



University of
New Haven

University of New Haven

Digital Commons @ New Haven

Honors Theses

Student Works

5-16-2021

Pathways to Peer Victimization: The Impact of Childhood Adversity on Social Relationships

Elizabeth E.E. Sloane

Follow this and additional works at: <https://digitalcommons.newhaven.edu/honorstheses>



Part of the Psychology Commons


UNIVERSITY OF NEW HAVEN
HONORS PROGRAM

2020-2021 Honors Thesis

Pathways to peer victimization: The impact of childhood
adversity on social relationships

Elizabeth Sloane

A thesis presented in partial fulfillment of the requirements of the Undergraduate Honors
Program at the University of New Haven.

Student	_____ Elizabeth E. E. Sloane _____ (Signature)
Thesis Advisor:	_____ <i>Melissa L. Whitson</i> _____ (Signature)
Department Chair:	_____ <i>A.E. Guzmán</i> _____ (Signature)
Honors Program Director:	_____  _____ (Signature)

May 16, 2021

(Date)

**Pathways to Peer Victimization:
The Impact of Childhood Adversity on Social Relationships**

Thesis Advisor: Dr. Melissa Whitson

Elizabeth Sloane

University of New Haven

Table of Contents

Abstract.....	4
Introduction/Literature Review.....	5
Methods.....	13
Results.....	15
Discussion.....	22
References.....	30
Tables and Figures.....	33
Appendices.....	35
Acknowledgements.....	43

Abstract

The purpose of the research study was to explore the connection between the presence of Adverse Childhood Experiences (ACEs) and pathways to the experience of peer victimization. Previous literature indicates that ACEs can have far-reaching negative effects into adulthood. Individuals with multiple ACEs have an increased risk of developing various physical and mental health issues as both children and adults. Research has also demonstrated that ACEs can negatively impact social affiliation and can preclude individuals from seeking social support. Social support is also pertinent in predicting the peer victimization because positive interactions with peers are protective against victimization. However, the relationship between ACEs, social connectedness, and peer victimization is not well understood and few studies have examined the potential connections. Therefore, the present study examined how the experience of ACEs related to social connectedness, and reported victimization. An electronic survey was conducted using university undergraduate students with ACE score as predictor variable, and social connectedness and victimization as dependent variables. The results indicated that participants with higher ACE scores were more likely to report lower social connectedness. Participants with high ACE scores and lower social connectedness were more likely to report experiences of victimization. A path analysis revealed that social connectedness mediated the relationship between ACE scores and reported victimization. Implications and future research directions are discussed.

Keywords: Adverse childhood experiences, ACEs, social support, peer victimization, friends

Pathways to Peer Victimization:

The Impact of Childhood Adversity on Social Relationships

As human beings we have an innate desire to connect with other people and our first experiences with family and caregivers let us know what to expect from our relationships with others. From these initial experiences with significant others, children learn how to respond to the world around them, and whether they can trust and depend on other humans to protect and keep them safe. Childhood trauma can send the message that it is not safe to be around other people and that other people cannot be trusted not to harm us. Unfortunately, this can prevent individuals with past trauma from engaging with the world around them and potentially disrupt the development of future social relationships.

Adverse Childhood Experiences

Adverse Childhood Experiences (ACEs) are childhood traumatic events, such as maltreatment and witnessing family violence, exposure to parental incarceration, substance abuse, or mental illness, living in unsafe neighborhoods, in poverty, or in financial hardship, and experiencing bullying or discrimination (Bethell et al., 2017; Mersky et al., 2017). The initial ACEs study by Felitti et al. (1998) uncovered that exposure to multiple forms of childhood trauma can have particularly insidious impacts on physical health conditions later in life. This pioneering study has stimulated increased investigation on the detrimental effects of ACEs on both physical and mental health, as well as social processes. Researchers found that 52% of the sample had been exposed to at least one ACE and that the majority of individuals exposed to one ACE had also been exposed to another (Felitti et al., 1998). Individuals with exposure to ACEs were at an increased risk for many behaviors that contribute to the leading causes of morbidity and mortality in the United States. Another significant finding was that exposure to ACEs and

risk for health-harming behaviors/disease demonstrated a dose-response relationship. As exposure to different categories of ACEs increased, so did the risk of engaging in behaviors associated with the leading causes of death and physical conditions such as autoimmune disease, Ischemic heart disease, and stroke (Felitti et al.,1998).

A more recent study by Mersky et al. (2013) investigated ACE exposure in a large urban sample to determine impacts on mental and physical health. The original ACEs study was comprised of 75% white participants and relatively few studies have investigated the prevalence of childhood adversity in a minority and low-income sample. Researchers also examined a much younger population than the original study (57 years), with an average age of 24 years. The purpose for examining the impact of ACEs in early adulthood was that many mental health issues such as depression, substance use, and anxiety emerge during this period of life. Compared to the study by Felitti et al. (1998) a much larger portion of the sample, 79.5% of participants experienced at least one ACE. Results indicated that as exposure to ACEs increased, so did the impact on both physical and mental health. Compared to a group with no ACE exposure, individuals exposed to multiple ACEs reported worse overall health. Similarly, individuals exposed to multiple ACEs were more likely to report low life satisfaction, frequent depressive symptoms, frequent anxiety, frequent tobacco use, and frequent marijuana use (Mersky et al., 2013). An important implication of these findings is that mental health problems in early adulthood may contribute to worse health outcomes in later life, as mental health issues and physical health issues are often comorbid.

Another outcome of childhood adversity that may contribute to both physical health and mental health is deficits in social cognitive functioning. Germaine et al. (2015) investigated how different types of childhood trauma impacted abilities related to the development and

maintenance of social relationships in a large online study of 5,000 participants. Specifically, researchers examined face recognition and discrimination, theory of mind abilities, social motivation, and perceived social support. Theory of mind refers to the ability to interpret and predict the thoughts and feelings of others and plays a significant role in facilitating smooth social interactions and relationships. Participants were assessed on 25 types of childhood adversity created from a combination of the Adverse Childhood Experiences Scale (Felitti et al., 1998), Conflict Tactics Scale (as cited by Germaine et al., 2015), and Composite International Diagnostic Interview (as cited by Germaine et al., 2015). While no forms of childhood adversity impacted facial recognition or facial discrimination, different categories of adversity were uniquely related to theory of mind, social motivation, and social support. Parental maltreatment (emotional abuse and physical abuse) and domestic violence were strongly related to all three, whereas parental maladjustment (substance use, criminal activity, and suicide attempts) only related significantly to theory of mind. Parental neglect was associated with social support and social motivation, while sexual abuse was only related to social motivation (Germaine et al., 2015). These findings indicate that childhood adversity contributes to differences in adult social cognitive functioning and may disrupt reception of the many benefits associated with interpersonal relationships.

