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Posttraumatic Stress Disorder and Attitudes about Scoial Support: Does Shame matter?

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POSTTRAUMATIC STRESS DISORDER AND ATTITUDES ABOUT SOCIAL SUPPORT: DOES SHAME MATTER?

by

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Abstract

Feelings of shame have been related to both posttraumatic stress disorder (PTSD) and turning away from social support. Based on this past research, the current study evaluated shame as a possible intermediary process in the relationship between PTSD symptoms and negative attitudes toward using social support in 202 female survivors of intimate partner violence (IPV). A history of childhood abuse (CA) was also evaluated as a moderator of the relationship between shame and negative attitudes about social support. Path analyses supported a significant indirect relationship between PTSD and negative attitudes about social support through shame. Additionally, CA moderated this effect, such that women with a history of CA in addition to IPV showed a stronger relationship between PTSD and negative attitudes toward social support through shame. These findings support the relevance of shame following IPV and CA, and the role of shame in strengthening negative beliefs about using social support.

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Posttraumatic stress disorder and attitudes about social support: Does shame matter?

Past research has found a consistent relationship between PTSD symptoms and reduced levels of social support (Brewin, Andrews, & Valentine, 2000; Ozer, Best, Lipsey, & Weiss, 2003). In considering this association, many scholars have focused on the direction of causality underlying this relationship, specifically whether social support is eroded by PTSD or buffers against its development (e.g., King, Taft, King, Hammond, & Stone, 2006). However, recent research has suggested that individuals with PTSD may have negative attitudes about using social support, an orientation that could help account for the robust association between PTSD symptoms and reduced support. In considering possible processes that may underlie negative attitudes toward utilizing social support, the present study focused on shame, defined as a self-conscious emotion, experienced when a core aspect of the self is judged as defective, inferior, or inadequate (Gilbert, 1997; Tangney, 1995). People who feel shame may describe themselves as "a bad person" and shrink away or withdraw from others to avoid possible negative social judgment (Gilbert, 1997). The current study explored the role of shame as an intermediary process that may underlie the association between PTSD symptoms and negative attitudes about the use of social support. A sample of women who had experienced intimate partner violence (IPV) was selected for this study, based on the empirically supported relationships between IPV, PTSD, and feelings of shame. Additionally, because past research has supported the relationship of childhood abuse (CA) with feelings of shame and negative attitudes toward using social support, the current study explored whether a history of CA in addition to the experience of IPV moderated the relationship between shame and negative network orientation.

Negative attitudes or beliefs about the utility of social support have been termed a *negative network orientation* (Tolsdorf, 1976). Supporting the validity of the negative network

orientation construct, Yoo, Goh and Yoon (2005) noted that negative network orientation was associated with negative attitudes toward seeking professional help and self-concealment (e.g., not sharing an important secret with anyone). Past research also found that negative network orientation was associated with both lower social support satisfaction and lower perceived social support from family and friends in a college sample (Pretorius, 1994). Within the trauma literature, Kallstrom-Fuqua, Weston, and Marshall (2004) found that negative network orientation was associated with suspicion and mistrust of others in a sample of 178 women who had been exposed to childhood abuse. Additionally, Clapp and Beck (2009) noted that negative network orientation mediated the relationship between PTSD and attenuated social support in 458 survivors of motor vehicle accidents. The findings from these two studies of trauma-exposed individuals suggest that negative attitudes toward accessing social support are important in determining whether people will draw upon available social resources following a trauma and help to better elucidate the well-documented relationship between PTSD and social support.

These findings also raise another question--why do people suffering from symptoms of PTSD have negative attitudes toward seeking social support? Negative emotions such as shame may be relevant to this question because feelings of shame have been related to both PTSD (Leskela, Dieperink, & Thuras, 2002) and to turning away from possible social support (Buchbinder & Eisikovits, 2003) in trauma-exposed samples. The role of shame might be particularly relevant in interpersonal traumas such as IPV, as these events may be associated with stigmatized and shaming reactions from others (Charuvastra & Cloitre, 2008). In line with this reasoning, La Bash and Papa (2014) found that peritraumatic shame was a strong predictor of the development of PTSD following interpersonal traumas (e.g., physical or sexual assault) but not following non-interpersonal traumas (e.g., natural disaster). Furthermore, other studies

have found a consistent relationship between shame and PTSD (Beck et al., 2011; Street & Arias, 2001) in survivors of IPV. Shame has been associated with non-disclosure of abuse following IPV (Buchbinder & Eisikovits, 2003; Giles-Sims, 1998), which may result in loneliness, loss of social ties, and loss of trust in others (Buchbinder & Eisikovits, 2003). Post-trauma feelings of shame were also supported as a maintaining factor of PTSD symptoms longitudinally in a sample of 157 victims of violent crime (Andrews, Brewin, Kirk, & Rose, 2000). Past support for shame in both the maintenance of PTSD symptoms and turning away from social support provides evidence that shame may be a relevant factor in the relationship between PTSD and negative network orientation.

