Does Perceived Social Support Moderate the Relationship Between Cumulative Trauma and Psychological Distress?

By

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Abstract

Upwards of 80% of individuals encounter some type of trauma in childhood or adolescence and once individuals experience one type of trauma, they are more likely to have more experiences of trauma (Turner, Finkelhor, & Ormrod, 2010), which results in higher levels of psychological distress. Numerous factors have been identified as potentially protective in mitigating negative outcomes of traumatic experiences, but in particular, perceived social support is a common protective factor. Previously, literature focused on a single, specific type of trauma, so the purpose of this study is to fill the gap by exploring the relationship between cumulative trauma, perceived social support, and psychological distress. It was hypothesized that higher levels of cumulative trauma would result in higher levels of psychological distress, and higher levels of perceived social support would result in lower levels of psychological distress. Additionally, it was hypothesized that perceived social support would be a moderator with higher levels of perceived social support being related to less psychological distress. Data was collected through an online survey system including 319 participants from a rural southeast university in the United States. The Juvenile Victimization Questionnaire (JVQ; Finkelhor et al., 2005), the Life Events Checklist (LEC; Blake et al., 1995), the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988), and the Trauma Symptom Checklist-40 (TSC-40; Elliott & Briere, 1992) were administered; regression analyses were run to determine that both main effect hypotheses and the interaction effect hypothesis were significant. Results suggest that higher levels of cumulative trauma result in higher levels of psychological distress and that higher levels of perceived social support result in lower levels of psychological distress. Last, perceived social support was found to be a significant moderator for cumulative trauma and psychological distress. These findings initiate many meaningful clinical implications.

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DEDICATION

For my parents, who inspired me to pursue my dreams and dedicate my life to improving the lives of others.

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CHAPTER 1

INTRODUCTION

Traumatic experiences can vary greatly from an accidental single event (e.g., car accident) to an intentional, repeated event (e.g., child sexual assault). Additionally, traumatic experiences can range in severity, from relatively minor incidents (e.g., having a personal item stolen) to severe (e.g., sexual assault). Whether accidental, intentional, minor, or severe, individuals who survive traumatic experiences report feeling a range of consequences, including symptoms of psychological distress. Psychological distress is defined as the inability to cope with a stressor, often apparent by symptoms of depression, anxiety, and somatization (Drapeau, Marchand, & Beaulieu-Prévost, 2011). Measuring traumatic experience is difficult because of the variability in conceptualization of trauma in the research literature, as well as varied experiences of survivors.

It is estimated that approximately 80% of individuals will experience some form of trauma prior to the age of 17 (Finkelhor, Turner, Ormrod, & Hamby, 2009). After experiencing one type of trauma, the likelihood of experiencing additional trauma increases (Turner et al., 2010). To date, the research literature on trauma has typically focused on negative outcomes resulting from traumatic experiences (Martin et al., 2013; Park et al., 2015; Turner et al., 2010), specific types of trauma (e.g., Evans, Steel, Watkins, & DiLillo, 2014; Hamby, Finkelhor, Turner, & Ormrod, 2010; van Geel, Vedder, & Tanilon, 2014), the age at which the trauma occurred (e.g., Choi & Oh, 2014; Mersky, Topitzes, & Reynolds, 2013; Ogle, Rubin, & Siegler, 2014), and specific populations that seem to be especially vulnerable to experiencing traumatic events (e.g., Archard & Murphy, 2015; Park, Wachen, Kaiser, & Stellman, 2015; Shakespeare-Finch, Rees, & Armstrong, 2015; Turner, Shattuck, Hamby, & Finkelhor, 2013). What is less

known, however, is the role protective factors play in moderating the experience of psychological distress among cumulative trauma survivors. The purpose of the present study is to explore the potential moderating effect of perceived social support on the relationship between cumulative trauma and psychological distress.

Because of the varied descriptions within the research literature pertaining to trauma, for the purpose of clarity, the term *cumulative trauma* is used to encompass what other scholars have called polyvictimization (Finkelhor et al., 2005) and complex trauma (Herman, 1992). The current study explored the relationship between cumulative trauma and psychological distress to understand the increased complexity of symptomology experienced by those who have survived cumulative trauma. Then, perceived social support was examined as a moderating factor to determine how much influence social support has on the relationship between cumulative trauma and psychological distress. Next, a brief overview of the relevant background literature on cumulative trauma, perceived social support, and psychological distress is provided.

Single Trauma versus Multiple Trauma

Prevalence rates for single-event trauma are alarmingly high. Eighty percent of youth under the age of 17 (Finkelhor et al., 2005) and 98% of college females report at least one traumatic event during their lifetimes (Elliott, Alexander, Pierce, Aspelmeier, & Richmond, 2009). Keane et al. (2016) added that childhood trauma is linked with adult trauma, meaning that once someone has experienced trauma early in life, he or she is more likely to experience trauma as an adult (Keane et al., 2016). Because of this, researchers have shifted their view about how to explore trauma, moving from single-event trauma studies to exploring the role of cumulative trauma (Turner et al., 2010). This has resulted in a flux of literature focused on experiencing repeated traumatic events or multiple different types of trauma.

In order to understand the scope of trauma literature, it is necessary to first review each distinct subset that fits under the umbrella of cumulative trauma (i.e., complex trauma and polyvictimization). Each subset has its own terminology, which consequently has its own unique definition. For example, Finkelhor et al. (2005) referred to polyvictimization as the experience of four or more different types of trauma. Complex trauma, on the other hand, is used to label traumatic experiences that are chronic, occur early in life, and are interpersonal in nature (Brier & Scott, 2015; Cook, Blaustein, Spinazzola, & van der Kolk, 2003; Kliethermes et al., 2014; Wamser-Nanney, 2016). Cumulative trauma is a broader term, typically defined as experiencing multiple types of trauma throughout one's life (Martin, Cromer, Deprince, & Freyd, 2013). While different disciplines have described similar experiences in discreet ways, the term cumulative trauma will be used to describe individuals who have experienced polyvictimization and complex trauma across the life span.

The negative consequences of cumulative trauma are dependent on a number of factors including type of trauma, severity of trauma, duration of trauma, frequency of trauma, age of the survivor, the response of people closest to the survivor, the interpersonal nature of the trauma, and, if interpersonal, the relationship of the perpetrator to the survivor (Hodges et al., 2013). As one can see, taking a single-event perspective of trauma can result in missing (a) the contextual nature of how trauma is experienced, and (b) its subsequent impact on psychological functioning (Finkelhor, Ormrod, & Turner, 2007). Regardless of terminology, across the literature, experiences of cumulative trauma are consistently believed to result in more complex symptomology due to the repeated, aggregated nature of traumatic experiences (Hodges et al., 2013).

Negative Consequences of Trauma

Survivors of cumulative trauma are at an increased risk for negative outcomes and it is noted that each subsequent experience and unique type of trauma experienced may amplify symptoms (Martin et al., 2013; Park et al., 2015; Turner et al., 2010). Mental health symptoms and negative outcomes are strongly associated with those who continually experience trauma throughout their lifetime (Finklehor et al., 2009). Interpersonal traumas (e.g., sexual assault, physical assault, and robbery) significantly predict posttraumatic stress disorder (PTSD), but non-interpersonal trauma (e.g., natural disaster and motor vehicle accidents) does not. This is of interest because cumulative interpersonal traumas may be playing a more critical role in symptom development than cumulative non-interpersonal traumas (Briere, Agee, & Dietrich, 2016).

Cumulative trauma survivors, like survivors of complex trauma and polyvictimization, are at risk for experiencing a wide spectrum of symptoms. Due to the converging influences of multiple traumatic experiences, as well as individual differences, a range of symptoms is to be expected (Hodges et al., 2013). Cumulative traumatic experiences may result in immediate symptom expression or act as a risk factor later triggered by another experience (Maschi, Morgen, Zgoba, Courtney, & Ristow, 2011). The accumulation may result in more risk for adverse consequences over the life span.

Reactions to cumulative trauma may differ for many reasons, but common consequences consist of symptoms such as hyperarousal, avoidance, nightmares/flashbacks, depression, dissociation, anxiety, insecure attachment, behavioral issues, and emotional dysregulation (Kliethermes, Schacht, & Drewry, 2014). Kliethermes et al. (2014) also noted that interpersonal difficulties and family discord are common outcomes associated with cumulative trauma.

Additionally, Briere and Scott (2015) have noted that drug and alcohol abuse may be a negative consequence of cumulative trauma.

In addition to the types of symptoms cumulative trauma survivors may experience, it is important to note the intensity and severity with which they experience them. It is widely recognized that cumulative trauma outcomes tend to include more severe symptomology (Keane et al., 2016). In particular, "impairment seems to be more chronic and severe when trauma exposure has an earlier onset, increased duration, consists of multiple types of trauma, and is interpersonal in nature" (Kliethermes et al., 2014, p. 341). Understanding the impact of cumulative traumatic experiences should lead clinicians and researchers to explore what common or specific factors may positively influence the course and outcome of their symptoms. For instance, social support has been identified as a factor that may serve as a buffer against the deleterious effects of cumulative trauma (Rieck et al., 2005).

Social Support and Perceived Social Support

Social support is one factor that is specifically relevant as possibly protective against the negative impacts of trauma. Social support may come in many forms, such as parents, siblings, friends, partners, and other family members. Social support can be either formal (e.g., health care provider or clergy) or informal (e.g., friends or family) (Rieck, Shakespeare-Finch, Morris, & Newbery, 2005). It is widely recognized that social support is positively related with psychological well-being and physical health (e.g., Cohen & Willis, 1985; Maheux & Price, 2005). Social support helps reduce negative outcomes (e.g., isolation) by facilitating an individual's ability to cope with traumatic experiences or stressors (Rieck et al., 2005). Interestingly, perceived social support has been a better predictor of mental health outcomes than received social support (Hofman, Hahn, Tirabassi, & Gaher, 2016; Reid, Holt, Bowman,

Espelage, & Green, 2016). Perceived social support is an evaluation of one's resources and the availability of support when needed (Hofman et al., 2016). In general, social support has been shown in multiple cases to buffer against anxiety and depression, specifically when experienced following a major stressor, such as a trauma (Reid et al., 2016).

Perceived Social Support and Trauma

Perceived social support has emerged as a factor that protects individuals who have survived trauma from experiencing negative outcomes. After an individual survives a traumatic event, having support may help him or her to move past the trauma and even improve relationships with supportive networks (Rieck et al., 2005).

Whereas the literature on the impact of social support for trauma survivors is robust, unfortunately it has mostly focused on social support for single-event trauma or trauma experiences of specific, vulnerable populations. What is less known is how perceived social support plays a role in moderating the relationship between trauma that is cumulative in nature and psychological distress. The present study explores this gap within the literature by specifically examining the role perceived social support serves for survivors of cumulative trauma.

Hypotheses

As stated above, most research has focused on single, specific types of trauma, specific vulnerable populations, or perceived social support as a protective factor for trauma in general. Although perceived social support is often cited as a protective factor for negative outcomes of trauma, this has not been applied more specifically to cumulative trauma. The current study has attempted to determine if perceived social support is a significant moderator for the relationship

between cumulative trauma and psychological distress. As such, the following hypotheses were considered in this investigation:

Hypotheses regarding main effects

H_1: There will be a significant main effect of cumulative trauma history on psychological distress, with those experiencing higher levels of cumulative trauma experiencing higher levels of distress.

H_2: There will be a significant main effect of perceived social support on psychological distress in which an individual reporting higher levels of perceived social support will experience lower levels of distress.

Hypotheses regarding interaction effects

H_3: Perceived social support will moderate the relationship between cumulative trauma and psychological distress. The strength of the moderating relationship is predicted to be higher for those experiencing higher levels of cumulative trauma.

Method

Participants

A power analysis was conducted to determine the number of participants needed to establish an acceptable sample, which was approximately 220 participants. Author and committee determined that collecting approximately 100 more participants than the smallest sample size deemed suitable to detect the effect and would allow room for data cleaning; therefore, the goal for participation was 350 students. Responses from students at a rural Southeast university between the ages of 18 and 24 were collected through an online database using Qualtrics. Participants were a convenience sample of 358 college students, representative of the current university population from which they were sampled. Prior to analyses, data was cleaned to remove participants for lack of completion and incorrect responses to attention

checks. Three participants were removed for not consenting to the research at the informed consent stage. Five participants were removed due to not completing any of the questionnaires in the survey. Last, the check questions were used to remove participants who did not answer 75% of these items correctly (n = 25). After this portion of the data cleaning, 325 participants remained.

As shown in Table 1, the majority of participants in this study were relatively evenly distributed between 18 and 21 years of age (n = 237, 74.3%). Many individuals did not identify their age (n = 47, 14.7%) and several identified an age outside of the age requirements for the study (n = 6, 1.8%). After these participants were removed, the final number of participants analyzed for the study was 319. Descriptive statistics based on race revealed 63.6% of participants identify as White, 18.2% identify as African American or Black, 14.7% identify as Multi-Ethnic or Multi-Racial, 2.2% identify as Hispanic, and 1.3% identify as unspecified/other, respectively. Also similar to current university demographics, gender was disproportional with 74.9% of participants identifying as female, 24.8% identifying as male, and 0.3% identifying as "other." Lastly, 42.8% of individuals endorsed receiving mental health services at some point in their life and 57.2% denied history of mental health services. Of those who endorsed services, 12.3% identified current participation in therapy and 46.8% identified participation in therapy as a result of a traumatic event.

Measures

A demographic questionnaire was used to ascertain information about race, ethnicity, gender, sexual orientation, year in school, age, relationship status, past psychiatric treatment (therapy), and current psychiatric treatment (see Table 1). Additionally, four measures were included in the survey for a total of 105 questions. The full survey can be found in Appendix A.

Table 1.

Demographic Characteristics of the Sample

Variable	Frequency	Percent
Biological Sex		
Male	81	25.8%
Female	232	73.9%
Other	1	0.3%
No Response	5	1.6%
Gender Identity		
Man	79	24.8%
Woman	239	74.9%
Other	1	0.3%
Age		
18	61	19.1%
19	63	19.7%
20	64	20.1%
21	49	15.4%
22	27	8.5%
23	5	1.6%
24	3	0.9%
No Response	47	14.7%
Race		
White	203	63.6%
Black or African American	58	18.2%
American Indian or Alaskan Native	1	>1%
Asian Indian	0	0%
Chinese	1	>1%
Filipino	1	>1%
Japanese	0	0%
Korean	0	0%
Vietnamese	1	>1%
Other Asian	0	0%
Native Hawaiian	0	0%
Guamanian or Chamorro	0	0%
Samoan	0	0%
Pacific Islander	0	0%
Hispanic, Latino or Spanish	7	0%
Multi-Racial	47	14.7%
Year in College		
First Year	127	39.8%
Second Year	64	20.1%
Third Year	66	20.7%
Fourth Year	51	16.0%
Fifth Year	6	1.9%
Other	5	1.6%
Sexual Orientation		
Heterosexual	278	87.1%
Homosexual	8	2.5%
Bisexual	20	6.3%
Questioning	6	1.9%
Asexual	5	1.6%
Asexual and Bi-Romantic	1	0.3%
Pansexual	1	0.3%

The Juvenile Victimization Questionnaire-Adult Retrospective Version (JVQ-R2). The JVQ-R2 (Finkelhor et al., 2011) is a self-report measure that assesses 34 types of victimization that may have occurred before the age of 17. Instructions were altered slightly to remove the age limit of 17 to include lifetime cumulative trauma. For purposes of this study, the Screener Sum Version was used; questions range from high probability/low severity (e.g., having an item stolen) to low probability/high severity (e.g., being kidnapped). Responses were reported on a 5-point scale ranging from 0 ("no") to 4 ("four times or more"). Based on the hypotheses, participants' responses were dichotomized into values of "0" (never experienced that type of trauma) and "1" (experienced that type of trauma at least one time). A total score was determined by summing the 33 questions (one question was unintentionally left out of the survey) to represent how many different types of victimization are endorsed.

The overall α for the JVQ for respondents answering all 34 items was .80 (Finkelhor, Hamby, Ormrod, & Turner, 2005). Construct Validity was measured by determining how endorsement of JVQ items was reflected in trauma symptomology and was found to be a moderate, but significant predictor (Finkelhor et al. 2005). The JVQ-R2 has been widely used since its creation as a comprehensive measure of trauma and it has been used across populations (e.g., Hamby et al., 2010; Segura, Pereda, Guilera, & Abad, 2016; Turner, Finkelhor, & Ormrod, 2010), including the college population (Elliott et al., 2009).

The Life Events Checklist (LEC). The LEC (Blake et al., 1995) is a 17-question self-report measure created to assess a number of difficult or stressful things that sometimes happen to people. Responses are recorded based on five categories: happened to me personally, witnessed it happen to someone else, learned about it happening to someone close, not sure if it fits, and does not apply. Respondents are able to endorse more than one answer per question.

According to Gray, Litz, Hsu, and Lombardo (2004), "the mean kappa for all items was a .61 and the retest correlation was r =.82, $p < .001$" (p. 334). It is noted that the LEC is a stable screening measure able to measure varying levels of direct exposure to potentially traumatic events (Gray et al., 2004). The LEC was not used in the analysis for this study, but may be used for future research.

The Multidimensional Scale of Perceived Social Support (MSPSS). The MSPSS (Zimet, Dahlem, Zimet, & Farley, 1988) is a 12-question self-report measure created to assess subjective social support from three different sources: friends, family, and significant other. Responses are recorded using a 7-point scale ranging from 1 ("very strongly disagree") to 7 ("very strongly agree"). An overall perceived social support score was calculated by summing each response and dividing by 12. For exploratory analyses, a subscale score was calculated by summing the responses to the four questions and dividing by four for each of the three different sources. The subscale scores allow for a clearer understanding about the influence of specific types of perceived social support. The measure of internal reliability for the total scale was .88. Significant other, family, and friends subscales were also good with values of .91, .87, and .85, respectively (Zimet et al., 1988). The measure has strong factorial validity and moderate construct validity (Zimet et al., 1988). The MSPSS has been used across populations (Clara, Cox, Enns, Murray, & Torgrudc, 2003; Osman, Lamis, Freedenthal, Gutierrez, & McNaughton-Cassill, 2014), including the college population (Clara et al., 2003; Reid et al., 2016).

