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Peer Victimization and Post-Traumatic Stress Problems among Latinx Youth: The Role of Emotional Reactivity and Gender

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Peer Victimization and Post-Traumatic Stress Problems among Latinx Youth: The Role of
Emotional Reactivity and Gender

A Thesis

Presented in

Partial Fulfilment of the

Requirements for the Degree of

Master of Science

By

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Abstract

Peer victimization is widespread and well-established as a risk factor for youth; however, few studies have examined the relation between peer victimization and post-traumatic stress symptoms among ethnic minority children and adolescents. Additionally, existing studies rarely investigate potential moderators of the relation and often utilize retrospective reports of peer victimization from adults. This study expands on the Regulatory Theory of Temperament (Strelau, 2008) by examining the role of emotional reactivity on the association between peer victimization and post-traumatic stress problems. The sample includes 275 predominantly low-income, Latinx (86.5%), and Mixed-Latinx (13.4%) Chicago Public School students ages 10-14 ($M = 11.44$ years, 55.3% female). Measures were collected at three time points, including reports of post-traumatic stress problems approximately one year apart. Peer victimization significantly predicted post-traumatic stress symptom changes. Additionally, emotional reactivity moderated the relation between peer victimization and changes in post-traumatic stress symptoms such that youth with low and moderate levels of emotional reactivity had lower post-traumatic stress symptoms one year later. Further, gender was not found to moderate the association between peer victimization and post-traumatic stress or the moderation effect of emotional reactivity on the association between peer victimization and post-traumatic stress symptoms. Implications of these findings and study limitations will be discussed.

Introduction

In recent decades, peer victimization has been of growing concern to parents, teachers, school administrators, and researchers globally. Broadly, peer victimization refers to being the target of damaging physical, sexual, verbal, or relational behaviors by other children. The prevalence of peer victimization in the United States is estimated to be between 20-60% (Afifi et al., 2020; Ladd et al., 2017; Lutrick et al., 2020; Modecki et al., 2014; Nansel et al., 2001). Studies have consistently found that peer victimization increases in elementary school and peaks in middle school before decreasing during high school (Nansel et al., 2001; Pellegrini & Long, 2002; Pepler et al., 2006). Middle school students most commonly report forms of relational aggression, which can include exclusion, spreading rumors, teasing, and intimidation (Yoon et al., 2004). Given such a high prevalence, developing bullying prevention programs has been a larger research focus than understanding outcomes; however, the most effective bullying prevention programs only reduce victimization by 15-16% (Gaffney et al., 2019). Much of the literature on the impact of peer victimization has focused primarily on European American youth despite evidence suggesting Latinx youth experience peer victimization at similar, if not higher, rates (Hong et al., 2014). Given such a high prevalence and minimal efficacy of prevention programs, an investigation of the experience of victims, with a focus on Latinx early adolescents, is necessary.

A growing body of research has already substantiated the relation between peer victimization and a wide range of adverse outcomes. A longitudinal study following youth ages 10-17 for two years found that youth who experienced peer victimization were 2.4 times more likely to report experiencing suicidal ideation within the prior month than youth who have not experienced peer victimization (Turner et al., 2012). Peer victimization has also been linked to

maladjustment and symptoms associated with internalizing disorders, including loneliness, negative affect, subclinical psychotic experiences, somatization, low self-worth, suicide attempts, and withdrawal in childhood and adolescence (De Loore et al., 2007; Dempsey et al., 2011; Dill et al., 2004; Juvonen et al., 2000; McDougall & Vaillancourt, 2015; Van Geel et al., 2014). In longitudinal studies, peer victimization has also been linked with youth externalizing symptoms over time, including attentional difficulties, misconduct, aggression, truancy, and delinquency (Reijntjes et al., 2011). Further, retrospective studies utilizing adult samples suggest previous experiences with peer victimization predict social anxiety, difficulty forming meaningful relationships, self-confidence, and symptoms of psychological distress, including post-traumatic stress disorder, in adulthood (Boulton, 2013; Mebane, 2010). The majority of the studies on the effects of peer victimization have not included samples of youth of racially or ethnically diverse backgrounds.

Studies exploring peer victimization in Latinx youth have indicated that their experiences with peer victimization may differ from those of other groups. Nativity has been documented as one potential factor influencing the prevalence of peer victimization in Latinx youth. For instance, Espinoza et al. (2013) documented generational differences in the prevalence of peer victimization, where third-generation Mexican-American high school students reported experiencing more peer victimization than their first-generation counterparts. Conversely, Maynard et al. (2016) found that immigrant youth experience peer victimization at significantly higher rates than US-born Latinx youth. Inconsistent findings across these studies may be attributable to variations in school demographics and how victimization was assessed (Felix & You, 2011). Studies of Latinx youth have also found associations between cultural and familial variables and peer victimization prevalence. For example, Forster et al. (2013) found that higher

acculturative stress and lower family cohesion put Latinx youth at greater risk of experiencing peer victimization. These studies indicate that the peer victimization experiences of Latinx youth are unique and highlight a need for further research centering Latinx youth.

Peer Victimization and Mental Health in Latinx Youth

The relationship between peer victimization and internalizing symptoms has been extensively researched, with more than 230 studies documenting this relationship in general samples of youth (Christina et al., 2021; Gini et al., 2018; Lutrick et al., 2020). However, a recent systematic review identified only 17 studies investigating the relation between peer victimization and depression in samples that were at least 25% Latinx and under the age of 26 (Lutrick et al., 2020). Only 3 of the 17 studies identified focused exclusively on Latinx youth. Lutrick et al. (2020) found significant associations between peer victimization and depression in all of the included studies and concluded that Latinx youth experiences with peer victimization may be significantly different from those of their European American peers due to sociocultural factors. Further, they characterize the representation of Latinx youth in the literature thus far as insufficient and argue that research focused on the peer victimization experiences of Latinx youth is needed.

Building on the established relation between peer victimization and depression, Cooley et al. (2015) found peer social support to moderate the association between peer victimization and depressive symptoms in a 95% Latinx sample so that victimization and depressive symptoms were positively associated at low levels of peer social support and unrelated at high levels of peer social support. Additionally, Robinson et al. (2021) demonstrated that a willingness to seek help moderates the relation between peer victimization and symptoms of depression and suicidality in Latinx youth, while ethnic representation moderates the relation between peer victimization and

depressive symptoms in girls. Moreover, Ramos et al. (2021) found perceived discrimination to be associated with higher peer victimization, lower familism, and higher internalizing symptoms in a sample of rural Latinx youth.

Few studies have explored the relationship between peer victimization and psychological outcomes other than depression in Latinx youth. A national sample of 2,138 Latinx adolescents aged 12-17 found that Latinx youth who were bullied, picked on, or excluded by others were five times more likely to have anxiety compared to those who were not victimized (Yockey et al., 2019). Studies have also begun examining the relation between peer victimization and substance use in Latinx youth. For instance, Forster et al. (2013) found that peer victimization was associated with cigarette use but not with other forms of substance use in Latinx youth.

Peer Victimization and Post-traumatic Stress Problems

One mental health outcome of peer victimization which has not been thoroughly examined is post-traumatic stress symptomatology or problems (PTS). The dearth of research on the association between peer victimization and PTS is likely due to peer victimization experiences typically not reaching the high magnitude necessary for diagnosis specified by Criterion A of the DSM and the omission of bullying from Criterion A prior to the changes introduced in DSM-5-TR (American Psychiatric Association, 2022). DSM-5-TR was updated to include bullying involving a threat of serious harm or violence as a potential Criterion A1 experience, acknowledging peer victimization as a potentially traumatic event. Most instances of bullying likely still do not meet this updated definition; however, several studies cast doubt on the importance of meeting Criterion A for a diagnosis of PTSD. For instance, Bedard-Gilligan & Zoellner (2008) found that Criterion A did not predict PTSD symptoms, duration, or impairment any better than by chance across three samples of adults.

Moreover, Criterion A may not be an appropriate tool for diagnosing youth with PTSD, given that children's perceptions of danger may vary considerably from those of adults (Scheeringa et al., 2011). A number of low-magnitude events which do not meet the "life-threatening" requirement of criterion A, such as the death of a parent or loved one and placement in foster care, have been shown to occur more frequently in youth and be more likely to lead to symptoms of PTSD than high magnitude events (Scheeringa et al., 2011). Thus, lower-magnitude experiences of peer victimization may lead to the development or exacerbation of post-traumatic stress problems. Additionally, peer victimization experiences do often invoke responses of "intense fear, helplessness, or horror," responses which were previously specified as necessary for a PTSD diagnosis by Criterion A2 of DSM-IV (American Psychiatric Association, 1998, p. 428). Further, children who have experienced peer victimization often exhibit behaviors in line with post-traumatic stress problems as a result, such as negative beliefs about themselves, concentration difficulties, angry outbursts, and avoidance of situations, places, and people.

Examining post-traumatic stress symptoms continuously in children is justified by the limitations of the categorical diagnostic criteria for PTSD when applied to children and evidence of the unique sequelae following childhood peer victimization. While PTSD is the disorder that best captures the sequelae of childhood victimization, it does not account for the full range of symptoms commonly experienced after childhood victimization (D'Andrea et al., 2012). Additionally, studies have found that most children experiencing trauma-related distress do not meet DSM criteria for PTSD despite experiencing substantial distress (D'Andrea et al., 2012; Scheeringa et al., 2006, 2011).

Recent work suggests peer victimization should be reconceptualized as a potentially traumatic event due to overlap in the definitions, outcomes, and measurement of trauma and peer

victimization (Jenkins et al., 2022). Since much peer victimization is ongoing and repeated, Jenkins et al. (2022) suggest peer victimization can satisfy criterion A, which includes repeated exposure to traumatic events. Further, peer victimization meets the SAMHSA definition of trauma since it is an “event” or “series of events” which are “physically or emotionally harmful” and have “lasting adverse effects” (Jenkins et al., 2022). This reconceptualization is also supported by the overlap in mental health difficulties associated with peer victimization and trauma, including anxiety, depression, and suicidal ideation. Lastly, Jenkins et al. (2022) suggest the fields’ acknowledgment of peer victimization as a traumatic event is evident in many validated measures produced by trauma researchers, which include items assessing for peer victimization experiences such as the UCLA PTSD Reaction Index for Children/Adolescents for DSM-5, the Juvenile Victimization Questionnaire, and the Maltreatment and Abuse Chronology of Exposure scale (Hamby et al., 2004; Steinberg et al., 2013; Teicher & Parigger, 2015).