The current study examined whether shame served as an intermediate variable in the association between PTSD and negative network orientation, using a sample of 202 women who had experienced IPV. IPV involves physical, sexual, or psychological harm by a romantic partner or spouse (Centers for Disease Control and Prevention, 2010) and is a prevalent issue, with approximately 25% of American women experiencing some form of IPV in their lifetime (Breiding, Black, & Ryan, 2008). Longitudinal studies have indicated that mental health problems are long-standing following IPV (e.g., Sutherland, Bybee, & Sullivan, 1998), including PTSD (Golding, 1999; Kemp, Green, Hovanitz, & Rawlings, 1995). In light of the prevalence of IPV, as well as its negative mental health consequences, focus on this population appears timely. Additionally, a focus on other interpersonal traumas that commonly co-occur with IPV (e.g., childhood abuse (CA)) may help to elucidate possible differential effects of cumulative traumas on mental health outcomes.

Many adult IPV survivors have also experienced CA (e.g., Bensley, Van Eenwyk, & Simmons, 2003; Desai, Arias, Thompson, & Basile, 2002), and several of the negative sequelae

associated with IPV have also been related to CA. For example, previous studies have supported the relationship of CA with greater PTSD severity, higher levels of shame, and a negative network orientation. Schumm, Briggs-Phillips, and Hobfall (2006) examined a sample of 777 women who had experienced either adult rape, CA, both adult rape and CA, or no abuse. This study found that women who experienced CA in addition to adult rape had significantly greater PTSD symptoms than women who had no history of CA prior to the rape. In a longitudinal study, Feiring and Taska (2002) supported the relationship between CA and persistent feelings of shame 6 years after first disclosure of the CA. Gibson and Hartshorne (1996) also found that childhood sexual abuse was related to a negative network orientation in both a treatment-seeking sample and a college sample. In considering the hypothesized associations between PTSD, shame, and negative network orientation, it is possible that a history of CA in addition to IPV may differentially influence the nature of these relationships compared to the experience of IPV alone.

In particular, it is possible that cumulative interpersonal traumas in childhood and adulthood may decrease a person's belief in the benefits of using social support as they have already been victimized by several trusted others (e.g., romantic partners, family members). Early negative interactions are theorized to be salient to the generation of a negative network orientation (Tolsdorf, 1976). Additionally, these repeated traumas during both childhood and adulthood may reinforce feelings of shame. The relationship between shame and negative attitudes toward social support may be particularly strong as the experience of both IPV and CA has reinforced negative self-focused feelings and these feelings strengthen negative beliefs about seeking social support (i.e., negative network orientation). Although exploratory, it is possible

that a history of CA may strengthen the association between shame and negative network orientation.

The relationship between the total number of abusive intimate relationships and negative network orientation was also examined in this study. Individuals who have been through multiple abusive relationships may have stronger negative beliefs about seeking social support because they have already experienced abuse from several trusted partners. This analysis is again exploratory, but it is plausible that multiple abusive relationships could strengthen negative attitudes concerning seeking social support.

Thus, in the current study, we examined the associations among PTSD symptom severity, shame, and negative network orientation in a sample of female IPV survivors. We hypothesized that shame would intermediate the association between PTSD symptom severity and negative network orientation. Additionally, we examined whether a history of childhood abuse moderated the relationship between shame and negative network orientation. We predicted that a history of childhood abuse would contribute to a stronger relationship between feelings of shame and negative network orientation. We hypothesized that there would be a stronger indirect relationship between PTSD and negative network orientation through shame for those with a history of both CA and IPV. We also examined the possible association between the total number of abusive intimate relationships and negative network orientation, to assess whether a woman's history of abusive relationships also played an important role in predicting negative attitudes toward using social support.

