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Differences in the Protective Relation Between Social Support, Gratitude, and PTSD Across Sexual and Non-Sexual Trauma

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Abstract

Those who suffered from sexual trauma specifically have been documented to suffer more severe symptoms of depression, suicidal thoughts, PTSD, anxiety, etc. It is therefore considered to be one of the most damaging forms of trauma. This thesis describes the phenomenon in which the protective factors of social support and gratitude have diminished effects on PTSD symptoms from sexual assault trauma when compared to non-sexual assault trauma. These findings could pinpoint the aspect of sexual assault that leads to these recurring patterns in patients. The thesis will discuss the relevance of guilt and shame derived from the internalization of stigma with the findings of diminished protective effects. It is expected that guilt and shame should be focused on in-treatment models for victims of sexual assault with PTSD symptoms.

Introduction

PTSD, otherwise known as Post-Traumatic Stress Disorder, is defined as a mental disorder caused by the first-hand experience of a traumatic event such as war, natural disasters, harmful accidents, life-threatening injury, sexual assault, etc. (DSM-5; APA, 2013). The debilitating symptoms that occur from PTSD have been documented to respond to the influence of social support or even the perception of social support (Simon et al., 2019), and it has proven to be one of the most important factors directly related to improvements in PTSD symptomology. Social support is the process of providing or exchanging resources with other people (Gabert-Quillen et al., 2011). These resources often refer to emotional support for PTSD victims. The mere innate perception of social support versus actual social support is associated with the ability to adjust and adapt to levels of stress (Simon et al., 2019). There is further documentation on the refusal or absence of social support and its damaging effects on victims of PTSD. Negative social interactions following the incident have proven to be far more damaging emotionally to victims than positive social support has proven beneficial (Major et al., 1997). Nothing exemplifies this phenomenon more than victims of sexual assault because they are often meant with more shame and stigmatization than any other form of trauma (Kennedy & Prock, 2016).

Sexual assault has been consistently reported to be a form of trauma with higher rates of PTSD symptomology and often in conjunction with higher suicidality rates, depression, and anxiety (Dworkin et al., 2017). Statistics associated with sexual assault tend to be elevated regarding mental health more than any other form of trauma. Rates of PTSD prevalence among sexual assault victims can be as high as 80% while the normal rate is 12-24% (Breslau, Davis, Andreski, & Peterson, 1991). Majority of the population experience traumatic events, but only a

very small percentage experience PTSD as a result. This does not remain true with those who've experienced sexual assault, the different degrees of sexual assault having been researched to have varying degrees of intense psychopathological disorders (Dworkin et al., 2017).

The effectiveness of social support for female victims of sexual assault who are suffering from PTSD has been studied with spouses and life partners. Spousal involvement and support have been found to be effective in conjunction with CBT, or Cognitive Behavioral Therapy, treatment methods (Bilette et al., 2008). A small study ($N = 3$) had been done in which CBT was conducted with three victims of sexual assault in the presence of their spouse as a form of social support. Results showed marked rates of improvement with all participants and even more following a three-month follow-up. Although this is a smaller study, it can be inferred that a solid base of social support is beneficial to these victims during treatment. Within college women who have suffered sexual assault, a study looked at the daily relationship between social support and PTSD. Results supported a positive influence of social support but also a reversed negative relationship where an increase in PTSD symptoms leads to an increase in participants seeking out social support which then decreases the PTSD symptoms in the short term (Dworkin et al., 2018). Generally, it is accepted that the presence of a positive support system improves symptomology within sexual assault victims like any other trauma victim by acting as a protective barrier in which the negative experience is buffered from affecting the victims later.

The idea of gratitude and its positive effect on overall well-being has also been found to combat symptoms of many emotional and mental disorders like Major Depressive Disorder and PTSD (Dusen et al., 2015). Gratitude, or the ability to express thankfulness consistently across different situations and with different people (Lin, 2015), is found to initiate the utilization of social support, which in return strengthens previous relationships (Wood et al., 2010).

Additionally higher levels of gratitude lead to a higher level of perceived social support garnering an improved sense of wellbeing (Wood et al., 2008). The link between social support and gratitude indicates there is a relationship in which gratitude can also aid in improvement for this specific population that suffers more extreme forms of symptoms such as suicidality as gratitude has been found to aid in deepening the meaning of life and therefore reduce suicidal thoughts (Kleiman et al., 2013). Following this, other studies have linked the relationship between social support and gratitude with gratitude promoting social support and thus decreasing the levels of stress and depression (Wood et al, 2008). Expanding the relationship between gratitude, PTSD, and sexual violence, and understanding its role as a moderator is the main goal of this thesis. Generally, social support and gratitude reduce the negative symptoms suffered from PTSD. This thesis examines whether this remains true for those who have suffered from sexual violence trauma as they have proven to be more severe in all trajectories.