Table 1 summarizes the research exploring the relation between peer victimization and post-traumatic stress problems in youth. A total of 10 studies were identified, most of which were conducted in North America and Europe. The potential relation between peer victimization and post-traumatic stress was first documented in a case study involving a 14-year-old girl from England who met all diagnostic criteria for PTSD except Criterion A after experiencing repeated peer victimization (Weaver, 2000). Subsequently, Mynard et al. (2000) found that peer victimization was associated with lower self-worth and higher post-traumatic stress disorder, with 37% of victimized youth experiencing clinically significant levels of PTSD. Storch & Esposito (2003) later found a positive relationship between peer victimization and some post-traumatic stress disorder symptoms in a predominantly Latinx sample of 5th and 6th-grade students. Subsequent studies found that children who experienced victimization were twice as

likely to report experiencing post-traumatic stress symptoms and that more frequent bullying was associated with higher post-traumatic stress symptoms (Guzzo et al., 2014; Idsoe et al., 2012; Litman et al., 2015). A summary of the main findings from these studies is presented in Table 1. Of note, only one study, conducted in Canada, included a longitudinal design (Holfeld & Mishna, 2021). Additionally, only one study, focused on elementary school students, included an all-Latinx sample (Litman et al., 2015).

Table 1

Studies Investigating Peer Victimization and Post-Traumatic Stress

Authors & Year	Study Design	Sample	Key Findings
Mynard et al. (2000)	Correlational	8-11 th grade students ($n=331$) in England.	40% of the sample experienced peer victimization. 39.8% of boys and 42.6% of girls who experienced peer victimization reported clinically significant levels of PTSD. Peer victimization was correlated with PTS ($r = .24, p < .02$). High peer victimization predicted low self-worth.
Storch & Esposito (2003)	Correlational	Students aged 10-13 ($n=205$) in an urban city in the United States. Sample was 78% Latinx, 15% Black, 4% Asian American, and 3% white.	Overt and relational victimization were correlated with PTS ($r = .37$ and $.33, p < .001$). No significant gender differences in PTS were found.
Carney (2008)	Experimental	6 th grade students aged 11-14 ($n=91$) from a rural town in the United States. Sample was 85% white, 7% Black, and 5% Native American.	Exposure to bullying predicted how many trauma symptoms participants might feel after a hypothetical bullying scenario.
Crosby et al. (2010)	Correlational	Students aged 10-14 ($n=244$) from rural towns in the United States. Sample was 88% white, 5% Native American, 5% Latinx,	13.5% reported experiencing peer victimization at least once per week. Relational, overt, and verbal victimization were correlated with PTS ($r = .67, p = .001$).

		2% Black, and 1% Asian American.	Girls reported higher levels of PTS than boys. Coping Strategy use moderated the association between peer victimization and PTS.
Penning et al. (2010)	Correlational	Boys aged 12-17 ($n=486$) from a male-only high school in South Africa.	60.2% of the sample experienced peer victimization. 22.4% of sample had clinical or sub-clinical PTSD scores. Peer victimization was correlated with PTS ($r=.44, p=.01$).
Idsoe et al. (2012)	Correlational	8 th and 9 th grade students ($n=963$) in Norway.	40-50% of the sample experienced peer victimization. Boys were 2.27 times more likely to experience frequent bullying. 33.7% of bullied students had PTSD scores in the clinical range. 40.5% of bullied girls and 27.6% of bullied boys had PTSD scores in the clinical range.
Guzzo et al. (2014)	Correlational	Students aged 16-17 ($n=488$) in Italy.	8.6% of sample experienced peer victimization within the prior year. Peer victimization predicted PTS. Alexithymic features totally mediated the relation between peer victimization and PTS.
Litman et al. (2015)	Correlational	Latinx students aged 6-11 ($n=358$) in an urban city in the United States.	58.7% of sample experienced at least one type of peer victimization more than once. Boys were more likely to experience peer victimization than girls. Peer victimization was correlated with PTS for boys ($r(161)=.33, p<.001$) and girls ($r(197)=.29, p<.001$). Attacks on property was most strongly associated with PTS in boys ($r=.36, p<.001$), while emotional victimization was most strongly associated with PTS in girls ($r=.29, p<.001$).
Plexousakis et al. (2019)	Correlational	Students aged 8-17 ($n=433$) from urban areas in Greece.	23.5% of sample experienced peer victimization at least once in the prior year.

			<p>All PTS items were endorsed by 21.4-72.5% of the sample.</p> <p>Girls reported higher PTS than boys; however, there was only a significant difference in avoidance symptoms.</p> <p>Maternal care and paternal overprotection put children at greater risk of PTS.</p>
Holfeld & Mishna (2021)	Longitudinal	<p>Students in grades 7 and 10 ($n=510$) in Canada. 44% Asian, 30% white, 11% Black, 8% mixed, 4% Middle Eastern, and 2% Latin American. Students assessed once a year for three years</p>	<p>PTS was correlated with both cyber ($r=.21$ to $.27$) and traditional victimization ($r=.21$ to $.26$) at each time point.</p> <p>Cyber victimization at each time point predicted PTS at concurrent time points, but not at subsequent time points.</p> <p>Traditional victimization predicted PTS at each concurrent time point (except T2), but not subsequent time points.</p> <p>PTS predicted cyber and traditional victimization at subsequent time points.</p> <p>Within-time correlations between victimization and PTS were significant for girls, but not boys at T1 and T2</p>

Peer Victimization and Gender

Numerous studies have demonstrated that there may be gender-based differences in the prevalence of peer victimization. Studies have found that boys tend to experience more physical victimization and direct/overt victimization, whereas girls experience more relational, sexual, and indirect victimization (Carbone-Lopez et al., 2010; Felix & Greif Green, 2009). On the other hand, some studies have documented no gender differences in verbal and relational victimization (Scheithauer et al., 2006; Storch & Esposito, 2003). These findings indicate that the types of

victimization experienced by boys and girls may differ, highlighting the importance of examining gender differences in peer victimization.

Additionally, studies have also documented gender-based differences in the perpetration of victimization. A number of studies have found that boys are also more likely to be bully perpetrators than girls are (Bentley, 1995; Felix & Greif Green, 2009; Felix & McMahon, 2006). Further, the effects of victimization have been found to differ based on the gender of the perpetrator. For instance, being victimized by a girl is not significantly related to internalizing or externalizing problems in boys or girls; however, being victimized by a boy is significantly related to internalizing problems in girls (Felix & McMahon, 2006). Sexual harassment by boys was the only form of victimization significantly associated with internalizing and externalizing symptoms in boys.

In addition to differences in bullying prevalence and perpetration, studies have indicated there may be gender-based differences in the association between peer victimization and post-traumatic stress. For instance, Idsoe et al. (2012) and Mynard et al. (2000) found that victimized girls were more likely to experience clinical levels of PTSD symptoms than boys. Storch & Esposito (2003) further found that relational and overt victimization were more strongly correlated with post-traumatic stress for girls than boys. Additionally, Plexousakis et al. (2019) discovered that while girls reported higher mean post-traumatic stress symptom scores than boys, statistically significant differences were only apparent in avoidance symptoms. Moreover, Litman et al. (2015) found that attacks on property was the type of victimization most strongly associated with post-traumatic stress symptoms in boys, whereas emotional victimization was most strongly associated with post-traumatic stress symptoms in girls. Additionally, in a longitudinal study, Holfeld and Mishna (2021) found that within-time correlations between peer

victimization and post-traumatic stress at T1 and T2 were significant for girls but not boys. On the other hand, Crosby et al. (2010) found that while girls reported higher levels of post-traumatic stress symptoms and relational victimization, controlling for gender only minimally changed the correlation between peer victimization and post-traumatic stress from .64 to .63.

A number of studies have also identified gender-based differences in factors predicting adverse outcomes after peer victimization. For instance, Sugimura and Rudolph (2012) found temperament put youth at risk of depression after experiencing peer victimization, depending on gender, in a predominately European American sample of second graders. Specifically, relational and overt peer victimization predicted depressive symptoms in girls with high negative emotional reactivity. On the other hand, relational and overt victimization significantly predicted depressive symptoms in boys with low negative emotional reactivity. Additionally, Plexousakis et al. (2019) found that lack of maternal care and paternal overprotection put victimized children at greater risk of developing post-traumatic stress symptoms and that girls reported a higher level of symptoms in a Greek sample. Plexousakis et al. (2019) suggest these findings can be explained by the influence of maternal care and paternal overprotection on children's emotional development and coping strategy formation. Combined, these studies indicate a need to understand the potential role of gender-based differences in emotional processes in the relation between peer victimization and post-traumatic stress symptoms.

Emotional Reactivity

Emotional reactivity refers to three distinct aspects of emotionality: (1) how sensitive an individual is to emotional responses, (2) the intensity of an individual's emotional responses, and (3) how long an individual's responses persist before returning to their baseline (Nock et al., 2008). Nock suggests that emotional reactivity predisposes individuals to difficulties with

emotional regulation, the process of acting on one's emotions to modulate their occurrence, persistence, intensity, and expression (Morris et al., 2017; Zimmermann & Iwanski, 2014).

Emotional reactivity is distinct in that it is not an active process and thus may explain how and why behavioral and psychological problems are developed and maintained (Nock et al., 2008).

Emotional regulation has been found to moderate the relationship between emotional reactivity and internalizing symptoms, while emotional reactivity influences the emotional regulation strategies adolescents choose and their effectiveness (Shapiro et al., 2016; Zimmermann & Iwanski, 2014). Prince-Embury (2008) identified emotional reactivity as a key component of personal resiliency which puts children at risk after experiencing adversity. Thus, emotional reactivity may play a unique role in the development and maintenance of post-traumatic stress problems.

