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Shame, Perceived Social Support, and PTSD: Bridging the Gap between Female and Male Survivors of Sexual Assault

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SHAME, PERCEIVED SOCIAL SUPPORT, AND PTSD: BRIDGING THE GAP BETWEEN FEMALE AND MALE SURVIVORS OF SEXUAL ASSAULT

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SHAME, PERCEIVED SOCIAL SUPPORT, AND PTSD: BRIDGING THE GAP BETWEEN FEMALE AND MALE SURVIVORS OF SEXUAL ASSAULT

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I dedicate this thesis to my dad who constantly inspires me to overcome obstacles and reminds me to live for joy. I also dedicate this work to Nick, who keeps me excited for life.

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SHAME, PERCEIVED SOCIAL SUPPORT, AND PTSD: BRIDGING THE GAP BETWEEN FEMALE AND MALE SURVIVORS OF SEXUAL ASSAULT

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Sexual assault (SA) is prevalent in both females and males, with approximately 25% of females and 10% to 20% of males experiencing SA at some point of their lives. Social support and shame are important factors that are related to PTSD for SA survivors. However, little research has compared female and male SA survivors on these factors. Consequently, the purpose of the present study was to investigate the role of social support on PTSD in female and male SA survivors. Sex of the SA survivor was also examined as a moderator of the relationship between PTSD and social support and shame. The study consisted of 342 female and 33 male young adult SA survivors who completed several self-report measures assessing trauma history, social support, shame, and PTSD. Analyses found no differences between female and male SA survivors in perceived social support from family and significant others. However, male SA survivors reported significantly higher levels of support from friends. Additionally, both female and male SA survivors reported similar levels of shame. Furthermore, it was found that family support was negatively associated with PTSD and significant other support was positively associated with PTSD. No significant interactions were found regarding sex of the SA survivors moderating social support or shame on PTSD. Findings suggest that female and male SA survivors may experience differing levels of support from friends, which could be related to differences in perpetrator characteristics. Findings also highlight the importance of social support in predicting SA-related PTSD. However,

findings do not indicate that social support or shame confer differential risk for PTSD depending upon SA survivor sex. The current study provides insight on the similarities and differences experienced by female and male SA survivors in relation to shame, perceived social support, and PTSD.

Introduction

Approximately 8-10% of the United States population will develop posttraumatic stress disorder (PTSD) at some point in their lives (American Psychiatric Association [APA], 2013). Although various traumatic events can result in the development of PTSD, sexual assault (SA) has one of the highest prevalence rates with around 30% to 40% of SA survivors developing the disorder (Kilpatrick et al., 2007; Ullman & Filipas, 2001). In addition to SA survivors developing PTSD at three times the rate of the national average, Chivers-Wilson (2006) reported that survivors of SA generally receive lower rates of positive social support and higher rates of negative social support than survivors of other traumas. It has also been found that SA survivors report some of the highest levels of shame compared to survivors of other traumatic events (Aakvaag et al., 2016; Feiring et al., 2002). This is concerning because social support and shame are risk factors for PTSD (Aakvaag et al., 2016; Brewin et al., 2000; Dorahy & Clearwater, 2012; Pulverman & Meston, 2020). Although past research has examined social support, PTSD, and shame in SA survivors, most research has focused on female survivors of sexual assault, with little research comparing female and male survivors. This study investigated the influence of three domains of social support on PTSD symptoms in female and male survivors of sexual assault. A secondary aim was to determine if the sex of SA survivors moderated of the effects of perceived social support and shame on PTSD symptoms.

Sexual Assault

Although rape or forced penetration is the most apparent form of SA, many other behaviors fall into the category of SA. Sexual assault includes a wide range of experiences, including attempted or completed fondling, unwanted touching, and/or

penetration through coercion, incapacitation, or force (Koss & Oros, 1982). Ultimately, SA consists of any unwanted sexually charged physical contact or advances (Rape, Abuse & Incest National Network [RAINN], 2020). SA may be perpetrated by strangers, acquaintances, friends, family members, or romantic partners, and the majority of survivors know their perpetrators in their personal lives. SA can happen to any person of any gender, age, race, ethnicity, or background, although adolescents and younger adults are most at risk (RAINN, 2020).

Past research has shown that approximately 25% of women and 10% to 20% of men will experience SA victimization at least once in their adult lives (Du Mont et al., 2013; Koss, 1993). Though there are differences in rates of sexual assault victimization reported by female and male survivors, it is likely that these percentages do not accurately represent the population of sexual assault survivors. Due to male survivors underreporting instances of victimization at higher rates than female survivors, it is likely that the rate for male sexual assault victimization is higher than statistics show (Dorahy & Clearwater, 2012). However, the exact percentage of male survivors that do not report their sexual assault victimization is unknown. Regardless, these statistics demonstrate that experiencing SA is not uncommon for women or men.

Both female and male sexual assault survivors frequently experience increased difficulties in various functional outcomes after an assault (Campbell et al., 2009). These issues may include the loss of jobs, financial issues, decreased physical health, and decreased relationship satisfaction (Ullman, 1996). Many of these issues are associated with the development of trauma-related mental health disorders caused by the assault. Campbell and colleagues (2009) reported that 13-15% of SA survivors developed

depression, 12-40% developed anxiety, 13-49% developed alcohol use disorders, 28-61% developed substance use disorders, and 23-44% developed suicidal ideation, with around 2-19% of SA survivors having attempted suicide. It is common for many of these disorders to occur comorbidly, consequently increasing the risk of revictimization, self-harm, and suicide (Dworkin et al., 2017; Messman-Moore & Long, 2003).

Posttraumatic Stress Disorder in Sexual Assault Survivors

One particularly common mental health condition experienced by sexual assault survivors is Posttraumatic Stress Disorder (PTSD). PTSD was originally noted in the 3rd edition of the Diagnostic Statistical Manual (DSM) in 1980 and recently revised in the most recent edition (APA, 1980; APA, 2013). For an individual to meet criteria for PTSD, they must experience an event that includes "exposure to actual or threatened death, serious injury, or sexual violence" (APA, 2013, p. 271). A trauma may be experienced in various forms, including directly experiencing, witnessing in person, or learning about traumatic events involving a loved one, or experiencing repeated exposure to details of traumatic events (APA, 2013). PTSD consists of four clusters of symptoms, including hyperarousal, avoidance, alterations in mood and cognition, and re-experiencing symptoms.

Female sexual assault survivors who live with untreated PTSD have shown to experience decreased functioning in many realms of their lives, including personal relationships, job performance, ability to care for themselves, and mental and physical health (Kilpatrick et al., 1992; Moller et al., 2014). PTSD has also been associated with decreased life satisfaction and increased levels of unhappiness (Karatzias et al., 2013).

SA consistently results in higher rates of PTSD than most other traumatic events (APA, 2013; Chivers-Wilson, 2006; Frazier et al., 2009; Littleton et al., 2012). A study conducted by Ullman and Filipas (2001) consisting of 323 female sexual assault survivors from the local college campus and surrounding community showed that PTSD development in SA survivors was over three times higher than the national average with around 30% to 40% of participants reporting PTSD symptoms (Ullman & Filipas, 2001). In another study, Breslau and colleagues (1991) found that approximately 80% of both female and male SA survivors developed PTSD after an assault. These statistics consistently demonstrate that SA survivors are particularly vulnerable to developing PTSD in comparison to survivors of various other traumas. Although past research has shown that both female and male survivors of sexual assault develop PTSD at similar rates after an assault, little is known about how predictors and symptoms of PTSD may differ between female and male SA survivors (Galovski et al., 2013; Kessler et al., 1995).