Method

Participants

The sample included 202 women who sought assessment and possible treatment at a university-based research clinic for mental health problems following IPV. Announcements for the clinic were dispersed throughout the community via health fairs, presentations to the faith community, flyers, and public service announcements. Participants for the current study were recruited from January 2009 to September 2015. Women qualified for assessment if their IPV included actual or threatened death or serious injury and their emotional response included intense fear, helplessness, horror, or the perception that they would die (Criterion A2; American Psychological Association (APA), 2000).[1] The sample ranged in age from 18 to 75 (mean age = 37.77, *SD* = 12.51). Approximately twenty-one percent of the participants (n = 43) reported still being involved with their most recent abusive partner at the time of the assessment.[2,3] Among the 159 participants who were no longer involved with their perpetrator, the average elapsed time since IPV exposure was 3.98 years (*SD* = 6.55). In addition to the experience of IPV, the current sample also experienced, on average, 3.82 (*SD* = 2.40) non-IPV related traumatic events. Table 1 shows other sample characteristics, including types of IPV experienced, race, educational background, and annual income.

[1]The *Diagnostic and Statistical Manual of Mental Disorders* (4th ed. text-rev.; *DSM-IV-TR*; APA, 2000) definition of PTSD was used in this study as data collection began several years before the most recent *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; APA, 2013) was published and the majority of the participants were assessed using *DSM-IV-TR.*

[2]In some circumstances, women were helped to formulate a safety plan if, in the interviewer's perspective, her personal safety potentially was at risk.

[3]A secondary analysis was conducted without the women that were currently involved in an abusive relationship (n = 43) to assess the possible undue influence of this subsample on the study results. Because none of the findings changed significantly, these women were not removed from the primary analysis.

Measures

Intimate Partner Violence. The Domestic Violence Interview (DVI) is a semi-structured instrument utilized to assess IPV (Beck, 2008). The interview has been used in several past studies (Beck et al., 2011; Reich et al., 2015) and was used to assess a history of physical, sexual, and emotional abuse from romantic partners. The interview also assessed whether participants met for Criterion A2 during the IPV (APA, 2000). To examine emotional response to the abuse, participants were asked to rate their emotional reactions on a Likert-type scale ranging from 0 (*not at all*) to 100 (*extremely*). Based on past research (Beck et al., 2004), a cutoff score of 50 on these ratings was used to determine if Criterion A2 was satisfied.

Posttraumatic Stress Disorder. The Clinician-Administered PTSD Scale-IV (CAPS-IV; Blake et al., 1990) was used to assess PTSD. The CAPS-IV is a structured interview that includes 17 standardized questions to evaluate the frequency and intensity of each PTSD symptom according to the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev., *DSM-IV*; American Psychiatric Association, 2000). CAPS-IV questions were anchored to the women's experience of IPV and assessed symptoms over the past month using a 5-point Likert scale ranging from 0 (*the symptom does not occur or does not cause distress*) to 4 (*the symptom occurs nearly every day or causes extreme distress and discomfort*). The intensity and frequency scores were summed to create a total PTSD severity score (range 0-136) with higher scores indicating greater severity. Other possible non-IPV related traumas were assessed using the Life Events Checklist (LEC; Gray, Litz, Hsu, & Lombardo, 2004). If the participant endorsed other traumas, she was re-administered the CAPS-IV with respect to these events. Non-IPV trauma symptoms were not counted towards the CAPS-IV IPV total score. The CAPS

has been shown to have excellent reliability and convergent and discriminant validity (Weathers, Keane, & Davidson, 2001). Internal consistency for the CAPS-IV in the current sample was excellent (alpha = .92).

Trained clinicians administered the CAPS-IV, and all interviews were recorded. Approximately 33% of CAPS-IV interviews (n = 67) were randomly selected and rated by an independent interviewer to assess inter-rater reliability. Previous research has established strong inter-rater reliability for the CAPS, with coefficients consistently at the .90-level or above (Weathers et al., 2001). The intra-class correlation coefficient for the current sample was excellent (r = .95).

Shame. The Internalized Shame Scale (ISS; Cook, 1987) was administered to assess shame. The ISS is a 30-item scale that contains 2 subscales that assess self-esteem and shame. The 24-item shame subscale was used in the current study. This scale measures levels of internalized shame with questions such as "I would like to shrink away when I make a mistake". Responses are assessed using a 5-point Likert scale ranging from 0 (*never*) to 4 (*almost always*) with higher scores indicating greater shame. The shame subscale has been shown to be unidimensional, have good test-retest reliability (Cook, 1996) and have good concurrent validity with other shame measures (Harder, Cutler, & Rockart, 1992). Internal consistency for the ISS shame subscale in the current sample was excellent (alpha = .97).

