and Esposito, with PV being positively and moderately related to post-traumatic stress symptomatology. Although the results suggest a similar relationship between these two general variables of interest, some differences between the two studies must be discussed.

First, there are some differences between instrumentation. Whereas Storch and Esposito (2003) used the SEQ-SR (Crick & Bigbee, 1998) and the TSCC Total Scale score in their analyses, we used adapted versions of each of these scales. Specifically, the SEQ-SR was expanded to include items specifically related to verbal aggression (e.g., threats, name-calling), a key component of PV in the vast majority of PV literature, as well as items added to both the overt and relational scales. This expansion may be responsible, in part, for the larger correlation between PV and post-traumatic stress observed here. (Notably, despite the addition of these new but necessary items, the 23-item scale retained a high alpha level of 0.96.) Furthermore, the TSCC was adapted from 10 items broadly addressing trauma to 10 items directly assessing traumatic symptomatology related to PV. The primary purpose of this adaptation was to attempt to elicit item endorsement for symptomatology related to PV only, as opposed to trauma experienced from other events or stimuli.

Finally, this study addressed a limitation reported by Storch and Esposito (2003): sampling from an urban population that was primarily Hispanic and/or Black. Specifically, this sample was drawn from a rural population. As discussed by Storch and Esposito, their sample was drawn from an area with known high crime rates. The authors further discussed the possibility that participants "were exposed to more trauma than children from other regions, for example suburban or rural neighborhoods" (pp. 95). Within a different region and population pool (i.e., primarily White, rural population), the posited positive relationship between PV and post-traumatic stress was confirmed. In this respect, this study has contributed to a known area of deficiency in the PV/trauma literature. Furthermore, a search of the broader literature on PV will yield few studies with specifically rural samples.

Limitations of the Current Study

Although the findings of this study are certainly informative, there are limitations that must be highlighted. First, the sample is particularly homogeneous. Specifically, as was noted previously, more than 87% of the participants described themselves as White. Although this is generally representative of the geographic region from which the sample was taken, the results cannot necessarily be generalized to other regions and areas that may contain a more culturally diverse population.

Furthermore, it is important to note that the scales used in this study do not have full national norms and are experimental instruments. Due to the variables of interest, and our desire to assess each of the major constructs in a manner consistent with both past research *and* theory, the instruments were adapted. Within the SEQ-SR (Crick & Bigbee, 1998), items were added to the overt and relational scales. In addition, a new verbal victimization subscale was developed. Finally, within the TSCC (Briere, 1996), the items were adapted to specifically address traumatic reactions to PV. We considered these adaptations to be desirable, but they do limit the comparability of our results to those of other existing investigations. Based on the strength, clarity, and consistency of these results as well as the practice of adapting PTSD scales to specific events (e.g., see Evans & Oehler-Stinnett, 2006), however, this is not a severe limitation but relatively common practice in exploratory research.

Finally, issues regarding self-reporting of victimization must be addressed. In a discussion of the difficulties with assessing PV, Davidson and Demaray (2007) reported concerns with self-report measures of PV. Specifically, within the professional literature there has not been a consensus reached on an exact definition of PV, thus convergent validity could be in question when choosing one assessment instrument over another. The current measurement of PV (i.e., the SEQ-SR), which is heavily founded in the most widely used definition of PV as created by Dan Olweus, was chosen as the basis for assessment of victimization experiences, however. Furthermore, the advantages of using self-report measures in large-sample studies far outweigh the concerns. When conducting a study focused on perceived experiences and indications of internalizing distress, such an approach is particularly valuable (Leff, Power, & Goldstein, 2004).

Future Research

Two particularly interesting findings of this study were the relatively high percentage of individuals reporting that adults are present when bullying occurs and that many individuals observe (i.e., as "bystanders") bullying quite often. Although research in each of these areas is increasing, additional efforts are certainly necessary. The indications from the participants in this study that adults are often present when bullying occurs is quite distressing. Although teachers were not surveyed in this study, it is important to know whether teachers confirm the participants' reports, or whether they are unaware that victimization is occurring.

Additionally, teachers' perceptions of what constitutes PV could differ from the definition used by the current authors and other researchers throughout the PV literature. Specifically, there could be a hierarchy of concerns about victimization wherein teachers and parents attribute physical aggression the most concern, and verbal and relational aggression the least (or no) concern. Further research comparing differential perceptions of the frequency, intensity, and so forth of PV, along with the perceived sequelae of victimization should be undertaken. It is not only important to assess the perceived seriousness of specific types of victimization, but also to elicit information about the likelihood of intervention. It is certainly possible that some adults may, in effect, be bystanders themselves because of a lack of skills for intervening, or (possibly) fearing the perpetrators themselves.