Predictors of PTSD

A number of predictors of PTSD have been identified in SA survivors. These predictors include more severe SA experiences with perceived life threat, use of weapons, and increased physical injuries (Ozer et al., 2003; Stein et al., 2000). Revictimization also has been shown to contribute to more severe PTSD development in survivors (Najdowski & Ullman, 2011; Ullman, 2010; Ullman & Peter-Hagene, 2016). When sexual assault survivors do not disclose their assault to others, they can experience heightened rates of PTSD (Feiring et al., 1996). On the other hand, disclosing instances of sexual assault to more people has also shown to be related to higher levels of PTSD, which is likely

related to higher levels of perceived negative social reactions by the survivor (Ullman & Filipas, 2001).

Perceived Social Support

Although SA victimization poses high conditional risk for PTSD, perceived social support can decrease PTSD development (Brewin et al., 2000). Perceived social support refers to the perception one has of the members in their social domains as available to provide overall support in times of need (Ioannou et al., 2019). Positive social support may consist of simply believing the survivor's story and providing non-judgmental support (Ullman & Filipas, 2001). On the other hand, negative social support may consist of victim-blaming, skepticism, shaming the survivor, and generally making the survivor feel worse about the traumatic event they experienced (Billette et al., 2008). Social support can come from a wide variety of support domains, such as one's workplace, school, religion, family, friend, and romantic partner social domains (Leech & Littlefield, 2011).

Multiple cross-sectional studies have shown that social support has proven to be one of the strongest predictors in the development of PTSD in SA survivors (Ahrens & Campbell, 2000; Billette et al., 2008; Borja et al., 2006; Ullman & Relyea, 2016). In a meta-analysis examining 34 different predictors of PTSD, social support was the strongest predictor of PTSD symptoms in sexual assault survivors, surpassing numerous other predictors including age of trauma exposure, gender, race, and education levels (Brewin et al., 2000).

The relationship between PTSD symptoms and social support has also been demonstrated in multiple longitudinal studies, even on a daily interactional basis

(Dworkin et al., 2018). Ullman and Peter-Hagene (2016) showed positive social support buffered against PTSD development, whereas negative social support increased PTSD development in SA survivors. Ullman and Peter-Hagene (2014) found that when SA survivors received higher levels of negative social support, they practiced maladaptive coping mechanisms, such as shaming themselves, and in turn harming their view of self and overall mental health, thus demonstrating a link between interpersonal processes and shame.

Although a clear link has been established between social support and PTSD, the majority of past research has discussed social support outcomes broadly and has not compared specific sources of social support in relation to PTSD. The few past studies that have examined specific domains of social support in relation to PTSD have produced varying results. Dworkin and colleagues (2018) examined family, friend, and romantic partner social support domains in relation to PTSD in survivors of SA. This study found that positive social support from friends was predictive of lower levels of PTSD in SA survivors, but there was no relation between family and significant other support domains and PTSD (Dworkin et al., 2018). However, another study conducted on these three social domains in relation to PTSD development found differing results. Woodward and colleagues (2015) found in a sample of intimate partner violence survivors that positive social support from both friends and family were significantly negatively associated with PTSD, while significant other support was not. Notably, most studies that have examined specific domain support have primarily focused on support from romantic partners, with results suggesting that significant other support is relevant in predicting PTSD

development in SA survivors (Billette et al., 2008). However, less research has examined other social domains, particularly in the context of male SA survivors.

The lack of research conducted on specific social support domains outside of romantic partners is a significant limitation. Recent research has shown that a substantial proportion of adults in the United States are not in a romantic relationship, indicating that they likely rely on other social domains for support (U.S. Census Bureau, 2019). Additionally, the research stated above demonstrates that social domains beyond romantic partners have a significant impact on PTSD symptoms in SA survivors (Dworkin et al., 2018; Woodward et al., 2015). Thus, it is critical to study social domains extending beyond romantic relationships. In particular, more research is needed to examine how other domains compare regarding their influence on PTSD symptoms in both female and male SA survivors. Further understanding of the influence of multiple social domains for both female and male SA survivors will allow for advancements in understanding, preventing, and treating PTSD in all SA survivors.

Shame

Another risk factor identified as focal in the development and maintenance of PTSD is shame. Shame has been defined as "a highly unpleasant self-conscious emotion arising from the sense of there being something dishonorable, immodest, or indecorous in one's own conduct or circumstances" (VandenBos, 2007, p.848). Shame is a cognitive state influenced by social interactions and negative feelings one has toward themselves due to their belief that they have failed to meet social expectations, or feel they are experiencing a social threat (Budden, 2009; Dorahy & Clearwater, 2012; Fessler, 2007). Although shame shares some similarities with PTSD such as negative and self-critical

thinking, avoidance, intrusive recollections, and negative attributions of the traumatic occurrence, shame and PTSD are separate, but co-occurring issues (Saraiya & Lopez-Castro, 2016).

A meta-analysis conducted by Saraiya and Lopez-Castro (2016) examined 47 studies on the topic of the role of shame in PTSD and found a consistent association between shame and PTSD. Not only was shame found to be a common experience in individuals with PTSD, but it was also found to pre-dispose individuals to the development of PTSD following trauma exposure (Saraiya & Lopez-Castro, 2016). More specifically, individuals who reported struggling with feelings of shame pre-assault were more likely to develop heightened levels of shame and PTSD post-assault. Notably, few of these studies examined male SA populations in relation to shame and PTSD (Saraiya & Lopez-Castro, 2016).

In addition to development and maintenance of PTSD, shame has also been identified as a key to PTSD treatment outcomes. Approximately 30-50% of individuals who suffer from PTSD remain symptomatic after completing their evidence-based therapy (EBTs) treatments (Bradley et al., 2005). It is believed that this may be due in-part to EBTs not fully addressing the topic of shame throughout PTSD treatment (Saraiya & Lopez-Castro, 2016). Furthermore, past studies have shown that PTSD treatments are even less effective for SA survivors, along with results showing that SA survivors experience higher levels of shame compared to survivors of other violent crimes (Chivers-Wilson, 2006; DePrince et al., 201l; Vidal & Petrak, 2007; Weiss, 2010). This is likely due to the nature of SA being extremely traumatic, perceived as violent and

invasive, along with SA being highly stigmatized (Aakvaag et al., 2016; Amstadter & Vernon, 2008).

Further examination is needed on the relation between shame and PTSD in populations that consistently report heightened levels of shame, such as SA survivors. Since SA is a common trauma that is highly stigmatized, shame is an important factor to examine in relation to PTSD in this population. However, there is still much unknown on how shame may impact PTSD in SA survivors. Namely, little is known on how sex may moderate this relation. Further research is needed in these areas, particularly in comparing female and male SA survivors. Studies have reported that male SA survivors may uniquely experience mental health symptoms due to societal expectations of gender roles and masculinity (Lisak et al., 1996; Perrott & Webber, 1996). Thus, it cannot be assumed that shame operates similarly for female and male SA survivors with regard to PTSD. Better understanding of how sex influences the association between shame and PTSD in SA survivors will help inform whether this risk factor is more relevant in shaping PTSD symptoms for specific SA survivors.