Negative Network Orientation. The Network Orientation Scale (NOS; Vaux, Burda, & Stewart, 1986) is a 20-item measure designed to assess attitudes and expectations regarding the usefulness of social support utilization during times of need. Items reflecting positive and negative attitudes toward support utilization are administered using a 4-point Likert scale ranging from 1 (*strongly agree)* to 4 (*strongly disagree*). Positively worded items were reverse scored, so

higher total scores indicated greater negative network orientation. Vaux et al. (1986) and Wallace and Vaux (1993) found good internal consistency (range = .60 to .88) for the NOS across 5 samples of student and community participants and good test-retest reliability of NOS scores across four weeks (r = .77). Supporting the validity of the NOS, Vaux and Wood (1987) found in a path analysis that NOS scores predicted lower support resources and more negative appraisals of social support. Internal consistency for the NOS in the current sample was good (alpha = .82).

Child Abuse. A history of childhood abuse (either childhood physical abuse (CPA) and/or childhood sexual abuse (CSA)) was assessed using the Life Events Checklist (LEC; Gray et al., 2004). Participants who endorsed childhood abuse-related events on this measure were asked to provide a brief description. Traumas consistent with CPA (e.g., physical assault, punishment resulting in serious injury under age 18) or CSA (e.g., inappropriate touching, fondling, or sexual experience under age 18) were conceptualized as childhood abuse. Abuse status was coded as a dichotomous variable in these analyses (0 = *no abuse;* 1 = *abuse*). Approximately 61% of participants (n = 123) endorsed experiencing some form of childhood abuse.

Procedure

After providing informed consent, the DVI, CAPS, and another semi-structured interview were administered to participants individually. Participants also completed several questionnaires including the NOS, ISS, and the LEC. At the end of the assessment, participants were debriefed, provided with feedback and community referrals as needed. The Institutional Review Board approved of all procedures.

Data Analytic plan

The significance of hypothesized pathways was tested directly using a structural-equation modeling (SEM) framework in Mplus software version 7.3 (Muthén & Muthén, 2012). All variables had complete data (n = 202) except the NOS variable. The NOS variable had missing data (n = 33) primarily because this measure was entered into the study after data collection had already begun. Thus, this missing data fit the definition for *missing completely at random* (MCAR) and was appropriate for structural equation modeling (SEM). Missing data were accommodated by maximum likelihood estimation, as this strategy is considered a superior approach to missing data in most situations (Arbuckle, 1996).

The moderated mediation model assessed the indirect association between PTSD and negative network orientation through shame as well as the moderating influence of a history of childhood abuse (CA). As shown in Figure 1, the hypothesized indirect association is represented through the combined effects of Path A and Path B. The direct effect of PTSD on negative network orientation is denoted by Path C', the direct effect of the moderator CA on negative network orientation is denoted by Path V, and the interaction effect of shame and CA on negative network orientation is denoted by Path BV. The conditional indirect effects were calculated for both levels of the moderator. Both the indirect effect and the conditional indirect effects were formally tested using a 95% confidence interval (CI) calculated on the basis of 5000 bias-corrected bootstrap samples. Additionally, to more formally test the difference between the conditional indirect effects at different levels of the moderator, the *index of moderated mediation* (Hayes, 2015) was computed, and a 95% confidence interval was calculated for this statistic on the basis of 5000 bootstrap samples. When the bias-corrected bootstrapped CIs of the indirect

effect, conditional indirect effect, or the index of moderated mediation do not include 0, the effect is considered statistically significant (Hayes, 2013, 2015; Preacher & Hayes, 2008). Because the model in the current study is just-identified, no indices of model fit are presented.

Statistical power for the current study was derived using results from simulation studies of different moderated mediation models (Preacher, Rucker, & Hayes, 2007), including a model that matches the one used in the current study. Preacher et al. (2007) derived power estimates for different moderated mediation models based on coefficient effect size and varying sample sizes (e.g., 100, 200, 1,000). Based on a proposed bias-corrected bootstrapping analysis, a sample size of 202 participants, a medium effect size ($\beta = .39$) for pathways A, B, BV, and V, as well as a null effect for pathway C' ($\beta = 0$), our model had excellent power ($\beta = 1.00$).