Social Connectedness

Lee & Robbins (1995) characterize social connectedness as representing cognitions of interpersonal closeness with the social world, and later as a cognitive structure that represents consistency in interpersonal relationship patterns (as cited by Lee et al., 2001). An individual's sense of social connectedness develops early in life based on parent-child attachments providing an initial sense of security and similarity with others. Social connectedness continues to develop

in adolescence based on peer relationships and group membership. By adulthood, current and previous experiences are slowly integrated into the overall sense of self to provide a stable sense of connectedness. Individuals who experience interpersonal difficulties such as abandonment, peer rejection, isolation, and criticism are more likely to develop low social connectedness (Lee & Robbins, 1995). Therefore, these individuals have more negative relationship experiences included in their sense of self. These individuals tend to have difficulty relating to the social world, feel uncomfortable in social situations, and see themselves as outsiders.

Lee et al. (2001) conducted three studies to revise and validate a measure of social connectedness and investigate how social connectedness related to other constructs. The purpose of study 1 was to revise and improve the Social Connectedness Scale. The original scale contained eight negatively worded items. Researchers intended to reduce bias in the instrument and more fully capture the experience of social connectedness by including positive items. Results indicated that the revised version of the scale demonstrated good internal reliability, and was more normally distributed than the original scale, with approximately 6-15% of participants being classified as more socially disconnected (Lee et al., 2001). The purpose of study 2 was to validate the theoretical framework of the social connectedness and demonstrate concurrent validity in relation to other constructs.

In self-psychology, social connectedness refers to an individual's subjective experience of interpersonal closeness and awareness of others, rather than the physical presence of others. Social connectedness is thought to contribute to self-esteem and lack of connectedness results in loneliness and distress. The revised scale was found have good convergent validity in that it was positively correlated with independent self-definition and self-esteem and negatively correlated with loneliness, social distress and avoidance, depression, hostility, and social discomfort, and

dysfunctional interpersonal behaviors (Lee et al., 2001). The objective of study 3 was to investigate dysfunctional interpersonal behaviors as a mediator between social connectedness and psychological distress. Individuals with low social connectedness were more likely to negatively evaluate their relationships and display dysfunctional behaviors such as difficulty with sociability, intimacy, submissiveness, assertiveness, and avoidance of social situations (Lee et al., 2001). Results demonstrated support for the hypothesis that it is not low social connectedness that results in psychological distress, but rather the behaviors associated with low connectedness preventing enhancement of self-esteem through social relationships.

Peer Victimization

Literature on peer victimization has examined different factors that are protective against both bullying behavior and being victimized. Bollmer et al. (2005) investigated how friendship and having a quality best friend moderated the experience of victimization in 10-13-year-olds. Researchers were interested in how friendship might operate to protect individuals who have particular characteristics that are associated with an increased risk of bullying and victimization. Characteristics that increase vulnerability to victimization are often referred to as internalizing problems, such as when individuals appear anxious, depressed, socially withdrawn, and self-reproaching in response to victimization attempts. Characteristics that increase the likelihood of engaging in bullying behavior are referred to as externalizing behaviors, such as when individuals display aggression, impulsivity and the need to dominate others (Bollmer et al., 2005). Results demonstrated that children with internalizing behaviors were more likely to be victimized by peers, while children with higher quality best friendships were less likely to be victimized. These factors exerted significant independent effects, but friendship quality did not buffer the risk associated with internalizing behaviors and victimization. Overall, children with

internalizing symptoms who also lacked a high-quality best friend were most likely to report peer victimization. Children with externalizing behaviors were less likely to engage in bullying behavior when they had high-quality best friend than children with externalizing behaviors and low-quality friendships (Bollmer et al., 2005). The most significant conclusions of the study were that having a high-quality best friendship protected children from being targeted and also altered bullying behavior.

Previous research on peer victimization has indicated that in adolescence, internalizing symptoms, which commonly occur in individuals with depression and anxiety disorders, contribute to peer victimization. Adolescents who report depressive or social anxiety symptoms report many difficulties in peer relationships such as fewer friends and close friendships, low social support, and more experiences of overt and covert victimization (Ranta et al., 2009). Adolescents with social Phobia (SP), the clinical condition associated with pervasive social anxiety tend to have few or no social relationships, poor social skills, and are judged by peers as less competent in social situations. Epidemiological studies suggest that significant comorbidity exists between SP and depression in adolescence with approximately 30-40% of adolescents with SP also having depression; comorbidities with SP are associated with greater social impairment.

Ranta et al. (2009) investigated overt and covert victimization among 4 groups of 15-16-year-old adolescents to determine whether forms of victimization were more associated with either non-comorbid or comorbid depression/SP. Boys in the SP and depression/SP conditions were at an increased risk of being either covertly or overtly victimized and that parental unemployment (one parent) also contributed to slightly increased risk. Similar to boys, girls who were in the SP and depression/SP group were found to have an increased risk of covert victimization. Girls with SP, depression/SP, significant general anxiety, and parental

unemployment (both parents) were at an increased risk of experiencing overt victimization. The most significant finding was that SP, and not depression, was associated with risk of victimization and comorbid depression/SP was related to a significantly higher risk of victimization than depression alone. Symptoms of SP such as social fears, social avoidance, and poor social skills may result in adolescents being particularly vulnerable to victimization and contribute to further social avoidance and withdrawal (Ranta et al., 2009).

Research on peer victimization has also examined longitudinal associations between chronic victimization and the experience of both physical and mental health problems. Previous research indicates a bidirectional association between victimization and mental/physical health problems. Youth who experience victimization also often report physical symptoms such as headaches, stomachaches, and sleep problems and youth who report physical and mental health issues are also more likely to be victimized (Biebl et al., 2011). There also exists a bidirectional relationship between mental health issues and physical health issues. Individuals experiencing both internalizing and externalizing behaviors are more likely to report physical health problems, and the stress associated with physical health issues increases the risk of developing mental health issues. Biebl et al. (2011) investigated how victimization by peers and mental health problems were connected to reports of physical health problems to determine the long-term effects of victimization. Results indicated that individuals who experienced chronic victimization reported more conduct problems and more physical health problems than nonvictims. Findings also suggest that chronic victimization increased the risk for specific physical problems such as headaches and sleep difficulties. Chronically victimized girls had significantly more emotional symptoms and physical health issues than nonvictims, unlike findings in chronically victimized boys. In line with the hypothesis, youth who reported high levels of victimization and emotional

problems reported significantly more physical health issues than individuals experiencing either alone (Biebl et al., 2011).