The Trauma Symptom Check List–40 (TSC-40). The TSC-40 (Elliott & Briere, 1992) is a 40-item self-report measure created to assess symptomatic distress resulting from traumatic experiences. Responses are reported on a on a 4-point scale measuring how often a symptom was experienced ranging from 0 ("never") to 3 ("often"). A total score was calculated by summing all

responses. The total score has high reliability with an alpha of .90. Subscale alphas range from .62 (Sexual Abuse Trauma Index) to .77 (Sleep Disturbances; Elliott & Briere 1992).

Procedure

Informed consent, recruitment, and participation. The current study was approved by the university's Institutional Review Board. Participants were recruited through a university-based online system (SONA) that enables students at the university to create accounts to participate in research for extra credit in psychology courses. The current study was posted on that site, including the name of the study, study description, age requirement (18-24 years old), and credits awarded. Consent was collected passively by clicking a button agreeing to complete the survey. Any participant who selected "decline" to the consent question was routed directly to the end of the study and provided with contact information and resources; that data was removed from the study (n = 3). As part of the study description, students were informed that questions were assessing trauma history and current symptomology. Students were offered two credits since the study length was expected to take between 30-45 minutes (one credit per 30 minutes). Students were awarded credit regardless of completing the survey, meaning they were free to discontinue participation at any time without repercussions. Surveys that were not at least 75% completed were removed from data analysis (n = 5).

After students signed up for the study on SONA, a link to the survey on Qualtrics appeared. Students were free to start the survey at any time, but once the link was opened, it had to be completed. The link opened with the informed consent, and the participant had to "accept" to continue. First, demographic questions were administered, followed by the three questionnaires. Once the participant answered the last question and chose "next," a debriefing

statement appeared. The debriefing statement included investigator contact information as well as campus resources in the event the survey had caused distress.

Formulation of the survey. The full survey consisted of 105 questions: 33 questions comprised the JVQ-R2 (it was discovered during data cleaning that one JVQ question was missing from the survey), 12 questions comprised the MSPSS, and 40 questions comprised the TSC-40. Thirteen items were used to measure demographics and other variables of interest, and seven questions were inserted in the measures as check questions (e.g., "answer 2 for this question").

Analysis

A series of regression analyses were used to test the hypothesis that perceived social support moderates the relationship between cumulative trauma and psychological distress. Moderator relationships require a significant interaction between the proposed moderator (i.e., perceived social support) and the independent variable (i.e., cumulative trauma) (Baron & Kenny, 1986). Each cumulative trauma x perceived social support interaction was tested using a regression (Aiken & West, 1991). In addition to this, exploratory analyses were conducted to investigate more thoroughly any additional factors that may have contributed to the findings. Particularly, differences in demographic information were explored and the perceived social support variable was broken down by type to gain clarity on if a particular type of social support is more influential in moderating the relationship between cumulative trauma and psychological distress.

Results

Preliminary Data Analyses

Means and standard deviations for all study variables are reported in Table 2. Overall, participants reported moderate levels of trauma (M = 9.18, SD = 6.32). Those experiencing four or more types of trauma were considered to have experienced cumulative trauma (81.2%). Participants, on average, reported experiencing moderate to high levels of perceived social support (M = 5.68, SD = 1.18) and mild to moderate levels of psychological distress (M = 33.26, SD = 21.09). Consistent with previous research (e.g., Briere et al., 2016; Hodges et al., 2013), there was a significant, strong positive correlation between cumulative trauma and psychological distress (r = .568, p = .000). Likewise, although not as strong, there was a significant, negative correlation between perceived social support and psychological distress (r = -.140, p = .012). Therefore, the first two hypotheses were confirmed. That is, those who experience higher levels of trauma also experience higher levels of distress; and, those who experience higher levels of perceived social support experience lower levels of psychological distress. Intercorrelations for these variables are displayed in Table 3.

Table 2.

Mean Scores for Cumulative Trauma, Perceived Social Support, & Psychological Distress (n = 319)

Variables (Measures)	M	SD
Trauma (JVQ-R2)	9.18	6.32
Perceived Social Support (MSPSS)	5.68	1.18
Psychological Distress (TSC-40)	33.26	21.09

Table 3.

Correlation between Variables (n = 319)

Measure	JVQ-R2	MSPSS	TSC-40
JVQ-R2	1	-.233**	.568**
MSPSS	-	1	-.140*
TSC-40	-	-	1

Note. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Primary Analyses: Tests of Moderation

In order to test the third hypothesis, this study used the model developed by Baron and Kenny (1986) for determining a moderating relationship. In order to limit multicollinearity, the variables for trauma and perceived social support were centered. To test the hypothesis that perceived social support moderates the relationship between cumulative trauma and psychological distress, a multiple regression analysis was run using cumulative trauma and cumulative trauma X perceived social support (interaction term) as predictor variables, and psychological distress as the dependent variable. Results from this analysis, and in concert with the aforementioned intercorrelations, showed that cumulative trauma significantly predicted psychological distress, $\beta = .526$, $t(319) = 11.352$, $p = .000$; and, perceived social support was significantly and negatively correlated with psychological distress, $\beta = -.177$, $t(319) = -3.803$, $p = .000$. Additionally, perceived social support was a significant moderator for the relationship between cumulative trauma and psychological distress, $\beta = -.109$, $t(319) = -2.352$, $p = .019$. Therefore, the third hypothesis was supported. The model of moderation is displayed in Figure 1.

Model of Moderation

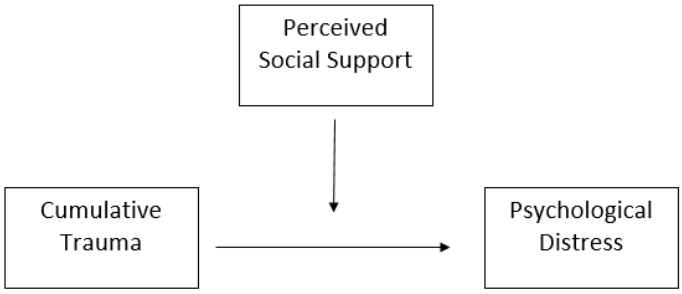

Figure 1. Perceived social support as a moderator of cumulative trauma and psychological distress.

Simple slope analyses were run for high levels of cumulative trauma (1 SD above the mean) and the interaction effect of perceived social support, and results showed that perceived social support is an even stronger moderator in cases of higher cumulative trauma, β = -.287, $t(319)$ = -3.986, p = .000. The simple slope analyses were run again for low levels of cumulative trauma (1 SD below the mean) and the interaction effect of perceived social support, and perceived social support was not a statistically significant moderator, β = -.067, $t(319)$ = -1.126, p = .261. These findings mean that the interaction between social support and cumulative trauma on self-reported psychological distress is such that it makes a significant difference for individuals who reported higher levels of cumulative trauma, but makes no difference for individuals who reported lower levels of trauma. The simple slopes graph is shown in Figure 2.

Simple Slopes Graph

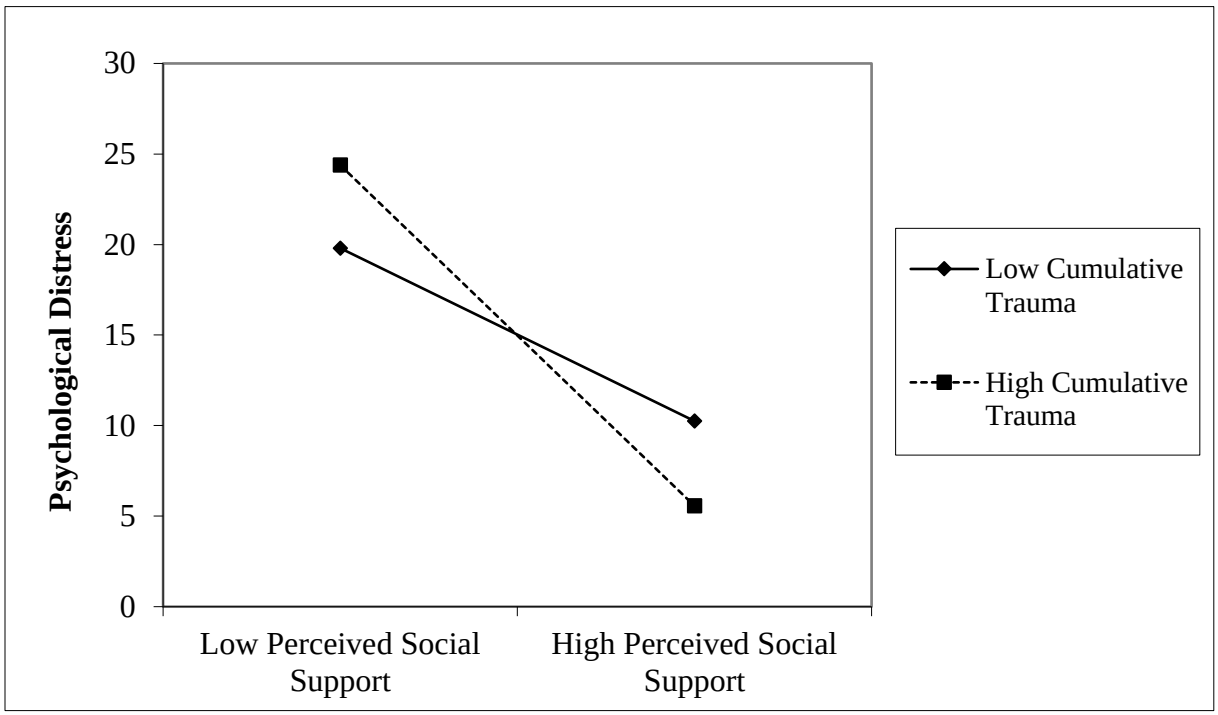

Figure 2. Simple slopes analyses for high and low cumulative trauma and perceived social support.

Exploratory Analyses

As previously stated, it was determined that exploratory analyses should be used to gain a deeper understanding of the results. Several different explorations were investigated, by looking into differences in demographics and individual types of perceived social support.

When exploring demographic variable differences within the sample, an independent-samples t-test was used to determine if there were any statistically significant differences for any of the three variables (cumulative trauma, perceived social support, and psychological distress) based on gender. From this test, the only statistically significant findings based on gender showed that females reported a mean difference of 6.5 (p = .018) on psychological distress. This means that females in this study on average experienced psychological distress at a higher rate than males. Gender comparisons for this study are difficult to make because of the

disproportionately high number of females versus males. To continue exploring demographic differences, a One-Way ANOVA was used to explore potential age differences in the three variables. No statistically significant differences were based upon age. Again, this may be because participants were constrained in age (18-24 years old), limiting the variability needed to detect meaningful differences.

To provide a more thorough understanding of the impact based on the type of perceived social support, a regression analysis for the interaction was completed for each of the three types of perceived social support (i.e., friend, family, and significant other) and none of the three interactions were statistically significant when tested individually. It is important to note that the significant other support (β = -1.742, $t(319)$ = -2.339, p = .020) and family support (β = -2.157, $t(319)$ = -2.692, p = .008) are both significant predictors of trauma symptoms (negatively related). Friend support is not a significant predictor of trauma symptoms, but is approaching significance (β = -1.489, $t(319)$ = -1.900, p = .059). This finding was particularly interesting since previous research has addressed the shift from family (parent) support to friend support during adolescence and emerging adulthood (Traylor, Williams, Kenney, & Hopson, 2016).

Discussion

General Findings

Finkelhor et al. (2005) reported that children, on average, have experienced three lifetime incidents of trauma. As this study extended the age range used by Finkelhor and colleagues, and investigated individuals up to the age of 24, it is not surprising that 81.2% of individuals in the sample reported four or more types of trauma (M = 9.18, SD = 6.32). Though this is not surprising, and based on the previous research, this high of a number is alarming even though the severity of many of these traumatic experiences may be low. Assessing experiences of trauma up

to the point of taking the survey may have added months of experiences for some individuals and years for others as compared to previous research that focuses solely on childhood. To provide further understanding of why this number is so high, it is important to consider that once individuals experience one type of trauma, they are more likely to experience another trauma (Turner et al., 2010), and that several types of traumatic experiences can co-occur (e.g., physical and verbal abuse; Briere et al., 2016). Additionally, college is a time of exploration and identity development, which often involves risk-taking behaviors, and the culture of college promotes participating in such behaviors (Dworkin, 2005). Though this often is seen as developmentally appropriate, it may in turn increase the potential for experiencing trauma. Understanding the prevalence of cumulative trauma in the college population is imperative to comprehend the connections with perceived social support and psychological distress.

Tinajero and colleagues (2015) stated that perceived social support is one of the most important protective factors for students transitioning to college. Students in this study reported, on average, a high level of social support (M = 5.68, SD = 1.18) as measured by the MSPSS. As this study was conducted in a college population, it is possible the amount of available resources on campus, and the perception of the availability of support, were higher than they may be in the general population. It can be suggested that attending college is a privilege that not all individuals are afforded and to become a college student, a certain level of social support is likely pre-existing. This suggestion leads to the assumption that not only do college students have certain available resources above and beyond the general population, but also that certain resources may have been available to them prior to college, which helped facilitate the college transition process and retention. These assumptions are not meant to overgeneralize, because certainly many individuals have experienced a difficult path to become a college student.

Alternatively, these assumptions are meant to suggest that, for many college students, there are likely systems and resources in place from which the general population has not benefited, which consequently may be an explanation for why the reported levels of perceived social support were higher in this study. Additionally, Ciarrohi et al. (2017) found that combining multiple sources of social support is associated with higher levels of well-being. The findings from the present investigation support this assertion. When researchers in this study investigated the differences between total perceived social support versus individual types of social support, total social support more clearly moderated the relationship between cumulative trauma and psychological distress.

Both the levels of cumulative trauma and perceived social support in this study were slightly higher than expected, though this can potentially be explained by the above literature. These analyses were conducted prior to testing the hypotheses to gain a better sense of the levels within this sample.

Hypothesis 1

Remaining congruent to the multitude of journal articles that connect traumatic experiences to higher levels of distress and symptomology, it was hypothesized that there would be a significant main effect of cumulative trauma history on psychological distress, with those experiencing higher levels of cumulative trauma experiencing higher levels of distress. Results indicated a significant positive correlation between cumulative trauma and psychological distress. This means that as individuals reported more experiences of trauma, they also reported experiencing higher levels of psychological distress. According to Turner et al. (2010), those who endure cumulative trauma are at the greatest risk for mental health issues. Findings from the present study seem to align with Turner and colleagues' assertion. Additionally, this study

aligns with the previous literature that reports experiencing cumulative trauma results in more negative outcomes than single-event trauma (e.g., Finkelhor et al., 2009; Kliethermes et al., 2014; Turner et al., 2010).

Hypothesis 2

Repeatedly the literature cites perceived social support as a predictor of mental health outcomes (e.g., Hofman et al., 2016; Reid et al., 2016) and as such, this study explored that connection between levels of perceived social support and the impact on psychological distress levels. It was hypothesized that there would be a significant main effect of perceived social support on psychological distress in which an individual reporting higher levels of perceived social support would experience lower levels of distress. Again, results indicated a significant, negative correlation between perceived social support and psychological distress. This finding supports what has been previously stated in the literature, which is that social support is a potent factor in mitigating against the deleterious effects of negative life experiences and associated mental health concerns (Rieck et al., 2005).

Hypothesis 3

In an effort to expand on the previous literature, it was hypothesized that higher levels of perceived social support result in lower levels of psychological distress, although the strength of this relationship is predicted to be higher for those experiencing higher levels of cumulative trauma. Results indicated that the relationship between cumulative trauma and psychological distress was significantly moderated by perceived social support. In other words, those who endorsed cumulative trauma and high levels of perceived social support reported lower levels of psychological distress. That is, perceived social support seemed to act as a buffer against heightened mental health concerns stemming from prior traumatic experiences, and in fact, for

individuals with higher levels of trauma, perceived social support makes a more significant difference. This finding is in line with other similar research within the field. Notably, perceived social support is reported to buffer against negative outcomes for individual types of trauma such as sexual assault (Johnson & Johnson, 2013) and for populations that are considered at-risk or vulnerable (e.g., emergency medical dispatchers, military, homeless individuals). Often, these populations are vulnerable to experiencing cumulative trauma. Consequently, the previous research has focused on the positive impact perceived social support can have for at-risk populations, though not specifically in relation to cumulative trauma (Archard & Murphy, 2015; Park et al., 2015; Shakespeare-Finch et al., 2015; Turner et al., 2013). This means that perceived social support has been identified as a protective factor for individuals vulnerable to trauma, but the decrease in symptomology in relation to increasing amounts of cumulative trauma has not specifically been explored. Instead, the influence of perceived social support for the populations as a whole has been investigated. This study's findings suggest that for cumulative trauma survivors, higher social support may result in lower psychological distress.