Results

Data Screening and Preparation

Descriptive statistics for the primary variables can be found in Table 2. The NOS evidenced missing data, largely because this measure was added to the project's assessment battery after data collection was already underway. Because the majority of the missing data was due to the absence of this measure and not due to any particular characteristic of the participants (i.e., level of PTSD, shame), data loss was assumed to be missing completely at random (MCAR) and appropriate for analyses using SEM (Kline, 2011). Data were screened for univariate and multivariate outliers, skew, and kurtosis using guidelines from Tabachnick and Fidell (2007). No significant skew, kurtosis, or outliers were found. Based on the differences in total variance among the variables, it appeared that the covariance matrix for this data was ill-scaled (i.e., the ratio of largest to smallest variance was greater than 10; Kline, 2011). Thus, PTSD severity total, ISS-shame scale total, CA, NOS totals, and total number of abusive

relationships were all re-scaled through multiplication by a constant (0.1, 0.1, 5, 0.3, and 2 respectively; Kline, 2011). The resulting variance-covariance matrix is shown in Table 2. The interaction term (i.e., the interaction between shame and CA) was calculated through multiplication of the rescaled, centered variables. Coefficients within the range of .10, .30, and .50 are classified as small, medium, and large effect sizes respectively (Kline, 2011).

Relationship between PTSD symptom severity and Negative Network Orientation through Shame

The direct relationship between PTSD symptom severity and negative network orientation when controlling for shame, CA, and the interaction between CA and shame was not significant (Path C' = .09, p = .280, 95% CI [-.07, .26]). PTSD symptom severity was significantly related to feelings of shame (Path A = .39, p < .001 95% CI [.25, .52]) and shame was significantly related to negative network orientation independent of PTSD symptom severity, CA, and the interaction between CA and shame (Path B = .41, p < .001, 95% CI [.26, .56]). The overall indirect effect was statistically significant based on a 95% bias-corrected bootstrapped confidence interval (Path AB = .16, p < .001, 95% CI [.09, .26], percent mediation = 64%). Based on the significant indirect effect and the non-significant direct effect of PTSD symptom severity on negative network orientation, the results support that shame intermediated the relationship between PTSD symptom severity and negative network orientation.

Moderating effect of Childhood Abuse (CA) on the relationship between PTSD symptom severity and Negative Network Orientation through Shame

A moderating effect of CA on the relationship between shame and negative network orientation was also observed in the model. The relationship between the interaction term of shame and CA with NOS when controlling for PTSD severity, shame, and CA was significant

(Path BV = .06, p = .023, 95% CI [.01, .11]). The conditional indirect effects at each level of the moderator were also significant. First, there was a significant conditional indirect effect for those without a history of childhood abuse, Path ABV = .09, p = .022, 95% CI [.02, .18], as well as for those who had a history of childhood abuse, Path ABV = .20, p < .001, 95% CI [.11, .33]. The index of moderated mediation was also significant (Index = .11, p = .036, 95% CI [.02, .23]), indicating that the conditional indirect effect was significantly stronger for those with a history of childhood abuse in comparison to those who did not have a history of childhood abuse. This model accounted for 12.3% of the variance in shame and 23.8% of the variance in negative network orientation. Significant pathways and standardized path coefficients for the model are shown in Figure 2.

Consideration of total number of Abusive Intimate Relationships as a possible Covariate

Total number of abusive intimate relationships was evaluated as a possible covariate in the relationship between shame and negative network orientation as moderated by a history of CA. First, a correlation analysis was conducted between total number of abusive relationships and the dependent variable (negative network orientation). A small significant relationship was found (r = .16, p = .042). Second, the difference in the number of abusive relationships between women who had and had not experienced CA was examined. The distribution of the number of abusive relationships was not normally distributed (Kolmogorov-Smirnov = .25, p < .001), so the difference between groups was evaluated using a non-parametric alternative, the Mann-Whitney U test. The test indicated a significant difference in the number of abusive relationships between those who had and had not experienced CA (Z = -2.84, p = .004). According to Miller and Chapman's (2001) suggestions for the use of covariates, the significant difference in the number

of abusive relationships between those who had and had not experienced CA, supports that these variables are related and to use the number of abusive relationships as a covariate may bias the CA variable as a predictor of negative network orientation. Thus, no further analyses with the total number of abusive relationships variable were conducted.