Present Study

While there is sparse research on connections between ACEs and risk of victimization, both have a connection to social relationships. Our sense of social connectedness is developed throughout the life span based on prior social relationships (Lee et al., 2001). Research has indicated that past experiences of childhood abuse, neglect, and household dysfunction are related to social affiliation, social motivation, and theory of mind (TOM) abilities (Germaine et al., 2015). Since risk of peer victimization has been found to be associated with social relationships such as having a best friends, social skills, and internalizing behaviors (Bollmer et al., 2005), social connectedness could potentially mediate a relationship between childhood adversity and risk of peer victimization. The purpose of the current study was to determine whether a relationship exists between ACEs, social connectedness, and peer victimization in a college student sample. In line with prior research, we hypothesized that individuals with a higher prevalence of ACEs, especially childhood maltreatment, neglect, and abuse would report lower levels of social connectedness. Second, we hypothesized that individuals who reported high ACE exposure and lower social connectedness would experience higher rates of peer victimization. In contrast, individuals reporting a high level of ACE exposure, who also report higher social connectedness will report lower rates of peer victimization. The third hypothesis predicted that the relationship between ACE scores and peer victimization would be mediated by social connectedness scores.

Methods

Participants

The target population in this study was undergraduate college students. Students from a small northeastern university received information about the study and a link through university email accounts. Participants were also recruited through the undergraduate psychology research pool, using the SONA system. To incentivize participation, students were informed of the opportunity to win one of two \$75 Amazon gift cards. The final sample included 374 university students. The participants ranged from 18- 51 years old ($M= 19.50$; $SD= 2.77$). The sample was relatively even regarding class year. Thirty-seven percent of participants were first year students, 22.5% were sophomores, 16.7% were juniors, and 22.8% were seniors. Regarding gender, 73.7% of participants were female, 23.6% were male, 1.6% were transgender females, 0.3% were transgender males, and 0.8% identified as non-binary or another category. The racial/ethnic composition of the sample was mainly White participants with 72.7% identifying as White/Caucasian, 8.8% Latinx/Hispanic, 6.4% Black (non-Hispanic), 5.9% Biracial or multiracial, and 4.8% Asian/Pacific Islander. Indian/Southeast Asian, Middle Eastern/Arab American, Native American/Alaskan Native, and other categories were reported by 1.4% of the sample. In terms of SES, 23.3% of the sample reported being from the working class, 59.0% middle class, 17.2% upper-middle class, and 0.5% upper class.

Measures

Adverse Childhood Experiences. Childhood trauma was assessed using the Adverse Childhood Experiences Scale (Felitti et al., 1998). This measure consists of ten dichotomous questions about traumatic experiences in the childhood home environment (See Appendix A). Domains of adverse childhood experiences included are abuse, neglect, and household dysfunction. Scores range from 0 – 10 with higher scores indicating more ACEs. In the current study, the lowest score reported was 0 ACEs and the highest score was 8 ACEs.

Social Connectedness. This construct was measured using the Social Connectedness Scale-Revised (Lee et al., 2001). The scale consists of 20 items (10 positively worded, 10 negatively worded) about an individual's feelings of connection to others and society (See Appendix B). Items are rated on a 6-point Likert scale, ranging from 1 – *Strongly Disagree* to 6 – *Strongly Agree*. Scores in the SCS-R range from 20 - 120, with higher scores indicating greater feelings of social connectedness. The SCR-R was found to have convergent and discriminant validity. Research by Lee et al. (2001) reported a mean social connectedness score of 89.84 with a standard deviation of 15.44 points.

Peer Victimization. Past experiences of peer victimization were assessed using the Multidimensional Peer Victimization Scale – Revised – 24 (MPVS-R-24; Joseph & Stockton, 2018). The MPVS-R-24 includes 24 questions assessing different forms of victimization by peers (See Appendix C). Based on meta-analytical review, it was concluded that the MPVS-R-24 was a reliable and valid measure for a wide range of age groups from children to adults. The revised scale also includes a section on cyber victimization developed by Betts et al. (2015). The 24-item scale was used in this study because it offers the most extensive examination of the different forms of peer victimization (Joseph & Stockton, 2018). Possible responses for each question were, *none*, *once*, and *more than once*. Potential scores range from 24 - 72 on the MPVS. In this study, participants were asked to report victimization occurring within the past eight years, rather than only victimization within the past year.

Demographic information. The final survey collected demographic information with eight questions (See Appendix D). The demographic questionnaire included questions on age, race/ethnicity, gender identity, SES, sexuality, class year, past mental health diagnosis, and

residential or commuter student status. They were also asked if they had any previously diagnosed mental health conditions and whether they were a commuter or residential student.

Procedure

Student participants received an advertisement and confidential electronic survey link through their university email and were informed of the potential rewards of completing the study. After clicking the link, students were redirected to Qualtrics survey software and provided with informed consent information. Students who consented to participate were directed to the Adverse Childhood Experiences Scale, followed by the Social Connectedness Scale Revised, the Multi-dimensional Peer Victimization Scale, and a demographic questionnaire. After completing the demographic questionnaire, participants were thanked and given the opportunity to enter their email for a chance to win one of two \$75 dollar Amazon gift cards. They were informed that entering an email was optional, and that emails would be kept confidential and unconnected to responses. There was minimal risk to participants for completing this survey. However, some questions may contribute to slight emotional distress in participants with trauma related to ACEs or peer victimization. Therefore, the phone number to contact the university counseling center was provided at the end of the survey.

Results

Preliminary Analyses

Out of the participants who completed the ACE questionnaire (N=374) 32.62% of the sample reported no experience of the listed ACEs (n=122), while 22.99% reported having experienced at least one ACE (n= 86). The lowest ACE Score for participants in the study was 0 and the highest score of any participant was 8 (M= 1.86; SD= 1.96). The mean and standard deviation indicate that ACEs were not very prevalent in this sample. See Table 1 for breakdown

of ACE scores in the sample. Participants social connectedness scores (N=374) ranged from 34 and 118 out of a possible minimum score of 20 and maximum score of 120. The mean social connectedness score of study participants was 79.79 (SD= 15.89). The mean social connectedness score reported in this study was about 10 percentage points lower than that of college students reported by Lee et al. (2001). College students scores ranged from 24 to 72 on the MPVS-R-24 (N=374). The mean peer victimization score was 43.11 (SD= 12.41). As the scale considered victimization within the past eight years, the mean was relatively low.

The three main predictions of this study involved connections between ACE scores, social connectedness scores, and peer victimization scores; therefore, the first preliminary analysis examined correlations between these three main variables. ACE score and social connectedness score shared a significant negative correlation ($r = -.39, p = 0.00$), and social connectedness score was also negatively correlated with peer victimization score ($r = -.34, p = 0.00$). Conversely, ACE scores shared a significant positive relationship with peer victimization scores ($r = .46, p = 0.00$). These results demonstrate that participants with higher social connectedness tend to report less ACEs and less peer victimization. Participants with higher ACE scores tend to report more victimization and lower connectedness. Having established existence of relationships between ACE score, social connectedness, and peer victimization, we began examining the potential connections and confounding influences of demographic characteristics to the main variables. A second correlational test was performed to examine the three main variables' connections to age. There was no indication of any significant relationships between the age demographic variable and the three main variables.