Exploratory Findings

After reviewing the preliminary findings, researchers in this study sought to further understand if other factors, such as gender, age, and type of support, might also be important when considering the moderating effect of social support on the relationship between trauma and mental health concerns. Of the three variables, the only statistically significant differences in gender were associated with psychological distress. There was a mean difference of 6.5 (p = .018) between women and men associated with psychological distress, which is consistent with findings from Norris and colleagues (2002), who reported females as being more likely than males to develop PTSD within their lifetime. Additionally, previous research has noted more

complex symptomology for females than males according to caretaker reports (Hodges et al., 2013). Interestingly, there were no statistically significant differences in levels of cumulative trauma or perceived social support between men and women. As research on cumulative trauma is still on the rise, it was helpful to review literature focused on single trauma to better understand this lack of significance. Generally, it is commonly accepted that males tend to experience higher levels of single-event traumatic experiences (e.g., car accidents, physical assault) and females are more likely to experience childhood sexual assault, which may by more enduring in nature (Norris et al., 2002). Additionally, this study's finding of no significant differences between men and women was consistent with Guerra and colleagues (2016), who also reported no differences in how men and women make sense of the traumatic experiences. Finally, the lack of a statistically significant difference based on gender for perceived social support aligns with previous studies that has found no differences in perceived social support based on gender available after release from prison (Pettus-Davis, Veeh, Davis, & Tripodi, 2018).

To continue exploring demographic differences, a One-Way ANOVA was run to determine if there were any statistically significant differences in the three variables based on age, which there were not. This lack of statistical significance may be for several reasons, including that this study utilized a very narrow age range (18-24 years old). Previous studies retrospectively assessed for trauma experienced before the age of 17, but the age range of participants was not limited. This study expanded the age range of when the trauma could have occurred up to the age of 24. The statistics reported in this study for number of traumatic experiences were higher than many of the studies that only assessed for traumatic experiences prior to the age of 17 (e.g., Finkelhor et al., 2005; Turner et al., 2010), which suggests that

extending the age of when trauma occurred resulted in a more encompassing picture of the survivor's whole experience. Participants were fairly evenly distributed from ages 18-21 and then significantly tapered off from ages 22-24. These differences in distribution could have impacted the statistical significance and effect size. These implications will be discussed further in the directions for future research section.

Previously, literature showed conflicting evidence about the impact of whether or not particular types of social support (e.g., individual versus familial) are more beneficial in moderating distress (e.g., Barnes et al., 2016; Ciarrohi et al., 2017; Evans et al., 2014; (Schwerdtfeger Gallus, Shreffler, Merten, & Cox, 2014). In an attempt to better understand these conflicting findings, a regression analysis was completed for each of the three types of perceived social support as measured by the MSPSS (i.e., friend, family, and significant other). None of the three interactions were statistically significant moderators on their own. This suggests that individually, none of the three types of perceived social support provides enough support to moderate the relationship between cumulative trauma and psychological distress on their own. It should be noted that the significant other and family support variables were significantly and negatively correlated with trauma symptoms, whereas friend support was not. One may infer, then, that significant other and family may be more salient in mitigating the effects of psychological distress. This finding was slightly surprising since according to Traylor et al. (2016), friend support becomes more important for adolescents as they grow older and become more autonomous. Though, it is also noted that the positive impact from friend support is dependent on the friend's well-being and behavior, which was not examined by the measures used in this study.

Clinical Implications

First and foremost, the need for assessing trauma, cumulative trauma, and the impact of trauma is highlighted by the high numbers of individuals in this study who reported traumatic experiences and their psychological sequalae. Understanding how common it is for someone to have experienced some type of trauma is important for clinicians in the initial assessment/intake process and during conceptualization. Oftentimes, when only one type of trauma or event that is considered "more severe" is assessed, additional and more subtle types of trauma may be overlooked. Also in these cases, symptoms can be misattributed, the impact of a specific event may be overestimated, or the interrelatedness between events could be missed altogether (Finkelhor et al., 2007; Turner et al., 2010). This study exemplifies the importance of assessing for cumulative trauma, which includes the higher frequency, lower severity events as well. Traumatic events may range in severity or frequency, but ultimately each individual responds differently to a traumatic experience.

That being said, it is also important to recognize the survivor as the expert on his or her experience and explore the unique impact it has had on his or her life. The information provided by this study exhibits how many individuals not only experience one type of trauma, but experience multiple. This knowledge should be used by professionals to better understand those who seek their services regardless of setting (e.g., medical, university counseling center, private practice). Depending on the professional setting, a more thorough assessment may be useful, though at the least, empathy and conceptualization of the person as a whole, including all life experiences, is a necessity. By recognizing the survivor as the expert, the power is taken away from determining "if" something is considered traumatic and allows for meeting the individual where he or she is to begin moving forward.

Not only is it important for clinicians to attend to a thorough assessment of trauma, but it is imperative to accurately assess symptomology. Understanding that higher levels of cumulative trauma result in higher levels of psychological distress, regardless of the types of trauma the individual has survived, is of paramount importance in delivering effective services. Again, employing a more encompassing assessment of symptoms allows for a more holistic approach to working with a survivor and may incorporate symptoms that were missed or not considered to be relevant. This bigger picture approach can result in a more thorough treatment plan and ultimately provide more support and positive outcomes. The theory behind a trauma-informed approach is routed in this idea and knowledge, and many settings are beginning to incorporate trainings and protocols based on this notion. According to the Substance Abuse and Mental Health Services Administration (2015),

> a program, organization, or system that is trauma-informed realizes that widespread impact of trauma and understands potential paths for recovery; recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and responds by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively resist re-traumatization. (p. 9)

Taking a trauma informed approach is becoming best practice not only in mental health settings, but also in medical practice.

Additionally, this data informs clinicians of the power of perceived social support, particularly for cumulative trauma survivors. Since many individuals seeking treatment have experienced at least one type of trauma in their life, it is good practice to explore current perceived social supports and look to build upon them. Occasionally, depending on the nature of the trauma (i.e., interpersonal), perceived social support may be significantly impacted, whether

it be because of the person who was the offender or because the survivor's response to the event may be to socially isolate. In these situations, it is particularly important to encourage contact with supports who are trusted. For those professionals working in a mental health setting, therapy may be a survivor's first experience with a supportive relationship, so helping to foster that relationship and skills that are transferrable to other relationships is key.

Not only is increasing perceived social support important for those who have survived cumulative trauma, but ultimately it can be beneficial for all clients. A preventative approach can be taken by targeting perceived social support early in treatment to promote well-being, which may also serve as a protective factor should an individual experience a future traumatic event. It is likely that improving social support is already incorporated by many clinicians, but the results of this study provide even more evidence to support the benefits.

Last, depending on the setting, prevention work and outreach about the impact of trauma, common occurrence of cumulative trauma, and importance of perceived social support may be beneficial and can take many different forms. Often trauma survivors feel very alone or isolated in their experience; however, if there was more insight prior to an event occurring, it may facilitate help-seeking. According to Kantor, Knefel, and Lueger-Schuster (2017), low mental health literacy has been identified as one of the most important obstacles for seeking treatment. Specifically, survivors reported uncertainty of where to seek help and a lack of knowledge about services as being additional barriers. Much of this information can be provided to the general population as a preventative measure and would likely be beneficial for all individuals, but particularly for those who go on to experience a traumatic event. Prevention work may also take other forms and help to reduce the frequency of interpersonal trauma once individuals understand how their actions may be impacting others. Based on today's political climate and

representation in the media, experiences of surviving trauma and speaking out are much more prominent. This is promoting more conversations around what makes a healthy relationship, what is consent, and how changes can be made to reduce the occurrence of trauma and abuse. These types of conversations can be continued on all levels to promote health and wellness, support survivors, and prevent future experiences that could be traumatic. Psychoeducation, based in the literature, is a key part of this change.

The clinical implications mentioned would significantly improve a client's experiences and ensure a more thorough clinical conceptualization of the individual. These suggestions can be implemented in both a preventative and responsive way. It is also important to realize that the findings of this study and clinical implications are impacted by the limitations of this study.

Limitations

As is common with conducting research, there are several limitations associated with this study. First, using an online, self-report survey format, though beneficial for convenience, is also not without several issues that must be considered. The ability to take the survey anywhere the participant has access to internet and a computer or phone adds several complicating factors. Specifically, individuals have the ability to click through the questionnaire without answering any questions accurately, or by providing the same answer to every question. For that reason, check questions were inserted into three of the four questionnaires randomly, and several participants had to be removed due to answering three or more check questions wrong. Though, by inserting check questions to prevent answering randomly, it does not ensure that was not the case for others who met the requirements for the check questions. Additionally, online surveys do not allow for researchers to see participants' reactions to questions as they are completing the questionnaire. Consequently, in rare cases that responding to these questions may have caused

increased distress, researchers were not aware nor able to check in to provide resources, which is why multiple campus and community resources were provided as part of the debriefing statement.

A second limitation of this study is the use of a college student population, particularly with the age range of 18-24 years old and with the demographic makeup at this university. Several participants identified an age above that range, and therefore had to be excluded from the analysis. Many participants did not report their age and it is unclear why that may have happened, though the data for these participants remained in the analyses. By limiting the age range, non-traditional students may have been excluded from the population. Also, by using a college population, the data is certainly limited in many ways, which may specifically have impacted this study. College students are often, though not always, privileged to have some forms of perceived social support and possibly higher financial means. This means that it is possible by capturing a college student population, they may be skewed to higher levels of support and potentially lower levels of trauma depending on family background. According to research, individuals from lower socioeconomic status (SES) backgrounds or ethnic and racial minorities tend to live in less safe areas, resulting in higher levels of trauma (Turner et al., 2013). As the current study primarily consisted of Caucasian females, few between-group differences for racial or cultural variables could be assessed. So generally, the lack of diversity in age, cultural and racial background, SES, sexual orientation, and otherwise creates a lack of generalizability to a larger population. Though this study is a good start in filling a gap, more understanding with a more generalizable population is imperative.

A third limitation is related to the use of the JVQ-R2 questionnaire. First, one of the questions was unintentionally left out from the survey (i.e., “Did someone threaten to hurt you

when you thought they might really do it?"). This was discovered at the time of analysis and though there are other similar questions (i.e., "Did someone start to attack you, but for some reason, it didn't happen? For example, someone helped you or you got away?"), it is unclear how this missing item may have impacted the study. Also, the Screener Sum version was used, though the supplemental questions were not and instead the LEC was added to try to account for other types of trauma that were not being measured. At the time of analysis, it was determined the LEC could not be combined with the JVQ for an overall score, so it was not used. In retrospect, it would have been more useful, and simpler, to use the supplemental questions to gather the additional information without overlap. Not only would it have provided a more encompassing picture of experiences, it also would have been cleaner for statistical analysis purposes. Also, the version used in this study (i.e., Adult Retrospective) allows for adults to think back on their lives, which may also be a limitation because 18-24 year olds may not necessarily remember every traumatic event that they experienced, and sometimes the most severe events may be blocked from their memory. In general, any retrospective measure adds a limitation, but currently is the most commonly used format to understand experiences of trauma.

Finally, the use of the MSPSS measure adds a limitation because although it is a reliable and valid measure, the normed populations are unclear. It has been widely used across many populations, including a college student population, but there are no established population norms on the MSPSS. According to the scoring information, "norms would likely vary on the basis of culture and nationality, as well as age and gender" (Zimet et al., 1988). Additionally, the participants in this study reported a very high level of social support overall, which may have been due to being a college population. However, having such a high level of social support could have acted as a ceiling effect, and therefore could potentially be limiting the interaction

effect. It is unclear if this is a measurement issue or a population issue, but should be considered for future research.

Directions for Future Research

Based on the findings, clinical implications, and limitations, several directions for future research are worth noting. First, completing a similar study utilizing the JVQ-R2 Screener Sum version with supplemental questions may better explore untapped areas of cumulative trauma. This study attempted to gather that information with a separate screener (i.e., LEC), which made scoring difficult and incompatible to integrate the findings of the two measures together in meaningful ways. The JVQ-R2 has additional supplemental items based on several scales: Exposure to Family Violence and Abuse, School Violence and Threat, Other Severe Assaults, Electronic Victimization, Exposure to Community Violence, and several additional items for neglect and peer relational aggression. Utilizing these additional items would allow for a more thorough assessment of experiences. Of particular interest are the Electronic Victimization items, due to the current increase in research on victimization that is occurring through social media and text messaging.

Next, it would be very helpful to widen the sample from only 18-24 years old to all college students and then potentially widen it even further to individuals at all ages. By limiting the age for this study, several participants were unintentionally excluded. These individuals may be non-traditional college students, who potentially have had a more difficult path to college, and therefore that valuable data was missed. As a college student population was used out of convenience, though informed by research, a future study should look at individuals at all ages to better understand how experiences of cumulative trauma may change across the life span.

Included in widening the age range, it would be beneficial to complete a similar study with a more diverse (e.g., racially, ethnically, sexual identity, sexual orientation) subject pool. As this study was completed at a predominately White institution located in a rural area, it was hard to make generalizations to other populations due to the lack of diversity. As noted in the literature, there may be several aspects of demographics that may be related to experiences of cumulative trauma, particularly low SES and education (Turner et al., 2013). It is unclear how those demographics would impact the findings of this study, but it is realistic to address that being in a college population holds a level of privilege in itself that likely impacts both the number of traumatic experiences and level of perceived social support. As the findings of this study already exhibit high levels of trauma, if anything, it is likely the levels may be higher in less-privileged samples. Additionally, it would be beneficial to have more men in the study to be able to make gender comparisons based on amount of cumulative trauma experienced, level of perceived social support, and amount of psychological distress experienced. If the number of males and females was comparable, one could also explore different types of traumatic experiences and influences of different types of perceived social support with respect to gender.

Future research could also build upon the exploratory analyses by understanding more about the impact of different types of trauma and different types of perceived social support. As the JVQ is mostly focused on interpersonal trauma, it would be interesting to explore if other types of trauma (e.g., car accident, natural disaster, etc.) may have a different impact when folded into cumulative trauma. As the exploratory analyses suggested, certain types of perceived social support may be more or less beneficial, and this in particular would be helpful to understand for clinical and treatment purposes. Additional exploratory analyses around the

impact of participation in past or present therapy treatment may provide a deeper understanding into the experience of trauma survivors and provide support for engaging in treatment.

Last, it would likely be fruitful to explore how attachment may play a role as a moderator in a similar study. As trauma can significantly impact attachment based on the type of traumatic experience, attachment may also significantly impact one's perception of social support. Particularly in instances of interpersonal trauma with a caregiver, attachment may be impacted, and consequently, perception of social support or willingness to engage with social supports may change. According to Kliethermes and colleagues (2014), attachment relationships are commonly disrupted for individuals who have survived trauma from a caregiver by either overstimulation (i.e., abuse) or understimulation (i.e., neglect). Additionally, if individuals who have experienced chronic or cumulative trauma are unable to regulate themselves through an attachment relationship, this may significantly impact their level of distress. For these reasons, it would likely be beneficial for future research to explore the role attachment plays on cumulative trauma and social support, which may in turn impact psychological distress.

Ultimately, as with most research, there is still a lot of unknown when it comes to experiences of trauma, particularly cumulative trauma. Future research can take many forms and continue to add to the field.

Conclusion

Findings from this study suggest that there is a significant connection between the amount of trauma experienced and the level of psychological distress one experiences. Additionally, it appears that perceived social support contributes significantly to decreasing the amount of psychological distress experienced, particularly when an individual has experienced cumulative trauma. In this study, an alarming amount of individuals reported experiencing

cumulative trauma (81.2%), which suggests that by the time individuals are entering college and throughout their time in college, they may have already experienced multiple traumas. This study extends previous literature by understanding the impact of perceived social support as a moderator for individuals who have experienced cumulative trauma. Understanding this information is beneficial for clinicians, professors, and administration to understand more of students' lived experiences and provide more support for students.

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CHAPTER 2

REVIEW OF THE LITERATURE

In this chapter, a summary of the literature is provided on trauma and victimization, social support and perceived social support, and psychological outcomes of traumatic experiences. First, an overview of terminology will acquaint the reader with common terms used throughout the chapter. Next, the review will differentiate between the impact of and differences between single and multiple traumas. Then a review of literature specific to complex trauma, polyvictimization, and cumulative trauma will describe the differences in each school of thought. Following the individual review of each type of trauma will be an overview of multiple traumas based on cumulative trauma, which encompasses complex trauma and polyvictimization to highlight the magnitude and range of traumatic experiences. Subsequently, populations vulnerable to cumulative trauma will be addressed to ensure a comprehensive picture of the risk associated with cumulative trauma. Lastly, perceived social support will be examined as a protective factor for cumulative trauma.

Terminology

Traumatic experiences can vary greatly from an accidental single event (e.g., a car accident) to an intentional, repeated event (e.g., child sexual abuse). They can range from relatively minor experiences (e.g., having a personal item stolen) to extremely severe (e.g., sexual assault), and ultimately individuals who survive trauma exhibit a host of outcomes ranging from anxiety and depression to hypervigilance and flashbacks. Measuring traumatic experiences is difficult because of the variability in conceptualization and interpretation of experiences. The following terminology is defined to provide clarity to the reader throughout the literature review.

Single-event trauma: a single type of traumatic event, experienced one time (e.g., a car accident).

Polyvictimization: a term coined by Finkelhor, Ormrod, and Turner (2007); experiencing multiple (more than four) different types of trauma or victimization (often measured before the age of 17).

Poly-victim: an individual who has experienced polyvictimization.

Lifetime victimizations: the total amount of trauma or victimization an individual has experienced throughout life.

Complex trauma: a term coined by Herman (1992); repeated and prolonged trauma experienced early in life, often of an interpersonal nature (e.g., childhood sexual abuse).

Cumulative trauma: a term coined by Follette, Polusny, Bechtle, and Naugle (1996); number of different types of trauma experienced throughout one's lifetime (e.g., childhood sexual abuse, intimate partner violence, witnessing a murder, etc.).

Psychological distress: a state of emotional suffering due to an inability to cope with stressors, characterized by symptoms of depression and anxiety and often accompanied by somatic symptoms (Drapeau, Marchand, & Beaulieu-Prévost, 2011).

Posttraumatic stress disorder (PTSD): a disorder that develops in some people who have experienced a shocking, scary, or dangerous event (National Institute of Mental Health [NIMH], 2016). Characteristic symptoms often include intrusive symptoms (e.g., nightmares), avoidance symptoms (e.g., places), negative changes in mood or thoughts, and hyperarousal (American Psychiatric Association [APA], 2013).