Discussion

The aim of the current study was to examine the possible role of shame in the relationship between PTSD symptom severity and negative network orientation, as well as the possible moderating effect of a history of childhood abuse. Shame was supported as a relevant emotion in explaining the relationship between PTSD symptom severity and negative network orientation. These findings support that higher PTSD symptom severity may lead to stronger feelings of shame which increase negative attitudes about seeking social support, potentially for fear of receiving shaming social reactions. Additionally, we found that for those with a history of CA, the relationship between PTSD and negative attitudes toward social support through shame was significantly stronger.

The results of this study suggest that shame is an operative post-trauma emotion that increases concerns about using social support in survivors of IPV. The results of this study also demonstrate that a history of both CA and IPV, compared to IPV alone, may have a differential effect on the interrelationships between PTSD, shame, and negative network orientation. It is possible that survivors of both CA and IPV have particularly internalized feelings of shame, which may increase social avoidance. Although in the short-term, this strategy may help the person to avoid possible negative reactions from others, this process may actually maintain negative emotions and PTSD symptoms by preventing trauma survivors from reaching out to social resources (e.g., friends, family, mental health resources). For example, feelings of shame

and negative attitudes toward using social support may motivate the trauma survivor to cope by isolating themselves and avoiding discussion of the trauma, which may prevent them from actively dealing with their post-trauma reactions.

The findings of the current study may help build on past research in several ways. First, past empirical and theoretical work has supported the importance of shame in posttraumatic functioning (Andrews et al., 2000; Ehlers & Clark, 2000; Feiring & Taska, 2005), and the current study may point to one particular process (i.e., negative network orientation) that could follow from feelings of shame and deter trauma survivors from seeking support. This study may also help explicate the well-documented relationship between PTSD and lower social support. Past research found that negative network orientation mediated the relationship between PTSD symptom severity and lower social support (Clapp & Beck, 2009). It may be that following trauma, shame helps foster a negative attitude toward using social resources and this negative attitude leads to lower utilization of social support. Further research is needed to test this full pathway, preferably using a longitudinal design.

Treatment implications for the current study include addressing feelings of shame and dysfunctional beliefs about using social support in survivors of both IPV and CA. Although scholars have emphasized the importance of shame possibly hampering therapy for individuals with PTSD (e.g., Resick & Schnicke, 1992), treatments for PTSD have not yet included a specific focus on shame. The current study again demonstrates the relevance of shame as a treatment target for those struggling with PTSD. Addressing dysfunctional beliefs about social support that stem from CA may be addressed with current treatments. For example, the Skills Training in Affective and Interpersonal Regulation (STAIR; Cloitre, Koenen, Cohen, & Han, 2002) protocol aims to help survivors of CA to challenge *maladaptive interpersonal schemas*

related to childhood abuse (e.g., other people will reject you if you confide in them) and develop alternative adaptive interpersonal schemas (e.g., to be connected to someone means to be respected). The STAIR protocol may also help CA survivors identify strong negative emotions (e.g., shame), how those emotions may lead them to adopt negative coping strategies (e.g., social isolation), and help them to learn alternative beneficial ways of coping.

Like most studies, there are several limitations to the current study. First, because the data were cross sectional, a causal relationship between the paths should not be assumed. However, the medium to large effect sizes for the pathways between PTSD symptom severity, shame, and negative network orientation do support the importance of these relationships, even though directionality cannot be inferred. Second, the sample was entirely female, thus the findings cannot be generalized to male survivors of IPV. It will be important to assess whether the pathways examined in the current study are relevant to male survivors of IPV.

Future research should also examine the relationships assessed in the current study in different trauma samples. For example, future research can examine whether these associations are relevant in survivors of non-interpersonal traumas (e.g., natural disasters). Although past research has supported there are higher levels of stigmatization and shaming social reactions following interpersonal versus non-interpersonal traumas (Charuvastra & Cloitre, 2008), recent research has documented similarities in the association of PTSD and stigmatizing thoughts (e.g., self-blame) among survivors of interpersonal and non-interpersonal traumas (Woodward et al., 2015). Thus, the relevance of negative self-focused emotions like shame in interpersonal versus non-interpersonal traumas may be a direction for future research. Other negative emotions (e.g., guilt, anger) that are important for posttraumatic functioning (Andrews et al., 2000; Beck et al., 2011) should also be assessed in place of or in conjunction with shame to better understand the

effects of these emotions. Finally, future studies should use a more robust measure of CA. For example, a continuous measure of childhood abuse may better define the effects of different types (e.g., physical, sexual, and emotional abuse) and severities of CA on the outcomes.