Next, three independent samples t-tests were performed to examine potential differences on the three main variables by demographics, such as gender (male/female), living situation

(commuter/residential), and race/ethnicity (white/student of color). The first t-test examined group differences in mean ACE score between male and female participants. The mean ACE score reported by females ($n=275$, $M= 2.08$, $SD= 2.03$). was significantly higher than the mean ACE score reported by males ($n=88$, $M=1.09$, $SD= 1.47$; $t(361) = -.989$, $p< .00$). The first t-test also revealed that female participants ($n=275$) had a significantly lower mean social connectedness score of 78.10 ($SD= 15.29$) compared to male participants ($n= 88$, $M= 85.59$, $SD= 16.17$; $t(361)= 7.49$, $p< .00$). The third finding from the first t-test indicated that male and female participants differed in mean peer victimization scores, with females having significantly higher mean scores on the MPVS-R ($n=275$, $M=44.16$, $SD= 12.09$; $n= 88$, $M= 39.39$, $SD= 12.72$; $t(361)= 14.77$, $p< .01$). It is important to interpret this data with caution as there was a large difference in the number of male and female participants.

The second t-test examined group differences in ACE, social connectedness, and peer victimization scores between residential and commuter students. While commuter students ($n= 107$) had a higher mean ACE score of 2.15 ($SD= 2.02$) compared to residential students ($n= 266$, $M= 1.75$, $SD= 1.93$), this finding did not reach significance ($t(371)= -.41$, $p= .07$). Commuters and residential students did not show any significant differences in mean social connectedness scores, or in mean peer victimization scores. These results should also be considered carefully due to the large difference in group sizes. The third t-test examined group differences in the mean scores of white students ($n= 271$) and students of color ($n= 102$) for the three main study variables. White students and students of color did not have significantly different group means for ACE score. However, white participants differed significantly from BIPOC participants in mean social connectedness score, with BIPOC students reporting lower social connectedness ($M= 76.54$, $SD= 14.25$) compared to white participants ($M= 80.99$, $SD=$

16.36; $t(371) = -4.45, p = .016$). The third t-test also indicated that white participants had a higher mean score on the MPVS-R ($M = 43.90, SD = 12.47$), compared to BIPOC participants ($M = 41.12, SD = 12.08$); this finding reached significance ($t(371) = -2.79, p = .053$).

The final demographic variables examined during preliminary analysis were SES and academic grade level. Both of these variables contained four categories, and therefore, two ANOVAs were performed to assess significant group differences in means. Results indicated that there was a significant difference between SES group means for ACE ($F(3) = 8.46, p < .00$) and social connectedness score ($F(3) = 5.47, p = .001$); however, SES groups did not differ in mean scores for peer victimization. A Bonferroni post-hoc test was conducted to determine which SES groups differed significantly from one another in ACE and social connectedness scores. Post-hoc revealed that the mean ACE score for working class participants differed significantly from both middle class and upper-middle class participants, however, middle class and upper-middle class participants did not differ. No other SES groups were significantly different from one another in mean ACE score. The post-hoc also revealed that the same pattern existed in social connectedness scores. The mean social connectedness score for working class participants differed significantly from both the middle class and upper-middle class means, and these two groups did not differ from each other. No other groups SES groups differed significantly in mean social connectedness. The second ANOVA revealed that there were no significant group mean differences found between the four academic grade levels (first-year, sophomore, junior, senior) on any of the three main study variables: ACE, social connectedness, and peer victimization.

Main Analyses

Regression Analyses

Two multiple regression analyses were conducted to examine the relationships between ACE score, social connectedness, and peer victimization score. To examine the first hypothesis, a regression analysis was conducted with social connectedness as the dependent variable. ACE score was entered as the predictor variable. The multiple regression analysis revealed that ACE score contributed significantly to the regression model, [$R^2 = .149$, $F(1, 376) = 65.68$, $p < .01$] and accounted for 14.9% of the variation in social connectedness score. As shown in the table, ACE score had significant regression weight ($\beta = -.386$, $p = 0.00$). Results from the first multiple regression analysis indicate that students with higher ACE scores were expected to report lower levels of social connectedness.

To examine the accuracy of the second hypothesis a multiple regression analysis was conducted with peer victimization as the dependent variable. Social connectedness and total ACE score were entered as independent variables. Analysis revealed that the model was a significant predictor of peer victimization, [$R^2 = .247$, $F(2, 371) = 60.93$, $p < .01$]. ACE score and social connectedness accounted for 24.7% of the variation in peer victimization. However, ACE score played a more substantial role in predicting peer victimization ($\beta = .390$, $p = 0.00$), compared to social connectedness ($\beta = -.193$, $p = 0.00$). Results from the second regression analysis indicate that students with higher ACE scores and lower social connectedness were expected to report higher levels of peer victimization.

Hierarchical Regression

To account for the potential contributions of gender, race, and socio-economic status (SES) on ACE and social connectedness scores, these three demographic variables were added to the previous regression models using two-step hierarchical multiple regression analyses. In the first analysis, social connectedness was entered as the dependent variable. Race, gender, and SES

were entered at step one as predictor variables. At step two, ACE score was added as another predictor variable. Findings from step one indicated that the first three independent variables accounted for 8.5% (adjusted $R^2 = .085$), of the variance in social connectedness. The findings from step one were revealed to be statistically significant ($F(3,359) = 12.26, p = 0.00$), with race ($\beta = .116, p < 0.05$), gender ($\beta = .196, p = 0.00$), and SES ($\beta = .181, p = 0.00$), all providing significant contributions. At step two, the change in variance accounted for (ΔR^2) equaled 9.3% and was statistically significant ($F(1, 358) = 40.76, p = 0.00$). ACE score ($\beta = -.322, p = 0.00$), race ($\beta = .108, p < 0.05$), gender ($\beta = .129, p < 0.00$), and SES ($\beta = .105, p < 0.05$), all carried significant regression weight. Results indicate that while the demographic variables remained statistically significant as predictors in step two, the predictive effect was greatest for ACE score.

The second hierarchical regression analysis examined peer victimization as the dependent variable. At step one, race, gender, and SES were entered as predictor variables. ACE and social connectedness scores were then added as predictor variables in step two. The results of step one indicated that the three demographic variables accounted for 4.2% of the variance (adjusted $R^2 = .034$), in peer victimization. The findings from step one were statistically significant ($F(3, 359) = 5.25, p < 0.00$). However, only race ($\beta = .103, p < 0.05$), and gender ($\beta = -.163, p < 0.00$) contributed significantly to the model, while SES was not a significant predictor of peer victimization. At step two, the change in variance (ΔR^2) when ACE and social connectedness were added as predictor variables was 21.5% and the change was statistically significant ($F(2, 357) = 51.55, p = 0.00$). At step two, ACE score ($\beta = .388, p = 0.00$), social connectedness score ($\beta = -.198, p = 0.00$), and race ($\beta = .136, p < 0.00$), remained significant predictors of peer victimization. The results indicate that when ACE and social connectedness scores are added as

predictor variables, gender loses its predictive effect on peer victimization (See Table 2 for results of the hierarchical regression analyses).