Perceived social support: "perceived availability of satisfying relationships that can provide the individual with care and help as needed" (Hofman, Hahn, Tirabassi, & Gaher, 2016, p. 32).

The term cumulative trauma has been purposefully chosen to describe and encompass what other researchers call polyvictimization and complex trauma. Based upon the conceptual literature pertaining to cumulative trauma as outlined by Follette et al. (1996), this broad and more inclusive term will be used to describe the experiences of those who have experienced trauma in both childhood and adulthood, as well as repeated and/or prolonged instances of traumatic experiences that may vary in nature.

Also related to the purposeful choice of language, and in alignment with current counseling psychology core values (e.g., Packard, 2009), a strength-based perspective will be utilized to describe those who have experienced trauma. More specifically, the term *survivor* will be used throughout this paper. Next, a review of the literature pertaining to single versus multiple trauma is explored.

Single Trauma versus Multiple Traumas

In a nationally representative sample, over 60% of youth under the age of 18 had been exposed to at least one direct or indirect traumatic experience in the past year. The same study also assessed lifetime prevalence rates and found that approximately 80% of youth reported at least one type of traumatic experience across their life (i.e., physical, sexual, peer/sibling, witnessing/indirect, child maltreatment, and property crime). Rates of exposure to trauma are higher for children than adults, possibly due to the lack of control they have over their environments (Finkelhor et al., 2009).

Early research on trauma tended to focus on single, separate, and specific types of experiences, but based on the findings about polyvictimization, researchers should suspect that children who experience one type of trauma are likely to experience others (Turner et al., 2010). Often, one main incident, such as child sexual assault, is the focus of research (e.g., Berliner & Elliott, 2002). Assessing for only one type of trauma leads researchers to understand a significant amount about one very small section of trauma, but results in several limitations. Symptoms can be misattributed, the impact of a specific event may be overestimated, or the interrelatedness between events could be missed altogether (Finkelhor et al., 2007; Turner et al., 2010). Also, children who endure cumulative trauma are at the greatest risk for mental health issues, but without assessing all trauma experiences, they can easily be missed (Turner et al., 2010).

As mentioned, measuring multiple traumas has been complicated by the variety of terminology. Of particular interest are three specific terms: complex trauma, polyvictimization, and cumulative trauma. Each term has a slightly different definition, which has resulted in disparate literature on the topic of trauma. To understand the full spectrum of trauma research, it is necessary to review each subset of literature that addresses multiple traumas, beginning with complex trauma.

Complex Trauma

The term complex trauma is being increasingly used within the research literature to describe repeated instances of the same type of trauma. Complex trauma refers to (a) chronic trauma experienced (b) early in life, most commonly of an (c) interpersonal nature (Brier & Scott, 2015; Cook, Blaustein, Spinazzola, & van der Kolk, 2003; Kliethermes, Schacht, & Drewry, 2014; Wamser-Nanney, 2016). Herman (1992) originally coined this term based on children surviving repeated and prolonged exposure to trauma. Over time, definitions have

broadened and varied, but all include the three key aspects listed above. Due to the lack of consensus on a definition of complex trauma, researchers have placed emphasis on different aspects of the trauma (e.g., frequency, severity, type, age of occurrences) making findings, such as symptom profiles, inconsistent (Kliethermes et al., 2014). Conceptualizing complex trauma is also complicated by the variability in how individuals experience traumatic events and environmental and personal differences (Keane et al., 2016).

Wamser-Nanney (2016) described the differences in many definitions and argued that even though most definitions highlight the role the caregiver usually plays in complex trauma, it is important to realize this definition may not be completely accurate since complex trauma can occur outside of the caregiving relationship. Though originally complex trauma was thought to occur only early in life, more recent research has proposed that complex trauma is not unique to children (Palic et al., 2016). Multiple adult populations, such as military, refugees, torture survivors, domestic violence survivors, and prisoners, are more susceptible to complex trauma (Keane et al., 2016).

Regardless of the particular definition, it is widely recognized that high rates of complex trauma impact children and the consequences of such trauma are varied and multidimensional. Kliethermes et al. (2014) discussed numerous consequences of complex trauma, such as interpersonal difficulties, emotional dysregulation, behavioral issues, and family discord. Briere and Scott (2015) also noted how complex trauma may lead to anxiety, depression, drug and alcohol abuse, impulsivity, and dissociation. Taken together, complex trauma survivors may have more complex symptomology because of the combined effects of multiple traumatic experiences. It is widely recognized that complex trauma outcomes tend to include more severe symptomology (Keane et al., 2016). Briere, Kaltman, and Green (2008) stated that there is a

linear relationship between complex trauma in childhood and different types of symptomology reported. Symptom severity and complexity can be quantified by the number of symptoms being experienced and their perceived severity. Psychological distress in adulthood may be influenced by past, cumulative experiences of trauma that are unattended to by researchers and clinicians (McCormack & Thomson, 2016). Childhood trauma is linked with adult trauma, meaning that once someone has experienced trauma early in life, they are more likely to experience trauma as an adult (Keane et al., 2016).

Complex trauma comprises just one subset of trauma research. It assesses repeated or chronic trauma that is similar in nature. In doing so, however, the assessment for multiple types of trauma may go unnoticed (i.e., when one individual experiences different types of traumatic experiences). Polyvictimization is another subset of trauma research that focuses specifically on those who experience multiple different types of trauma.

Polyvictimization

Polyvictimization is a term created to describe a compilation of multiple victimizations (i.e., sometimes categorized as more than four; e.g., physical, sexual, peer/sibling, witnessing/indirect, child maltreatment, and property crime) ranging in severity and probability (Finkelhor et al., 2007). Previous research on polyvictimization has tended to focus on one type of victimization, a smaller age range of participants, and failed to explore the interrelatedness between the types of victimization and their negative consequences. This narrow focus is cause for concern because it can lead to misattributing symptoms to one particular trauma and may fail to identify individuals more at risk and vulnerable to future victimization (Finkelhor et al., 2007). Moreover, this narrow focus on the impact of single experiences of victimization runs the risk of

minimizing individuals' experience of their trauma as they move into adulthood (Finkelhor et al., 2007).

According to Finkelhor and colleagues (2005), children, on average, have experienced three lifetime victimizations. In a nationally representative sample of American children and youth, close to 66% of the population experienced more than one type of victimization and 30% experienced five or more types of victimization (Turner et al., 2010).

Childhood victimization results in an increased risk for revictimization, and in fact, research shows that abused and neglected children are at an even higher risk for revictimization (Widom, Czaja, & Dutton, 2008). Widom et al. (2008) mentions that the reasoning behind revictimization is speculatory in nature, but may have something to do with the higher risk in disadvantaged communities. It is pertinent to recognize the vulnerability across contexts to better understand situational constraints (e.g., children's lack of control over their home setting) an individual may be facing (Finkelhor, Ormrod, Turner, & Holt, 2009).

Poly-victims often face many different kinds of victimization (e.g., physical, witnessing, emotional), in different environments (e.g., home, school, community), by different offenders (e.g., friends, family, strangers). Not only does one victimization increase the risk of a future victimization, but once an individual is a poly-victim, the risk for additional victimization is highly elevated (Turner et al., 2010).

Finkelhor et al. (2009) reported four pathways that may make an individual more vulnerable for polyvictimization. The first pathway included individuals living in a community that was considered to be more dangerous. Second, being raised in a family, or living with a family system that had a high rate of violence or conflict, was considered a risk factor. Also, the third pathway was having more family discord about issues such as money, marriages, or

substance abuse. The last path could occur if an individual struggled with emotional or behavioral regulation prior to victimization. All of these pathways were considered risk factors that could individually contribute to the onset of polyvictimization (Finkelhor et al., 2009).

Most of the research on polyvictimization focuses on traumas before the age of 17 (e.g., Finkelhor et al., 2005; Turner et al., 2010) and places less emphasis on enduring the same type of trauma repeatedly. This limits what we know about continued victimization into adulthood. As a result, the cumulative trauma literature is reviewed because it is believed to be more encompassing and comprehensive.

Cumulative Trauma

Cumulative trauma is a term used to describe the number of different traumas an individual experiences over a lifetime (Martin, Cromer, Deprince, & Freyd, 2013). Oftentimes individuals experience the same type of trauma numerous times, but it is common for survivors to also report experiencing multiple types (Finkelhor et al., 2007; Martin et al., 2013) and experiencing multiple types within the same time frame (e.g., physical and sexual abuse; Briere, Agee, & Dietrich, 2016). Follette et al. (1996) originally introduced the term cumulative trauma to represent the total number of different types of trauma an individual experiences throughout his or her life. Enduring multiple types of trauma puts an individual at risk for experiencing more symptomology including anxiety, depression, substance abuse, suicide, self-injurious behavior, dissociation, and interpersonal difficulties (Briere et al., 2016). Briere et al. (2016) stated that a diagnosis of PTSD was more likely if there were additional prior traumatic events.

Survivors of cumulative trauma have a greater statistical likelihood of also experiencing sexual trauma (Briere et al., 2016), and research repeatedly shows negative outcomes for survivors after a sexual trauma (e.g., Choi & Oh, 2014; Godbout, Briere, Sabourin, & Lussier,

2014; Martin et al., 2013). Therefore, it is difficult to determine if the more severe and increased rates of symptomology are a result of cumulative trauma or sexual trauma. Briere et al. (2016) attempted to clarify this exact point and found after cumulative trauma has been taken into account, sexual trauma ceases to be a significant predictor of PTSD. Also of note, interpersonal traumas (e.g., sexual assault, physical assault, and robbery) significantly predict PTSD, but non-interpersonal trauma (e.g., natural disaster and motor vehicle accidents) does not. This is of interest because cumulative traumas that include interpersonal events may play a more critical role in symptom development than cumulative traumas that do not (Briere et al., 2016). Cumulative trauma survivors, like survivors of complex trauma and polyvictimization, are at risk for experiencing a wide spectrum of symptoms. Due to the converging influences of multiple trauma experiences as well as individual differences, a range of symptoms is to be expected (Hodges et al., 2013). Cumulative traumatic experiences may result in immediate symptomology or may be delayed once triggered by another circumstance (Maschi, Morgen, Zgoba, Courtney, & Ristow, 2011).

Scope of Cumulative Trauma

Most survivors of trauma report exposure to more than one type of trauma (Martin et al., 2013). Experiencing repeated, chronic, or multiple types of trauma all impact an individual in some way. In general, cumulative trauma results in more negative outcomes than a single-event trauma (e.g., Finkelhor, Ormrod, & Turner, 2009; Kliethermes et al., 2014; Turner et al., 2010). Continued trauma exposure increases risk for negative outcomes, and each subsequent experience may exemplify symptoms (Park, Wachen, Kaiser, & Stellman, 2015). Not only is the total number of multiple traumatic experiences an important factor, but each unique type of trauma contributes to negative outcomes (Martin et al., 2013). Chartier, Walker, and Naimark

(2010) stated there is an association between adverse childhood experiences and poor adult health, and the more accumulated adverse experiences there were, the more harmful it was to long-term outcomes in adulthood.

Sometimes a survivor is traumatized by someone close, which adds more layers of complexity, especially if it takes place early in life. In these situations, the trauma can result in trust issues, trouble forming future relationships, and attachment issues, along with the symptoms experienced from any other type of trauma. Much research geared toward cumulative trauma focuses on early traumatic experiences, and consequently often involves a parent or caretaker. While this deserves attention because of the critical developmental period that is being impacted by the traumatic experience, cumulative trauma experiences of older adults should not be ignored. Ogle, Rubin, and Siegler (2014) focused on older adults in their 60's and found a relationship between cumulative trauma and PTSD, even in individuals who had greater access to resources.

If only one type of trauma is considered, and further trauma is not assessed for, mental and physical health problems may be overly attributed to the one traumatic experience. A significant number of traumatic experiences go undetected if they are not specifically asked about because they are lower severity and higher probability (Richmond, Elliott, Pierce, Aspelmeier, & Alexander, 2009).

Populations Vulnerable to Cumulative Trauma

At-risk populations experience even higher levels of cumulative trauma exposure (Kliethermes et al., 2014). Many differences can contribute to a population being considered "at-risk." These populations include, but are not limited to, individuals from "disordered communities" (Turner et al., 2013), first responders (Marmar et al., 2006), military service

members (Parks et al., 2015), homeless individuals (Archard & Murphy, 2015), refugees (Keane et al., 2016), and those who are incarcerated (Keane et al., 2016).

Turner and colleagues (2013) discussed children living in "disordered communities" as being at-risk. According to Turner et al. (2013), "[c]ommunity disorder can be defined as a neighborhood environment that presents residents with observable signs that social control is weak and that there is little concern or ability to maintain a safe and orderly physical environment" (p. 257). This aligns with information provided above describing four pathways that may make an individual more vulnerable to cumulative trauma (Finkelhor et al., 2009). Environment is an influential factor that many individuals are not able to control for a variety of reasons (e.g., financial, age, etc.). The fact that individuals in disordered communities may not be able to control being surrounded by that environment makes them extremely vulnerable.

First responders (e.g., law enforcement, emergency medical personnel, and firefighters) are another population that is at-risk because they are repeatedly exposed to traumatic situations as a part of their career. Situations such as armed confrontation, domestic violence calls, and witnessing homicides and suicides can be incredibly disturbing and leave lasting effects. This may not happen every day on the job, but these experiences happen far more often for first responders than most individuals encounter in a lifetime. First responders have higher rates of PTSD (7-19%; Marmar et al., 2006) than the general population (8.7%; APA, 2013). Similarly, military service members, particularly combat veterans, also encounter traumatic situations repeatedly, leading to a cumulative effect. Specifically, childhood trauma puts service members at substantial risk for developing mental and physical health problems (Park et al., 2015).

Homeless individuals are widely recognized as a vulnerable population for several reasons. They are often devoid of basic needs, such as food and shelter, which can be

traumatizing in itself. Additionally, they tend to experience discrimination and adversities most people have never experienced. Their environment lends itself to social isolation and lack of support. A combination of all these issues results in higher levels of experienced trauma in homeless individuals (Archard & Murphy, 2015).

Psychological Impact of Trauma

All types of trauma, but specifically cumulative trauma, have multiple negative outcomes. Outcomes may differ for many reasons, but common outcomes consist of traumatic stress reactions such as hyperarousal, avoidance, nightmares/flashbacks, depression, dissociation, anxiety, insecure attachment, behavioral issues, and emotional dysregulation (Kliethermes et al., 2014). All of those specific symptoms are part of the criteria for a PTSD diagnosis except insecure attachment, anxiety, and depression, though many symptoms of anxiety and depression would fit Diagnostic and statistical manual of mental disorders, 5th edition (DSM-5) criteria (APA, 2013). Additionally, the number of traumatic experiences is a significant predictor of PTSD symptomology (Owens & Chard, 2006).

The negative outcomes one experiences may depend on the type of traumatic experience itself. For example, an individual who has survived a sexual trauma may later develop sexual dysfunction issues, which would be much less likely for an individual surviving other traumas not of a sexual nature (Hodges et al., 2013). Symptomology in cases of cumulative trauma does not necessarily cleanly meet criteria for PTSD because symptoms and severity are dependent on a number of factors such as type of trauma, severity of trauma, duration of trauma, frequency of trauma, and age of the survivor (Hodges et al., 2013).

"Impairment seems to be more chronic and severe when trauma exposure has an earlier onset, increased duration, consists of multiple types of trauma, and is interpersonal in nature"

(Kliethermes et al., 2014, p. 341). Owens and Chard (2006) noted that individuals who have experienced a traumatic event have higher levels of cognitive distortion and self-blame than those who have never experienced a trauma. Cook et al. (2003) stated that cumulative trauma can often result in self-concept issues causing an individual to feel ineffective, helpless, deficient, and unlovable. These issues with self-concept can impair one's ability to cope with traumatic experiences. As traumas accumulate, they may exacerbate previous symptoms, which can result in resorting to more negative coping strategies (e.g., dissociation, externalization, and substance abuse; Hodges et al., 2013).

Not all outcomes of trauma are negative, and recently more research has taken a holistic, positive approach to determine what positive outcomes may arise from cumulative trauma, such as posttraumatic growth. For purposes of this study, only negative outcomes (psychological distress) are being assessed, but it is imperative to understand that negative and positive outcomes can coexist after traumatic events (Rieck, Shakespeare-Finch, Morris, & Newbery, 2005).

Diagnosis After Cumulative Trauma

To date, a current DSM diagnosis for complex or cumulative trauma does not exist, but research depicts the significant differences in symptoms between a single-event trauma and complex trauma. Mahoney and Markel (2016) argued complex trauma goes far beyond a single trauma and symptoms experienced from a single trauma. The chronic nature often impacts personality and relationship development. Van der Kolk (2005) proposed a diagnosis, Developmental Trauma Disorder, aimed at addressing repeated traumas experienced during critical periods of development that are not addressed by a PTSD diagnosis. Mahoney and

Markel (2016) aligned with the belief that the manifestation and conceptualization of symptoms is not addressed in current diagnostic criteria.

Mahoney and Markel (2016) addressed that there is a push for a diagnosis that recognizes the "multiplicity of exposures to trauma over critical developmental periods" (p. 2). Research on multiple traumatic experiences consistently report that current PTSD criteria is not necessarily appropriate for individuals who have survived multiple traumas or victimizations (e.g., Karatzias et al., 2017; Kira et al., 2012; Krammer, Kleim, Simmen-Janevska, & Maercker, 2015). This is of particular interest based on more current research findings; once an individual is exposed to one type of trauma, he or she is more likely to experience another (Finkelhor et al., 2007), and survivors of multiple traumas are more likely to experience higher levels of symptom severity and negative outcomes (e.g., Briere & Scott, 2015; Hodges et al., 2013; Keane, Magee, & Kelly, 2016; Kliethermes et al., 2014).