Methods

Participants were recruited using Amazon's Mechanical Turk and asked to fill out questionnaires to supply our data collection. Amazon's Mechanical Turk is a platform that allows workers to be contracted to conduct services that require human intelligence for tasks uploaded by requesters. It is also an optimal form of participant recruitment during the pandemic as in-person contact is unnecessary. Data collected through this service has been found to be as valid as data collected through more traditional clinical routes (Shapiro et al. 2013). A Human Intelligence Task (HIT) was posted on the Amazon Mechanical Turk website for participants to complete questionnaires assessing the impact of stressful events with keywords: survey, stress, gender, women/men, and health. The HIT was made available to participants' IP addresses

located in the U.S. and had a prior 70% prior HIT success rate and was made available for one hour.

The first questionnaire given was the Life Events Checklist (LEC) which is used to identify those who have experienced a qualifying traumatic event and screen those who have not. The measure includes five validity checks to ensure that participants are providing accurate answers. Participants who answered at least three of these validity checks questions correctly as well as having spent more than five minutes on the HIT questionnaire are deemed valid cases. All these precautions allow for the validity of the data collected from Amazon Mechanical Turk to be as high as possible. Additionally, the individuals deemed eligible for the assessment had their responses reviewed in-person to determine valid Criterion A events and filter out "bad participants" who provided unusable data. Following the first screening with the LEC measure, the participants were asked to fill out four more measures.

The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) was used to determine the variable being tested: social support. This is a 12-item self-report measure that evaluates three domains of defined current perceived social support. The three domains consist of perceived social support from friends, family, and significant others.

The PTSD checklist-5 (PCL-5; Weathers et al., 2013) is a 20-item self-report measure that evaluates PTSD symptoms experienced over the last month using DSM-5 criteria. The symptoms are assessed from the four symptom clusters of PTSDS (intrusions, avoidance, negative alterations to cognition and mood, alterations in arousal and reactivity) on a 0–4-point Likert scale.

The Gratitude Questionnaire (GQ6; McCullough, Emmons, & Tsang., 2003) is a short, 6-item self-report measure of the disposition to feel gratitude on a 1 – 7 scale. Two items are reverse scored to inhibit response bias.

Data Analytic Plan

In the sample, there were more females with 422 females, 194 males, and 1 non-binary participant. This difference was expected because sexual assault has been historically more prevalent in females than males on record. Participants averaged 33 years of age with a minimum of 18 to 77. The reported income annual income was $5,000 - $15,000.

The method of analysis relied on the bootstrapping mechanism which takes 10,000 bootstraps samples and estimates the 95% confidence interval for our moderated mediation analysis. If the lower and upper confidence intervals include zero, we conclude the relationship is non-significant. However, if they do not include zero, we are able to conclude that there is a mediating variable present within the relationship between the independent variable and dependent variable.

Results

The bivariate correlations between the variables were first examined. (Table 1) All variables were correlated in the expected direction.

The SV and non-SV were then compared on all the variables of interest. There were no significant differences in social support ($t(479.95) = -1.634$; $p = 0.103$) and gratitude ($t(426.85) = 0.774$; $p = 0.44$) between these groups.

Next, a mediation analysis was conducted. There was a significant total effect (C path) between social support and PTSD symptoms ($b = -0.02$, $SE = 0.05$ $p < 0.64$). There was a significant relation between social support and gratitude (A path) ($b = 0.26$, $SE = 0.02$ $p < 0.01$).

When including gratitude in the model, there was also a significant relation between gratitude and PTSD, controlling for social support (B path) ($b = -0.66$, $SE = 0.11$ $p < 0.01$). Furthermore, there was also a significant indirect effect of social support on PTSD symptoms via gratitude, $b = -0.17$, $SE = 0.05$, 95% CI: -0.13 to 0.08.