Mediation Path Analysis

The third hypothesis of this study was that social connectedness would mediate the relationship between ACEs and the experience of peer victimization. This hypothesis was examined using a path analysis. A mediator variable accounts for the relationship between two other variables, and helps to explicate a process in which the independent or predictor variable leads to the mediator and the mediator then leads to the dependent or criterion variable (Baron & Kenny, 1986). Conducting a path analysis allows for the examination of predictor, mediator, and criterion variables. The path analysis examined the complete indirect effect model, as suggested by numerous researchers (Kenny, Kashy, & Bolger, 1998; Preacher & Hayes, 2004; Rucker et al., 2011). After examination of the direct relationships between the variables in the path analysis, a Sobel test (Sobel, 1986) was performed to assess the potential mediating role of social connectedness on the model, based upon procedures outlined by Preacher and Hayes (2004). Analyses were conducted using AMOS 25.0 Statistical Package.

The results of the path analysis indicated that there was a significant negative relationship between ACE score and social connectedness score [$\beta = -.39$ (SE = .39), $p < .001$]. And social connectedness had a significant negative relationship with peer victimization [$\beta = -.19$ (SE = .04), $p < .001$]. The direct relationship between ACE score and peer victimization was also significant [$\beta = .39$ (SE = .31), $p < .001$]. Specifically, having a higher ACE score was related to lower social, while lower social connectedness was related to higher reported peer victimization. Results of the Sobel test revealed that the indirect effect was significant [$z = 3.57$ (SE = 0.13), $p <$

.001], suggesting a mediating effect of social connectedness. The results of the path analysis are presented in Figure 1.

Discussion

The first hypothesis examined in this study was whether the experience of ACEs would predict sense of social connectedness. This hypothesis was supported by the study results. Specifically, the regression analysis and the hierarchical regression were both significant. This revealed that the effect of ACEs on social connectedness were still predictive after controlling for the variables of gender, race/ethnicity, and SES. This suggests that experiences of childhood trauma can continue to negatively impact our sense of connection to others well into young adulthood. The results of the first hypothesis are supported by previous research findings from Germaine et al. (2015). The researchers demonstrated that individuals with certain kinds of childhood trauma may be at risk for lower social affiliation, social motivation, and altered theory of mind (TOM). While previous research on ACES did not focus specifically on the construct of social connectedness, Lee et al. (2001) found that the construct of social connectedness was negatively correlated with measures of constructs such as loneliness, social distress and avoidance, depression, hostility, social discomfort, and dysfunctional interpersonal behaviors. Social connectedness was also found to be positively correlated with measures of public-based collective self-esteem and independent self-construal.

After having past experiences of trauma and negative interactions with significant others, individuals may develop lower feelings of social connectedness. Difficulty with TOM and feelings of distress related to interpersonal contact as a result of past experiences of trauma could potentially contribute to lower social motivation. Social interactions allow for another opportunity to damage the individual's sense of social connectedness based on negative

perceived reactions from others. Social interactions therefore become potentially threatening to self-esteem, leading to increased distress and social avoidance. As the pattern of interactions continues to reinforce negative self-appraisals on one's ability to connect with others, individuals may internalize feelings of blame. Consequentially, there are many potential variables that interact to lower social connectedness as an outcome related to ACE exposure.

The second hypothesis in this study was that ACE score and social connectedness score would together predict reported experiences of peer victimization, such that higher ACE score and lower social connectedness would predict higher reported victimization. This hypothesis was also supported by the study data. The multiple regression and hierarchical multiple regression analyses revealed that ACE score and social connectedness were significant predictors of peer victimization. These variables accounted for 25.7% of the variance in peer victimization score. Further, once the influence of gender, SES, and race/ethnicity was removed, social connectedness and ACE score still explained 21.5% of the variance in peer victimization. This suggests that ACE score and social connectedness were still able to account for a significant amount of variance, even after removing the impact of other variables.

The second hypothesis is also supported by research findings from Bollmer et al. (2005). While they did not specifically examine the construct of social connectedness in relation to experiences of peer victimization, researchers examined whether having a quality best friend moderated the risk of peer victimization. They found that students most likely to report victimization were children with internalizing symptoms and who also lacked a high-quality best friendship. The combination of internalizing symptoms and not having a quality best friend is therefore associated with more peer victimization occurrences. While the current study did not

examine internalizing symptoms as a predictive of victimization, social connectedness is related to the experience of forming quality social relationships.

As discussed in relation to the first hypothesis, childhood trauma is associated with lower social affiliation, social motivation, and altered TOM abilities (Germaine et al., 2015). The scale used to assess the construct of social connectedness was also negatively correlated with measures of constructs such as loneliness, social distress and avoidance, depression, hostility, social discomfort, and dysfunctional interpersonal behaviors (Lee et al., 2001). Based on these associations, individuals with past experiences of ACEs, and lower social connectedness may be less likely to engage with others and therefore less likely to develop high quality friendships. The research findings by Bollmer et al. (2005) indicate that these friendships were associated with lower reported victimization. Therefore, individuals with ACEs and difficulty connecting with others may be less likely to develop the kinds of close friendships that help reduce risk of victimization. In support of the previous literature, the current study found that ACEs and lower social connectedness predicted higher reported peer victimization.

The third and final hypothesis in this study was that social connectedness scores would mediate the relationship between ACE scores and reported peer victimization. The third hypothesis was also supported by the study data. Specifically, the path analysis revealed that social connectedness score mediated the relationship between ACEs and peer victimization, with lower social connectedness predicting higher reported victimization and vice versa. It was also revealed that ACE score exerted a direct effect on the risk of peer victimization. This suggests that social connectedness may be a mechanism through which ACE score contributes to risk of victimization, and that ACE score itself is also a powerful predictor of victimization, even without consideration of the indirect influence through social connectedness.

Previous research also provides support for the third hypothesis of this study. Turner et al. (2016) examined the impact of multiple forms of victimization on the dependent variable of psychological distress. Victimization was assessed at two points and family social support, friend social support, self-esteem, and mastery were all considered as potential variables mediating the relationship between victimization and psychological distress. Researchers found that the participant groups with stable high victimization and increasing victimization across waves had reductions in the four resources tested as mediators. Only mastery and self-esteem were found to mediate the relationship between victimization and distress. While the current study did not examine distress in relation to victimization, the findings by Turner et al. (2016) provide support for the current study in that participants who had stable levels of victimization or increased victimization had lower self-esteem and mastery. The concept of social connectedness is highly correlated with measures such as self-esteem. In comparison with the findings of Turner et al. (2016), the current study found that individuals with higher reported ACEs and higher reported victimization also reported lower social connectedness. Social connectedness was found to mediate the relationship between ACE score and reported victimization and is conceptually similar to self-esteem. Taken together, these findings suggest that lower social connectedness and self-esteem are likely associated with the risk of victimization and are also an outcome of experiencing victimization.