In a longitudinal study spanning nine years, Pine et al.(2001) found that emotion reactivity was a predictor of the development of psychiatric disorders in adolescence and adulthood. Specifically, high levels of emotional reactivity were found to predict the presence of depression, social phobia, fearful spells, and conduct disorder two years later. Additionally, high levels of emotional reactivity were found to predict the presence of adult psychiatric disorders, including depression, generalized anxiety disorder, specific phobia, and obsessive-compulsive disorder. Moreover, this study documented gender-based differences in the development of emotional reactivity. The researchers found that girls report themselves as having higher emotional reactivity at all ages. They also found that at age 12, girls began to report stable or increasing emotional reactivity, while boys began to report stable or decreasing emotional reactivity. The sample in this study was 90% European American; thus, the generalizability of these findings to Latinx youth is unknown. In a literature review on the psychobiology of

emotional development, Michalska and Davis (2019) theorize that sociocultural contexts may influence the development of emotional reactivity and called for a consideration of culture in research on emotional reactivity; however, this still has not been explored in a Latinx adolescent sample.

Neuroimaging studies provide compelling evidence supporting the role of emotional reactivity in predicting changes in post-traumatic stress problems over time. For instance, Fitzgerald et al. (2018) found that emotional reactivity moderated the relation between time and PTSD symptom reduction in a sample of combat-exposed veterans. Specifically, veterans with lower emotional reactivity experienced greater reductions in PTSD symptom severity over the course of a year. Further, Fonzo et al. (2017) found that emotional reactivity, as indicated by neural activity during emotional reactivity tasks, moderated the relation between treatment and PTSD symptom change in a sample of adults with PTSD such that adults with higher emotion reactivity experienced less symptom change from prolonged exposure therapy.

While these findings are notable, no neuroimaging studies have examined emotional reactivity as a moderator of the association between stress exposure and post-traumatic stress symptoms in youth. However, Kujawa et al. (2016) conducted a study in which they found neural indices of emotional reactivity measured pre-exposure significantly predicted the presence of internalizing and externalizing symptoms (including post-traumatic stress symptoms) eight weeks after exposure to a natural disaster in 9-12-year olds. Further, the interaction between stress exposure and emotion reactivity significantly predicted externalizing symptoms eight weeks after exposure to the natural disaster, although it only approached significance for internalizing symptoms ($p < .10$). Additionally, eight months after exposure, they found a significant main effect of emotional reactivity measured pre-exposure on externalizing

symptoms, although the main effect on internalizing symptoms only approached significance ($p=.08$). This study did not isolate post-traumatic stress symptoms in analyses. Combined, these studies indicate that emotional reactivity may play a critical role in the relation between exposure to a potentially traumatic event and post-traumatic stress problems, highlighting a need for further exploration of this association in youth.

Theoretical Framework

The Regulatory Theory of Temperament posits that individual differences in temperament play a critical role in how individuals respond to stress (Strelau, 2008). According to Strelau (2008), temperament is defined as six relatively stable personality traits that manifest in childhood and are gradually shaped by maturation and interactions between the genotype and the environment. These six traits are briskness, perseveration, sensory sensitivity, emotional reactivity, endurance, and activity. All six traits have been demonstrated to predict how individuals respond to stress; however, emotion reactivity is the best predictor of PTS following exposure to potentially traumatic stressors in adults (Strelau & Zawadzki, 2004, 2005; Zawadzki & Popiel, 2012).

Studies evaluating the Regulatory Theory of Temperament in adults have found that emotional reactivity moderated the association between intensity of the trauma experienced and predicted PTS severity three months, fifteen months, and three years after experiencing a flood and coal mining catastrophe (Strelau & Zawadzki, 2004, 2005). Additionally, in a longitudinal study of adult motor vehicle accident survivors investigating the Regulatory Theory of Temperament, severity of experienced trauma predicted the highest levels of PTS severity in participants with high emotional reactivity at T1 (within six months after the accident). The same relationship was observed at T2 (12 months after the first assessment) when controlling for post-

traumatic stress symptom severity at T1, indicating that emotion reactivity moderated the relation between severity of experienced trauma and PTS change (Zawadzki & Popiel, 2012). Further, emotional reactivity was found to moderate the relation between trauma exposure and PTS in two samples of adult motor vehicle accident survivors interviewed within the first six months and from six to twenty-four months after the accident (Kaczmarek & Zawadzki, 2012). No studies have evaluated the Regulatory Theory of Temperament in youth.

Rationale

Despite the high prevalence of peer victimization and the plausibility of a relationship between peer victimization and post-traumatic stress problems, there is only a small body of literature documenting this relationship. Only one existing study has utilized a longitudinal design. Additionally, existing studies have not included racially and ethnically diverse samples. The only study including an all-Latinx sample (Litman et al., 2015) included elementary school children. Developmental differences may influence the nature of this relationship in middle school-aged samples. Given that bullying tends to peak in middle school, understanding the nature of this relationship in this demographic is critical. It is also critical to explore the role of gender as the literature suggests gender may influence the types of peer victimization experienced and outcomes associated with peer victimization.

The present study expands on the Regulatory Theory of Temperament by examining the relation between temperament and PTS in children. Specifically, this study explores whether the Regulatory Theory of Temperament holds for children and whether temperament predicts stress responses to peer victimization in this population. This is the first study to examine emotional reactivity as a moderator of the association between peer victimization and post-traumatic stress symptoms. Understanding this relationship is critical as it can help identify children who may be

more vulnerable to stressors and benefit from targeted interventions. Additionally, the present study contributes to our understanding of the role of emotional reactivity in the stress response in children.

Study Aims

The present study seeks to determine the relation between peer victimization and post-traumatic stress problems in youth and to identify factors increasing victimized youths' risk for post-traumatic stress problems by exploring the following hypotheses:

Hypothesis 1

Gender differences in the prevalence of peer victimization are expected, such that girls will report more sexual victimization, and boys will report more physical-verbal harassment and victimization involving weapons and physical attacks. There will be no gender differences in overall levels of victimization.

Hypothesis 2

It is expected that higher peer victimization at time point 2 will be correlated with higher post-traumatic stress symptoms at time point 3. Higher peer victimization at time point 2 will predict increased post-traumatic stress symptoms one year later (time point 3) when controlling for post-traumatic stress symptoms at time point 1.

Hypothesis 3

Emotional reactivity will moderate the relation between peer victimization and changes in post-traumatic stress symptoms. Specifically, higher peer victimization (at time point 2) will be

associated with increased post-traumatic stress symptoms (at time point 3 and controlling for time point 1), especially among youth with higher emotional reactivity.

Hypothesis 4

Gender will moderate the relation between overall peer victimization (at time point 2) and increases in post-traumatic stress symptoms (at time point 3 and controlling for time point 1). Specifically, the strength of the relation will be stronger for girls than boys. Gender will also be explored as a moderator for physical-verbal harassment, sexual harassment, and weapons and physical attacks.

Hypothesis 5

Gender will moderate the moderational relation of emotional reactivity on the association between peer victimization and changes in post-traumatic stress symptoms. Specifically, higher peer victimization will be associated with increases in post-traumatic stress symptoms, especially among youth with high emotional reactivity. However, that moderational relation will be stronger for girls.

Method

Participants

The sample for this study includes Latinx students enrolled in 5th through 7th-grade at nine Chicago Public Schools, who ranged in age from 10-14 years ($M = 11.44$, $SD = 0.96$). The sample includes first generation (7.6%; $n = 21$), second generation (75.3%; $n = 207$), third generation (10.9%; $n = 30$), and not of immigrant background ($n = 17$) youth. The sample was predominately Mexican American (68.5%; $n = 188$), followed by Mixed Latinx (13.4%; $n = 37$),

Puerto Rican (11.2%; $n = 31$), Cuban American (.4%; $n = 1$), Central or South American (5.8%; $n = 16$), and another Latinx group (.7%; $n = 2$). The sample was predominately Latinx only (90.2%; $n = 248$), followed by mixed Latinx and African American (3.6%; $n = 10$), Mixed Latinx and European American (4.7%; $n = 13$), and mixed three or more ethnic groups (1.5%; $n = 4$). The majority of families (67.2%; $n = 176$) included in the sample were low-income, earning less than \$30,000 per year. Data were collected at three time points over the course of one year.

Measures

California School Climate and Safety Survey School Victimization Subscale (CSCSS-SVS; Furlong et al., 2005). Peer victimization was assessed at time point 2 using the 23-item CSCSS-SVS. The CSCSS-SVS asks students to indicate which instances of violence have happened to them at school in the past month by responding with yes (1) or no (0). The research version of this scale contains 21 items with no subscales. The CSCSS-SVS Short-Form reduced the scale to 17 items assessing three subscales. All 21 items will be used for analyses examining overall peer victimization, and the subscales of the 17-item scale will be used for analyses of the peer victimization subtypes. The 7-item Physical-Verbal Harassment subscale measures verbal threats (“Another student threatened to hurt you.”) and physical attacks (“Grabbed or shoved by someone mean.”). The 2-item Sexual Harassment subscale measures sexual victimization (“Someone sexually harassed you (made unwanted sexual comments to you).”). The 5-item Weapons and Physical Attacks subscale measures weapon exposure (“You were threatened by a student with a knife, and you saw the knife.”) and Physical attacks (“Went to a doctor or nurse because you were hurt in an attack or fight.”). The remaining three items are items that were retained because they are critical items for schools to assess, but not their own subscale due to low reliability. The scale also contains two validity items, “you took 10 field trips,” and “you

were voted student of the week 4 times.” Peer victimization was computed by summing the remaining 21 items (after excluding the 2 validity items) with a possible score range of 0-21. Sum scores for each of the subscales were also calculated by summing the items for each subscale. In this sample, $\alpha = .81$. Physical-Verbal Harassment ($\alpha = .75$) and Sexual Harassment ($\alpha = .76$) both demonstrated good internal consistency in this sample; however, the alpha for weapons and physical attacks was unacceptable ($\alpha = .39$). Previous studies have found all three subscales to have good internal consistency ($\alpha > .70$) (Furlong et al., 2005).