Summary

Experiencing a sexual assault is a life changing and traumatic event that happens to an individual in America every 73 seconds (RAINN, 2020), with upwards of 80% of survivors developing PTSD (Breslau et al., 1991; Saraiya & Lopez-Castro, 2016). Although there is an abundance of research on PTSD in the population of female sexual assault survivors, there is a surprisingly low amount of research conducted on male survivors, with few comparisons of female to male SA survivors. Although research has shown social support is a significant predictor of PTSD, few studies have extended this

examination to research specific social domains, and findings are mixed. Additionally, studies have yet to examine whether the association between various domains of social support influence PTSD similarly for female and male SA survivors.

In addition to social support, research has documented that shame is another important factor in shaping risk for PTSD. However, male SA survivor may be especially likely to experience shame following SA due to traditional gender norms, and thus shame may be more relevant in shaping PTSD for male SA survivors compared to female SA survivors (Brewin et al., 2000). However, studies have yet to test this hypothesis. Taken altogether, more research is needed that compares whether established vulnerability factors for PTSD operate similarly in female and male SA survivors with regard to the risk they confer for PTSD.

Rationale for Current Study

The current gaps in research on social support, shame, and PTSD in survivors of SA include a lack of representation and comparison of both female and male SA survivors. There are currently no studies which have compared the influence of social support domains on PTSD in female versus male SA survivors. Knowledge on how to implement social support as a tool against PTSD would allow mental health care providers to better treat individuals with histories of SA and ultimately reduce the rates of PTSD in SA survivors. Social support is a key predictor of PTSD development, and therefore can be used to combat the development of PTSD in SA survivors. Further investigation may help identify which specific social domains are prominent in shaping trauma response.

Furthermore, there is also a lack of research examining whether shame is more strongly associated with PTSD in SA survivors depending on whether they are female or male. Although it is known that SA survivors report some of the highest levels of shame of any trauma survivors, it is currently unknown whether female or male survivors experience different levels or characteristics of shame. Awareness of how sex differentially impacts shame in SA survivors would allow SA recovery service providers to better address and reduce these feelings of shame, and in turn, PTSD symptoms for both female and male survivors.

This study investigated the impact of shame and social support from various social domains on PTSD symptoms. It was also examined whether the relationship of shame and social support on PTSD were influenced by whether a SA survivor was female or male. The results of this study aimed to determine whether the importance of established risk factors vary for female and male survivors of SA.

Hypotheses

Hypotheses examined the impact of social support and shame on PTSD in female and male SA survivors. The first hypothesis was 1) female SA survivors would report higher rates of support from all three social support domains (friends, family, and significant other) and lower levels of shame than male SA survivors. This was based on previous research demonstrating that women are more likely to seek out and utilize social resources than men (Reevy & Maslach, 2001) and that gender norms about masculinity may result in higher levels of shame for male SA survivors. It was also hypothesized that 2) perceived support from the friend domain would be significantly associated with PTSD, while family and significant other would not be significantly associated. This

hypothesis was based on past findings that perceived social support from the friend domain was predictive of PTSD in SA survivors, whereas family and significant other support were not (Dworkin et al., 2018). 3) The third hypothesis was that sex of the SA survivor would moderate the association between social support and PTSD. Namely, it was hypothesized that social support from all domains would be more strongly associated with PTSD for female SA survivors compared to male SA survivors. 4) Lastly, it was hypothesized that sex of the SA survivor would moderate the association between shame and PTSD. More specifically, it was hypothesized that shame would be more strongly associated with PTSD in male SA survivors relative to female SA survivors. This hypothesis was based on past findings which indicate that male SA survivors report unique and challenging mental health symptoms in relation to societal expectations of masculinity (Lisak et al., 1996; Perrott & Webber, 1996). It was believed that these unique challenges would cause additional distress and shame in male survivors, in addition to the issues that both female and male SA survivors experience.

Method

Participants

Participants in this study were recruited on a volunteer basis through an online university-based study pool. The specific requirements set in place for participating in the study were that participants must have been 18 years or older and had currently been attending the university where the study was held. Upon completion of the online study, participants were rewarded with credits to their university study pool account.

The study initially consisted of 537 female and 130 male participants who completed the online survey. However, before data analyses were conducted, participants

who did not indicate histories of SA were removed from the data sample. This was determined based on whether or not participants endorsed one or more of the questions on the Sexual Experiences Survey-Short Form Victimization and the Childhood Trauma Questionnaire measures. Additionally, participants who failed one of more attention checks placed throughout the measures were excluded from the analyses. Examples of these attention checks include statements such as "please select extremely for this response" and "select often for this response", which were randomly embedded in various measures. This specific inclusion criteria resulted in 244 participants being excluded from data analyses due to failing to pass all attention checks. An additional 10 participants were removed from data analyses due to data validity concerns related to survey completion time, and an additional 2 participants were removed for partial survey completion.

The participants included in the analyses consisted of female (n=342) and male (n=33) participants who reported any instances of SA victimization throughout their lifetime. Approximately 24% of females and 12% of male SA survivors reported only experiencing SA as an adult. Additionally, around 7% of both female and male SA survivors reported SA only as a child. Furthermore, approximately 22% of female and 7% of male survivors reported SA as both a child and adult. The majority of participants were Caucasian (83.2%), and the remaining consisted of African American or Black (11.9%), Asian American (2.2%), Native American or American Indian (1.3%), Hispanic or Latinx (5.6%), and Other (1.9%). The average age of participants was 19.3 years old with ages ranging from 18 to 46 years old.

Procedure

Upon approval from the local IRB, the study was made available to students through a university based online study-pool. Participants volunteered to complete the survey online for course credit. Once participants signed up for the study, they were redirected to a survey administered via Qualtrics. It took participants approximately 25 minutes to complete the survey. No identifying data was collected from participants and all data was completely anonymous. Attention checks were placed throughout the measures to ensure only quality data was examined and represented in the results of the study.

The first page of the survey was the informed consent form in which participants were required to state whether or not they agreed to participate in the study. If participants did not consent to participate, the survey automatically closed. If participants did consent to participate, directions for the first measure appeared. Although "required response" was not applied to any of the questions throughout the measures, participants were notified when they do not answer a question and told that they could go back to answer the question or move forward without answering. The last page of the survey consisted of contact information for mental health services that are provided both locally and nationally. Participants were prompted to answer a question which indicated that they had read the provided information. Once this page was completed, participants were notified of their study completion and were granted course credit.

Measures

Demographics. The demographics questionnaire asked participants to indicate their age, gender, sexuality, relationship status, and race/ethnicity. Additionally, there

were questions on participants' current income, military status, level of college education, and if English was their primary language.

Adult Sexual Assault History. The Sexual Experiences Survey-Short Form Victimization (SES-SFV) was used to determine if participants experienced adult sexual assault (Koss & Oros, 1982). This measure assessed respondents' histories of sexual assault victimization, which included sexual assault and harassment, completed and attempted rape, sexual assault through coercion, force, threat of harm, physical assault, and use of drugs or alcohol (Koss & Oros, 1982). This measure consisted of 35 statements that respondents answered on a four-point Likert scale, ranging from 0 *(never happening*), to 3 (*happening three or more times*), along with three follow-up questions at the end of the measure. Examples of the statements included in the survey consist of; "Since age 14, a man put his penis into my vagina, or someone inserted fingers or objects without my consent by:" with additional sub-statements, including: "Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to", and "Using force, for example holding me down with their body weight, pinning my arms, or having a weapon" (Koss & Oros, 1982).