Limitations

The results of the current study must be examined with consideration of several limitations that impact the ability to generalize findings. The sample consisted of college students at a small private university in the Northeastern United States. The students in this sample on average had a low experience of ACEs. The sample also had a lower social

connectedness mean score than the previous means reported by Lee et al. (2001). This may be an impact related to the isolation of the Covid-19 Pandemic, as the measure of social connectedness is highly negatively correlated with measures loneliness. Victimization mean scores were also relatively low when considering that participants were asked to report victimization within the past eight years. The sample population was skewed in reported gender and racial/ethnic identities. Most of the participants in this study were female, white/Caucasian, and reported middle class SES. The findings may not generalize to racially diverse populations, or low and high SES groups due to low representation. The findings also may not generalize to the experiences of LGBTQ+ individuals or populations with a greater number of males. Attending a private university in the Northeast, along with the volunteer sampling method, likely contributed to the uneven sample distribution. Students received the study link through their university email accounts and introductory psychology students also had access to the study link through the SONA System. Students with certain population characteristics may have be more likely to respond to research participation requests and confound the data. All of the aforementioned factors have the potential to limit generalizability of the study findings. Finally, some limitations exist in that the measures of ACEs and peer victimization were retrospective reports. Therefore, there is potential for participants to misreport specific occurrences of past events.

Implications

Despite the limitations of the sample generalizability, there are several important implications suggested by the study results. The results of this study contribute to the existing body of literature on the negatives outcomes associated with ACEs, and the growing number of research studies demonstrating the relationship between ACEs and negative social outcomes. A major implication of this study is that, considering that ACEs are preventable occurrences, more

must be done to develop potential interventions. One way for future researchers to apply the findings of research on negative outcomes associated with ACEs is by screening for ACEs in school-age children starting in early elementary school through middle and high school. Screening allows for identification of children that may need increased social support or intervention to improve interactions with peers. In addition, researchers must develop and assess potential interventions focused on assisting youth in forming positive relationships and social interactions with peers. ACEs also exerted a significant direct impact on peer victimization, indicating that ACEs may be operating through mechanisms other than social connectedness to increase risk of peer victimization. Therefore, primary prevention is essential for diminishing the negative social, psychological, and health consequences associated with ACEs. One way to prevent ACEs before they occur is to increase public awareness of what events may be traumatic for children. New parents especially should be informed about the negative consequences of ACEs by primary care physicians, and through targeted public health campaigns.

Future Directions

Although study results supported all three hypotheses, there are many potential directions for future research to expand the current findings. ACE score was found to predict social connectedness score such that a higher ACE exposure was related to lower reported social connectedness. In support of Hypothesis 2, higher ACE score and lower social connectedness predicted higher rates of peer victimization. Results also supported the mediation model, with ACE score indirectly impacting peer victimization through influence on social connectedness, and ACE score also exerted a direct effect on reported victimization. However, the sample population consisted mainly of White, female, college students attending a private university. Participants reported relatively low ACE prevalence and moderate social connectedness.

It is essential that future researchers examine the relationship between ACEs, social connectedness, and peer victimization in more diverse samples. In samples with majority BIPOC participants, data may potentially reveal more connections between race/ethnicity, SES and the three main study variables. Another important direction for researchers to consider are measuring these constructs in elementary, middle, and high school to assess victimization when it is occurring. Researching ACEs and victimization in children while it is occurring allows for the study of potential interventions to improve social connectedness and address the impacts of both ACEs and peer victimization. Assessing children also allows for the potential to conduct longitudinal studies on the impact of social/friendship intervention strategies.

Conclusion

The purpose of this research was to connect the literature on ACEs and Peer victimization by examining the relationship between ACEs, social connectedness, and peer victimization. Another goal of the current study was to establish a model with the variable social connectedness as potential mediator between ACE score and peer victimization risk. Analysis of study data provided support for all three hypotheses. It was determined that ACE score was a significant predictor of social connectedness, and that ACE score and social connectedness were significant predictors of peer victimization. It was also determined that social connectedness mediated the relationship between ACEs and peer victimization, and that ACE score exerted both a direct and indirect influence on peer victimization. While findings provided initial evidence for the relationship between ACEs, social connectedness, and peer victimization, future research must investigate these connections with more diverse samples. In addition, further research on interventions to prevent ACEs, and to assist in the development of social

connectedness and friendships in children/adolescents is essential for reducing the negative outcomes associated with childhood trauma.

References

- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Bethell, C. D., Simpson, L. A., & Solloway, M. R. (2017). Child well-being and adverse childhood experiences in the United States. *Academic Pediatrics*, 17, S1–S3.
- Betts, L. R., Houston, J. E., & Steer, O. L. (2015) Development of the Multidimensional Peer Victimization Scale–Revised (MPVS-R) and the Multidimensional Peer Bullying Scale (MPVS-RB), *The Journal of Genetic Psychology*, 176:2, 93-109, DOI: [10.1080/00221325.2015.1007915](https://doi.org/10.1080/00221325.2015.1007915)
- Biebl , S. J. W., DiLalla, L. F., Davis, E. K., Lynch, K. A., Shinn, S. O. (2011) Longitudinal associations among peer victimization and physical and mental health problems, *Journal of Pediatric Psychology*, 36 (8), 868–877. <https://doi.org/10.1093/jpepsy/jsr025>
- Bollmer, J. M., Milich, R., Harris, M. J., & Maras, M. A. (2005). A friend in need: The role of friendship quality as a protective factor in peer victimization and bullying. *Journal of Interpersonal Violence*, 20(6), 701–712. DOI: 10.1177/0886260504272897
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experience (ACE) Study. *American Journal of Preventive Medicine*, 14, 245–258.
- Germine, L., Dunn, E. C., McLaughlin, K. A., & Smoller, J. W. (2015). Childhood Adversity Is Associated with Adult Theory of Mind and Social Affiliation, but Not Face Processing. *PloS one*, 10(6), e0129612. <https://doi.org/10.1371/journal.pone.0129612>

- Joseph, S., & Stockton, H. (2018). The multidimensional peer victimization scale: A systematic review. *Aggression and Violent Behavior, 42*, 96–114.
<https://doi.org/10.1016/j.avb.2018.07.009> .
- Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 233-265). New York, NY, US: McGraw-Hill.
- Lee, R. M., Draper, M., & Lee, S. (2001). Social connectedness, dysfunctional interpersonal behaviors, and psychological distress: Testing a mediator model. *Journal of Counseling Psychology, 48*(3), 310–318. <https://doi.org/10.1037/0022-0167.48.3.310>
- Lee, R. M., & Robbins, S. B. (1995). Measuring belongingness: The Social Connectedness and the Social Assurance scales. *Journal of Counseling Psychology, 42*(2), 232–241.
<https://doi.org/10.1037/0022-0167.42.2.232>
- Mersky, J. P., Topitzes, J., & Reynolds, A. J. (2013) Impacts of adverse childhood experiences on health, mental health, and substance use in early adulthood: A cohort study of an urban, minority sample in the U.S. *Child Abuse & Neglect, 37*, 917-925.
<https://doi.org/10.1016/j.chiabu.2013.07.011>
- Mersky, J. P., Janczewski, C. E., & Topitzes, J. (2017). Rethinking the measurement of adversity: Moving towards second-generation research on Adverse Childhood Experiences. *Child Maltreatment, 22*, 58–68.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36*, 717-731.