Youth Self Report Post-Traumatic Stress Problems Subscale (YSR-PTSP; Achenbach & Rescorla, 2001). YSR-PTSP is a 14-item self-report subscale measuring post-traumatic stress symptomology in youth. Youth indicate how true each item is of them on a 3-point Likert scale where 0 = *not true*, 1 = *somewhat true*, and 3 = *very true*. Sample items are “I can’t get my mind off certain thoughts; (describe),” “I have nightmares,” and “I feel too guilty.” YSR-PTSP has demonstrated utility as a screening tool for PTSD, as 71% of youth with a score of 18 or more met the diagnostic criteria for PTSD when evaluated by a clinician (You et al., 2017). Raw post-traumatic stress symptom scores were used instead of standardized T scores to preserve variability. A total score was calculated by summing responses to the 14-item YSR scale for a minimum score of 0 and a maximum score of 28. This scale demonstrated good internal consistency in this sample at time point 1 ($\alpha = .79$) and one year later at time point 3 ($\alpha = .81$).

Emotional Reactivity Scale (ERS; Nock et al., 2008). The ERS is a 21-item self-report measure assessing the three components of emotional reactivity: emotional sensitivity, emotional persistence, and emotional arousal/intensity. The ERS was administered at time point 2 during the one-on-one interview. Youth indicate how they experience emotions on a regular basis on a 5-point Likert scale from 0 = *not at all like me* and 4 = *completely like me*. Emotional is defined

as being angry, sad, excited, or some other emotion.” Sample items include, “I tend to get very emotional very easily,” “When something happens that upsets me, it’s all I can think about for a long time,” and “When I’m emotionally upset, my whole body gets physically upset as well.” An emotional reactivity mean score was calculated by taking the average score of the 21 items for a minimum score of 0 and a maximum score of 4. Higher scores indicate higher emotional reactivity. This scale demonstrated excellent internal consistency in this sample ($\alpha = .94$).

Procedure

The data for the proposed study were collected as part of a larger longitudinal study evaluating the implementation of a cognitive behavioral school-based group intervention for youth at risk of depression. All students were sent home with parental consent forms describing the study. All students who returned a completed consent form, regardless of whether they would participate in the study, received a DePaul-branded school supply such as a pen and pencil, valued at \$3 or less. Students whose parents or legal caregivers consented were read an assent form in which they were asked if they wished to participate. Those who assented were included in the study. Students and parents were informed that they were free to withdraw from the study at any point, and their decision to participate or not participate would not influence their relationship with their school or affect their grades in any way.

Participating students were assessed in a classroom-wide survey (time point 1) that took approximately one hour to administer with the help of members of the research team, who read the survey items aloud while students independently filled in their answers. Students who completed the survey were entered in a raffle for prizes valued at \$5-\$15, such as movie passes or gift cards to local stores. Approximately one in every eight students won a raffle prize. Then, students were invited to participate in one-on-one interviews (time point 2), oversampling those

who were at-risk for depression. One year later, classroom-wide surveys (time point 3) were administered with the same participants. The DePaul University Institutional Review Board reviewed and approved all study procedures.

Results

Preprocessing

No missing data were found for any of the study participants. All variables were checked to ensure the assumptions for parametric analyses were met. Means and standard deviations for all study variables are presented in Table 2. Additionally, the data were analyzed for outliers, and no outliers were identified as needing to be removed from analyses.

Table 2

Means and Standard Deviations for All Study Variables

		PV	PVH	SH	WPA*	ER*	PTS T1*	PTS T3*
Overall	<i>M</i>	1.91	1.22	0.05	0.10	1.28	11.44	8.56
(<i>N</i> = 275)	<i>SD</i>	2.58	1.65	0.27	0.38	0.82	5.22	5.34
Girls	<i>M</i>	1.66	1.09	0.05	0.06	1.43	12.30	9.80
(<i>n</i> = 152)	<i>SD</i>	2.26	1.48	0.30	0.26	0.87	5.01	5.63
Boys	<i>M</i>	2.21	1.38	0.04	0.15	1.09	10.37	7.02
(<i>n</i> = 123)	<i>SD</i>	2.91	1.84	0.24	0.48	0.72	5.30	4.54

Note. PV = Peer Victimization; PVH = Physical-Verbal Harassment; SH = Sexual Harassment;

WPA = Weapons and Physical Attacks; ER = Emotional Reactivity; PTS = Post-Traumatic

Stress. * = Significant gender difference.

Table 3

Correlations Across All Study Variables

	1	2	3	4	5	6	7	8	9
1. PV	-	.93***	.42***	.55***	.41***	.02	-.11	.25***	.18**
2. PVH		-	.28***	.36***	.40***	-.00	-.08	.24***	.14*
3. SH			-	.24***	.09	.08	.02	.08	.14*
4. WPA				-	.23**	-.01	-.13*	.13*	.09
5. ER					-	.07	.20**	.47**	.34**
6. Age						-	.06	.05	.12
7. Gender							-	.18**	.26***
8. PTS T1								-	.43***
9. PTS T3									-

Note. $N = 275$. Gender was dummy coded 1 = male, 2 = female. PV = Peer Victimization; PVH = Physical-Verbal Harassment; SH = Sexual Harassment; WPA = Weapons and Physical Attacks; ER = Emotional Reactivity; PTS = Post-Traumatic Stress; * = $p < .05$, ** = $p < .01$, and *** = $p < .001$.

Correlations between potential covariates were explored and are displayed in Table 3. Gender was the only covariate identified for inclusion in analyses as it was the only demographic variable significantly correlated with post-traumatic stress symptoms and emotional reactivity (see Table 3). Higher peer victimization was significantly correlated with higher post-traumatic stress symptoms at time point 1 ($r = .25, p = <.001$) and time point 3 ($r = .18, p = .002$) and emotional reactivity ($r = .41, p < .001$). Further, higher emotional reactivity was significantly correlated with higher post-traumatic stress symptoms at time point 1 ($r = .47, p < .001$) and time point 3 ($r = .34, p < .001$). 58.2% of participants reported experiencing at least one instance of peer victimization in the month before time point one. At timepoint 1, 4% of the sample was in the clinical range of post-traumatic stress symptoms, 38.9% was in the borderline clinical range,

and 57% were within the normal range of symptoms. All the participants who did not report peer victimization were in the not clinical range at timepoint 1. At timepoint 3, 8.4% of the sample was within the clinical range of post-traumatic stress symptoms, 10.9% was within the borderline clinical range of symptoms, and 80.7% were within the normal range of symptoms. Only 4 participants who did not report any peer victimization were in the clinical range at time point 3.

Statistical Analyses

Hypothesis 1

Using SPSS V.25, a one-way analysis of variance (ANOVA) was conducted to evaluate if there are gender differences in the overall prevalence of peer victimization. Peer victimization was entered as the dependent variable, and gender was entered as the factor. As hypothesized, there was no significant difference in overall peer victimization experienced by girls and boys $F(1,173) = 3.08, p = .08$.

A multivariate analysis of variance (MANOVA) was conducted to determine if there are gender differences across the peer victimization subscales. Each of the peer victimization subscale scores were entered as the dependent variables, and gender was entered as the fixed factor. Overall, there was not a significant gender difference across the peer victimization subscales $F(3,271) = 2.03, p = .11$; Wilk's $\Lambda = .98$, partial $\eta^2 = .02$. Contrary to predictions, no significant gender differences were found on physical-verbal victimization, $F(1,273) = 2.10, p = .15$, partial $\eta^2 = .01$, or sexual victimization $F(1,273) = 0.13, p = .72$, partial $\eta^2 < .0005$. As hypothesized, there was a significant effect of gender on weapons and physical attacks with boys experiencing higher weapons and physical attacks victimization than girls, $F(1,273) = 4.37, p = .04$, partial $\eta^2 = .02$.

Hypothesis 2

As hypothesized, higher peer victimization at time point 2 was significantly and positively correlated with post-traumatic stress symptoms at time point 3 ($r = .18; p < .01$). A hierarchical linear regression was conducted to determine if peer victimization predicts changes in post-traumatic stress problems when controlling for gender. Post-traumatic stress symptoms were entered as the dependent variable. In step 1, gender and T1 post-traumatic stress symptoms were entered as independent variables. In step 2, peer victimization was added as an independent variable. The overall model was statistically significant, $R^2 = .23, F(4,271) = 27.03, p < .001$. In support of hypothesis 2, higher peer victimization significantly predicts post-traumatic stress symptoms at time point 3 when controlling for gender and post-traumatic stress symptoms at time point 1 $b = 0.23, p = .048, \Delta R^2 = .011$.

Hypothesis 3

A moderated regression was conducted using Model 1 of the SPSS PROCESS macro v.4.0 to determine if emotional reactivity moderated the relation between peer victimization and changes in post-traumatic stress symptoms. Peer victimization was entered as X, post-traumatic stress problems at time point 3 was entered as Y, emotional reactivity was entered as W, and post-traumatic stress symptoms at time point 1 and gender were entered as covariates. The number of bootstrap samples was set to 5000, and predictor variables were mean-centered. The overall model was significant $R^2 = .27, F(5,269) = 20.29, p < .001$. The interaction between peer victimization and emotional reactivity accounted for a significant portion of the variance in post-traumatic stress symptoms $\Delta R^2 = .03, F(1,269) = 12.53, p < .001, b = -0.52, 95\% \text{ CI } (-0.81, -0.23), t(269) = -3.54, p < .001$. See Figure 1 for a graph of this interaction.