Through the use of display logic, sex specific questions were displayed to respondents with their indicated matching biological sex. The three follow-up questions at the end of the measure directly asked respondents to indicate whether any of the above statements had happened to them one or more times, to state the sex of the perpetrators that assaulted them, and if they have ever been raped. Respondents who received higher scores on this measure indicated higher levels of sexual trauma experienced. An

endorsement of one or more to any of the questions within this measure indicated the participant had a history of sexual assault. Throughout the literature, the SES-SFV has shown to be a very commonly used measure used to examine sexual assault histories.

Childhood Sexual Assault History. The Sexual Abuse Subscale of the Childhood Trauma Questionnaire (CTQ) measured whether respondents experienced sexual abuse before the age of 14. This subscale consisted of five statements that participants responded to on a five-point Likert scale, ranging from 1 (*never true*) to 5 (*very often true*). Total possible scores range from 5 to 25, with higher total scores indicating higher levels of trauma experienced (Liebschutz et al., 2018). Example statements include "[I] was touched sexually", "[I was] made to do sexual things", and [I was] hurt if I didn't do something sexual" (Bernstein et al., 1994). Similar to the SES measure, an endorsement of one or more on any of these questions indicated a history of sexual assault victimization. Past studies have reported the CTQ sexual abuse subscale to have high internal consistency with past reports ranging from α =.93 to α =.95 (Bernstein et al., 1997). The CTQ also has high test-retest reliability with the coefficient at r=0.80 (Bernstein et al., 1997). For the current study, the internal consistency for the CTQ was high at α =.88.

Post-traumatic Stress Disorder. The Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5) assessed respondent's present PTSD symptoms. Respondents were instructed to think of their unwanted sexual experience while answering the questions in this measure. The measure consisted of 20 total questions that required respondents to answer how much the problems listed had been bothering them in the last month. These questions were presented on a five-point Likert scale ranging from 0 (*not at all*), to 4

(*extremely*). Examples of the statements included in the measure are "Repeated, disturbing, and unwanted memories of the stressful experience", "Trouble remembering important parts of the stressful experience", and "Loss of interest in activities that you used to enjoy" (Koss & Oros, 1982). Participant total scores were obtained through a composite score, along with sub-scores that represented the PTSD subscales: hyperarousal, avoidance, alterations in mood and cognition, and re-experiencing symptoms. Past studies have found that the PCL-5 has both strong internal consistency at (α = .94) and test-retest reliability at r=.82 (Belvins et al., 2015). For the current study, the PCL-5 had high internal consistency at α =.95.

Perceived Social Support. The Multidimensional Scale of Perceived Social Support (MSPSS) is a 12-item measure that assessed for respondents' perceived social support (Zimet et al, 1988). The measure included statements on three social support domains, consisting of family, friends, and special persons. The questions were scored on a Likert scale ranging from 1 (*very strongly disagree)* to 7 (*very strongly agree).* The MSPSS included four statements that addressed the family support domain, four statements which addressed the friend support domain, and four statements for the special person domain. Examples of these statements include: "There is a special person with whom I can share my joys and sorrows" and "I can talk about my problems with my friends" (Zimet et al., 1988). According to past studies, the internal consistency for the MSPSS has been reported as high, ranging from α = 0.93 to α = 0.98. The reliability of the MSPSS has been reported as high as well, ranging from r= 0.72 to r= 0.85 (Hardan-Khalil & Mayo, 2015). For the current study, the internal consistency for the MSPSS subscales and total score was high ($\alpha \geq .93$).

Shame. The Internalized Shame Scale (ISS) measured participants' past and present feelings of shame (Cook, 1987). The measure consisted of 24 statements that participants rated on a five-point Likert scale on how often they agreed with the statements. The Likert scale ranged from 0 (*never*), to 4 (*almost always*). Examples of the statements are "I think that people look down on me", "I have an overpowering dread that my faults will be revealed in front of others", and "I have this painful gap within me that I have not been able to fill" (Cook, 1987). The ISS has been shown to yield high internal consistency (α = 0.88-0.96) and high test-retest reliability (r= 0.8; Peter & White 2006). For the current study, the ISS had high internal consistency at α =.96.

Data Analyses

Prior to data analyses, data were checked and corrected for outliers and assumption of normality, including skew, and kurtosis. Data corrections were applied using guidelines from Tabachnick and Fidell (2019). For between-groups comparisons, estimates of effect size were reported as Cohen's d. Using guidelines from Cohen (1988), effect sizes of .2 were interpreted as small, .5 as a medium effect, and .8 as a large effect.

Results

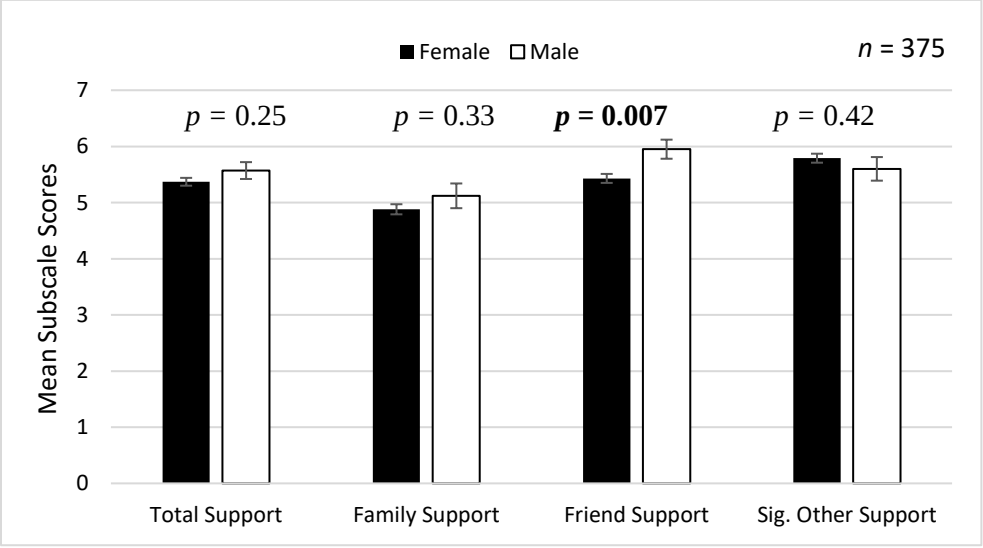
Comparing Levels of Social Support and Shame Between Female and Male SA Survivors

Independent samples T-tests were conducted to investigate hypothesis 1 (female SA survivors would report higher rates of support from all three social support domains (friends, family, and significant other) and lower levels of shame than male SA survivors). Results showed that there were no significant differences in perceived social support between female (M = 5.37, SD =1.24) and male (M = 5.57, SD = 0.86) SA

survivors for total support (t(46) = -1.17, p = 0.25, d = 0.19). Additionally, no significant differences found for family support between female (M = 4.88, SD = 1.71) and male (M = 5.12, SD = 1.29) SA survivors (t(44) = -0.98, p = 0.33, d = 0.16). Furthermore, there was no significant difference in support from a significant other (female SA M = 5.79, SD = 1.49; male SA M = 5.61, SD = 1.19; t(43) = 0.82, p = 0.42, d = 0.13). However, there was a statistically significant difference found for support from a friend (t(47) = -2.82, p = 0.007, d = 0.43). Results showed that male SA survivors report higher perceived social support (M = 5.95, SD = 0.97) from a friend than female SA survivors (M = 5.43, SD = 1.43).

Finally, levels of shame were compared between female and male SA survivors. Results showed that there was no significant difference (t(41) = 1.7, p = 0.08, d = 0.31) between levels of shame reported by female (M = 46.12, SD = 21.77) and male SA survivors (M = 40, SD = 18.55), indicating female and male SA survivors experienced feelings of shame at similar levels.