This study advances the current literature by supporting the significance of feelings of shame and negative network orientation following several types of interpersonal traumas. As well, the current report advances the understanding of the effects of cumulative interpersonal traumas. These results support the evaluation of feelings of shame in posttrauma functioning, particularly how this emotion may relate to dysfunctional attitudes about using social support following CA and IPV. Overall, this study highlights relevant emotional and cognitive processes that affect posttrauma functioning, as well as several treatment targets for survivors of interpersonal trauma.

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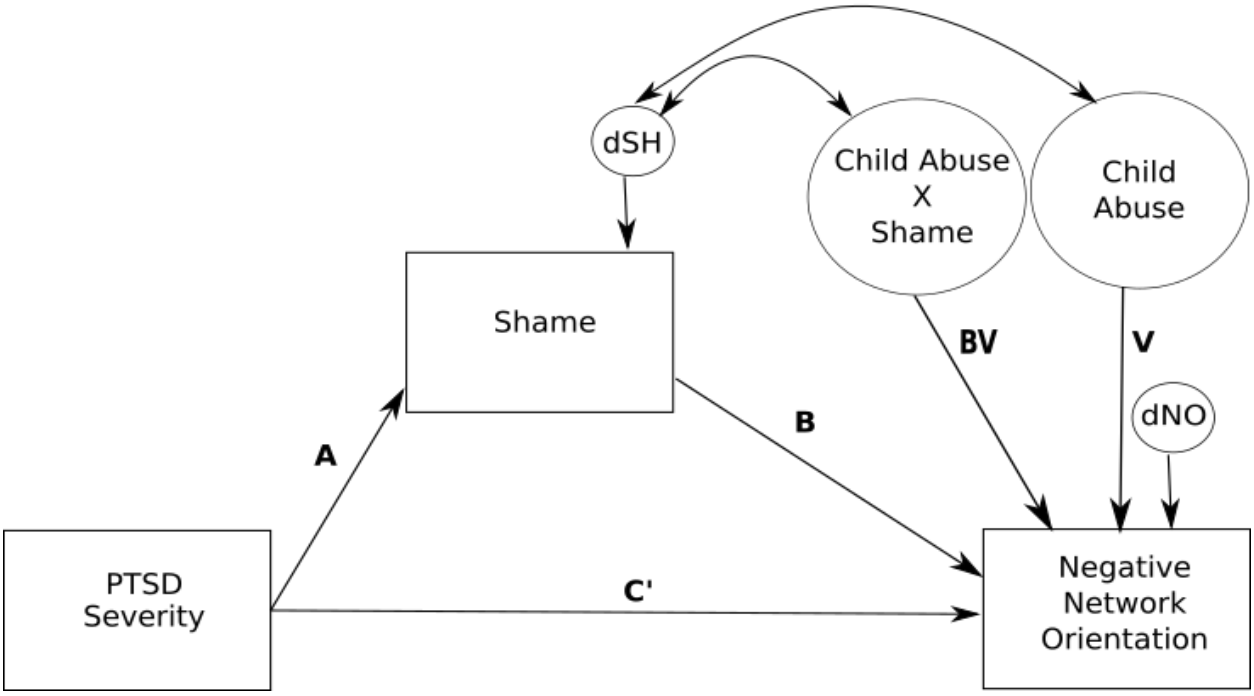
Appendix

Table 1
Sample Demographics

	n	%
Types of intimate partner abuse experienced		
Emotional, Physical, and Sexual Abuse	102	50.5
Physical and Sexual Abuse	5	2.5
Emotional and Sexual Abuse	8	4.0
Emotional and Physical Abuse	80	39.6
Emotional Abuse	5	2.5
Sexual Abuse	1	<1.0
Physical Abuse	1	<1.0
Race		
Caucasian	104	51.5
African American	73	36.1
Hispanic	3	1.5
Asian	3	1.5
Other or no answer	19	9.4
Educational background		
Elementary school	3	1.5
High school	23	11.4
Attended or completed college	132	65.4
Attended or completed graduate training	39	19.3
Declined to respond	5	2.5
Annual Household income		
Below $10,000	43	21.3
$10,000 to $20,000	44	21.8
$20,000 to $30,000	25	12.4
$30,000 to $50,000	30	14.9
Over $50,000	35	17.3
Declined to respond	25	12.4



F*igure 1.* Path analysis of moderated mediation of PTSD on negative network orientation through shame as moderated by childhood abuse; dSH and dNO are disturbance terms for shame and negative network orientation respectively.