Figure 1

Conditional Effects of Peer Victimization on Post-Traumatic Stress Symptoms

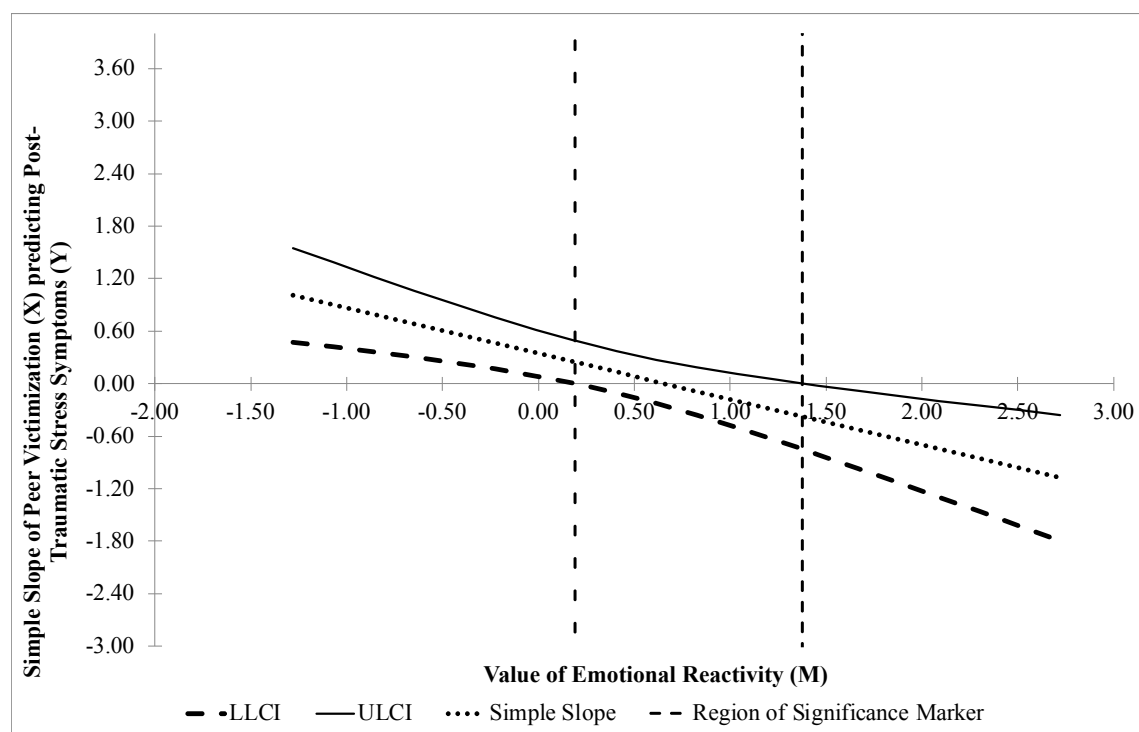
Note. Conditional effects of peer victimization on post-traumatic stress symptoms at time point 3 at different levels of emotional reactivity when the covariates (post-traumatic stress symptoms at time point 1 and gender) are held constant at the mean. * = $p < .05$.

The conditional effect of the predictor was significant at lower levels of emotional reactivity [effect = 0.77, 95% CI (0.35, 1.20), $p < .001$] and at medium levels of emotional reactivity [effect = 0.34, 95% CI (0.08, 0.61), $p = .010$]. The conditional effect of the predictor at higher levels of emotional reactivity was negative but not significant [effect = -0.08, 95% CI (-0.36, 0.19), $p = .538$]. The Johnson-Neyman technique demonstrated that the relation between peer victimization and post-traumatic stress problems was significant when emotional reactivity was below -0.19 (below the mean) and above 1.38 (above the mean). The region of significance is graphed in Figure 2. Contrary to hypothesis 3, among youth with higher emotional reactivity,

higher peer victimization was associated with greater decreases in post-traumatic stress symptoms, while lower peer victimization was associated with smaller decreases in symptoms. Among youth with lower emotional reactivity, higher peer victimization was associated with the smallest decreases in post-traumatic stress symptoms, while lower peer victimization was associated with the greatest decreases in post-traumatic stress symptoms.

Figure 2

Johnson-Neyman Plot

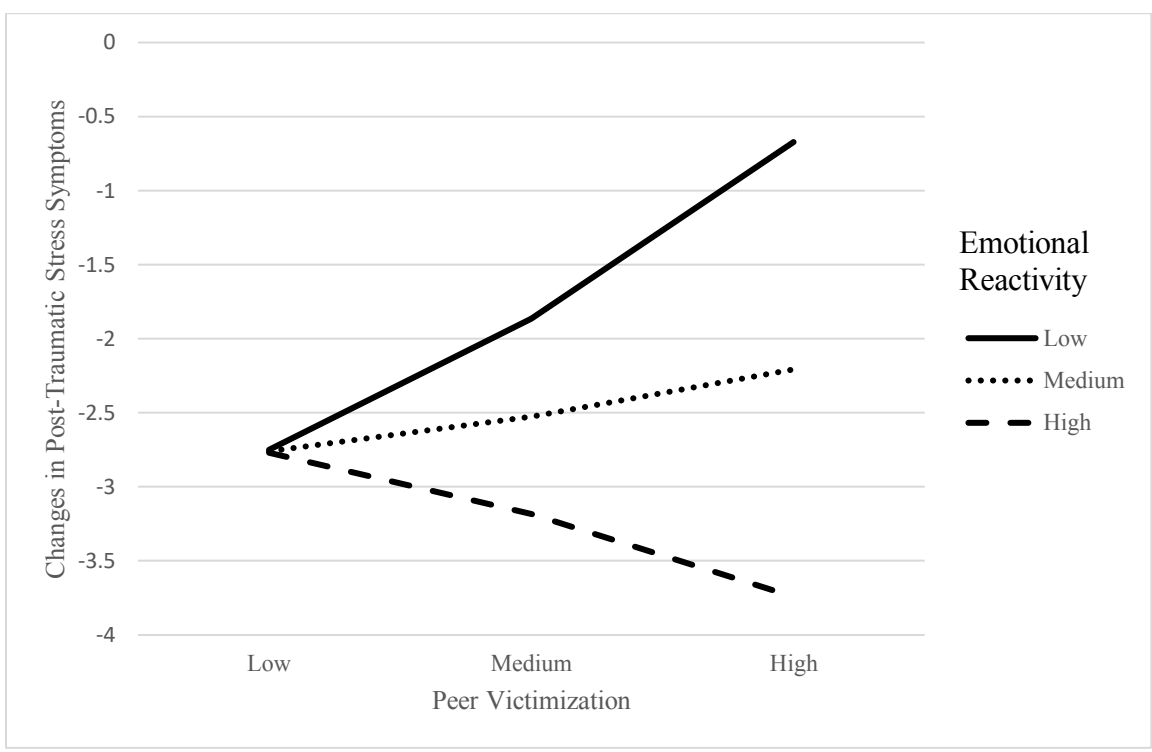


Note. LLCI = Lower Limit Confidence Interval; ULCI = Upper Limit Confidence Interval.

Predictors were mean-centered.

Figure 3

Conditional Effects of Peer Victimization on Changes in Post-Traumatic Stress Symptoms



Note. To graphically represent changes in post-traumatic stress symptoms, the moderation analyses were run following the same procedure but using the difference between time point 3 and time point 1 post-traumatic stress symptoms as the outcome variable. Lower numbers on the Y-axis indicate a greater decline in post-traumatic stress symptoms from time point 1 to time point 3.

Hypothesis 4

A moderated regression was conducted using Model 1 of the SPSS PROCESS macro v4.0 to determine if gender moderated the relation between peer victimization and changes in post-traumatic stress symptoms. Peer victimization was entered as X, post-traumatic stress

symptoms at time point 3 was entered as Y, gender was entered as W, and post-traumatic stress symptoms at time point 1 was entered as a covariate. The number of bootstrap samples was set to 5000, and predictor variables were mean-centered. The overall model was significant, $R^2 = .23$ $F(4,270) = 20.32, p < .001$. The interaction between peer victimization and gender did not account for a significant portion of the variance in post-traumatic stress symptoms, $\Delta R^2 = .001$, $F(1,270) = 0.38, p = .54, b = -0.14, 95\% \text{ CI } (-0.58, 0.30)$.

Moderation models were fit for each peer victimization subscale. For each subscale, the overall model was significant; however, the interactions were not. The overall model with physical-verbal harassment as the independent variable was significant, $R^2 = .23$ $F(4,270) = 19.56 p < .0001$; however, the interaction between physical-verbal harassment and gender was not significant, $b = -0.20$ 95% CI (-0.89, 0.49), $p = .56$. The overall model with sexual victimization as the independent variable was significant, $R^2 = .24$ $F(4,270) = 21.20 p < .001$; however, the interaction between sexual victimization and gender was approaching significance, $b = -4.13$ 95% CI (-8.47, 0.21), $p = .06$. The overall model with weapons and physical attacks as the independent variable was significant, $R^2 = .23$ $F(4,270) = 19.88, p < .001$; however, the interaction between weapons and physical attacks and gender was not significant, $b = -2.11$ 95% CI (-5.49, 1.27), $p = .220$.

Hypothesis 5

A moderated moderation was calculated using model 3 of the SPSS PROCESS macro v4.0 to determine if gender moderated the moderational relation of emotional reactivity on the association between peer victimization and changes in post-traumatic stress symptoms. Peer victimization was entered as X, post-traumatic stress symptoms at time point 3 was entered as Y, emotional reactivity was entered as W, gender was entered as Z, and post-traumatic stress

symptoms at time point 1 was entered as a covariate. The number of bootstrap samples was set to 5000, and predictor variables were mean-centered. The overall model was significant, $R^2 = .28$ $F(8,266) = 13.19$ $p < .001$. The three-way interaction between peer victimization, emotional reactivity, and gender was not significant $b = -0.35$, 95% CI (-0.95, 0.26) $p = .26$.

Discussion

The primary objective of the present study was to investigate the relation between peer victimization and post-traumatic stress problems in Latinx youth, while examining the potential moderating roles of gender and emotional reactivity. Although nine studies have found support for the positive concurrent associations between peer victimization and post-traumatic stress symptoms (refer to Table 1), only one study had explored this relation longitudinally (Holfeld & Mishna, 2021). Therefore, this study is the first to investigate this relation longitudinally in a Latinx sample. Exploring this relation longitudinally is crucial for gaining a comprehensive understanding of how peer victimization is associated with the development and persistence of post-traumatic stress symptoms in youth. Overall, the findings suggest that peer victimization predicts post-traumatic stress symptoms, and that this relation is moderated by emotional reactivity.