Figure 1. Social Support Levels by Survivor Sex



Examining Social Domains as Predictors of PTSD Symptoms

For hypothesis 2 (perceived support from the friend domain would be significantly associated with PTSD, while family and significant other would not be significantly associated), a linear regression analysis was conducted. Analyses were conducted on the combined female and male SA sample. All three support domains were examined in the same model to ensure the model accounted for the combined influence of all three domains. Results showed that family support was significantly negatively associated (B = -1.66, p = .000) with PTSD symptoms, while significant other support was significantly positively associated (B = 1.24, p = .011) with PTSD symptoms. However, friend support was not associated with PTSD symptoms (B -.13, p = .801).

Table 1. Social Support Domains and PTSD

	B	***t***	***p***
Predictor			
Family Support	-1.66	-4.01	.00
Friend Support	-.13	-.25	.80
Significant Other Support	1.24	2.53	.01
n	375		

Examining Sex as a Moderator of the Association Between Social Support and PTSD

Moderator analyses were conducted using the PROCESS Macro (Hayes, 2017) to examine if sex of the SA survivor moderated the associations between the various social support domains and PTSD (hypothesis 3). No significant interaction effects were found for family social support (B = -0.2, p = 0.91), friend social support (B = -0.40, p = 0.87), or significant other support domain (B = -1.23, p = 0.50). Relatedly, no significant interaction was found for overall social support on PTSD (B = -1.17, p = 0.63).

Sex of The SA Survivor Will Moderate the Association Between Shame and PTSD

Hypothesis 4 was examined using a similar approach as hypothesis 3, with a moderator analysis examining whether SA survivor sex moderated the relationship between shame and PTSD symptoms. Similar to hypothesis 3, SA survivor sex did not moderate the association between shame and PTSD (B =0.02, p = 0.83).

Discussion

The overall purpose of this study was to examine the relationship between social support, shame, and PTSD in female and male SA survivors. Given the lack of previous work comparing female and male SA survivors, more research is needed to examine whether the importance of predictors of PTSD such as shame and social support vary as a function of SA survivor sex.

The first specific aim within this framework was to examine if female and male SA survivors reported similar levels of perceived social support and shame. Regarding social support, the results showed a lack of significant differences between family and significant other support between female and male SA survivors. Furthermore, there were no significant differences in levels of shame felt by female and male SA survivors. However, male SA survivors reported significantly higher friend support than female SA survivors. The second aim of this study was to examine which social domains predicted PTSD symptoms in SA survivors. The results indicated that family support was negatively associated with PTSD symptoms, and support from significant others was positively associated with PTSD symptoms in SA survivors. However, there was no significant association found between friend support and PTSD symptoms in SA survivors. The study's third aim was to examine whether sex of the SA survivor

moderated the association between social support and PTSD. The results revealed that each social support domain had similar effects on PTSD, regardless of SA survivor sex. Finally, the fourth aim was to examine whether SA survivor sex moderated the association between shame and PTSD. The results demonstrated that SA survivor sex did not moderate the association between shame and PTSD.

Regarding the finding that male SA survivors reported higher friend support than female SA survivors, a possible explanation may relate to differences between female and male SA survivors regarding perpetrator characteristics. Past research has shown that males are assaulted more often by perpetrators who are significantly older or are holding positions of power above them, whereas females are more often assaulted by peers and individuals closer to their age (Budd et al., 2019; Stemple & Meyer, 2014). Relatedly, past research has shown that approximately 26% of females experience SA during college, while 7% of male college students experience college-related SA (Cantor et al., 2015). These differences in SA experiences and perpetrator demographics may explain the significant differences in perceived friend support between female and male SA survivors in the current study. Because females may experience higher rates of SA by perpetrators in their peer groups, their friendships could be more negatively affected following SA for women than for male SA survivors. Relatedly, a longitudinal study which examined social support as a predictor of PTSD symptoms in SA survivors indicated that perceived positive friend support was associated with lower levels of PTSD symptoms when substance use was not used as a form of coping (Dworkin et al., 2018). These results suggest that, clinically, it may be useful for female SA survivors to receive services addressing interpersonal difficulties with friends, such as distrust or other

relational elements, to promote SA trauma recovery and reduce PTSD symptoms. Additionally, targeting individuals within a SA survivor's social network may be a potential pathway of recovery regarding PTSD symptoms.

Furthermore, analyses indicated that feelings of shame were reported at similar rates for both female and male SA survivors. These results contrast with speculations from past research that hypothesize male SA survivors may feel higher levels of shame due to societal expectations of masculinity (Lisak et al., 1996; Perrott & Webber, 1996; Reevy & Maslach, 2001). However, it should be noted that trauma-specific shame was not examined in this study. Trauma-specific shame refers to feelings of shame directly related to a specific traumatic event, rather than general feelings of overall shame such as was assessed in this study (Øktedalen et al., 2014). Therefore, this study can only make conclusions on general feelings of shame in relation to PTSD in SA survivors. In the future, studies should examine both general and trauma-specific shame. Additionally, future studies should measure how traditional gender roles interact with general and trauma-specific shame in female and male SA survivors. Such examination would assist in determining whether female and male SA survivors feel shame due to similar or varying causes. Although the results did not find significant differences in shame felt by female and male SA survivors, shame may still be a crucial emotion involved in PTSD, and it is likely that SA results in high levels of shame for all SA survivors regardless of sex of the victim.

Hypothesis 2 did not find that friend support was associated with PTSD, instead showing that family and significant other support were associated with PTSD symptoms. These results are similar to past studies that have found social support is commonly

associated with PTSD symptoms in trauma survivors (Brewin et al., 2000). Nevertheless, there have been mixed results on which specific social domains, including family support, are significantly associated with lower PTSD symptoms (Dworkin et al., 2018; Harper et al., 2005; Wilson & Scarpa, 2014; Woodward et al., 2015). However, the current study's results support the conclusion that greater family support is associated with lower levels of PTSD symptoms. However, the mechanisms underlying this association remain unclear. Future research is needed to discover why family support is predictive of lower PTSD symptoms. Furthermore, future studies should explore implementing family interventions for PTSD in SA survivors. A recent study found that implementation of a brief family intervention reduced dropout from individually-focused PTSD treatment (Thompson-Hollands et al., 2021), showing that interpersonal approaches can be used to augment existing treatments.

Surprisingly, a positive association was found between significant other support and PTSD, indicating that higher perceived support from a SA survivor's significant other was related to higher levels of PTSD symptoms. Although the association was the opposite of what has been found in past research, these results may be explained by partner accommodation theory (Fredman et al., 2016). Partner accommodation theory can be described as an individual adjusting their own behavior to reduce PTSD-related distress in their romantic partner or to reduce conflict in the relationship (Fredman et al., 2016). This accommodation from one's partner has been shown to have the unintended effect of encouraging individuals to avoid addressing their PTSD symptoms and allow such symptoms to persist and worsen over time (Campbell et al., 2017). Therefore, accommodation may be perceived as supportive from one's significant other, although it

maintains PTSD. Unfortunately, this study did not measure partner accommodation, so this mechanism was unable to be examined. Future research should examine whether partner accommodation could explain the positive correlation between significant other support and PTSD symptoms in SA survivors, particularly for male SA survivors, as research at the moment has primarily focused on female spouses' accommodation of males with PTSD (Fredman et al., 2016).