Kira et al. (2012) argued that current trauma theory is fragmented and "does not allow for a comprehensive trauma assessment that evaluates the traumatic exposure of the individual" (p. 643) and therefore does not accurately depict the complex nature of cumulative trauma. Also noted is that trauma theory focuses on the past, which does not fully capture current, ongoing traumatic stressors (Kira et al., 2012). Developmentally based trauma framework integrates the previously fragmented theories into one, inclusive theory considering the variety of traumatic experiences, profiles, severity, and chronicity. Cumulative trauma disorders is a term proposed to represent the spectrum of lifetime traumas (Kira et al., 2012).

Since current literature and theory does not adequately depict the complexity of cumulative trauma, it is unable to fully determine protective factors. According to literature on specific types of trauma, perceived social support is regularly cited as a buffering factor. This

strong literature base for single-trauma and perceived social support provides a reason to believe perceived social support may serve the same purpose for cumulative trauma survivors.

Social Support and Perceived Social Support

Social support can come in many forms such as parents, siblings, friends, partners, and other family members. Social support can be either formal (i.e., health care provider) or informal (e.g., friends and family; Rieck et al., 2005). It is widely recognized that social support is positively related with well-being, mental health, and physical health. Aimed at helping an individual to cope with traumatic experiences or stressors, it often helps reduce negative outcomes (Rieck et al., 2005).

In most research, perceived social support has been measured, and has even been determined to be a better predictor of mental health outcomes than received social support (Hofman et al., 2016; Reid et al., 2016). Perceived social support is an evaluation of one's resources and availability of support when needed (Hofman et al., 2016). Received social support is defined as the actual assistance provided by others (Hofman et al., 2016).

Cohen and Wills (1985) proposed two theories that give evidence for social support as a protective factor: stress buffering theory and main effect theory. Stress buffering theory states that social support is a buffering agent between stress and any negative impact that comes from stressful life experiences. According to this theory, those with higher levels of social support are better at coping with stressful life events and consequently have fewer mental health symptoms. This relates to the present study because traumatic events are considered stressful life events; therefore, support should act as a protective factor, or buffer, based on this theory. Main effect theory differs in that it states that individuals with higher levels of social support will always have better mental health than those with lower levels of social support. Main effect theory states

that this relationship is not dependent on levels of stress, but solely based on levels of social support. Main effect theory will not be considered for the present study because it does not fit with the literature stating that cumulative trauma has more severe symptomology (Cohen & Wills, 1985).

Types of Social Support

Social support has been shown in multiple cases to buffer against anxiety and depression, specifically when experienced following a major stressor (Reid et al., 2016).

The individuals who make up a social support network may be more influential than the quality or content of support (Barnes, Howell, & Miller-Graff, 2016). If type of social support proves to be an influential factor on the role it plays as a protective factor, it seems essential to determine this. A review of the literature shows conflicting evidence about if type of social support makes a difference, and if so, which type.

Ultimately, combining multiple sources of social support is associated with higher levels of well-being (Ciarrohi, Morin, Sahdra, Litalien, & Parker, 2017). Ciarrohi et al. (2017) argued that specific "social support profiles," which consist of distinct combinations of social support, have different implications. Specifically, a profile consisting of high levels of parent and peer support had the highest levels of well-being.

Friend support becomes more important for adolescents as they grow older and become more autonomous. Traylor, Williams, Kenney, and Hopson (2016) stated the positive impact of support from friends is also somewhat dependent on a friend's well-being and behavior.

Perceived Social Support and Trauma

Perceived social support is of particular interest in cases of trauma and cumulative trauma because of several symptoms that often result from trauma (e.g., social isolation, avoidance,

etc.), though typically research focuses on a specific trauma. For example, for survivors of sexual abuse, social support is endorsed as a potential buffer to negative outcomes such as risky sexual behavior and substance abuse (Johnson & Johnson, 2013). Murphy et al. (2014) argued that individuals who have experienced any type of adverse experiences in childhood can "move toward health through the establishment of social ties that are supportive" (p. 225). As research has continued to recognize the importance of exploring cumulative trauma, perceived social support has emerged as a factor that may protect individuals who have experienced cumulative trauma from negative outcomes.

In cases where one or more traumatic experiences were interpersonal in nature, they could cause anxiety around social interactions, which could result in problems forming or maintaining close emotional relationships (Nanda, Reichert, Jones, & Flannery-Schroeder, 2016). If children are abused by a caregiver early in life, they may associate all social interactions with abuse and therefore struggle to make connections and be fearful. In addition, many individuals who have experienced a childhood trauma report lower levels and quality of perceived social support from friends and family as adults (Barnes et al., 2016; Kuhl & Boyraz, 2016). Barnes and colleagues (2016) found that during emerging adulthood, child cumulative trauma directly and negatively impacts perceived social support. Kuhl and Boyraz (2016) stated that level of distress after traumatic experiences may be a better predictor of perceived social support than type of trauma. Having support may be a positive factor for individuals after a trauma and help them to move past what they have been through, and even improve relationships with supportive networks (Rieck, et al., 2005).

Aligning with research about vulnerable populations, recent literature has emphasized the importance of perceived social support for these populations (e.g., veterans, homeless

individuals, emergency medical dispatchers, individuals from disordered communities, etc.). Since these populations are more likely to experience cumulative traumatic events and consequently experience negative outcomes, exploring potential protective factors is essential (Archard & Murphy, 2015; Park, Wachen, Kaiser, & Stellman, 2015; Shakespeare-Finch, Rees, & Armstrong, 2015; Turner et al., 2013).

Emergency Medical Dispatchers (EMDs) are individuals who answer emergency calls and coordinate dispatch of local responders, which is recognized as a population that is exposed to extremely high levels of trauma on a daily basis due to responding to a wide variety of emergency calls. Shakespeare-Finch et al. (2015) found that EMDs who received higher levels of perceived social support reported higher levels of well-being and negatively predicted PTSD.

Recently, a lot of attention has been given to protective and risk factors for PTSD in a military population. Social support is often addressed as a protective factor, especially in combat exposed individuals. In a study of American combat veterans from Vietnam, individuals who experienced higher levels of combat reported lower levels of perceived social support. In this study, perceived social support was negatively related to PTSD symptoms, consistent with previous literature on PTSD and perceived social support. Of particular interest is the moderating effect of perceived social support between combat exposure and mental health outcomes, such that perceived social support may have mitigated negative mental health outcomes (Park et al., 2015). MacEachron and Gustavsson (2012) noted that peer support is responsible for a small, but significant reduction in PTSD symptoms.

Positive perceived social support from a spouse was found to be a buffer for men who had only been exposed to inter-partner violence as a child. If a man was exposed to childhood physical abuse, positive perceived social support from a spouse had less of an effect. However,

women's symptoms were found to be unrelated to positive or negative spouse support (Evans, Steel, Watkins, & DiLillo, 2014).

In a sample of seventh grade students, connectedness to parents and school resulted in lower levels of depression for individuals who had experienced interpersonal traumas early in life. Though surprisingly, individuals who had experienced high levels of interpersonal trauma did not benefit from connectedness to parents or school (Schwerdtfeger Gallus, Shreffler, Merten, & Cox, 2014).

Godbout et al. (2014) examined the role of support from nonoffending parents for future outcomes after child sexual abuse. Survivors of childhood sexual abuse with supportive parents expressed adjustment comparable to non-abused participants.

Literature on the impact of social support for trauma survivors is thriving, though unfortunately the research is mostly focused on social support for specific types of trauma or specific populations and is not focused on the role it plays with cumulative trauma. One would expect that perceived social support would serve the same purpose and play the same role as it does with single-event traumas or vulnerable populations, but it is not clear due to the conflicting literature and knowledge that often individuals struggle interpersonally after experiencing certain types of trauma. This is a gap in the literature that, if better understood, could provide fruitful information for researchers and clinicians alike.

Conclusion

The reviewed literature establishes the strong connection between cumulative trauma, psychological distress, and vulnerability. Moreover, perceived social support is not only documented as a protective factor for traumatic experiences, but also identified as a key factor in well-being and psychological health. The present study seeks to empirically establish the

potentially moderating relationship perceived social support plays between cumulative trauma and psychological distress. While this relationship seems implied via the theoretical and conceptual literature, an empirical understanding of the nature of this relationship is warranted.

CHAPTER 3

METHOD

Review of the Study

As stated, most research has focused on single, specific types of trauma, specific vulnerable populations, or perceived social support as a protective factor for trauma in general. Although perceived social support is often cited as a protective factor for negative outcomes of trauma, this has not been applied more specifically to cumulative trauma. The current study has attempted to determine if perceived social support is a significant moderator for the relationship between cumulative trauma and psychological distress. As such, the following hypotheses were considered in this investigation:

Hypotheses regarding main effects

H_1: There will be a significant main effect of cumulative trauma history on psychological distress, with those experiencing higher levels of cumulative trauma experiencing higher levels of distress.

H_2: There will be a significant main effect of perceived social support on psychological distress in which an individual reporting higher levels of perceived social support will experience lower levels of distress.

Hypotheses regarding interaction effects

H_3: Perceived social support will moderate the relationship between cumulative trauma and psychological distress. The strength of the moderating relationship is predicted to be higher for those experiencing higher levels of cumulative trauma.

Participants

A power analysis was conducted to determine the number of participants needed to establish an acceptable sample, which was approximately 220 participants. Author and committee determined that collecting approximately 100 more participants than the smallest sample size deemed suitable to detect the effect and allow for data cleaning; therefore, the goal for participation was 350 students. Responses from students at a rural Southeast university between the ages of 18 and 24 were collected through an online database using Qualtrics. Participants were a convenience sample of 358 college students, representative of the current university population from which they were sampled. Prior to analyses, data was cleaned to remove participants for lack of completion and incorrect responses to attention checks. Three participants were removed for not consenting to the research at the informed consent stage. Five participants were removed due to not completing any of the questionnaires in the survey. Last, the check questions were used to remove participants who did not answer 75% of these items correctly (n = 25). After this portion of the data cleaning, 325 participants remained.

As shown in Table 1, participants in this study were relatively evenly distributed between 18 and 21 years old (n = 237, 74.3%). Many individuals did not identify their age (n = 47, 14.7%) and several identified an age outside of the age requirements for the study and therefore were removed. (n = 6, 1.8%). The final number of participants analyzed for the study was 319. Descriptive statistics based on race revealed 63.6% of participants identify as White, 18.2% identify as African American or Black, 14.7% identify as Multi-Ethnic or Multi-Racial, 2.2% identify as Hispanic, and 1.3% identify as unspecified/other. Gender was representative of the university with 74.9% of participants identifying as female, 24.8% identifying as male, and 0.3% identifying as “other.” Last, 42.8% of individuals endorsed receiving mental health services in

their lifetime. Of those who endorsed services, 12.3% identified current participation in therapy and 46.8% identified participation in therapy as a result of a traumatic event.

Table 1.

Demographic Characteristics of the Sample

Variable	Frequency	Percent
Biological Sex		
Male	81	25.8%
Female	232	73.9%
Other	1	0.3%
No Response	5	1.6%
Gender Identity		
Man	79	24.8%
Woman	239	74.9%
Other	1	0.3%
Age		
18	61	19.1%
19	63	19.7%
20	64	20.1%
21	49	15.4%
22	27	8.5%
23	5	1.6%
24	3	0.9%
No Response	47	14.7%
Race		
White	203	63.6%
Black or African American	58	18.2%
American Indian or Alaskan Native	1	>1%
Asian Indian	0	0%
Chinese	1	>1%
Filipino	1	>1%
Japanese	0	0%
Korean	0	0%
Vietnamese	1	>1%
Other Asian	0	0%
Native Hawaiian	0	0%
Guamanian or Chamorro	0	0%
Samoan	0	0%
Pacific Islander	0	0%
Hispanic, Latino or Spanish	7	0%
Multi-Racial	47	14.7%
Year in College		
First Year	127	39.8%
Second Year	64	20.1%
Third Year	66	20.7%
Fourth Year	51	16.0%
Fifth Year	6	1.9%
Other	5	1.6%
Sexual Orientation		
Heterosexual	278	87.1%
Homosexual	8	2.5%
Bisexual	20	6.3%
Questioning	6	1.9%
Asexual	5	1.6%
Asexual and Bi-Romantic	1	0.3%
Pansexual	1	0.3%

Measures

Four measures and demographic information was included in the survey for this study. The demographic questionnaire included background questions about race, ethnicity, gender, sexual orientation, year in school, age, relationship status, past psychiatric treatment (behavioral and medication), and current psychiatric treatment. The full survey can be found in Appendix A.

The Juvenile Victimization Questionnaire-Adult Retrospective Version (JVQ-R2). The JVQ-R2 (Finkelhor et al., 2011) is a self-report measure that assesses 34 types of victimization that may have occurred before the age of 17. Instructions were slightly altered to remove the age limit of 17 to include lifetime cumulative trauma. For purposes of this study, the Screener Sum Version was used. The Screener Sum Version is the basic screening questions with no follow-ups and is best suited for self-administered questionnaires. The questions range from high probability/low severity (e.g., having an item stolen) to low probability/high severity (e.g., being kidnapped).

This measure was normed on an adult population, reflecting on past experiences. It was designed to be a more comprehensive measure of trauma and assesses victimization across five aggregate categories: conventional crime, child maltreatment, peer and sibling victimization, sexual victimization, and witnessing and indirect victimization. Responses were reported on a 5-point scale ranging from 0 (“no”) to 4 (“four times or more”). Based on the hypotheses, participants’ responses were dichotomized into values of “0” (never experienced that type of trauma) and “1” (experienced that type of trauma at least one time). A total score was determined by summing the 33 questions (it was discovered during analyses that one question was unintentionally left out of the survey) to represent how many different types of victimization are endorsed. Additionally, the frequencies were summed to better understand the cumulative impact

and a second score was recorded. This score gives a clearer picture of how many times specific types of victimization are being endorsed, though it was not used in the data analysis for this study.

The overall α for the JVQ for respondents answering all 34 items was .80 (Finkelhor et al., 2005). Internal consistency is not necessarily relevant to the subscales because even though an individual is endorsing one question in a subscale does not mean he or she has experienced any other traumatic experiences included in that subscale. Construct validity was measured by determining how endorsement of JVQ items was reflected in trauma symptomology and was found to be a moderate, but significant predictor (Finkelhor et al., 2005). The JVQ-R2 has been widely used since its creation as a comprehensive measure of trauma and it has been used across populations (e.g., Hamby et al., 2010; Segura et al., 2016; Turner et al., 2010), including the college population (Elliott et al., 2009).

The Life Events Checklist (LEC). The LEC (Blake et al., 1995) is a 17-question self-report measure created to assess a number of difficult or stressful things that sometimes happen to people. Responses are recorded based on five categories: happened to me personally, witnessed it happen to someone else, learned about it happening to someone close, not sure if it fits, and does not apply. Respondents are able to endorse more than one answer per question. This allows for a summed score of experienced life events. According to Gray and colleagues (2004), "the mean kappa for all items was a .61 and the retest correlation was r =.82, $p < .001$" (p. 334). It is noted that the LEC is a stable screening measure able to measure varying levels of direct exposure to potentially traumatic events (Gray et al., 2004). For purposes of this study, the LEC was not used in the analysis, though it may be used in future research.

The Multidimensional Scale of Perceived Social Support (MSPSS). The MSPSS (Zimet et al., 1988) is a 12-question self-report measure created to assess subjective social support from three different sources (i.e., friends, family, and significant other). Responses are recorded on a 7-point scale ranging from 1 ("very strongly disagree") to 7 ("very strongly agree"). An overall perceived social support score was calculated by summing each response and dividing by 12. For exploratory analyses, a subscale score was also calculated for each of the three types by summing the responses to the four questions for each of the three different sources and dividing by four.

The measure of internal reliability for the total scale was .88. Significant other, family, and friends subscales were also good with values of .91, .87, and .85, respectively. The measure has strong factorial validity and moderate construct validity (Zimet et al., 1988). The MSPSS has been used across populations (Claraet al., 2003; Osmanet al., 2014), including the college population (Clara et al., 2003; Reid et al., 2016).

The Trauma Symptom Checklist-40 (TSC-40). The TSC-40 (Elliott & Briere, 1992) is a 40-item self-report measure created to assess symptomatic distress resulting from traumatic experiences. Responses were reported on a on a 4-point scale measuring how often a symptom was experienced ranging from 0 ("never") to 3 ("often"). A total score was calculated by summing all responses. Additionally, the TSC-40 has six subscales (i.e., Anxiety, Depression, Dissociation, Sexual Abuse Trauma Index, Sexual Problems, and Sleep Disturbances), which were not utilized for this study. The total score has high reliability with an alpha of .90. Subscale alphas range from .62 (Sexual Abuse Trauma Index) to .77 (Sleep Disturbances) (Elliott & Briere, 1992).

Procedure

Informed consent, recruitment, and participation. The current study was approved by the university's International Review Board. Participants were recruited through a university-based online system (SONA). Students at the university create accounts to participate in research for extra credit in psychology courses. The current study was posted on that site, including the name of the study, study description, age requirement (18-24 years old), and credits awarded. As part of the study description, students were cautioned that questions were assessing trauma history and current symptomology. Students were offered two credits since the study length was expected to take between 30-45 minutes (one credit per 30 minutes). Students were awarded credit regardless of if they completed the survey, meaning they were free to discontinue participation at any time without repercussions. Surveys that were not at least 75% completed were removed from data analysis (n = 5).