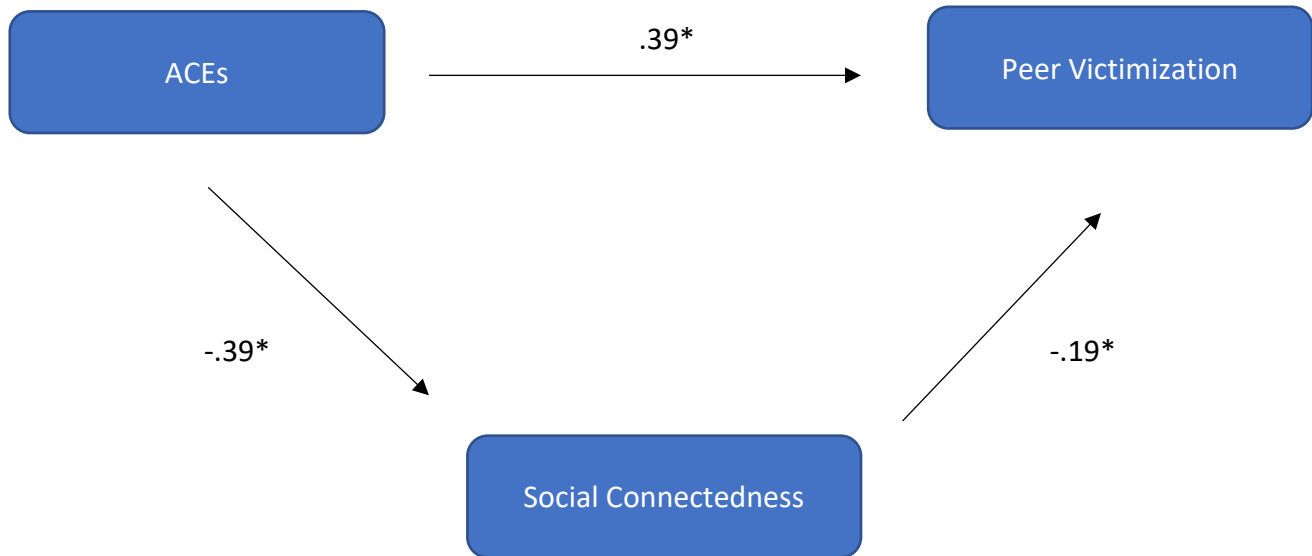
- Ranta, K., Kaltiala-Heino, R., Pelkonen, M., & Marttunen, M. (2009). Associations between peer victimization, self-reported depression and social phobia among adolescents: The role of comorbidity. *Journal of Adolescence*, *32*(1), 77–93. doi: 10.1016/j.adolescence.2007.11.005
- Rucker, D. D., Preacher, K. J., Tormala, Z. L., & Petty, R. E. (2011). Mediation analysis in social psychology: Current practices and new recommendations. *Social and Personality Psychology Compass*, *5*, 359-371.
- Sobel, M. E. (1986). Some new results on indirect effects and their standard errors in covariance structure models. *Sociological Methodology*, *16*, 159-186.
- Turner, H. A., Shattuck, A., Finkelhor, D., & Hamby, S. (2016). Effects of Poly-Victimization on Adolescent Social Support, Self-Concept, and Psychological Distress. *Journal of Interpersonal Violence*, *32*(5), 755–780. <https://doi.org/10.1177/0886260515586376> .

Table 1 Prevalence of Adverse Childhood Experiences

ACE SCORE	FREQUENCY	PERCENTAGE
0.00	122	32.62
1.00	86	22.99
2.00	47	12.57
3.00	37	9.80
4.00	40	10.70
5.00	20	5.35
6.00	12	3.21
7.00	6	1.60
8.00	4	1.01

Table 2 Hierarchical multiple regression results predicting risk of peer victimization

Step	Predictor Measures	Final B	Std. B	R ²	R ² Change
1	Demographics			0 .042	
	Gender	-4.708	-0.163		
	Race/Ethnicity	2.848	0.103		
	SES	-1.492	-0.079		
Step	Predictor Measures	Final B	Std. B	R ²	R ² Change
	1	Demographics		0 .042	
	Gender	-1.253	-0.043		
	Race/Ethnicity	3.763	0.136		
	SES	0.923	0.049		
2	ACE Score	2.462	0.388	0 .257	0.215
SC Score	-0.156	-0.198			

Figure 1

Unstandardized path coefficients; * $p < .001$

Figure 1. ACEs were significantly related to social connectedness, which in turn was significantly related to peer victimization. This represents the indirect effect of social connectedness on the relation between ACEs and peer victimization.

Appendix A
Adverse Childhood Experience (ACE) Questionnaire

While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household **often** ...
Swear at you, insult you, put you down, or humiliate you?
or
Act in a way that made you afraid that you might be physically hurt?
Yes
No
2. Did a parent or other adult in the household
often ... Push, grab, slap, or throw
something at you?
or
Ever hit you so hard that you had marks or were injured?
Yes
No
3. Did an adult or person at least 5 years older than you **ever**...
Touch or fondle you or have you touch their body in a sexual way?
or
Try to or actually have oral, anal, or vaginal sex with you?
Yes
No
4. Did you **often** feel that ...
No one in your family loved you or thought you were important or special?
or
Your family didn't look out for each other, feel close to each other, or support each
other?
Yes
No
5. Did you **often** feel that ...
You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?
or
Your parents were too drunk or high to take care of you or take you to the doctor if you needed
it?
Yes
No
6. Were your parents **ever** separated or divorced?
Yes
No

7. Was your mother or stepmother:

Often pushed, grabbed, slapped, or had something thrown at her?

or

Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?

or

Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?

Yes

No

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?

Yes

No

9. Was a household member depressed or mentally ill or did a household member attempt suicide?

Yes

No

10. Did a household member go to prison?

Yes

No

Appendix B

SOCIAL CONNECTEDNESS SCALE-REVISED

Directions: Following are a number of statements that reflect various ways in which we view ourselves. Rate the degree to which you agree or disagree with each statement using the following scale (1 = Strongly Disagree and 6 = Strongly Agree). There is no right or wrong answer. Do not spend too much time with any one statement and do not leave any unanswered.