Contrary to expectations, friend support was not associated with PTSD. As noted above, findings have been inconsistent when comparing the influence of multiple domains on PTSD, including friendships. For example, Harper and colleagues (2015) examined perceived social support in relation to recovery from childhood sexual assault within a sample of 30 child abuse survivors. It was found that support from friends significantly increased the survivor's recovery process and reduced PTSD symptoms for the SA survivors. Likewise, Woodward and colleagues (2015) found similar results that positive social support from friends was negatively associated with PTSD symptoms in a sample of victims of intimate partner violence. However, Wilson and Scarpa (2014) found that perceived friend support had no significant association to PTSD symptoms in SA survivors. Furthermore, Dworkin and colleagues (2018) found that friend support was significantly associated with lower levels of PTSD symptoms in SA survivors. These apparent inconsistencies in the research call attention to the need to further examine how friend support impacts PTSD in SA survivors and moderators of this relationship. Continuing research on this topic will allow for a better understanding of the influence of friend support in shaping trauma responses and PTSD in SA survivors. This may then

allow for advancements in preventing and treating PTSD for SA survivors and targeting of specific social domains.

Hypothesis 3 did not find that sex of SA survivors moderated the association between perceived social support and PTSD, for total support or any specific social domain. These results indicate that each social support domain had similar effects on PTSD regardless of SA survivor sex. Thus, family, friend, and significant other support may be equally important for college-student female and male SA survivors in terms of relating to PTSD symptoms. Social support should still be considered relevant when working with SA survivors with PTSD; however, these preliminary results do not indicate that social domains differentially affect PTSD for female and male SA survivors. SA survivor services should try to improve SA survivors' support and reduce negative interpersonal interactions to promote mental health; however, social domains may not need to be differently targeted when working with female and male SA survivors.

Similar to hypothesis 3, hypothesis 4 was not supported, finding that sex of the SA survivor did not moderate the relationship between shame and PTSD. Based on these results, shame appears to have an equal effect on PTSD regardless of SA survivor sex. In conjunction with hypothesis 3, the consistent finding seems to be that these predictors of PTSD do not operate differentially for male vs. female SA survivors. Clinically, shame should be evaluated and addressed in all SA survivors with PTSD symptoms. However, shame does not appear to increase the risk of PTSD differently for male vs. female SA survivors.

This study holds several strengths. This is one of the first studies to examine shame, perceived social support, shame, and PTSD in female and male SA survivors, as

past research has exclusively examined female SA survivors. Due to past research focusing primarily on female SA survivors, less is known about male SA survivors and the factors that influence PTSD in this demographic. The results from this study assist in filling in the gap on male SA survivors in the literature and provide information for fellow researchers and mental health care providers serving male SA survivors.

Additionally, the use of the SES measure should be considered a strength for this study because it addresses a wide range of sexual assault experiences. The SES measure allows researchers to capture SA experiences that participants may have experienced but do not personally identify as a SA trauma. As noted above, this study's sample reported SA at higher rates than national averages. This suggests that SA experiences are often underreported and narrow operationalizations of SA likely influence prevalence estimates of SA. This study was able to include a wide range of SA histories, thus increasing identification of SA survivors.

Nevertheless, the study held several limitations that should be noted. Specifically, the study's sample consisted of only college students, with the majority being white and female. Even though college students are at a higher risk of SA victimization than their non-college attending peers, there is a need to expand studies to community-based samples to generalize findings (Mellins et al., 2017). The experiences of SA survivors may vary depending upon a number of demographic and sample-specific factors. Thus, it cannot be assumed that findings from college student samples apply to other SA groups, such as help-seeking samples. Relatedly, a further limitation was the small number of male SA survivors present in the sample. This makes it difficult to draw definitive conclusions when comparing female and male SA survivors. An increase in male SA

survivors in future studies would allow for higher-powered investigations comparing female and male SA survivors' mental health outcomes and provide more reliable estimates of these dynamics.

Furthermore, the study was cross-sectional, which limits any inferences that can be made regarding causal directions of variables examined in this study. Relatedly, past research has reported that PTSD may lead to lower levels of perceived social support and weaken social ties due to symptoms negatively impacting social relationships (Campbell & Renshaw, 2018). As such, it is also possible that PTSD symptoms may have a deleterious effect on social support and shame. Future studies should be conducted with a longitudinal design to examine how shame, PTSD, and perceived social support may interact over an extended period after a SA.

Based on the results from this study, there are several directions future studies should explore. Although the current study placed a significant focus on male SA survivors, future studies should examine marginalized populations within the male SA survivor community. For example, future studies should explore how the effects of being both a male SA survivor and belonging to a racial or ethnic minority groups impacts adjustment following SA. Additionally, future studies should also examine male sexual and gender minorities who are SA survivors. Past research has shown that these populations experience SA at a heightened rate (Cantor et al., 2015), as well as have an increased risk for poor mental health due to discrimination and social stigmas (APA, 2021). Therefore, this population may be especially likely to suffer adverse outcomes following SA.

Moreover, future research should examine the relation between perceived social support, shame, PTSD, and SA through longitudinal frameworks. Such studies will advance knowledge on the directional relation between these variables in SA survivors. Thus, expanding knowledge on directionality will assist in clarifying the processes of PTSD development, as well as provide insight on the dynamics between social support, shame and PTSD for SA survivors.

In summary, the current study provides insight on differences and similarities experienced by female and male SA survivors in relation to shame, perceived social support, and PTSD. Although few differences were found between female and male SA survivors, the need continues to further include males in the SA literature. Future studies must continue to provide space for male SA survivors in their work and continue to examine differences in SA survivor experiences.

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Appendix A

INFORMED CONSENT DOCUMENT

Project Title: Survey of Stressful Life Events and Emotional Responses

Investigators: Kelsey Woodward and Dr. Matthew Woodward

Questions About this Research Study: This study is being conducted by Dr. Matt Woodward. Dr. Woodward can be reached through the Department of Psychological Sciences, Western Kentucky University, 1023 Kelly Thompson Hall, by phone at (270) 745-3918, or via email at matthew.woodward@wku.edu.

You are being asked to participate in a project conducted through Western Kentucky University. The University requires that you give your signed agreement to participate in this project. **You must be 18 years old or older to participate in this research study.**

A basic explanation of the project is written below.

1. **Nature and Purpose of the Project:** You are being asked to take part in a Western Kentucky University research project. This project will entail completing questions related to stressful experiences that may have happened to you and your emotional responses. The purpose of this project is to examine prevalence rates and impact of common stressors and life events, including sexual experiences, that may be experienced while living within the United States

2. **Explanation of Procedures:** We are asking you to complete questions related to stressful experiences that may have happened to you and how these experiences may be affecting you currently. It will take approximately 20 minutes to complete these questions. This is part of a research study being conducted at Western Kentucky University. A list of related resources will be presented to you upon completion of the study.

3. **Discomfort and Risks:** The risks in this study are considered minimal. These questionnaires are commonly used in research, and to the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life. However, it may be difficult or upsetting for you to answer some questions about your experiences. You may choose to not answer any particular question that you do not feel comfortable addressing, and you may withdraw at any time without penalty.

4. **Benefits:** You will receive two Study Board credits upon full completion of the study. One other potential benefit of this study is to contribute to research aimed at gaining a better understanding of how difficult experiences affect individuals emotionally, which may lead to improvements in treatments for individuals who are suffering in the aftermath of a difficult life event such as sexual assault.

5. **Confidentiality:** If you decide to take part in this research study, as part of the research, you will be asked to give us information about various life events and your moods. All data will be obtained only for research purposes. All data will be kept confidential and not directly linked to any individual participant. Contact and identifying information will not be collected. Participation in the study is completely anonymous and confidential.