As Gini, Albiero, Benelli, and Altoe (2008) noted in their discussion of bully bystanding, although adolescents often disapprove of bullying and sympathize with victims, they often do little to assist their peers or notify adults. Gini and colleagues further suggested that professionals should train observers (i.e., bystanders) to take action against victimization, using methods that are effective and safe. Although assertiveness training is sometimes used with victim populations, it is suggested that such trainings also be used throughout the school population, which could also benefit from learning such techniques. Such approaches could be effective in improving the school climate by introducing a method that places less emphasis on the individual victim's responsibilities in reactive responding to such a distressing stimulus.

Implications for Practice

The results of this study also yielded several implications for practice. As these results are supportive of the conceptualization of PV as a potentially serious and traumatic stressor in the lives of some youths, PV should certainly be considered within psycho-educational evaluations of students reporting internalizing distress. Furthermore, these results indicate that not only are more individualized approaches to treatment necessary for victims of bullying, but also adaptations to school-wide approaches would be of benefit to the school climate as a whole.

Such a multilevel approach is certainly beneficial, especially for a system wherein adults and other students are reported to be present when victimization occurs. Not only are school-wide expectations established, but all children are trained in techniques for reducing victimization and bully bystanding. Furthermore, small-group and individualized approaches, including specialized social skills training and support, are implemented to victims as well as to individuals who may exhibit bullying behaviors. Therefore, rather than a "blanket" approach of a reactive nature, a multitiered and proactive approach addresses all individuals in the system.

As discussed by Bradshaw and colleagues (2007), it is imperative that school staff members learn to recognize various types of PV, especially within middle-school populations. Furthermore, a recognition that PV can result in negative sequelae that impact not only the child but the school environment as a whole is imperative. As was previously discussed, many participants reported that adults were nearby when PV occurred. It is possible that some of these events were not detected by the adults, despite their proximity. It is also possible that some adults did detect the PV incidents, but were not able to or did not intervene effectively. Staff members, therefore, could benefit from school-wide training in effectively intervening in witnessed PV acts as well as communicating their efforts to children (Bradshaw et al., 2007).

With regard to the previously discussed "pervasive [rural] attitudes about violence" (Dulmus et al., 2006; p. 18), it should also be noted that some adults may consider reactive aggression (or "fighting back") an effective response to PV, despite its demonstrated ineffectiveness in the PV literature (e.g., Kochenderfer & Ladd, 1997). It is *plausible* that such adults would be less

likely to intervene because of an expectation that the PV will remit when the bully is exposed to the reactive aggression by the victim. That is, some adults may consider aggression an effective means of "conflict" resolution. These potential beliefs and the general context of rural schools and communities must be considered when implementing systemic interventions. The aforementioned attitudes regarding reactive aggression must be explicitly addressed with parents, teachers, and students, and alternative (i.e., prosocial) responses to PV must be presented and framed as *more effective behaviors*. The results of the current study do not yield any specific findings on adult perceptions of effective, appropriate, or acceptable responses to PV. Further research on the attitudes of rural adults on their expected, promoted, or accepted responses to PV must be conducted for definitive conclusions to be drawn and for interventions to be effectively informed.

School psychologists are trained collaborative consultants, who should assist students, teachers, and parents in developing and implementing effective school-wide programs to prevent bullying. Additional research is needed, however, in the areas of implementing and evaluating effective interventions within specifically rural settings. To our knowledge, there are no well-established school-wide interventions to reduce PV specifically in rural schools. It may not be the case that such specialized approaches are required for these locales, yet more data are required before any such conclusions can be made. Although much work is being done to improve our understanding of PV, its impact, as well as interventions, much work is still to be done (see Smith et al., 2004).

Conclusion

The results of this study support the position that PV is associated with significant internalizing distress in some youths, and are particularly beneficial to the extant PV literature for two primary reasons. First, little research has assessed the relationship between PV and post-traumatic stress symptomatology, and these findings add to and support the limited research on this topic. Second, these results provide insight into the need for improvements in more thorough and individualized approaches to decreasing PV in schools, especially as related to interventions for individuals experiencing victimization. Additional research in this area across cultural and demographic characteristics must be undertaken.

These results are indicative not only of significant rates of bullying within two rural school campuses, but also of an alarming relationship between victimization and post-traumatic stress. Furthermore, these results indicate that many students not only report that adults are present when bullying occurs, but also that a significant portion also actually observe the bullying themselves on a fairly regular basis. It is apparent that school climates and expectations for social support are certainly in need of improvement. Such improvements must occur not only through continued research on the sequelae of PV and victim adaptive/maladaptive responses to PV, but also through the continued development of school-wide and targeted interventions to reduce the frequency and mitigate the impact of PV.

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