As hypothesized, there were no significant gender differences in the overall prevalence of peer victimization. Additionally, there was a significant gender difference in weapons and physical attacks, with boys experiencing higher victimization in this area. This is consistent with previous research showing that girls generally report equal or higher levels of peer victimization compared to boys, depending on the methodology employed (Felix & Greif Green, 2009). In the present study, the equal prevalence of overall peer victimization may be attributed to the CSCSS-SVS emphasis on assessing physical and direct victimization, while not containing many items

assessing physical and direct victimization and not many items assessing relational or indirect victimization. Girls tend to experience indirect and relational victimization at higher rates, and boys tend to experience higher rates of direct and physical peer victimization (Carbone-Lopez et al., 2010; Felix & Greif Green, 2009). Additionally, the findings did not support the hypotheses that girls would experience higher sexual victimization; however, this discrepancy may be attributed to the low prevalence of sexual victimization in this sample. Furthermore, although the group mean for physical-verbal victimization was higher for boys compared to girls, this difference was not statistically significant. It is possible that gender differences in sexual victimization by peers and physical-verbal victimization emerge later in adolescence. These findings highlight the potential influence of gender on the types of peer victimization children encounter and underscore the importance of considering forms of peer victimization when examining gender differences.

As predicted, higher peer victimization predicted increases in post-traumatic stress symptoms one year later. These findings align with previous cross-sectional studies documenting the association between peer victimization and post-traumatic stress symptoms (refer to Table 1). However, these findings differ from those of the only longitudinal study, which found that peer victimization did not predict subsequent post-traumatic stress symptoms (Holfeld & Mishna 2021). Differences in these findings may be attributed to methodological limitations of Holfeld & Mishna's study, which did not control for baseline symptoms and assessed victimization using only two global items—one measuring traditional victimization and the other assessing cyber victimization. Importantly, this study extends the existing literature by employing a more robust measure of peer victimization and utilizing a longitudinal design that examined changes across time. These enhancements provide stronger evidence in support of the association between peer

victimization and post-traumatic stress symptoms, despite peer victimization typically not meeting the high threshold set by DSM-5-TR criterion A (American Psychiatric Association, 2022).

It was hypothesized that emotional reactivity would moderate the relation between peer victimization and changes in post-traumatic stress symptoms. Although the findings showed that emotional reactivity moderated the relation between peer victimization and changes in post-traumatic stress symptoms, it was not as predicted. Among youth with lower emotional reactivity, lower levels of peer victimization were associated with greater declines in post-traumatic stress symptoms, whereas higher levels of peer victimization were associated with minimal change in post-traumatic stress symptoms. In contrast, among youth with higher levels of emotional reactivity, higher peer victimization was associated with the largest decrease in symptoms whereas lower levels of peer victimization were associated with smaller decreases in symptoms. This may be due to youth with higher peer victimization and higher emotional reactivity having the highest baseline scores. This result may also be attributed to the overall low levels of emotional reactivity reported in this sample, with approximately 80% of participants reporting mean emotional reactivity below 2. Given the distribution of emotional reactivity in this sample, it is possible that the low emotional reactivity group, which was associated with the least change in post-traumatic stress symptoms, represents emotional reactivity so low that it is maladaptive, while the high emotional reactivity group represents a healthy level of emotional reactivity and expressivity typical in most children. Healthy levels of emotional reactivity may promote emotional regulation, which has been associated with decreases in internalizing symptoms following peer victimization in European American adolescents (Cooley et al., 2022). Given that higher emotional reactivity was associated with higher post-traumatic stress

symptoms at time point 1 and time point 3, emotional reactivity cannot be considered a protective factor. Consequently, due to these limitations, limited conclusions can be drawn regarding the applicability of the Regulatory Theory of Temperament to children. Future studies should aim to explore the role of temperament in the maintenance of post-traumatic stress disorder in children. Additionally, given that girls reported significantly higher emotional reactivity than boys and previous studies have found levels of emotional expression and suppression influence the trajectory of depressive and anxiety symptoms for European American boys and girls differently, depending on victimization subtype, future studies should explore if the influence of emotional reactivity on the trajectory of post-traumatic stress symptoms varies by gender and by victimization type (McClain et al., 2020).

It was hypothesized that the relation between peer victimization and changes in post-traumatic stress symptoms would be stronger among girls, however, the findings did not support this hypothesis. Gender was also explored as a moderator of the relations between each subtype of victimization (i.e., physical-verbal harassment, sexual victimization, and weapons and physical attacks) and changes in post-traumatic stress symptoms, and not found to be a significant moderator for any subtype. Additionally, while girls did have significantly higher emotional reactivity, hypothesis 5, which investigated the moderational relation between emotional reactivity and gender on the association between peer victimization and post-traumatic stress symptoms, did not yield significant results. The existing literature on the effect of gender on the association between peer victimization and post-traumatic stress symptoms has produced mixed results. For example, Crosby et al. (2010) found that controlling for gender had no effect on the correlation between peer victimization and post-traumatic stress, while Holfeld & Mishna (2021) found that the correlation between post-traumatic stress was only significant for girls. In

light of these mixed findings between gender, peer victimization, and post-traumatic stress symptoms, further research is needed to understand better the nuanced mechanisms underlying these associations.

In conclusion, this study contributes to our understanding of the relation between peer victimization and post-traumatic stress problems in Latinx youth. The findings provide compelling evidence for the predictive nature of peer victimization on subsequent post-traumatic stress symptoms, shedding light on the enduring impact of peer victimization experiences on the well-being of youth. Moreover, the identification of emotional reactivity as a moderating factor highlights the potential for individual differences in temperament to influence the trajectory of post-traumatic stress symptoms in youth following peer victimization experiences, findings that may be applicable to the trajectory of psychological maladjustment in youth.

Despite the insights gained from this study, several limitations should be acknowledged. First, peer victimization was not measured simultaneously with the baseline assessment of post-traumatic stress symptoms. Additionally, peer victimization was only measured once. Future research should investigate changes in peer victimization and how they relate to changes in post-traumatic stress symptoms. Longitudinal designs following the trajectories of peer victimization and its impact on post-traumatic stress symptoms would provide a more comprehensive understanding of the consequences of peer victimization. Moreover, this study did not consider identity, an important factor that influences experiences of peer victimizations and mental health outcomes. Future research should investigate forms of victimization that intersect with gender, sexual orientation, racial, and other aspects of identity marginalization. This is critical to understanding the peer victimization experiences of youth facing multiple layers of marginalization. By addressing these limitations and pursuing these future directions, researchers

can advance our understanding of the relation between peer victimization and post-traumatic stress symptoms which can better inform prevention efforts, intervention strategies, and a variety of supports tailored to the diverse needs of the victimized youth.

These findings have important implications for school policy, research, and clinical practice. First, they highlight the potential pervasive, long-lasting influence of peer victimization on youth, indicating that understanding the experience of peer victimization victims and supporting them needs to be a priority. Second, they highlight the need for longitudinal studies to explore further the complex interplay between peer victimization and post-traumatic stress symptoms, especially among underserved populations which may experience victimization at higher rates, such as Latinx youth. Third, the identification of some gender differences, and lack thereof, emphasize the importance of validated, comprehensive measures of peer victimization that capture the full range of victimization experienced by boys and girls equally. Lastly, the identification of emotional reactivity as a potential moderating factor suggests interventions aimed at emotional regulation and expression skills may be beneficial for youth with high and low levels of emotional reactivity who have experienced peer victimization.

References

- Achenbach, T. M., & Rescorla, L. (2001). *Manual for the ASEBA school-age forms & profiles: An integrated system of multi-informant assessment*.
- Afifi, T. O., Taillieu, T., Salmon, S., Davila, I. G., Stewart-Tufescu, A., Fortier, J., Struck, S., Asmundson, G. J. G., Sareen, J., & MacMillan, H. L. (2020). Adverse childhood experiences (ACEs), peer victimization, and substance use among adolescents. *Child Abuse & Neglect, 106*, 104504. <https://doi.org/10.1016/j.chiabu.2020.104504>
- American Psychiatric Association (Ed.). (1998). *Diagnostic and statistical manual of mental disorders: DSM-IV; includes ICD-9-CM codes effective 1. Oct. 96* (4. ed., 7. print).
- American Psychiatric Association (Ed.). (2022). *Diagnostic and statistical manual of mental disorders: DSM-5-TR* (Fifth edition, text revision). American Psychiatric Association Publishing.
- Bedard-Gilligan, M., & Zoellner, L. A. (2008). The Utility of the A1 and A2 Criteria in the Diagnosis of PTSD. *Behaviour Research and Therapy, 46*(9), 1062–1069. <https://doi.org/10.1016/j.brat.2008.06.009>
- Bentley, K. M. (1995). *Bully/victim problems in elementary schools and students' beliefs about aggression* [M.Sc., University of Calgary (Canada)]. <https://www.proquest.com/docview/304121786/abstract/CA21D0A634BE4F5EPQ/1>
- Boulton, M. J. (2013). Associations between adults' recalled childhood bullying victimization, current social anxiety, coping, and self-blame: Evidence for moderation and indirect effects. *Anxiety, Stress & Coping, 26*(3), 270–292. <https://doi.org/10.1080/10615806.2012.662499>

- Carbone-Lopez, K., Esbensen, F.-A., & Brick, B. T. (2010). Correlates and Consequences of Peer Victimization: Gender Differences in Direct and Indirect Forms of Bullying. *Youth Violence and Juvenile Justice*, 8(4), 332–350. <https://doi.org/10.1177/1541204010362954>
- Carney, J. V. (2008). Perceptions of Bullying and Associated Trauma during Adolescence. *Professional School Counseling*, 11(3), 179–188. <https://doi.org/10.1177/2156759X0801100304>
- Christina, S., Magson, N. R., Kakar, V., & Rapee, R. M. (2021). The bidirectional relationships between peer victimization and internalizing problems in school-aged children: An updated systematic review and meta-analysis. *Clinical Psychology Review*, 85, 101979. <https://doi.org/10.1016/j.cpr.2021.101979>
- Cooley, J. L., Blossom, J. B., Tampke, E. C., & Fite, P. J. (2022). Emotion Regulation Attenuates the Prospective Links from Peer Victimization to Internalizing Symptoms during Middle Childhood. *Journal of Clinical Child & Adolescent Psychology*, 51(4), 495–504. <https://doi.org/10.1080/15374416.2020.1731819>
- Cooley, J. L., Fite, P. J., Rubens, S. L., & Tunno, A. M. (2015). Peer Victimization, Depressive Symptoms, and Rule-Breaking Behavior in Adolescence: The Moderating Role of Peer Social Support. *Journal of Psychopathology and Behavioral Assessment*, 37(3), 512–522. <https://doi.org/10.1007/s10862-014-9473-7>
- Crosby, J. W., Oehler, J., & Capaccioli, K. (2010). The relationship between peer victimization and post-traumatic stress symptomatology in a rural sample. *Psychology in the Schools*, 47(3), 297–310. <https://doi.org/10.1002/pits.20471>
- D’Andrea, W., Ford, J., Stolbach, B., Spinazzola, J., & van der Kolk, B. A. (2012). Understanding interpersonal trauma in children: Why we need a developmentally