7. **Refusal/Withdrawal:** Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

If you want to participate in this study, click the [Agree, Accept, Next, Start] button to start the survey.

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Robin Pyles, Human Protections Administrator
TELEPHONE: (270) 745-3360

Please read the consent form below in its entirety prior to completing this study.

Consent to participate.

- I am at least 18 years old.
- I am younger than 18 years old.

Condition: I am younger than 18 years ... Is Selected. Skip To: End of Survey.

Consent to participate.

- I have read the consent form, fully understand it, and agree to participate in the study.
- I do not consent to participate in the study.

Condition: I do not consent to partici... Is Selected. Skip To: End of Survey.

SEX

Which sex were you identified with at birth?

- Female
- Male

Appendix B

SES-SFV

The following questions concern sexual experiences that you may have had that were unwanted. We know that these are personal questions, so we do not ask your name or other identifying information. Your information is completely confidential. We hope that this helps you to feel comfortable answering each question honestly. Please choose the response that indicates the number of times each experience below has happened to you. If several experiences occurred on the same occasion--for example, if one night someone told you some lies and had sex with you when you were drunk, you would select both options.

For the following statements, please only include instances that have occurred since age 14. Since age 14 refers to your life starting on your 14th birthday and stopping one year ago from today.

Since age 14, someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent (but did not attempt sexual penetration) by:

	0	1	2	3 + times
Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	○	○	○	○
Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using	○	○	○	○

	0	1	2	3 + times
physical force, after I said I didn’t want to.				
Taking advantage of me when I was too drunk or out of it to stop what was happening.	○	○	○	○
Threatening to physically harm me or someone close to me.	○	○	○	○
Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	○	○	○	○

Since age 14, someone had oral sex with me or made me have oral sex with them without my consent by:

	0	1	2	3 + times
Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn’t want to.	○	○	○	○
Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn’t want to.	○	○	○	○

	0	1	2	3 + times
Taking advantage of me when I was too drunk or out of it to stop what was happening.	○	○	○	○
Threatening to physically harm me or someone close to me.	○	○	○	○
Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	○	○	○	○

Display This Question:

If Which sex were you identified with at birth? Female Is Selected

Since age 14, a man put his penis into my vagina, or someone inserted fingers or objects without my consent by:

	0	1	2	3 + times
Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	○	○	○	○
Showing displeasure, criticizing my sexuality or attractiveness,	○	○	○	○

	0	1	2	3 + times
getting angry but not using physical force, after I said I didn't want to.				
Taking advantage of me when I was too drunk or out of it to stop what was happening.	○	○	○	○
Threatening to physically harm me or someone close to me.	○	○	○	○
Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	○	○	○	○

Since age 14, a man put his penis into my butt, or someone inserted fingers or objects without my consent by:

	0	1	2	3 + times
Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	○	○	○	○

	0	1	2	3 + times
Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	○	○	○	○
Taking advantage of me when I was too drunk or out of it to stop what was happening.	○	○	○	○
Threatening to physically harm me or someone close to me.	○	○	○	○
Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	○	○	○	○

Since age 14, even though it didn't happen, someone TRIED to have oral sex with me, or make me have oral sex with them without my consent by:

	0	1	2	3 + times
Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	○	○	○	○
Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not	○	○	○	○

	0	1	2	3 + times
using physical force, after I said I didn't want to.				
Taking advantage of me when I was too drunk or out of it to stop what was happening.	○	○	○	○
Threatening to physically harm me or someone close to me.	○	○	○	○
Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	○	○	○	○

Display This Question:

If Which sex were you identified with at birth? Female Is Selected

Since age 14, even though it didn't happen, a man TRIED to put his penis into my vagina, or someone tried to stick in fingers or objects without my consent by:

	0	1	2	3 + times
Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	○	○	○	○
Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force,	○	○	○	○

	0	1	2	3 + times
after I said I didn't want to.				
Taking advantage of me when I was too drunk or out of it to stop what was happening.	○	○	○	○
Threatening to physically harm me or someone close to me.	○	○	○	○
Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	○	○	○	○

Since age 14, even though it didn't happen, a man TRIED to put his penis into my butt, or someone tried to stick in objects or fingers without my consent by:

	0	1	2	3 + times
Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.	○	○	○	○
Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.	○	○	○	○

	0	1	2	3 + times
Taking advantage of me when I was too drunk or out of it to stop what was happening.	○	○	○	○
Threatening to physically harm me or someone close to me.	○	○	○	○
Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.	○	○	○	○

Did any of the experiences described in this survey happen to you 1 or more times?

- ○ Yes
- ○ No

What was the sex of the person or persons who did them to you?

- ○ Female only.
- ○ Male only.
- ○ Both females and males.
- ○ I don't know.
- ○ I reported no experiences.

Have you ever been raped?

- ○ Yes
- ○ No

Appendix C

Childhood Trauma Questionnaire (CTQ), Sexual Abuse Subscale

Listed below are descriptions of several experiences that may happen in childhood. Please read each item and decide how true that item is for your experience. Please be as honest as possible and remember there are no right or wrong answers. Each question refers to any event that you may have experienced **BEFORE THE AGE OF 14.**

	Never true	Rarely true	Sometimes true	Often true	Very often true
Was touched sexually	○	○	○	○	○
Hurt if I didn't do something sexual	○	○	○	○	○
Made to do sexual things	○	○	○	○	○
Was molested	○	○	○	○	○
Was sexually abused	○	○	○	○	○

If you experienced any of the events above, what was your youngest age the first time one of these experiences occurred?

Appendix D

PCL-5

Below is a list of problems that people sometimes have in response to a very stressful
experience. Keeping your unwanted sexual experience in mind, please read each problem
carefully and then select a response to the right to indicate how much you have been bothered by that problem in the past month. If you have not had an unwanted sexual experience, please think of the worst traumatic event you have experienced and select a response to indicate how much you have been bothered by that problem in the past month.

	Not at all	A little bit	Moderately	Quite a bit	Extremely
Repeated, disturbing, and unwanted memories of the stressful experience.	○	○	○	○	○
Repeated, disturbing dreams of the stressful experience.	○	○	○	○	○
Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it).	○	○	○	○	○
Feeling very upset when something reminded you of the stressful experience.	○	○	○	○	○
Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating).	○	○	○	○	○
Avoiding memories, thoughts, or feelings related to the stressful experience.	○	○	○	○	○
	○	○	○	○	○
Avoiding external reminders of the stressful experience (for example, people, places,	○	○	○	○	○

	Not at all	A little bit	Moderately	Quite a bit	Extremely
conversations, activities, objects, or situations).					
Trouble remembering important parts of the stressful experience.	○	○	○	○	○
Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous).	○	○	○	○	○
⊗ Please select moderately for this response.	○	○	○	○	○
Blaming yourself or someone else for the stressful experience or what happened after it.	○	○	○	○	○
Having strong negative feelings such as fear, horror, anger, guilt, or shame.	○	○	○	○	○

	Not at all	A little bit	Moderately	Quite a bit	Extremely
Loss of interest in activities that you used to enjoy.	○	○	○	○	○
Feeling distant or cut off from other people.	○	○	○	○	○
Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you).	○	○	○	○	○
Irritable behavior, angry outbursts, or acting aggressively.	○	○	○	○	○
Taking too many risks or doing things that could cause you harm.	○	○	○	○	○

	Not at all	A little bit	Moderately	Quite a bit	Extremely
Being "super alert" or watchful or on guard.	○	○	○	○	○