After students signed up for the study on SONA, a link to the survey on Qualtrics was made available. Students were free to start the survey at any time, but once the link was opened, it had to be completed. The link opened with the informed consent, and consent was collected passively, by clicking a button agreeing to complete the survey. Participants were instructed through the informed consent that they were free to discontinue participation at any time for any reason and would still receive credit. Students who declined consent to participate by selecting "decline" during the consent process were immediately redirected to the end of the survey debriefing statement, which provided contact information for researchers and campus and community resources. Those individuals were removed from the data set due to not consenting to participation (n = 3). After selecting "accept," demographic questions were administered first, followed by the three questionnaires. The three questionnaires were randomized by Qualtrics and

therefore presented in different orders to reduce fatigue effects. Once the participant answered the last question and chose "next," a debriefing statement appeared. The debriefing statement included investigator contact information as well as campus and community resources in the event the survey caused distress. At completion of the study, certain, possibly identifying information was removed from the data set (i.e., IP addresses, date of completion) for the protection of participants.

Formulation of the survey. The full survey consisted of 105 questions: 33 questions comprise the JVQ-R2 (it was discovered during data cleaning that one item on the JVQ was unintentionally left out from the survey), 12 questions comprise the MSPSS, and 40 questions comprise the TSC-40. Thirteen items were used to measure demographics and other variables of interest and seven questions were inserted to the measures as check questions (e.g., "answer 2 for this question").

Analysis

A series of regression analyses were used to test the hypothesis that perceived social support moderates the relationship between cumulative trauma and psychological distress. Moderator relationships require a significant interaction between the proposed moderator (perceived social support) and the independent variable (cumulative trauma) (Baron & Kenny, 1986). Each cumulative trauma x perceived social support interaction was tested using a regression (Aiken & West, 1991). In addition to this, exploratory analyses were conducted to investigate and more thoroughly understand any additional factors that may have contributed to the findings. Particularly, differences in demographic information were explored and perceived social support was broken down by type to gain clarity on if a particular type of social support is

more influential in moderating the relationship between cumulative trauma and psychological distress.

Summary

The current study expands upon current literature by empirically testing the impact of perceived social support on cumulative trauma and psychological distress. Previous literature recognizes the strong connection between trauma and distress and vulnerability to accumulating traumatic experiences and the impact. Regularly, perceived social support is not only documented as a protective factor for traumatic experiences, but also identified as a key factor in well-being and psychological health. The current research combines this knowledge into a comprehensive study. The results of the study provide clinicians with knowledge to enhance assessment and treatment.

CHAPTER 4

RESULTS

This chapter focuses on providing results from the statistical analyses based on the three hypotheses used to guide this study. Again, there were two main effect hypotheses: (1) There will be a significant main effect of cumulative trauma history on psychological distress, with those experiencing higher levels of cumulative trauma experiencing higher levels of distress, and (2) there will be a significant main effect of perceived social support on psychological distress in which an individual reporting higher levels of perceived social support will experience lower levels of distress. There was also a third hypothesis regarding the interaction effect: Perceived social support will moderate the relationship between cumulative trauma and psychological distress. The strength of the moderating relationship is predicted to be higher for those experiencing higher levels of cumulative trauma.

This chapter begins with preliminary data analyses exploring the descriptive statistics of the variables. Next, the chapter explores the correlations between the independent variable (i.e., cumulative trauma), moderator (i.e., perceived social support), and the dependent variable (i.e., psychological distress). Then, the results from the multiple regression analyses are provided to better understand the significance of the relationships between variables. Subsequently, the chapter examines the results from the primary analysis of the interaction effect to determine if perceived social support is a moderator for the relationship between cumulative trauma and psychological distress. Last, exploratory analyses are explored to help explain other possible relationships contributing to results and a summary is provided.

Preliminary Data Analyses

Means and standard deviations for all study variables are reported in Table 2. Overall, participants reported moderate levels of trauma (M = 9.18, SD = 6.32). Those experiencing four or more types of trauma were considered to have experienced cumulative trauma (81.2%). Participants, on average, reported experiencing moderate to high levels of perceived social support (M = 5.68, SD = 1.18) and mild to moderate levels of psychological distress (M = 33.26, SD = 21.09). Consistent with previous research (e.g., Briere et al., 2016; Hodges et al., 2013), there was a significant, strong positive correlation between cumulative trauma and psychological distress (r = .568, p = .000). Likewise, although not as strong, there was a significant, negative correlation between perceived social support and psychological distress (r = -.140, p = .012). Therefore, the first two hypotheses were confirmed. That is, those who experience higher levels of trauma also experience higher levels of distress; and, those who experience higher levels of perceived social support experience lower levels of psychological distress. Intercorrelations for these variables are displayed in Table 3.

Table 2.

Mean Scores for Cumulative Trauma, Perceived Social Support, & Psychological Distress (n=319)

Variables (Measures)	M	SD
Trauma (JVQ-R2)	9.18	6.32
Perceived Social Support (MSPSS)	5.68	1.18
Psychological Distress (TSC-40)	33.26	21.09

Table 3.

Correlation between Variables (n=319)

Measure	JVQ-R2	MSPSS	TSC-40
JVQ-R2	1	-.233**	.568**
MSPSS	-	1	-.140*
TSC-40	-	-	1

Note. ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Primary Analyses: Tests of Moderation

In order to test the third hypothesis, this study used the model developed by Baron and Kenny (1986) for determining a moderating relationship. In order to limit multicollinearity, the variables for trauma and perceived social support were centered. To test the hypothesis that perceived social support moderates the relationship between cumulative trauma and psychological distress, a multiple regression analysis was run using cumulative trauma and cumulative trauma x perceived social support (interaction term) as predictor variables, and, psychological distress as the dependent variable. Results from this analysis, and in concert with the aforementioned intercorrelations, showed that cumulative trauma significantly predicted psychological distress, β = .526, $t(319)$ = .11.352, p = .000; and, perceived social support was significantly and negatively correlated with psychological distress, β = -.177, $t(319)$ = -3.803, p = .000. Additionally, perceived social support was a significant moderator for the relationship between cumulative trauma and psychological distress, β = -.109, $t(319)$ = -2.352, p = .019. Therefore, the third hypothesis was supported. The model of moderation is displayed in Figure 1.

Model of Moderation

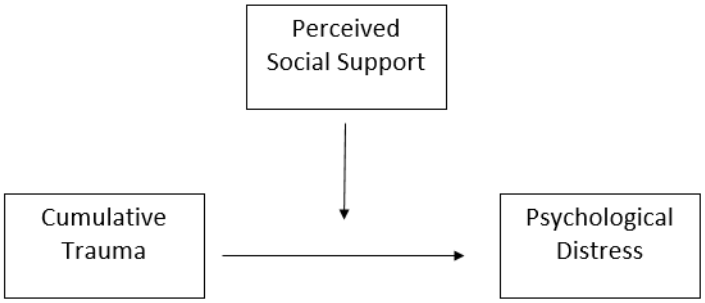

Figure 1. Perceived social support as a moderator of cumulative trauma and psychological distress.

Simple slope analyses were run for high levels of cumulative trauma (1 SD above the mean) and the interaction effect of perceived social support, and results showed that perceived social support is an even stronger moderator in cases of higher cumulative trauma, β = -.287, $t(319)$ = -3.986, p = .000. The simple slope analyses were run again for low levels of cumulative trauma (1 SD below the mean) and the interaction effect of perceived social support, and perceived social support was not a statistically significant moderator, β = -.067, $t(319)$ = -1.126, p = .261. These findings mean that the interaction between social support and cumulative trauma on self-reported psychological distress is such that it makes a significant difference for individuals who reported higher levels of cumulative trauma, but makes no difference for individuals who reported lower levels of trauma. The simple slopes graph is shown in Figure 2.

Simple Slopes Graph

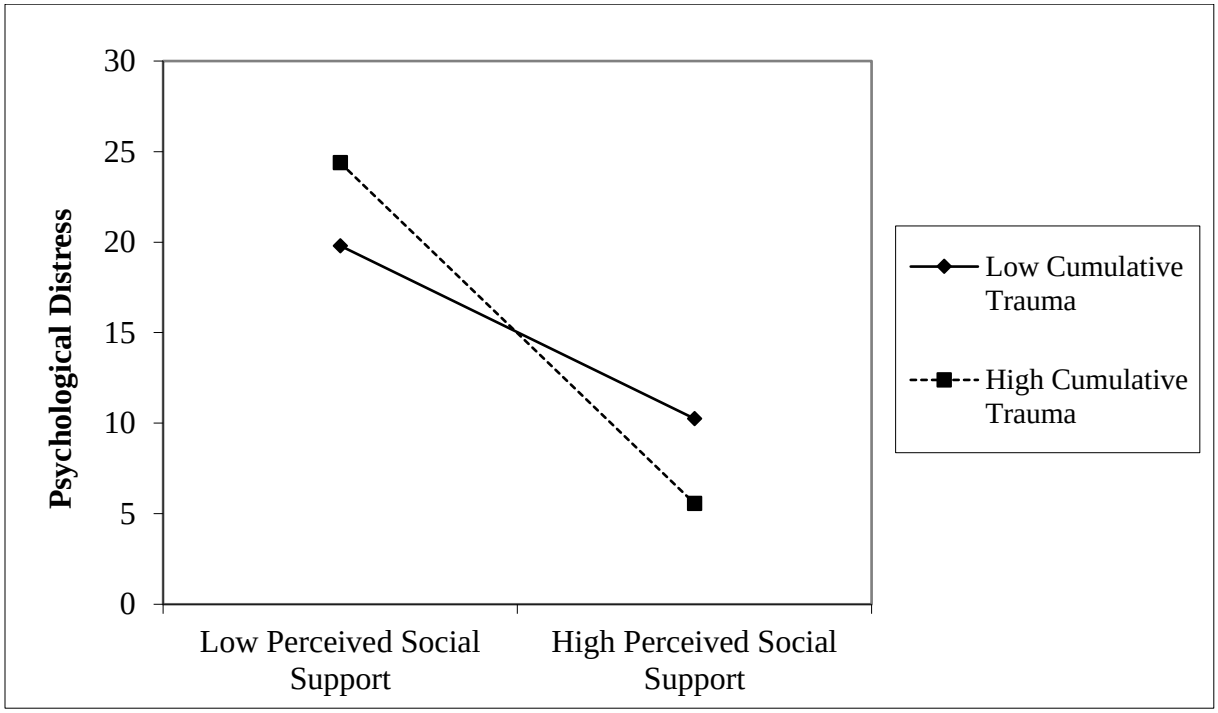

Figure 2. Simple slopes analyses for high and low cumulative trauma and perceived social support.

Exploratory Analyses

As previously stated, it was determined that exploratory analyses should be used to gain a deeper understanding of the results. Several different explorations were investigated, by looking into differences in demographics and individual types of perceived social support.

When exploring demographic variable differences within the sample, an independent-samples t-test was used to determine if there were any statistically significant differences for any of the three variables (cumulative trauma, perceived social support, and psychological distress) based on gender. From this test, the only statistically significant findings based on gender showed that females reported a mean difference of 6.5 (p = .018) on psychological distress. This means that females in this study on average experienced psychological distress at a higher rate

than males. Gender comparisons for this study are also difficult to make because of the disproportionately high number of females versus males. To continue exploring demographic differences, a One-Way ANOVA was used to explore potential age differences in the three variables. No statistically significant differences were based upon age. Again, this may be because participants were constrained in age (18-24 years old), limiting the variability needed to detect meaningful differences.

To provide a more thorough understanding of the impact based on the type of perceived social support, a regression analysis for the interaction was completed for each of the three types of perceived social support (i.e., friend, family, and significant other) and none of the three interactions were statistically significant when tested individually. It is important to note that the significant other support (β = -1.742, $t(319)$ = -2.339, p = .020) and family support (β = -2.157, $t(319)$ = -2.692, p = .008) are both significant predictors of trauma symptoms (negatively related). Friend support is not a significant predictor of trauma symptoms, but is approaching significance (β = -1.489, $t(319)$ = -1.900, p = .059). This finding was particularly interesting since previous research has addressed the shift from family (parent) support to friend support during adolescence and emerging adulthood (Traylor et al., 2016).

Summary

Chapter 4 explores findings of the study and suggests that all hypotheses were supported. The first two hypotheses were statistically significant relationships, suggesting that in alignment with previous literature, cumulative trauma directly affects psychological distress, and social support also directly impacts psychological distress. The interaction effect was also significant, suggesting that perceived social support moderates the relationship between cumulative trauma and psychological distress. After the initial analyses were completed, exploratory analyses were

conducted to dive deeper into the data and provided interesting information that will be explored in the discussion and could influence future directions of the research.

CHAPTER 5

DISCUSSION

In this chapter, a discussion regarding the three hypotheses and results is provided. It begins with general findings based on the three hypotheses and addresses exploratory analyses. The findings from this study are connected back to previous literature and suggest reasoning for the findings. Next, the chapter moves into clinical implications, limitations, and future directions. The chapter concludes with a summary and conclusion.

General Findings

Previous literature suggests that individuals experience traumatic events beginning early in life and continuing throughout, meaning that traumatic events and the subsequent consequences accumulate over a lifetime. Many variables may have an impact on the amount of traumatic experiences an individual is exposed to, and the level of psychological distress that is experienced as a result. There are also many factors that may act as protective factors for trauma survivors. That is why the current study focused on exploring how many traumatic events had been experienced by college students, the impact of those experiences, and if social support can be utilized to reduce the negative effects of traumatic experiences.

Finkelhor et al. (2005) reported that children, on average, have experienced three lifetime incidents of trauma. As this study extended the age range used by Finkelhor and colleagues, and measured individuals up to the age of 24, it is not surprising that 81.2% of individuals in the sample reported four or more types of trauma (M = 9.18, SD = 6.32). Though this is not surprising, based on the previous research, this high of a number is alarming even though the severity of many of these traumatic experiences may be low. Assessing experiences of trauma up to the point of taking the survey may have added months of experiences for some individuals and

years for others as compared to previous research that highly focused on childhood trauma or trauma related to a specific period of life. To provide further understanding of why this number is so high, it is important to consider that once individuals experience one type of trauma, they are more likely to experience another trauma (Turner et al., 2010), and that several types of traumatic experiences can co-occur (e.g., physical and verbal abuse; Briere et al., 2016). Additionally, college is a time of exploration and identity development, which often involves risk-taking behaviors, and the culture of college promotes participating in risky behaviors (Dworkin, 2005). Though this is often seen as developmentally appropriate, it may in turn increase the potential for experiencing trauma. Understanding the prevalence of cumulative trauma in the college population is imperative to comprehend the connections with perceived social support and psychological distress.

Tinajero and colleagues (2015) stated that perceived social support is one of the most important protective factors for students transitioning to college. Students in this study reported, on average, a high level of social support (M = 5.68, SD = 1.18) as measured by the MSPSS. As this study was conducted in a college population, it is possible the amount of available resources on campus, and the perception of the availability of support, were higher than they may be in a general population. It can be suggested that attending college is a privilege that not all individuals are afforded and to become a college student, a certain level of social support is likely pre-existing. This suggestion leads to the assumption that not only do college students have certain available resources above and beyond the general population, but also that certain resources may have been available to them prior to college, which helped facilitate the college process and retention. These assumptions are not meant to overgeneralize, because certainly many individuals in college have experienced a difficult path to become a college student.

Alternatively, these assumptions are meant to suggest that for many college students, there are likely systems and resources in place that the general population may have not benefited from, which consequently may be an explanation for why the reported levels of perceived social support were higher in this study. Additionally, Ciarrohi et al. (2017) found that combining multiple sources of social support is associated with higher levels of well-being. The findings from the present investigation support this assertion. When researched in this study investigated the differences between total perceived social support versus individual types of social support, total social support more clearly moderated the relationship between cumulative trauma and psychological distress.

Both the levels of cumulative trauma and perceived social support in this study were slightly higher than expected, though can potentially be explained by the above literature. These analyses were conducted prior to testing the hypotheses to gain a better sense of the levels within this sample.

Hypothesis 1

Remaining congruent to the multitude of literature that connects traumatic experiences to higher levels of distress and symptomology, it was hypothesized that there would be a significant main effect of cumulative trauma history on psychological distress, with those experiencing higher levels of cumulative trauma experiencing higher levels of distress. Results indicated a significant positive correlation between cumulative trauma and psychological distress. This means that as individuals reported more experiences of trauma, they also reported experiencing higher levels of psychological distress. According to Turner et al. (2010) those who endure cumulative trauma are at the greatest risk for mental health issues. Findings from the present study seem to align with Turner and colleagues' assertion. Additionally, this study aligns with

the previous literature, which reports that experiencing cumulative trauma results in more negative outcomes than single-event trauma (e.g., Finkelhor et al., 2009; Kliethermes et al., 2014; Turner et al., 2010).

Hypothesis 2

Repeatedly the literature cites perceived social support as a predictor of mental health outcomes (e.g., Hofman et al., 2016; Reid et al., 2016) and as such, this study explored that connection between levels of perceived social support and the impact on psychological distress levels. It was hypothesized that there would be a significant main effect of perceived social support on psychological distress in which an individual reporting higher levels of perceived social support would experience lower levels of distress. Again, results indicated a significant, negative correlation between perceived social support and psychological distress. This finding supports what has been previously stated in the literature, which is that social support is a potent factor in mitigating against the deleterious effects of negative life experiences and associated mental health concerns (Rieck et al., 2005).