Next, sexual assault group membership was tested to see if it moderated the A path. However, this was not found to be the case. The indirect relationship of social support on PTSD remained significant, ($b = -0.17$, $SE = 0.04$, 95% CI: -0.26 to -0.10). It did not moderate the A path ($b = 0.15$, $SE = 0.09$, 95% CI: -0.02 to 0.33). Sexual assault group membership was then included as a moderator of the B path. In this model, the direct effect (C path) was no longer significant, ($b = -0.09$, $SE = 0.05$, $p = 0.08$). The moderated indirect effect of social support on PTSD via gratitude was also significant, ($b = 0.16$, $SE = 0.06$, 95% CI: 0.05 to 0.28). The interaction at each level had a significant indirect effect of social support on PTSD via gratitude for those who did not experience sexual assault, $b = -0.21$, $SE = 0.04$, 95% CI: -0.30 to -0.14. There was not a significant indirect effect, however, for those who did experience sexual assault, $b = -0.05$, $SE = 0.05$, 95% CI: -0.15 to 0.05. Taken together, these results suggest that gratitude mediates the relation between social support and PTSD, but this relation is moderated by sexual assault experiences. Specifically, those with a history of sexual assault did not experience the beneficial effect of gratitude on social support.

Discussion

The results of the present study offer insight into a potential mechanism by which those with histories of sexual assault may have greater PTSD symptoms as well as stronger persistence of PTSD symptoms. Having a history of sexual violence moderated the mediated relationship of protector variables on PTSD symptoms. Social support has been shown to have a strong

protective effect against PTSD symptoms. The results of the present study are consistent with prior works showing that part of this protection is conferred by increasing feelings of gratitude. However, those who specifically suffer from sexual violence trauma experienced a diminished protective effect of social support via gratitude on their PTSD symptoms. This finding may explain, in part, why victims of sexual violence are 50% more likely to develop PTSD symptoms than any other form of trauma (Creamer, M., Burgess, P., & McFarlane, A. C., 2001). They are also associated with an increased risk for all other psychopathic mental disorders such as anxiety, depression, and suicidality (Campbell et al., 2009). Therefore with sexual violence, the relationship social support has with PTSD may be complicated in more ways than one, such as the individual's ability to reflect on positive elements of their life or ability to feel safe in their typical comforts if their safety had been violated there.

The diminished gratitude among victims of sexual violence could be attributed to the increased amount of self-stigma and social stigma associated with this form of trauma. Studies examining how stigmas relate to the victim's exacerbated trauma symptoms have found self-stigma, compared to other forms of stigma, cultural and social, to be associated with PTSD symptomology (Deitz et al., 2015). Self-stigma is the negative perspective and opinion one carries about themselves due to their sexual trauma and internalization of negative societal beliefs about sexual assault. With these present findings, the decreased protective effect of social support and gratitude on victims of sexual assault could be connected to self-stigma. Loss of self-esteem and self-worth through self-stigma would diminish feelings of gratefulness despite the presence of a social support system. More research is needed on self-stigma and gratefulness to further explore these relations.

Another potential explanation for the diminished impact of gratitude on PTSD is the increased shame experienced by victims of sexual violence. Shame is an emotional response of worthlessness, defectiveness, and debased in comparison to others to stigmatization and is a component of self-stigmatization (Bonanno et al., 2002; Negrao et al., 2005). Shame may similarly contribute to the inhibition of gratefulness through the larger umbrella of self-stigmatization. Shame may be more relevant to sexual assault trauma specifically, and previous literature recognizes its importance.

Notably, sexual violence did not impact the relationship between social support and gratitude. This indicates that a victim of sexual violence with a social support system is unhindered in receiving support and therefore feeling grateful. However, the feeling of gratefulness does not extend past their system to decrease their PTSD symptoms for their trauma. It is believed that before feeling grateful, the victims are overtaken by a stronger mixture of negative emotions hypothesized to be caused by self-stigmatization. Much of this would depend on a few factors such as the recency of the traumatic event and the strength of the social support system.

These results have implications for the treatment of PTSD. Treatments for sexual assault victims have emphasized the importance of a social support system. Immediately following the trauma, the anticipated actions of the people close to the victim greatly influence the mental and psychopathological resilience of the victim (Chivers-Wilson K. A., 2006). Even with the presence of a strong support system, the current study suggests that the extent that which the support system may assist in the reduction of PTSD is attributed to the type of trauma experienced. Specifically, those with sexual assault trauma will have elevated PTSD symptoms. Treatment providers should be aware of this reduced effectiveness of social support through

feelings of gratitude. The benefits of social support may be amplified by combining other forms of treatments that raise the victim's self-esteem and self-worth as well as lowering emotions of shame. Social support treatment options, such as group therapy and involving family members, are shown to be effective (Chivers-Wilson K. A., 2006), but might also increase in efficacy if in conjunction with therapy treatments specifically targeting these barriers.