	Not at all	A little bit	Moderately	Quite a bit	Extremely
Feeling jumpy or easily startled.	○	○	○	○	○
Having difficulty concentrating.	○	○	○	○	○
Trouble falling or staying asleep.	○	○	○	○	○

Appendix E

Multidimensional Scale of Perceived Social Support

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

	Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
There is a special person who is around when I am in need.	○	○	○	○	○	○	○
There is a special person with whom I can share my joys and sorrows.	○	○	○	○	○	○	○
My family really tries to help me.	○	○	○	○	○	○	○
I get the emotional help and support I need from my family.	○	○	○	○	○	○	○
	Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
I have a special person who is a real source of comfort to me.	○	○	○	○	○	○	○
My friends really try to help me.	○	○	○	○	○	○	○

	Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
I can count on my friends when things go wrong.	○	○	○	○	○	○	○
I can talk about my problems with my family.	○	○	○	○	○	○	○

	Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
I have friends with whom I can share my joys and sorrows.	○	○	○	○	○	○	○
There is a special person in my life who cares about my feelings.	○	○	○	○	○	○	○
My family is willing to help me make decisions.	○	○	○	○	○	○	○
I can talk about my problems with my friends.	○	○	○	○	○	○	○

Think of the individual whom you are closest with and select below how this person is related to you.

- ○ A romantic partner (such as a spouse, boyfriend/girlfriend).
- ○ A family member (not including spouse).
- ○ A friend.

Appendix F

Internalized Shame Scale

Below is a list of statements describing feelings or experiences that you may have had from time to time or that are familiar to you because you have had these feelings and experiences for a long time. Most of these statements describe feelings and experiences that are generally painful or negative in some way. Some people will seldom or never have had many of these feelings. Everyone has had some of these feelings at some time, but if you find that these statements describe the way you feel a good deal of the time, it can be painful just reading them.

Try to be as honest as you can in responding. Read each statement carefully and choose the number to the right of the item that indicates the frequency with which you find yourself feeling or experiencing what is described in the statement.

	Never	Seldom	Sometimes	Often	Almost always
I feel like I am never quite good enough.	○	○	○	○	○
I feel somehow left out.	○	○	○	○	○
I think that people look down on me.	○	○	○	○	○
I scold myself and put myself down.	○	○	○	○	○
I feel insecure about others opinions on me.	○	○	○	○	○
Compared to other people, I feel like I somehow never measure up.	○	○	○	○	○
	Never	**Seldom**	**Sometimes**	**Often**	**Almost always**
I see myself as being very small and insignificant.	○	○	○	○	○
I feel intensely inadequate and full of self-doubt.	○	○	○	○	○

	Never	Seldom	Sometimes	Often	Almost always
I feel as if I am somehow defective as a person like there is something wrong with me.	○	○	○	○	○
When I compare myself to others, I am just not as important.	○	○	○	○	○
I have an overpowering dread that my faults will be revealed in front of others.	○	○	○	○	○
I see myself striving for perfection only to continually fall short.	○	○	○	○	○
	Never	**Seldom**	**Sometimes**	**Often**	**Almost always**
I could beat myself over the head with a club when I make a mistake.	○	○	○	○	○
I would like to shrink away when I make a mistake.	○	○	○	○	○
I replay painful events over and over in my mind until I am overwhelmed.	○	○	○	○	○
Select Often for this response.	○	○	○	○	○
At times I feel like I will break into a thousand pieces.	○	○	○	○	○
I feel as if I have lost control over my	○	○	○	○	○

	Never	Seldom	Sometimes	Often	Almost always
bodily functions and my feelings.					
	Never	**Seldom**	**Sometimes**	**Often**	**Almost always**
Sometimes I feel no bigger than a pie.	○	○	○	○	○
At times I feel so exposed that I wish the earth would open up and swallow me.	○	○	○	○	○
I have this painful gap within me that I have not been able to fill.	○	○	○	○	○
I feel empty and unfulfilled.	○	○	○	○	○
My loneliness is more like emptiness.	○	○	○	○	○
I feel like there is something missing.	○	○	○	○	○

Appendix G

Demographics

Please enter your age in years. Please enter numerical responses only (ex: 18).

Do you sometimes make mistakes in life?
- Yes
- No

Please select which gender you best identify with.
- Female
- Male
- Transgender
- Non-binary
- Other (please specify)

Which of the following best represents how you think of yourself?
- Gay or Lesbian
- Bisexual
- Straight
- Queer
- Asexual
- Pan-sexual
- Other (please specify)

Please select your race and/or ethnicity. Choose all which apply to you.
- African American
- Asian American
- Caucasian
- Native American or American Indian
- Hispanic or Latinx
- Other (please specify)

Please indicate your household income.
- $0 - $9,999
- $10,000 - $19,999
- $20,000 - $29,999
- $30,000 - $39,999
- $40,000 - $49,999
- $50,000 to $59,999
- $60,000 - $69,999
- $70,000 - $79,999

- $80,000 - $89,999
- $90,000 - $99,999
- $100,000 or more

What is your military status?

- Never served
- Active Duty
- National Guard/Reserves

Veteran

Display This Question:

If What is your military status? Active Duty Is Selected
And What is your military status? National Guard/Reserves Is Selected
And What is your military status? Veteran Is Selected

What branch of service did you serve in, or currently serve?

- Navy
- Army
- Marine Corps
- Air Force
- Coast Guard

Display This Question:

If What is your military status? Active Duty Is Selected
Or What is your military status? National Guard/Reserves Is Selected
Or What is your military status? Veteran Is Selected

Did you serve in Operation Enduring Freedom, Operation Iraqi Freedom, or Operation New Dawn?

- Yes
- No

What level of college are you currently in?

- Freshman
- Sophomore
- Junior
- Senior
- Graduate Student

Is English your primary language?

- Yes
- No

Please indicate which best represents your relationship status.

- Single
- Monogamous relationship
- Non-monogamous relationship

Are you completing this survey in a private place?

- Yes
- No

Appendix H

Survey of Stressful Life Events and Emotional Responses
SURVEY DEBRIEFING STATEMENT

The study you have just completed was designed to investigate health behaviors, such as sexual assault experiences, behaviors associated with mental health and exposure to traumatic events. It is possible that answering these questions may have brought up some painful memories. There are many free resources that are provided to the public that have experienced any of the life events addressed in this survey. Please contact the following national resources if you would like more information on mental health treatment, sexual assault, and substance use, or if you find that you are having strong emotional reactions to the questions in this survey.

Websites That Provide More Information on the Content Covered in Survey:

https://www.rainn.org/
https://www.cdc.gov/
https://malesurvivor.org

Hotline Numbers:

Call or Text: Samaritans Depression/Mental Health Helpline 877-870-HOPE (4673)
Sexual Assault Crisis Hotline: 800-656-HOPE (4673)
Alcohol and Drug Helpline 800-662-HELP (4357)
National Suicide Prevention Helpline: 800-273-TALK (8255)
National Domestic Violence Helpline: 800-799-7233
Crisis Text Line: Text HOME to 741741
Crisis Chat Online: https://www.contact-usa.org/chat.html

Counseling and Assessment Services for Health Behaviors, Depression, Stress, etc.

WKU Counseling and Testing Center
https://www.wku.edu/heretohelp/
Located in Potter Hall
Phone #: 270-745-3159
Appointments may be arranged by calling or stopping by the Counseling Center

- Please click to acknowledge that you have reviewed the crisis information resources provided