Hypothesis 3

In an effort to expand on the previous literature, it was hypothesized that higher levels of perceived social support result in lower levels of psychological distress, although the strength of this relationship is predicted to be higher for those experiencing higher levels of cumulative trauma. Results indicated that the relationship between cumulative trauma and psychological distress was significantly moderated by perceived social support. In other words, those who endorsed cumulative trauma and high levels of perceived social support reported lower levels of psychological distress. That is, perceived social support seemed to act as a buffer against heightened mental health concerns stemming from prior traumatic experiences, and in fact, for

individuals with higher levels of trauma, perceived social support makes a more significant difference. This finding is in line with other research within the field. Notably, perceived social support is reported to buffer against negative outcomes for individual types of trauma such as sexual assault (Johnson & Johnson, 2013) and for populations that are considered at-risk or vulnerable (e.g., emergency medical dispatchers, military, homeless individuals). Often, these populations are vulnerable to experiencing cumulative trauma. Consequently, the previous research has focused on the positive impact perceived social support can have for at-risk populations, though not specifically in relation to cumulative trauma (Archard & Murphy, 2015; Park et al., 2015; Shakespeare-Finch et al., 2015; Turner et al., 2013). This means that perceived social support has been identified as a protective factor for individuals vulnerable to trauma, but has not specifically explored the decrease in symptomology in relation to increasing amounts of cumulative trauma. Instead, it has looked at the influence of perceived social support for the populations as a whole. This study's findings make a solid connection for all cumulative trauma survivors that higher social support results in lower psychological distress.

Exploratory Findings

After reviewing the preliminary findings, we sought to further understand if other factors, such as gender, age, and type of support, might also be important when considering the moderating effect of social support on the relationship between trauma and mental health concerns. Of the three variables, the only statistically significant differences in gender were associated with psychological distress. There was a mean difference of 6.5 (p = .018) between women and men associated with psychological distress, which is consistent with findings from Norris and colleagues (2002), who reported females as being more likely than males to develop PTSD within their lifetime. Additionally, previous research has noted more complex

symptomology for females than males according to caretaker reports (Hodges et al., 2013). Interestingly, there were no statistically significant differences in levels of cumulative trauma or perceived social support between men and women. As research on cumulative trauma is still on the rise, it was helpful to review literature focused on single trauma to better understand this lack of significance. Generally, it is commonly accepted that males tend to experience higher levels of single-event traumatic experiences (e.g., car accidents, physical assault) and females are more likely to experience childhood sexual assault (Norris et al., 2002). It can be suggested, based on the aforementioned information, that the overall experience of cumulative trauma is not statistically different due to these differences based on individual types of traumatic experiences all being included within the measure. This finding is consistent with Guerra et al. (2016), who also reported no significant gender differences in the number of different traumatic experiences. The lack of statistically significant difference based on gender as it relates to perceived social support aligns with previous studies that has found no difference in perceived social support based on gender available after release from prison (Pettus-Davis et al., 2018).

To continue exploring demographic differences, a One-Way ANOVA was run to determine if there were any statistically significant differences in the three variables based on age, which there were not. This lack of statistical significance may be for several reasons, including that this study utilized a very narrow age range (18-24). Previous studies retrospectively assessed for trauma experienced before the age of 17, but the age range of participants was not limited. This study expanded the age range of when the trauma was experienced up to the age of the participant at the time of the study, but limited the study to participants within the range 18-24 years old. The statistics reported in this study for number of traumatic experiences were higher than many of the studies that only assessed for traumatic

experiences prior to the age of 17 (e.g., Finkelhor et al., 2005; Turner et al., 2010), which suggests that extending the age of when traumatic events are experienced was a more encompassing picture. Participants were fairly evenly distributed from ages 18-21 and then significantly tapered off from ages 22-24. These differences in distribution could have impacted the statistical significance and effect size. These implications will be discussed further in the directions for future research section.

Previously, literature showed conflicting evidence about the impact of whether or not particular types of social support (e.g., individual versus familial) are more beneficial in moderating distress (e.g., Barnes et al., 2016; Ciarrohi et al., 2017; Evans et al., 2014; Schwerdtfeger Gallus et al., 2014). In an attempt to better understand these conflicting findings, a regression analysis was completed for each of the three types of perceived social support as measured by the MSPSS (i.e., friend, family, and significant other). None of the three interactions were statistically significant moderators on their own. This suggests that individually, none of the three types of perceived social support provide enough support to moderate the relationship between cumulative trauma and psychological distress on their own. It should be noted that the significant other and family support variables were significantly and negatively correlated with trauma symptoms, whereas friend support was not. One may infer, then, that significant other and family may be more salient in mitigating the effects of psychological distress. This finding was slightly surprising since according to Traylor et al. (2016), friend support becomes more important for adolescents as they grow older and become more autonomous. Though, it is also noted that the positive impact from friend support is dependent on the friend's well-being and behavior, which was not examined by the measures used in this study.

Clinical Implications

First and foremost, the need for assessing trauma, cumulative trauma, and the impact of trauma is highlighted by the high numbers of individuals in this study who reported traumatic experiences and their psychological sequalae. Understanding how common it is for someone to have experienced some type of trauma is important for clinicians in the initial assessment/intake process and during conceptualization. Oftentimes, when only one type of trauma or event that is considered "more severe" is assessed, additional and more subtle types of trauma may be overlooked. This study exemplifies the importance of assessing for cumulative trauma, which includes the higher frequency, lower severity events as well. Traumatic events may range in severity or frequency, but ultimately each individual responds differently to a traumatic experience.

That being said, it is also important to recognize the survivor as the expert on his or her experience and explore the unique impact it has had on his or her life. The information provided by this study exhibits how many individuals not only experience one type of trauma, but experience multiple. This knowledge should be used by professionals to better understand those who seek services, regardless of setting (e.g., medical, university counseling center, private practice). Depending on the professional setting, a more thorough assessment may be useful, though at the least, empathy and conceptualization of the person as a whole, including all life experiences, is a necessity. By recognizing the survivor as the expert, the power is taken away from determining "if" something is considered traumatic and allows for meeting the individual where he or she is to begin moving forward.

Not only is it important for clinicians to attend to a thorough assessment of trauma, but it is imperative to accurately assess symptomology. Understanding that higher levels of cumulative

trauma result in higher levels of psychological distress, regardless of the types of trauma the individual has survived, is of paramount importance in delivering effective services. Again, employing a more encompassing assessment of symptoms allows for a more holistic approach to working with a survivor and may incorporate symptoms that were missed or not considered to be relevant. This bigger picture approach can result in a more thorough treatment plan and ultimately provide more support and positive outcomes. The theory behind a trauma-informed approach is routed in this idea and knowledge, and many settings are beginning to incorporate trainings and protocols based on this notion. According to the Substance Abuse and Mental Health Services Administration (2015),

> a program, organization, or system that is trauma-informed realizes that widespread impact of trauma and understands potential paths for recovery; recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and responds by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively resist re-traumatization. (p. 9)

Taking a trauma informed approach is becoming best practice not only in mental health settings, but also in medical practice.

Additionally, this data informs clinicians of the power of perceived social support, particularly for cumulative trauma survivors. Since many individuals seeking treatment have experienced at least one type of trauma in their life, it is good practice to explore current perceived social supports and look to build upon them. Occasionally, depending on the nature of the trauma (i.e., interpersonal), perceived social support may be significantly impacted, whether it be because of the person who was the offender or because the survivor's response to the event may be to socially isolate. In these situations, it is particularly important to encourage contact

with supports who are trusted. For those professionals working in a mental health setting, therapy may be a survivor's first experience with a supportive relationship, so helping to foster that relationship and skills that are transferrable to other relationships is key.

Not only is increasing perceived social support important for those who have survived cumulative trauma, but ultimately it can be beneficial for all clients. A preventative approach can be taken by targeting perceived social support early in treatment to promote well-being, which may also serve as a protective factor should an individual experience a future traumatic event. It is likely that improving social support is already incorporated by many clinicians, but the results of this study provide even more evidence to support the benefits.

Last, depending on the setting, prevention work and outreach about the impact of trauma, common occurrence of cumulative trauma, and importance of perceived social support may be beneficial and can take many different forms. Often trauma survivors feel very alone or isolated in their experience; however, if there was more insight prior to an event occurring, it may facilitate help-seeking. According to Kantor and colleagues (2017), low mental health literacy has been identified by trauma survivors as one of the most important obstacles for seeking treatment. Specifically, survivors reported uncertainty of where to seek help and lack of knowledge about services as being additional barriers. Much of this information can be provided to the general population as a preventative measure and would likely be beneficial for all individuals, but particularly for those who go on to experience a traumatic event. Prevention work may also take other forms and help to reduce the frequency of interpersonal trauma once individuals understand how their actions may be impacting others. Based on today's political climate and representation in the media, experiences of surviving trauma and speaking out are much more prominent. This is promoting more conversations around what makes a healthy

relationship, what is consent, and how changes can be made to reduce the occurrence of trauma and abuse. These types of conversations can be continued on all levels to promote health and wellness, support survivors, and prevent future experiences that could be traumatic. Psychoeducation, based in the literature, is a key part of this change.

The clinical implications mentioned would significantly improve a client's experiences and ensure a more thorough clinical conceptualization of the individual. These suggestions can be implemented in both a preventative and responsive way. It is also important to realize that the findings of this study and clinical implications are impacted by the limitations of this study.

Limitations

As is common with conducting research, there are several limitations associated with this study. First, using an online, self-report survey format, though beneficial for convenience, is also not without several issues that must be considered. The ability to take the survey anywhere the participant has access to internet and a computer or phone adds several complicating factors. Specifically, individuals have the ability to click through the questionnaire without answering questions accurately or by providing the same answer to every question. For that reason, check questions were inserted into three of the four questionnaires randomly, and several participants had to be removed due to answering three or more check questions wrong. Though, by inserting check questions to prevent answering randomly, it does not ensure that was not the case for others who met the requirements for the check questions. Additionally, online surveys do not allow for researchers to see participants' reactions to questions as they are completing the questionnaire. Consequently, in rare cases that responding to these questions may have caused increased distress, researchers were not aware nor able to check in to provide resources, which is

why multiple campus and community resources were provided as part of the debriefing statement.

A second limitation of this study is the use of a college student population, particularly with the age range of 18-24 years old and with the demographic makeup at this university. Several participants identified an age above that range, and therefore had to be excluded from the analysis. Many participants did not report their age and it is unclear why that may have happened, though the data for these participants remained in the analyses. By limiting the age range, non-traditional students may have been excluded from the population. Also, by using a college population, the data is certainly limited in many ways, which may specifically have impacted this study. College students are often, though not always, privileged to have some forms of perceived social support and possibly higher financial means. This means that it is possible by capturing a college student population, they may be skewed to higher levels of support and potentially lower levels of trauma depending on family background. According to research, individuals from lower socioeconomic status (SES) backgrounds or ethnic and racial minorities tend to live in less safe areas, resulting in higher levels of trauma (Turner et al., 2013). As the current study primarily consisted of Caucasian females, few between-group differences for racial or cultural variables could be assessed. So generally, the lack of diversity in age, cultural and racial background, SES, sexual orientation, and otherwise creates a lack of generalizability to a larger population. Though this study is a good start in filling a gap, more understanding with a more generalizable population is imperative.

A third limitation is related to the use of the JVQ-R2 questionnaire. First, one of the questions was unintentionally left out from the survey (i.e., “Did someone threaten to hurt you when you thought they might really do it?”). This was discovered at the time of analysis and

though there are other similar questions (i.e., “Did someone start to attack you, but for some reason, it didn’t happen? For example, someone helped you or you got away?”), it is unclear how this missing item may have impacted the study. Also, the Screener Sum version was used, though the supplemental questions were not and instead the LEC was added to try to account for other types of trauma that were not being measured. At the time of analysis, it was determined the LEC could not be combined with the JVQ for an overall score, so it was not used at all. In retrospect, it would have been more useful, and simpler, to use the supplemental questions to gather the additional information without overlap. Not only would it have provided a more encompassing picture of experiences, it also would have been cleaner for statistical analysis purposes. Also, the version used in this study (i.e., Adult Retrospective) allows for adults to think back on their lives, which may also be a limitation because 18-24 year olds may not necessarily remember every traumatic event that they experienced, and sometimes the most severe events may be blocked from their memory. In general, any retrospective measure adds a limitation, but currently is the most commonly used format to understand experiences of trauma.

As part of the demographic questionnaire, participants were asked if they had ever been in therapy, and if so, if they were currently in therapy. Of this sample, 42.6% (n = 136) reported current or past therapy. Though it is very helpful to have this information, it also presents the issue of whether or not participation in therapy had an impact on the dependent variable or moderator. It is likely that as a part of therapy, participants were taught coping skills and had already reduced or were currently reducing psychological distress. Additionally, as noted previously, therapy is a formal form of social support and often increasing social support is a goal of treatment. Therefore, perceived social support may have also been higher for these

individuals. Based on this study, there is no way of knowing how much of an impact treatment had for individuals, so again, future research should take this into consideration.

Finally, the use of the MSPSS measure adds a limitation because although it is a reliable and valid measure, the normed populations are unclear. It has been widely used across many populations, including a college student population, but there are no established population norms on the MSPSS. According to the scoring information, "norms would likely vary on the basis of culture and nationality, as well as age and gender" (Zimet et al., 1988). Additionally, the participants in this study reported a very high level of social support overall, which may have been due to being a college population. However, having such a high level of social support could have acted as a ceiling effect, and therefore could potentially be limiting the interaction effect. It is unclear if this is a measurement issue or a population issue, but should be considered for future research.

Directions for Future Research

Based on the findings, clinical implications, and limitations, several directions for future research are worth noting. First, completing a similar study utilizing the JVQ-R2 Screener Sum version with supplemental questions may better explore untapped areas of cumulative trauma. This study attempted to gather that information with a separate screener (i.e., LEC), which made scoring difficult and integrating the findings of the two measures together in meaningful ways unmanageable. The JVQ-R2 has additional supplemental items based on several scales: Exposure to Family Violence and Abuse, School Violence and Threat, Other Severe Assaults, Electronic Victimization, Exposure to Community Violence, and several additional items for neglect and peer relational aggression. Utilizing these additional items would allow for a more thorough assessment of experiences. Of particular interest are the Electronic Victimization items,

due to the current increase in research on victimization that is occurring through social media and text messaging.

Next, it would be very helpful to widen the sample from only 18-24 years old to all college students and then potentially widen it even further to individuals at all ages. By limiting the age for this study, several participants were unintentionally excluded. These individuals may be non-traditional college students, who potentially have had a more difficult path to college, and therefore that valuable data was missed. As a college student population was used out of convenience, though informed by research, a future study should look at individuals at all ages to better understand how experiences of cumulative trauma may change across the life span.

Included in widening the age range, it would be beneficial to complete a similar study with a more diverse (e.g., racially, ethnically, sexual identity, sexual orientation) subject pool. As this study was completed at a predominately White institution located in a rural area, it was hard to make generalizations to other populations due to the lack of diversity. As explored in the literature, there may be several aspects of demographics related to experiences of cumulative trauma, particularly low SES and education. It is unclear how those demographics would impact the findings of this study, but it is realistic to address that being in a college population holds a level of privilege in itself that likely impacts both the number of traumatic experiences and level of perceived social support. As the findings of this study already exhibit high levels of trauma, if anything, it is likely the levels may be higher in less-privileged samples. Another aspect of diversity to explore would be the gender differences. As mentioned, this sample consisted mostly of women, which made it difficult to make gender comparisons. A future study should attempt to gather more male participants to explore gender differences for the interaction effect and potentially even explore if particular types of perceived social support are more influential for

men versus women. Gathering this information would allow for a more tailored approach to treatment and prevention efforts.

Future research could also build upon the exploratory analyses by understanding more about the impact of different types of trauma and different types of perceived social support. As the JVQ is mostly focused on interpersonal trauma, it would be interesting to explore if other types of trauma (e.g., car accident, natural disaster, etc.) may have a different impact when folded into cumulative trauma. As the exploratory analyses suggested, certain types of perceived social support may be more or less beneficial, and this in particular would be helpful to understand for clinical and treatment purposes.

It may also be beneficial for future research to explore how much of an impact attending therapy has on both perceived social support and psychological distress. This information would not only give a deeper understanding of a trauma survivor's experiences, but also provide support for engaging in therapy after a traumatic event.

Last, it would likely be fruitful to explore how attachment may play a role as a moderator in a similar study. As trauma can significantly impact attachment based on the type of traumatic experience, attachment may also significantly impact one's perception of social support. Particularly in instances of interpersonal trauma with a caregiver, attachment may be impacted, and consequently, perception of social support or willingness to engage with social supports may change. According to Kliethermes and colleagues (2014), attachment relationships are commonly disrupted for individuals who have survived trauma from a caregiver by either overstimulation (i.e., abuse) or understimulation (i.e., neglect). Additionally, if individuals who have experienced chronic or cumulative trauma are unable to regulate themselves through an attachment relationship, this significantly impacts the level of distress. For these reasons, it

would likely be beneficial for future research on cumulative trauma and social support to further explore the role attachment plays.

Ultimately, as with most research, there is still a lot of unknown when it comes to experiences of trauma, particularly cumulative trauma. Future research can take many forms and continue to add to the field.

Summary

Findings from this study suggest that there is a significant connection between the amount of trauma experienced and the level of psychological distress one experiences. Additionally, it appears that perceived social support contributes significantly to decreasing the amount of psychological distressed experienced, particularly when an individual has experienced cumulative trauma. In this study, an alarming number of individuals reported experiencing cumulative trauma (81.2%), which suggests that by the time individuals enter college and throughout their college careers, it is possible they have experienced multiple traumatic experiences. This study extends previous literature by understanding the impact of perceived social support as a moderator for individuals who have experienced cumulative trauma. Understanding this information is beneficial for clinicians, professors, and administration to understand more of students' lived experiences and provide more support for students.

Conclusion

Chapter 5 provided a comprehensive discussion based on the findings of this research. General findings based on the three initial hypotheses were discussed first, followed by additional findings based on exploratory analyses. Next, clinical implications were outlined to provide direction for clinicians and others who may encounter trauma survivors. Last, limitations and future directions were discussed to provide opportunities to build upon the current study.

This study added to the field of literature by filling a gap in understanding if perceived social support serves as a moderator for cumulative trauma survivors.