- appropriate trauma diagnosis. *American Journal of Orthopsychiatry*, 82(2), 187–200.
<https://doi.org/10.1111/j.1939-0025.2012.01154.x>
- De Loore, E., Drukker, M., Gunther, N., Feron, F., Deboutte, D., Sabbe, B., Mengelers, R., Van Os, J., & Myin-Germeys, I. (2007). Childhood negative experiences and subclinical psychosis in adolescence: A longitudinal general population study. *Early Intervention in Psychiatry*, 1(2), 201–207. <https://doi.org/10.1111/j.1751-7893.2007.00027.x>
- Dempsey, A. G., Haden, S. C., Goldman, J., Sivinski, J., & Wiens, B. A. (2011). Relational and overt victimization in middle and high schools: Associations with self-reported suicidality. *Journal of School Violence*, 10(4), 374–392.
<https://doi.org/10.1080/15388220.2011.602612>
- Dill, E. J., Vernberg, E. M., Fonagy, P., Twemlow, S. W., & Gamm, B. K. (2004). Negative Affect in Victimized Children: The Roles of Social Withdrawal, Peer Rejection, and Attitudes Toward Bullying. *Journal of Abnormal Child Psychology*, 32(2), 159–173.
<https://doi.org/10.1023/B:JACP.0000019768.31348.81>
- Espinoza, G., Gonzales, N. A., & Fuligni, A. J. (2013). Daily school peer victimization experiences among Mexican-American adolescents: Associations with psychosocial, physical and school adjustment. *Journal of Youth and Adolescence*, 42(12), 1775–1788.
<https://doi.org/10.1007/s10964-012-9874-4>
- Felix, E. D., & Greif Green, J. (2009). Popular Girls and Brawny Boys: The Role of Gender in Bullying and Victimization Experiences. In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), *Handbook of Bullying in Schools: An International Perspective*. Taylor & Francis Group.
<http://ebookcentral.proquest.com/lib/depaul/detail.action?docID=465313>

- Felix, E. D., & McMahon, S. D. (2006). Gender and Multiple Forms of Peer Victimization: How Do They Influence Adolescent Psychosocial Adjustment? *Violence and Victims, 21*(6), 707–724. <https://doi.org/10.1891/0886-6708.21.6.707>
- Felix, E. D., & You, S. (2011). Peer victimization within the ethnic context of high school. *Journal of Community Psychology, 39*(7), 860–875. <https://doi.org/10.1002/jcop.20465>
- Fitzgerald, J. M., Gorka, S. M., Kujawa, A., DiGangi, J. A., Proescher, E., Greenstein, J. E., Aase, D. M., Schroth, C., Afshar, K., Kennedy, A. E., Hajcak, G., & Phan, K. L. (2018). Neural indices of emotional reactivity and regulation predict course of PTSD symptoms in combat-exposed veterans. *Progress in Neuro-Psychopharmacology and Biological Psychiatry, 82*, 255–262. <https://doi.org/10.1016/j.pnpbp.2017.11.005>
- Fonzo, G. A., Goodkind, M. S., Oathes, D. J., Zaiko, Y. V., Harvey, M., Peng, K. K., Weiss, M. E., Thompson, A. L., Zack, S. E., Lindley, S. E., Arnow, B. A., Jo, B., Gross, J. J., Rothbaum, B. O., & Etkin, A. (2017). Brain Activation During Emotional Reactivity and Regulation Predicts Psychotherapy Outcome in Posttraumatic Stress Disorder. *The American Journal of Psychiatry, 174*(12), 1163–1174. <https://doi.org/10.1176/appi.ajp.2017.16091072>
- Forster, M., Dyal, StephanieR., Baezconde-Garbanati, L., Chou, C.-P., Soto, DanielW., & Unger, JenniferB. (2013). Bullying victimization as a mediator of associations between cultural/familial variables, substance use, and depressive symptoms among Hispanic youth. *Ethnicity & Health, 18*(4), 415–432. <https://doi.org/10.1080/13557858.2012.754407>

- Furlong, M. J., Greif, J. L., Bates, M. P., Whipple, A. D., Jimenez, T. C., & Morrison, R. (2005). Development of the California school climate and safety survey-short form. *Psychology in the Schools, 42*(2), 137–149. <https://doi.org/10.1002/pits.20053>
- Gaffney, H., Ttofi, M. M., & Farrington, D. P. (2019). Evaluating the effectiveness of school-bullying prevention programs: An updated meta-analytical review. *Aggression and Violent Behavior, 45*, 111–133. <https://doi.org/10.1016/j.avb.2018.07.001>
- Gini, G., Card, N. A., & Pozzoli, T. (2018). A meta-analysis of the differential relations of traditional and cyber-victimization with internalizing problems. *Aggressive Behavior, 44*(2), 185–198. <https://doi.org/10.1002/ab.21742>
- Guzzo, G., Pace, U., Lo Cascio, V., Craparo, G., & Schimmenti, A. (2014). Bullying Victimization, Post-Traumatic Symptoms, and the Mediating Role of Alexithymia. *Child Indicators Research, 7*(1), 141–153. <https://doi.org/10.1007/s12187-013-9206-6>
- Hamby, S. L., Finkelhor, D., Ormrod, R., & Turner, H. (2004). *The Juvenile Victimization Questionnaire (JVQ): Administration and Scoring Manual*. Crimes Against Children Research Center.
- Holfeld, B., & Mishna, F. (2021). The Development of Post-traumatic Stress Symptoms among Adolescents Who Experience Cyber and Traditional Victimization over Time. *Journal of Youth and Adolescence, 50*(12), 2339–2350. <https://doi.org/10.1007/s10964-021-01394-3>
- Hong, J. S., Peguero, A. A., Choi, S., Lanesskog, D., Espelage, D. L., & Lee, N. Y. (2014). Social Ecology of Bullying and Peer Victimization of Latino and Asian Youth in the United States: A Review of the Literature. *Journal of School Violence, 13*(3), 315–338. <https://doi.org/10.1080/15388220.2013.856013>

- Idsoe, T., Dyregrov, A., & Idsoe, E. C. (2012). Bullying and PTSD Symptoms. *Journal of Abnormal Child Psychology*, *40*(6), 901–911. <https://doi.org/10.1007/s10802-012-9620-0>
- Jenkins, L. N., Miller, H. H., Kaminski, S., & Putzeys, S. (2022). Re-conceptualizing Peer Victimization as a Potentially Traumatic Event. *International Journal of Bullying Prevention*. <https://doi.org/10.1007/s42380-022-00129-7>
- Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and school functioning in early adolescence. *Journal of Educational Psychology*, *92*(2), 349–359. <https://doi.org/10.1037/0022-0663.92.2.349>
- Kaczmarek, M., & Zawadzki, B. (2012). Exposure to Trauma, Emotional Reactivity, and Its Interaction as Predictors of the Intensity of PTSD Symptoms in the Aftermath of Motor Vehicle Accidents. *Journal of Russian & East European Psychology*, *50*(3), 47–64. <https://doi.org/10.2753/RPO1061-0405500303>
- Kujawa, A., Hajcak, G., Danzig, A. P., Black, S. R., Bromet, E. J., Carlson, G. A., Kotov, R., & Klein, D. N. (2016). Neural Reactivity to Emotional Stimuli Prospectively Predicts the Impact of a Natural Disaster on Psychiatric Symptoms in Children. *Biological Psychiatry*, *80*(5), 381–389. <https://doi.org/10.1016/j.biopsych.2015.09.008>
- Ladd, G. W., Ettekal, I., & Kochenderfer-Ladd, B. (2017). Peer victimization trajectories from kindergarten through high school: Differential pathways for children's school engagement and achievement? *Journal of Educational Psychology*, *109*(6), 826–841. <https://doi.org/10.1037/edu0000177>
- Litman, L., Costantino, G., Waxman, R., Sanabria-Velez, C., Rodriguez-Guzman, V. M., Lampon-Velez, A., Brown, R., & Cruz, T. (2015). Relationship Between Peer

- Victimization and Posttraumatic Stress Among Primary School Children. *Journal of Traumatic Stress*, 28(4), 348–354. <https://doi.org/10.1002/jts.22031>
- Lutrick, K., Clark, R., Nuño, V. L., Bauman, S., & Carvajal, S. (2020). Latinx bullying and depression in children and youth: A systematic review. *Systematic Reviews*, 9, 126. <https://doi.org/10.1186/s13643-020-01383-w>
- Maynard, B. R., Vaughn, M. G., Salas-Wright, C. P., & Vaughn, S. (2016). Bullying Victimization Among School-Aged Immigrant Youth in the United States. *Journal of Adolescent Health*, 58(3), 337–344. <https://doi.org/10.1016/j.jadohealth.2015.11.013>
- McClain, C. M., Link to external site, this link will open in a new window, Taylor, Y. S., & Christian, E. L. (2020). Social Risk and Internalizing Distress in Middle Childhood: The Moderating Role of Emotion Regulation Processes. *Journal of Child and Family Studies*, 29(1), 167–181. <https://doi.org/10.1007/s10826-019-01548-9>
- McDougall, P., & Vaillancourt, T. (2015). Long-term adult outcomes of peer victimization in childhood and adolescence: Pathways to adjustment and maladjustment. *American Psychologist*, 70(4), 300–310. <https://doi.org/10.1037/a0039174>
- Mebane, S. (2010). Adult survivors of adolescent bullying: An exploration of long term effects [dissertation] [University of Illinois at Urbana-Champaign]. In *University of Illinois at Urbana-Champaign, 2010. 130 pp.* (p. 130). <http://www.proquest.com/ptsdpubs/docview/831095524/Record/21C1A2D234B04C13PQ/11>
- Michalska, K. J., & Davis, E. L. (2019). The psychobiology of emotional development: The case for examining sociocultural processes. *Developmental Psychobiology*, 61(3), 416–429. <https://doi.org/10.1002/dev.21795>