Strongly Disagree	Disagree	Mildly Disagree	Mildly Agree	Agree	Strongly Agree		
1	2	3	4	5	6		
			<u>Strongly Disagree</u>		<u>Strongly Agree</u>		
1.	I feel comfortable in the presence of strangers.	1	2	3	4	5	6
2.	I am in tune with the world.	1	2	3	4	5	6
*3.	Even among my friends, there is no sense of brother/sisterhood.....	1	2	3	4	5	6
4.	I fit in well in new situations.....	1	2	3	4	5	6
5.	I feel close to people.	1	2	3	4	5	6
*6.	I feel disconnected from the world around me.....	1	2	3	4	5	6
*7.	Even around people I know, I don't feel that I really belong.	1	2	3	4	5	6
8.	I see people as friendly and approachable.....	1	2	3	4	5	6
*9.	I feel like an outsider.....	1	2	3	4	5	6
10.	I feel understood by the people I know.....	1	2	3	4	5	6
*11.	I feel distant from people.	1	2	3	4	5	6
12.	I am able to relate to my peers.	1	2	3	4	5	6
*13.	I have little sense of togetherness with my peers.	1	2	3	4	5	6
14.	I find myself actively involved in people's lives.	1	2	3	4	5	6
*15.	I catch myself losing a sense of connectedness with society.	1	2	3	4	5	6
16.	I am able to connect with other people.	1	2	3	4	5	6
*17.	I see myself as a loner.	1	2	3	4	5	6
*18.	I don't feel related to most people.....	1	2	3	4	5	6
19.	My friends feel like family.....	1	2	3	4	5	6
*20.	I don't feel I participate with anyone or any group... ..	1	2	3	4	5	6
			<u>Strongly Disagree</u>			<u>Strongly Agree</u>	

* reverse score

Social connectedness scale-revised has two scoring options. The original scale consists of 8 items and the revised item consists of 20 items.

- a) original = reverse score items 3,6,7,11,13,15,18,20 and sum 8 items.
 b) revised scale = reverse score items 3,6,7,9,11,13,15,17,18,20 and sum all 20 items.

Appendix C

Multidimensional Peer-Victimization Scale-24 (MPVS-24)

Below is a list of things that some people do to other people. How often during the past eight years has another person(s) done these things to you? Please answer by putting a tick in one of the three columns for each of the questions.

	Not at all	Once	More than once
1. Punched me			
2. Tried to get me into trouble with my friends			
3. Called me names			
4. Took something of mine without permission			
5. Kicked me			
6. Tried to make my friends turn against me			
7. Made fun of me because of my appearance			
8. Tried to break something of mine			
9. Hurt me physically in some way			
10. When I tried to spend time with one person, another person would not let me			
11. Made fun of me for some reason			
12. Stole something from me			
13. Beat me up			
14. Made other people not talk to me			
15. Swore at me			
16. Deliberately damaged some property of mine			
17. Sent me a nasty text			
18. Ignored me			
19. Said something mean about me on a social networking site			
20. Refused to talk to me			
21. Wrote spiteful things about me in a group chat or group message			
22. Would not let me join in their activity			
23. Wrote nasty things to me using instant messaging (Facebook Messenger, etc.)			
24. Kept secrets and would not tell me			

Appendix D

DEMOGRAPHIC QUESTIONNAIRE

INSTRUCTIONS: Please answer the following questions about yourself. All responses to this questionnaire will remain confidential.

1. Age: _____

2. Gender identity:

- Male
- Female
- Transgender male
- Transgender female
- Non-binary
- Other (please specify) _____

3. Race/ethnic background:

- Asian/Pacific Islander
- Black (non-Hispanic)
- Latinx/Hispanic
- White/Caucasian (non-Hispanic)
- Indian/Southeast Asian
- Middle Eastern/Arab American
- Native American/Alaskan Native
- Biracial or multiracial (please specify) _____
- Other (please specify) _____

4. Sexuality/sexual attraction:

- Straight (heterosexual)
- Lesbian (homosexual woman)

- Gay (homosexual man)
- Bisexual (attraction to men and women)
- Pansexual (attraction to people of any sex, gender, or gender identity)
- Asexual (lack of sexual attraction)
- Other (please specify) _____

5. Socioeconomic status:

- Working class
- Middle class
- Upper-Middle class
- Upper class

6. Class year (by academic credit):

- First Year
- Sophomore
- Junior
- Senior

7. What type of student are you?

- Residential
- Commuter

8. Have you ever been or are you currently diagnosed with the following mental health conditions? (check all that apply)

- Depression
- Anxiety
- Bipolar disorder
- Post-traumatic stress disorder
- Attention deficit/hyperactivity disorder

- Autism spectrum disorder
- Intellectual disability
- Other (please specify) _____

Appendix D
Consent Form

Dear participant,

You are invited to participate in a study conducted by University of New Haven Honors student Elizabeth Sloane, under the supervision of Dr. Melissa Whitson.

The purpose of this research is to examine relationships between past experiences and current functioning. Participants will be asked to complete online questionnaires and provide some demographic information. Completion of this study will take approximately 15-20 minutes.

The questionnaires address personal experiences, and it is possible that some people may experience mild psychological stress or discomfort. **Participation in this research is completely voluntary and may be withdrawn at any point, and for any reason, without consequence.** Responses to the questionnaires are confidential. Only the researchers will have access to participant responses.

By participating in this study, you may have the opportunity to earn course credit at your instructor's discretion. Upon completion of the study, you will have the opportunity to be entered in a drawing to win one of two \$75 Amazon gift cards. To be entered in the drawing, you will be asked to provide your email. Email will be used solely for the purpose of contacting you if you are the recipient of a gift card and will not be connected to your responses.

If you have any questions or concerns please contact the researcher, Elizabeth Sloane, at esloa1@unh.newhaven.edu or her Honors thesis advisor, Dr. Melissa Whitson, at mwhitson@newhaven.edu . If you have concerns about the study or your rights as a research participant and would like to speak to someone other than the researchers, contact the University of New Haven Institutional Review Board chair, Dr. Alexandria Guzmán at irb@newhaven.edu .

If you experience any distress after participating in the study and would like to talk with someone, you can contact the University of New Haven Counseling Center at (203) 932-7333.

I have read the above information and I understand that my participation is voluntary and may be withdrawn at any point, without consequence. I am 18 years of age or older, and I agree to participate in this study.

- I agree to participate.
- I do not agree to participate.

Acknowledgements

I would like to extend a special thank you to my thesis advisor, Dr. Melissa Whitson, for all of her guidance and support throughout the research process. I would not have been able to complete this project without her assistance, and I am extremely appreciative to have had her as my mentor. I would like to thank the University of New Haven Honors Program for the opportunity to conduct a thesis research project. I would also like to thank the University of New Haven Psychology Department for all of the teaching and mentorship I have received during the course of my degree. Finally, I would like to thank my family for their support and encouragement throughout the thesis research process.