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Appendix A: Full Qualtrics Survey

Cumulative Trauma, Social Support, and Psychological Distress

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Start of Block: Informed Consent

Q31

College of Humanities and Behavioral Science *Psychology Department*

You are invited to participate in a research survey, entitled "**Cumulative Trauma, Social Support, and Psychological Distress."** The study is being conducted by Rachel Turk, M.S. and Nicholas Lee, PhD of the Radford University Psychology Department, 5108 CHBS Building, P.O. Box 6946, Radford, VA 24142.

This study is interested in understanding the role of social support in the lives of people who have survived traumatic events. We estimate that it will take about 30-45 minutes of your time to complete the questionnaire. You are free to contact the investigator at the above address and phone number to discuss the survey.

Risks to participants are considered minimal. Participants will encounter questions (i.e., history of traumatic events and psychological symptoms) that may elicit feelings of discomfort due to the sensitive topic that is being examined by the current researchers. Both off- and on-campus resources will be provided to participants at the conclusion of this study, should they feel the need to speak with someone about their feelings or responses. While Qualtrics automatically collects IP addresses, Qualtrics does not report participants' IP addresses to the research team.

Your participation in this survey is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time without penalty. If you wish to withdraw from the study or have any questions, contact the investigator listed above.

If you have any questions, please call Dr. Nicholas Lee at 1-540-831-5361 or send an email to nlee11@radford.edu. You may also request a hard copy of the survey from the contact information above. This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Dr. Laura J.

Jacobsen, Interim Dean, College of Graduate Studies and Research, Radford University, ljacobsen@radford.edu, 1-540-831-5470.

If you agree to participate, please **press the "Accept" button at the bottom of the screen**. Otherwise press the "decline" button at the bottom of the screen and you will exit the survey.

Thank you.

- ○ Accept (1)
- ○ Decline (2)

Skip To: End of Survey If College of Humanities and Behavioral Science Psychology Department You are inv... = Decline

End of Block: Informed Consent

Start of Block: Demographics

D1 What is your age?

▼ 18 (1) ... 30 (13)

D2 What year are you in college

- ○ First Year (1)
- ○ Second Year (2)
- ○ Third Year (3)
- ○ Fourth Year (4)
- ○ Fifth Year (5)
- ○ Graduate Student (6)
- ○ Other (7)

D3 What is your biological sex?

- ○ Male (1)
- ○ Female (2)
- ○ Other (3)

D4 With what gender do you identify?

- ○ Man (1)
- ○ Woman (2)
- ○ Other (3)

D5 With which sexual orientation do you identify?

- ○ Heterosexual (1)
- ○ Homosexual (2)
- ○ Bisexual (3)
- ○ Questioning (4)
- ○ Asexual (5)
- ○ Other (6) _____

D6 What is your race? CHECK ALL THAT APPLY

- ☐ White (1)
- ☐ Black or African American (2)
- ☐ American Indian or Alaskan Native (3)
- ☐ Asian Indian (4)
- ☐ Chinese (5)
- ☐ Filipino (6)
- ☐ Japanese (9)
- ☐ Korean (10)
- ☐ Vietnamese (11)
- ☐ Other Asian (7)
- ☐ Native Hawaiian (8)
- ☐ Guamanian or Chamorro (12)
- ☐ Samoan (13)
- ☐ Other Pacific Islander (14)

D7 Are you of Hispanic, Latino, or Spanish origin?

- ○ No, not of Hispanic, Latino, or Spanish origin (1)
- ○ Yes, Mexican, Mexican American, Chicano (2)
- ○ Yes, Puerto Rican (3)
- ○ Yes, Cuban (4)
- ○ Yes, another Hispanic, Latino, or Spanish origin (5)

D8 How would you describe the area in which you grew up (or spent most of your time)?

- ○ Rural (50,000 people or less) (1)
- ○ Urban (50,000 to 100,000 people) (2)
- ○ Metropolitan (100,000 people or more) (3)

D9 What is your relationship status?

- ○ Single (1)
- ○ In a relationship (2)
- ○ Engaged (3)
- ○ Married (4)
- ○ Divorced (5)
- ○ Widowed (6)
- ○ Other (7)

Q18 Have you ever received mental health services?

- Yes (1)
- No (2)

Skip To: End of Block If Have you ever received mental health services? = No

Q21 Are you currently receiving mental health services?

- Yes (1)
- No (2)

Q19 How long have you received mental health services?

- 0-6 months (1)
- 6 months- 1 year (2)
- 1 - 1.5 years (3)
- 1.5 - 2 years (4)
- more then 2 years (5)

Q20 Did you receive mental health services as a result of a traumatic event?

- Yes (1)
- No (2)

End of Block: Demographics

Start of Block: LEC

LEC

Listed below are a number of difficult or stressful things that sometimes happen to people. For each event check one or more of the boxes to the right to indicate that: (a) it happened to you personally, (b) you witnessed it happen to someone else, (c) you learned about it happening to someone close to you, (d) you're not sure if it fits, or (e) it doesn't apply to you.

Be sure to consider your entire life (growing up as well as adulthood) as you go through the list of events.	Happened to me (1)	Witnessed it (2)	Learned about it (3)	Not sure (4)	Doesn't apply (5)
Natural disaster (for example, flood, hurricane, tornado, earthquake) (1)	○	○	○	○	○
Fire or explosion (2)	○	○	○	○	○
Transportation accident (for example, car accident, boat accident, train wreck, plane crash) (3)	○	○	○	○	○
Serious accident at work, home, or during recreational activity (4)	○	○	○	○	○
Exposure to toxic substance (for example, dangerous	○	○	○	○	○

chemicals, radiation) (5)					
Physical assault (for example being attacked, hit, slapped, kicked, beaten up) (6)	○	○	○	○	○
Assault with a weapon (for example being shot, stabbed, threatened with a knife, gun, bomb) (7)	○	○	○	○	○
Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm) (8)	○	○	○	○	○
Other unwanted or uncomfortable sexual experience (9)	○	○	○	○	○
Combat exposure to a war-zone (in the military or as a civilian) (10)	○	○	○	○	○
Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war) (11)	○	○	○	○	○

Life-threatening illness or injury) (12)	○	○	○	○	○
Severe human suffering (13)	○	○	○	○	○
Sudden, violent death (for example, homicide, suicide) (14)	○	○	○	○	○
Sudden, unexpected death of someone close to you (15)	○	○	○	○	○
Serious injury, harm, or death you caused to someone else (16)	○	○	○	○	○
Any other very stressful event or experience (17)	○	○	○	○	○
Answer “not sure” to this question (18)	○	○	○	○	○

End of Block: LEC

Start of Block: TSC_40

TSC_40_1 How often have you experienced each of the following in the past month?

	0 (never) (1)	1 (2)	2 (3)	3 (often) (4)
Headaches (1)	○	○	○	○
Insomnia (2)	○	○	○	○

Weight loss (without dieting) (3)	○	○	○	○
Stomach problems (4)	○	○	○	○
Sexual problems (5)	○	○	○	○
Feeling isolated from others (6)	○	○	○	○
"Flashbacks" (sudden, vivid, distracting memories) (7)	○	○	○	○
Restless sleep (8)	○	○	○	○
Low sex drive (9)	○	○	○	○
Anxiety attacks (10)	○	○	○	○
Sexual overactivity (11)	○	○	○	○
Loneliness (12)	○	○	○	○
Nightmares (13)	○	○	○	○
"Spacing out" (going away in your mind) (14)	○	○	○	○
Sadness (15)	○	○	○	○
Dizziness (16)	○	○	○	○
Not feeling satisfied with your sex life (17)	○	○	○	○

Answer 1 for this question (18)	○	○	○	○
Trouble controlling your temper (19)	○	○	○	○
Waking up early in the morning (20)	○	○	○	○
Uncontrollable crying (21)	○	○	○	○

TSC_40_2 How often have you experienced each of the following in the past month?

	0 (never) (1)	1 (2)	2 (3)	3 (often) (4)
Fear of men (1)	○	○	○	○
Not feeling rested in the morning (2)	○	○	○	○
Having sex that you didn't enjoy (3)	○	○	○	○
Trouble getting along with others (4)	○	○	○	○
Memory problems (5)	○	○	○	○
Desire to physically hurt yourself (6)	○	○	○	○
Fear of women (7)	○	○	○	○
Waking up in the middle of the night (8)	○	○	○	○

Bad thoughts or feelings during sex (9)	○	○	○	○
Passing out (10)	○	○	○	○
Feeling that things are “unreal” (11)	○	○	○	○
Answer 2 for this question (12)	○	○	○	○
Unnecessary or over-frequent washing (13)	○	○	○	○
Feelings of inferiority (14)	○	○	○	○
Feeling tense all the time (15)	○	○	○	○
Being confused about your sexual feelings (16)	○	○	○	○
Desire to physically hurt others (17)	○	○	○	○
Feelings of guilt (18)	○	○	○	○
Feeling that you are not always in your body (19)	○	○	○	○
Having trouble breathing (20)	○	○	○	○
Sexual feelings when you shouldn’t have them (21)	○	○	○	○

End of Block: TSC_40

Start of Block: MSPSS

MSPSS

We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

	1- Very Strongly Disagree (1)	2- Strongly Disagree (2)	3- Mildly Disagree (3)	4- Neutral (4)	5- Mildly Agree (5)	6- Strongly Agree (6)	7- Very Strongly Agree (7)
There is a special person who is around when am in need. (1)	○	○	○	○	○	○	○
There is a special person with whom I can share my joys and sorrows. (2)	○	○	○	○	○	○	○
My family really tries to help me. (3)	○	○	○	○	○	○	○
I get the emotional help and support I need from my family. (4)	○	○	○	○	○	○	○
I have a special person who is a	○	○	○	○	○	○	○

real source of comfort to me. (5)							
My friends really try to help me. (6)	○	○	○	○	○	○	○
I can count on my friends when things go wrong. (7)	○	○	○	○	○	○	○
I can talk about my problems with my family. (8)	○	○	○	○	○	○	○
I have friends with whom I share my joys and sorrows. (9)	○	○	○	○	○	○	○
There is a special person in my life who cares about my feelings. (10)	○	○	○	○	○	○	○
My family is willing to help me make decisions. (11)	○	○	○	○	○	○	○

I can talk about my problems with my friends. (12)	○	○	○	○	○	○	○

End of Block: MSPSS

Start of Block: JVQ

JVQ_1 These are questions about some things that might have happened during your life. Try your best to think about your entire childhood.

How many times:

	0 times (1)	1 time (2)	2-3 times (3)	4 or more times (4)
Has anyone use force to take something away from you that you were carrying or wearing? (1)	○	○	○	○
Has anyone stolen something from you and never give it back? Thinks like a backpack, money, watch, clothing, bike, stereo, or anything else? (2)	○	○	○	○
Has anyone break or ruin any of your things on purpose? (3)	○	○	○	○
Sometimes people are attacked with sticks, rocks,	○	○	○	○

guns, knives, or other things that would hurt. Has anyone hit or attack you on purpose with an object or weapon? Somewhere like: at home, at school, at a store in a car, on the street, or anywhere else? (4)				
Has anyone hit or attack you without using an object or weapon? (5)	○	○	○	○
Has someone started to attack you, but for some reason it didn't happen? For example, someone helped you or you got away? (6)	○	○	○	○
When a person is kidnapped, it means they were made to go somewhere, like into a car, by someone who they thought might hurt them. Has anyone tried to kidnap you? (7)	○	○	○	○
Answer 0 for this question (8)	○	○	○	○
Have you been hit or attacked	○	○	○	○

because of your skin color, religion, or where your family comes from? Because of a physical problem you have? or because someone said you were gay? (9)				
Not including spanking on your bottom, when you were a child, did a grown-up in your life hit, beat, kick, or physically hurt you in any way? (10)	○	○	○	○

JVQ_2 These are questions about some things that might have happened during your life. Try your best to think about your entire childhood.

How many times:

	0 times (1)	1 time (2)	2-3 times (3)	4 or more times (4)
When you were a child, did you get scared of feel really bad because grown-ups in your life called you names, said mean things to you, or said they didn't want you? (1)	○	○	○	○
When someone is neglected it	○	○	○	○

means that the grownups in their life didn't take care of them the way they should. They might not get enough food, take them to the doctor when they are sick, or make sure they have a safe place to stay. When you were a child, were you neglected? (2)				
Sometimes a family fights over where a child should live. When you were a child, did a parent take, keep, or hid you to stop you from being with another parent? (3)	○	○	○	○
Sometimes groups of kids or gangs attack people. Has a group of kids or a gang hit, jumped, or attacked you? (4)	○	○	○	○
When you were a child, did any kid, even a brother or sister, hit you? Somewhere like, at home, at school, out playing, in a store, or anywhere else? (5)	○	○	○	○

Has anyone tried to hurt your private parts on purpose by hitting or kicking you there? (6)	○	○	○	○
Has anyone, even a brother or sister, pick on you by chasing you or grabbing you or by making you do something you didn't want to do? (7)	○	○	○	○
Answer 4 or more for this question (8)	○	○	○	○
Have you been scared or felt really bad because others were calling you names, saying mean things to you, or saying they didn't want you around? (9)	○	○	○	○
Has a boyfriend or girlfriend or anyone you went on a date with slapped or hit you? (10)	○	○	○	○

JVQ_3 These are questions about some things that might have happened during your life. Try your best to think about your entire childhood.

How many times:

	0 times (1)	1 time (2)	2-3 times (3)	4 or more times (4)
When you were a child, did a grown-up you know touch your private parts when they shouldn't have or make you touch their private parts? Or did a grown-up you know force you to have sex? (1)	○	○	○	○
When you were a child, did a grown-up you did not know touch your private parts when they shouldn't have, make you touch their private parts, or force you to have sex? (2)	○	○	○	○
Has another person made you do sexual things, even a brother or a sister? (3)	○	○	○	○
Has anyone tried to force you to have sex; that is, sexual intercourse of any kind, even if it didn't happen? (4)	○	○	○	○

Has anyone made you look at their private parts by using force or surprise, or by "flashing" you? (5)	○	○	○	○
Answer 2-3 for this question (6)	○	○	○	○
Has anyone hurt your feelings by saying or writing something sexual about you or your body? (7)	○	○	○	○
When you were a child, did you do sexual things with anyone 18 or older, even things you both wanted? (8)	○	○	○	○
Have you SEEN a parent get pushed, slapped, hit, punched, or beat up by another parent, or their boyfriend or girlfriend? (9)	○	○	○	○
Have you SEEN a parent hit, beat, kick, or physically hurt your brothers or sisters, not including a spanking on the bottom? (10)	○	○	○	○

JVQ_4 These are questions about some things that might have happened during your life. Try your best to think about your entire childhood.

How many times:

	0 times (1)	1 time (2)	2-3 times (3)	4 or more times (4)
Have you SEEN anyone get attacked on purpose WITH a stick, rock, gun, knife, or other thing that would hurt? Somewhere like: at home, at school, at a store, in a car, on the street, or anywhere else? (1)	○	○	○	○
In real life, have you ever SEEN anyone get attacked or hit on purpose WITHOUT using a stick, rock, gun, knife, or something that would hurt? (2)	○	○	○	○
Has anyone stolen something from your house that belongs to your family or someone you live with? Things like a TV, stereo, car, or anything else? (3)	○	○	○	○
Has anyone close to you been murdered, like a friend, neighbor,	○	○	○	○

or someone in your family? (4)				
Have you been in any place in real life where you could see or hear people being shot, bombs going off, or street riots? (5)	○	○	○	○
Answer 0 for this question (6)	○	○	○	○
Have you been in the middle of a war where you could hear real fighting with guns or bombs? (7)	○	○	○	○

End of Block: JVQ

Start of Block: Debriefing

Q31 DO NOT EXIT THIS BROWSER, YOU MUST CLICK THE ARROW AT THE BOTTOM OF THE SCREEN TO RECEIVE CREDIT.

Your answers have been recorded. Thank you for your participation. You will receive two (2) SONA credits within 48-72 hours. If you have questions or concerns, please contact Nicholas Lee, Ph.D., at nlee11@radford.edu. Assistance is available through the Radford University Counseling Center; please call (540) 831-5226 if you would like to talk with a counselor. Additional resources are also available. **You may also print this page for your records.** You may now CLICK THE ARROW AT THE BOTTOM OF THE SCREEN TO RECEIVE CREDIT.

<u>On-Campus Resources</u>

Interim Title IX Coordinator: John Brooks

Office of Diversity and Equity: 540-831-5307, 314B Tyler Place (next to Subway)

Substance Abuse and Violence Education Support Services: Victim/Survivor Advocates, Confidential, Tyler Hall (lower level), 540-831-5709

Student Counseling Center: Confidential, Tyler Hall (lower level), 540-831-5226

Student Health Services: Confidential, STI Testing, Moffett Hall (ground floor), 540-831-5111

Dean of Students Office: Provide advocacy and academic support, 274 Heth Hall, 540-831-6297

Office of Student Standards and Conduct: Filing student conduct complaints, 207 Heth Hall, 540-831-5321

University Police Department: Filing criminal reports, assistance with care/well-being services, Allen Building, 540-831-5500

Human Resources: Support for faculty and staff, Christina K. Brogdon, 540-831-5008, 314B Tyler Place (next to Subway)

Off-Campus Resources

Women's Resource Center: Confidential Hotline, 540-639-1123, TTY Hotline 540-639-2197, Office 540-639-9592, Toll-free 800-788-1123, 1217 Grove Avenue, Radford, VA 24141

Radford City Police: Filing a criminal complaint, 540-731-3624, 20 Robertson Street, Radford, VA 24141

New River Medical Center: Physical evidence recovery kit available at no cost, 540-731-2866, 2900 Lamb Circle, Christiansburg, VA 24073s

YOU MUST CLICK THE ARROW AT THE BOTTOM OF THE SCREEN TO RECEIVE CREDIT.

End of Block: Debriefing