- Modecki, K. L., Minchin, J., Harbaugh, A. G., Guerra, N. G., & Runions, K. C. (2014). Bullying Prevalence Across Contexts: A Meta-analysis Measuring Cyber and Traditional Bullying. *Journal of Adolescent Health, 55*(5), 602–611.
<https://doi.org/10.1016/j.jadohealth.2014.06.007>
- Morris, A. S., Criss, M. M., Silk, J. S., & Houlberg, B. J. (2017). The Impact of Parenting on Emotion Regulation During Childhood and Adolescence. *Child Development Perspectives, 11*(4), 233–238. <https://doi.org/10.1111/cdep.12238>
- Mynard, H., Joseph, S., & Alexander, J. (2000). Peer-victimisation and posttraumatic stress in adolescents. *Personality and Individual Differences, 29*(5), 815–821.
[https://doi.org/10.1016/S0191-8869\(99\)00234-2](https://doi.org/10.1016/S0191-8869(99)00234-2)
- Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying Behaviors Among US Youth: Prevalence and Association With Psychosocial Adjustment. *JAMA, 285*(16), 2094. <https://doi.org/10.1001/jama.285.16.2094>
- Nock, M. K., Wedig, M. M., Holmberg, E. B., & Hooley, J. M. (2008). The Emotion Reactivity Scale: Development, Evaluation, and Relation to Self-Injurious Thoughts and Behaviors. *Behavior Therapy, 39*(2), 107–116. <https://doi.org/10.1016/j.beth.2007.05.005>
- Pellegrini, A. D., & Long, J. D. (2002). A longitudinal study of bullying, dominance, and victimization during the transition from primary school through secondary school. *British Journal of Developmental Psychology, 20*(2), 259–280.
<https://doi.org/10.1348/026151002166442>
- Penning, S. L., Bhagwanjee, A., & Govender, K. (2010). Bullying boys: The traumatic effects of bullying in male adolescent learners. *Journal of Child & Adolescent Mental Health, 22*(2), 131–143. <https://doi.org/10.2989/17280583.2010.528580>

- Pepler, D. J., Craig, W. M., Connolly, J. A., Yuile, A., McMaster, L., & Jiang, D. (2006). A developmental perspective on bullying. *Aggressive Behavior*, 32(4), 376–384.
<https://doi.org/10.1002/ab.20136>
- Pine, D. S., Cohen, P., & Brook, J. S. (2001). Emotional Reactivity and Risk for Psychopathology Among Adolescents. *CNS Spectrums*, 6(1), 27–35.
<https://doi.org/10.1017/S1092852900022860>
- Plexousakis, S. S., Kourkoutas, E., Giovazolias, T., Chatira, K., & Nikolopoulos, D. (2019). School Bullying and Post-traumatic Stress Disorder Symptoms: The Role of Parental Bonding. *Frontiers in Public Health*, 7.
<https://www.frontiersin.org/articles/10.3389/fpubh.2019.00075>
- Prince-Embury, S. (2008). The Resiliency Scales for Children and Adolescents, Psychological Symptoms, and Clinical Status in Adolescents. *Canadian Journal of School Psychology*, 23(1), 41–56. <https://doi.org/10.1177/0829573508316592>
- Ramos, G., Delgadillo, D., Fossum, J., Montoya, A. K., Thamrin, H., Rapp, A., Escovar, E., & Chavira, D. A. (2021). Discrimination and internalizing symptoms in rural Latinx adolescents: An ecological model of etiology. *Children and Youth Services Review*, 130, 106250. <https://doi.org/10.1016/j.childyouth.2021.106250>
- Reijntjes, A., Kamphuis, J. H., Prinzie, P., Boelen, P. A., van der Schoot, M., & Telch, M. J. (2011). Prospective linkages between peer victimization and externalizing problems in children: A meta-analysis. *Aggressive Behavior*, 37(3), 215–222.
<https://doi.org/10.1002/ab.20374>
- Robinson, L. E., Espelage, D. L., Valido, A., Ingram, K. M., El Sheikh, A. J., Torgal, C., Mintz, S., & Kuehl, T. (2021). Ethnic Representation and Willingness to Seek Help as

- Moderators Between Peer Victimization and Mental Health Outcomes among Latinx Adolescents. *School Mental Health*, 13(3), 561–577. <https://doi.org/10.1007/s12310-021-09419-9>
- Scheeringa, M. S., Wright, M. J., Hunt, J. P., & Zeanah, C. H. (2006). Factors Affecting the Diagnosis and Prediction of PTSD Symptomatology in Children and Adolescents. *American Journal of Psychiatry*, 163(4), 644–651. <https://doi.org/10.1176/ajp.2006.163.4.644>
- Scheeringa, M. S., Zeanah, C. H., & Cohen, J. A. (2011). PTSD in children and adolescents: Toward an empirically based algorithm. *Depression and Anxiety*, 28(9), 770–782. <https://doi.org/10.1002/da.20736>
- Scheithauer, H., Hayer, T., Petermann, F., & Jugert, G. (2006). Physical, verbal, and relational forms of bullying among German students: Age trends, gender differences, and correlates. *Aggressive Behavior*, 32(3), 261–275. <https://doi.org/10.1002/ab.20128>
- Shapero, B. G., Abramson, L. Y., & Alloy, L. B. (2016). Emotional Reactivity and Internalizing Symptoms: Moderating Role of Emotion Regulation. *Cognitive Therapy and Research*, 40(3), 328–340. <https://doi.org/10.1007/s10608-015-9722-4>
- Steinberg, A. M., Brymer, M. J., Kim, S., Briggs, E. C., Ippen, C. G., Ostrowski, S. A., Gully, K. J., & Pynoos, R. S. (2013). Psychometric Properties of the UCLA PTSD Reaction Index: Part I: UCLA PTSD Reaction Index. *Journal of Traumatic Stress*, 26(1), 1–9. <https://doi.org/10.1002/jts.21780>
- Storch, E. A., & Esposito, L. E. (2003). Peer Victimization and Posttraumatic Stress Among Children. *Child Study Journal*, 33(2), 91–98.

- Strelau, J. (2008). *Temperament as a regulator of behavior: After fifty years of research*. Eliot Werner Publications.
- Strelau, J., & Zawadzki, B. (2004). Trauma and temperament as predictors of posttraumatic stress disorder and its dimensions 3, 15 months and two years after experiencing flood. *Polish Psychological Bulletin*, 35, 5–13.
- Strelau, J., & Zawadzki, B. (2005). Trauma and Temperament as Predictors of Intensity of Posttraumatic Stress Disorder Symptoms After Disaster. *European Psychologist*, 10(2), 124–135. <https://doi.org/10.1027/1016-9040.10.2.124>
- Sugimura, N., & Rudolph, K. D. (2012). Temperamental Differences in Children's Reactions to Peer Victimization. *Journal of Clinical Child & Adolescent Psychology*, 41(3), 314–328. <https://doi.org/10.1080/15374416.2012.656555>
- Teicher, M. H., & Parigger, A. (2015). The 'Maltreatment and Abuse Chronology of Exposure' (MACE) Scale for the Retrospective Assessment of Abuse and Neglect During Development. *PLOS ONE*, 10(2), e0117423. <https://doi.org/10.1371/journal.pone.0117423>
- Turner, H. A., Finkelhor, D., Shattuck, A., & Hamby, S. (2012). Recent Victimization Exposure and Suicidal Ideation in Adolescents. *Archives of Pediatrics & Adolescent Medicine*, 166(12), 1149. <https://doi.org/10.1001/archpediatrics.2012.1549>
- Van Geel, M., Vedder, P., & Tanilon, J. (2014). Relationship between peer victimization, cyberbullying, and suicide in children and adolescents: A meta-analysis. *JAMA Pediatrics*, 168(5), 435–442. <https://doi-org.ezproxy.depaul.edu/10.1001/jamapediatrics.2013.4143>

- Weaver, A. (2000). Can Post-Traumatic Stress Disorder be Diagnosed in Adolescence without a Catastrophic Stressor? A Case Report. *Clinical Child Psychology and Psychiatry*, 5(1), 77–83. <https://doi.org/10.1177/1359104500005001008>
- Yockey, R. A., King, K. A., & Vidourek, R. A. (2019). School factors and anxiety disorder among Hispanic youth: Results from the 2016 US National Survey on Children’s Health. *School Psychology International*, 40(4), 403–415. <https://doi.org/10.1177/0143034319849621>
- Yoon, J. S., Barton, E., & Taiariol, J. (2004). Relational Aggression in Middle School: Educational Implications of Developmental Research. *The Journal of Early Adolescence*, 24(3), 303–318. <https://doi.org/10.1177/0272431604265681>
- You, D. S., Youngstrom, E. A., Feeny, N. C., Youngstrom, J. K., & Findling, R. L. (2017). Comparing the Diagnostic Accuracy of Five Instruments for Detecting Posttraumatic Stress Disorder in Youth. *Journal of Clinical Child and Adolescent Psychology : The Official Journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53*, 46(4), 511–522. <https://doi.org/10.1080/15374416.2015.1030754>
- Zawadzki, B., & Popiel, A. (2012). Temperamental traits and severity of PTSD symptoms: Data from longitudinal studies of motor vehicle accident survivors. *Journal of Individual Differences*, 33(4), 257–267. <https://doi.org/10.1027/1614-0001/a000074>
- Zimmermann, P., & Iwanski, A. (2014). Emotion regulation from early adolescence to emerging adulthood and middle adulthood: Age differences, gender differences, and emotion-specific developmental variations. *International Journal of Behavioral Development*, 38(2), 182–194. <https://doi.org/10.1177/0165025413515405>