The study had several limitations of note. First, it relied exclusively on self-report surveys. Self-reports are a useful and efficient measure of procuring data in a short amount of time, but they have proven to be susceptible to bias and deception. The data were collected remotely through the internet with no clinician-participant contact. Anonymity over the internet allows participants to keep their identity and experience secure. Alternatively, this may have screened out those who do not have access to the internet or are not adept at technology. However existing literature has validated data gathered from electronic surveys over the internet comparably to if they were administered in person with paper and pencil (Denscombe, 2006; Joubert & Kriek, 2009; Ritter, Lorig, Laurent, & Matthews, 2004; Robie & Brown, 2007). Third, the study was cross-sectional. Although directional relations were implied, they cannot be confirmed due to the lack of longitudinal data. Future work should use a longitudinal approach to understand these patterns from the perspective of a timeline.

In conclusion, this study has presented data to demonstrate how sexual violence may be associated with more severe PTSD symptoms – by limiting the benefit of protective factors such as social support and gratitude. These findings suggest that something else is at play in the moderating relationship between Gratitude, Sexual assault, and PTSD.

Further research should conduct to investigate the relation between this phenomenon and other variables such as self-stigma and its relationship with guilt and shame. Future findings may

indicate that the variable of sexual assault may stand in as the moderator in place of variables like guilt and shame that stem from the societal sentiments about sexual assault. Understanding this complex relationship between sexual assault and PTSD and how it relates to other variables can provide a focus for clinical practices to maximize recovery in treatment. While the standard social support is not significantly effective toward victims of sexual assault, it can be tailored to target feelings of guilt and shame through planned sessions and exercises.

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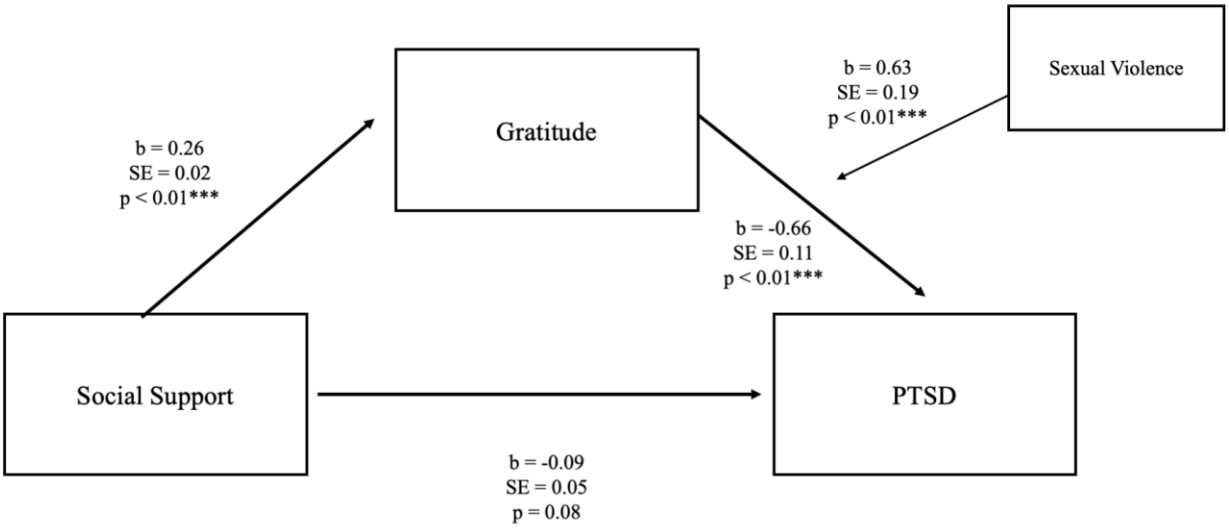
Table 1. Bivariate Correlations Table

Bivariate Correlations	**Correlations**	**p – value**	**95% CI Interval**
Social Support and Gratitude	0.56	< .01***	0.5 – 0.6
Social Support and PTSD	-0.17	< .01***	-0.25 - -0.1
Gratitude and PTSD	-0.28	< .01***	-0.36 - -0.21

Table 2. Moderated Mediation Table - Outcome Variable: PTSD

Predictors	**b**	**SE**	**p-value**
Social Support	-0.09	0.05	0.08
Gratitude	-0.81	0.13	< .01
Sexual Assault	-13.18	6.48	0.04
Sexual Assault x Gratitude	0.63	0.19	< .01

Figure 1


Sexual Violence
b = 0.63
SE = 0.19
p < 0.01***
Gratitude
b = 0.26
SE = 0.02
p < 0.01***
b = -0.66
SE = 0.11
p < 0.01***
Social Support
PTSD
b = -0.09
SE = 0.05
p = 0.08