Table 2

Correlations, Variance-Covariance Matrix, and Descriptive Statistics for Primary Variables [a]

	PTSD	Shame	NOS	CA	IPV	*M*[b]	*SD*[b]	n
PTSD	**4.54**	.35***	.28***	.11	.001	29.65	21.37	202
Shame	1.76	**5.56**	.46***	.09	.20**	47.37	23.63	202
NOS	1.41	2.60	**5.65**	.17*	.16*	48.07	8.02	169
CA	.57	.50	.86	**5.95**	.20**	.61	.49	202
IPV	.002	1.07	.84	.56	**5.27**	1.98	1.15	202

Note: PTSD – PTSD symptom severity; Shame – Internalized shame scale total; NOS – Network orientation scale total; CA – history of childhood physical or sexual abuse; IPV – total number of abusive relationships

[a] Diagonal contains variances (in boldface type), upper triangle contains correlations, lower triangle contains covariances; all statistics were calculated following adjustment for relative variances

[b] Values listed are prior to adjustment for relative variance and mean centering

* $p < .05$. ** $p < .01$. ***$p < .001$

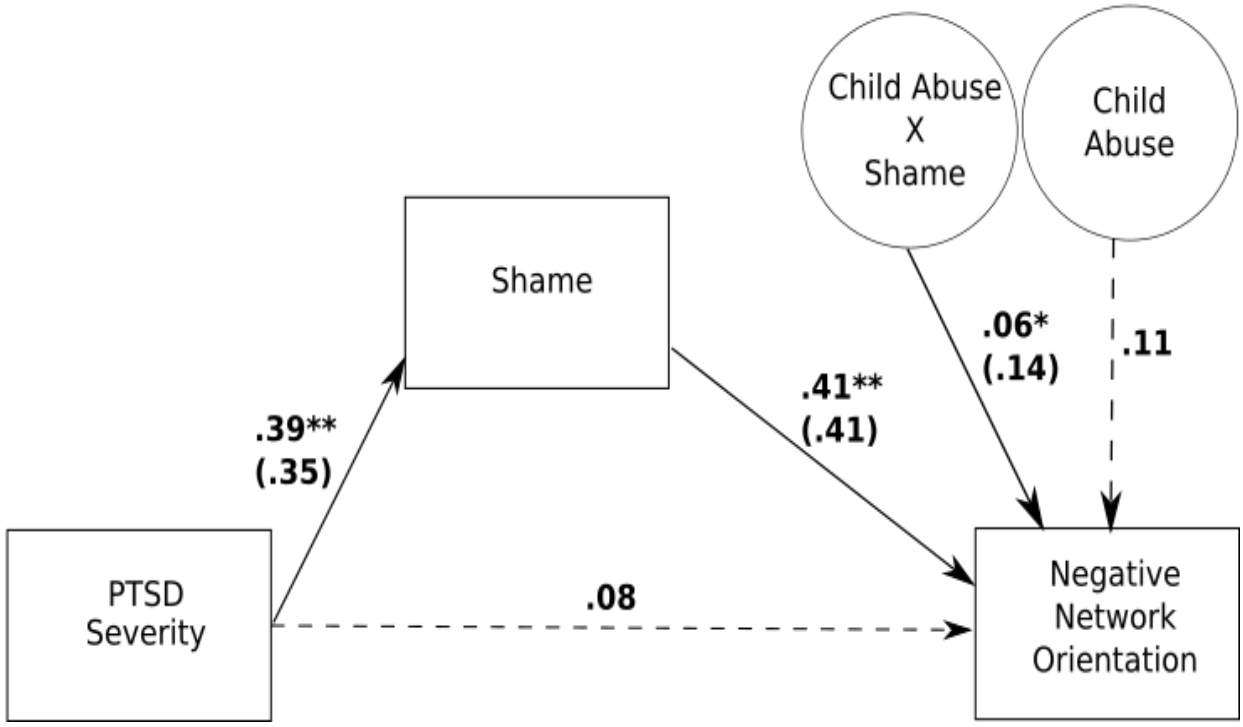


Figure 2. Results of the moderated mediation analysis with unstandardized path estimates listed for all paths. Standardized estimates are listed in parentheses for significant effects; paths noted with a broken line are non-significant at $p < .05$. Disturbance terms and correlations between variables are not listed in the figure. *$p < .05$. **$p < .001$