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To cite this article: Rebecca Seah & David Berle (2023) Does Exposure to Interpersonal Trauma Influence the Relationship between Shame and Posttraumatic Stress Symptoms?, Journal of Aggression, Maltreatment & Trauma, 32:9, 1304-1320, DOI: [10.1080/10926771.2023.2170841](https://doi.org/10.1080/10926771.2023.2170841)

To link to this article: <https://doi.org/10.1080/10926771.2023.2170841>



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Published online: 30 Jan 2023.



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Does Exposure to Interpersonal Trauma Influence the Relationship between Shame and Posttraumatic Stress Symptoms?

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ABSTRACT

Although shame is a common emotional response to trauma exposure, it may be precipitated by distinct trauma types. To our knowledge, our study is the first to investigate the relationship between shame and PTSD symptom severity and whether exposure to at least one interpersonal trauma influences the relationship between shame and PTSD symptoms. One-hundred and fifty-seven participants from Australia, Canada, United States, United Kingdom, and New Zealand completed a series of self-report measures. Although shame was significantly associated with PTSD symptom severity, it was not an independent predictor of PTSD when considering anxiety, depression, trauma history and guilt. Participants exposed to at least one interpersonal traumatic event endorsed higher levels of shame and PTSD compared to those who did not. Interpersonal trauma exposure also moderated the relationship between shame and PTSD. Clinical implications and directions for future research are also discussed.

ARTICLE HISTORY

Received 17 February 2022
Revised 26 October 2022
Accepted 2 January 2023

KEYWORDS

Shame; guilt; posttraumatic stress disorder; PTSD; interpersonal trauma

Posttraumatic Stress Disorder (PTSD) has long been assumed to be a fear-based disorder (Foa et al., 2007; Foa & Kozak, 1986). That is, PTSD is thought to emerge due to excessive fear responding to trauma related cues and associations which are thought to lead to the perception of a current and persistent threat. This manifests as intrusions and alterations in arousal, cognition and mood (e.g., hyperactivity, flashbacks, nightmares), prompting cognitive and behavioral avoidance (American Psychiatric Association [APA], 2022). Although fear is a primary emotional response to trauma, there have been suggestions that other potentially dysregulating emotions, such as a shame may also contribute to PTSD (Lee et al., 2001; Lopez-Castro et al., 2019).

Shame is a self-conscious emotion elicited through negative self-evaluation, where the individual sees themselves as flawed and inadequate, either in the eyes of themselves and/or others (Gilbert et al., 1994; H. Lewis, 1971; Tangney & Dearing, 2002). Shame often co-occurs with guilt, an interconnected, albeit

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distinct emotion. Although used interchangeably, shame and guilt have different implications for behavioral motivations and psychological adjustment (Tangney & Dearing, 2002). Shame is considered more painful and chronic due to the negative global evaluation on the self (“I am bad”), prompting withdrawal, avoidance, and maladaptive coping (M. Lewis, 2003; Tangney & Dearing, 2002; Tracy et al., 2007). Further, experiences of shame can negatively impact interpersonal functioning as individuals who are more shame prone may tend to distance themselves from others due to fear of judgment (Black et al., 2013). In contrast, guilt condemns behavior (“I did a bad thing”) and tends to motivate positive reparations and facilitate change (Tangney & Dearing, 2002).

Despite the differing conceptualizations and measures of shame, converging evidence indicates a significant moderate association between shame and PTSD symptom severity (Lopez-Castro et al., 2019), and suggestive of shame being predictive of higher levels of posttraumatic stress symptoms (PTSS) up to six months post trauma (Andrews et al., 2000; Beck et al., 2011). Preliminary treatment research suggests that changes in shame are also predictive of PTSD (Økstedalen et al., 2015), making an important target for treatment.

In contrast, findings from a recent systematic review investigating the role of guilt in the development of PTSD are mixed, with some studies indicating positive significant relationships with small to large effect sizes, to no relationship at all (Pugh et al., 2015). The challenge associated with disentangling the relative magnitude of shame and guilt in relation to PTSD is likely a reflection of study methodology such as measurement artifacts, and heterogeneity in clinical presentations. Majority of reviewed studies did not control for the effects of shame despite significant correlations between shame and guilt and shame and PTSD (Beck et al., 2011; Kubany et al., 1996; Leskela et al., 2002; Lowinger & Solomon, 2004; Robinaugh & McNally, 2010; Street & Arias, 2001). It is possible that the relationship between both shame and guilt in relation to PTSD may have been confounded by their construct overlap.

Although PTSD can arise from many different trauma types, variations in trauma exposure may also account for distinct emotional responses. Consistently, shame has been found to be the dominant emotional response and a stronger predictor of PTSD symptoms than guilt among those who report interpersonal trauma (e.g., physical, sexual assault, interpersonal violent crime (La Bash & Papa, 2014; Beck et al., 2011; DePrince et al., 2011; Ford et al., 2006; Haagen et al., 2015) compared to those that did not (e.g., natural disasters, transport accidents etc.; Ginzburg et al., 2009). This effect was also observed in a treatment study where shame, not guilt mediated changes in PTSD symptoms among female survivors of childhood abuse (Dewey et al., 2014; Velotti et al., 2014).

Shame is also considered a “social emotion” as it regulates peer relationships and social hierarchy and bonds (Gilbert & McGuire, 1998; H. Lewis, 1971).

Interpersonal traumas involve deliberate perpetration of human violence (e.g., sexual and violence, robbery etc.; Ozer et al., 2003). These events involve significant relational disruptions, where one is violated in some way at the hands of another. Thus, the experience of shame becomes a source of internalized feelings of worthlessness, helplessness, and threat of potential rejection (Lee et al., 2001; Wilson et al., 2006). Interpersonal traumatic events also represent violations of social norms and relational boundaries. This directly contrasts non-interpersonal events such as natural disasters or unintentional accidents. In this way, shame is likely to be the dominant emotion when exposed to the former.

Another potential risk factor for both shame and PTSD is the number of previous potentially traumatic events (PTEs; Ozer et al., 2003). The impact of cumulative trauma may give rise to more severe PTSD symptomology and greater distress and co-morbid psychiatric disorders (Briere et al., 2008; Suliman et al., 2009). Individuals with repeated trauma histories may undermine an individual's sense of safety and within the world, and lead to an internalized sense of helplessness following subsequent negative events (Harman & Lee, 2009; Janoff-Bulman, 2002).

The current study sought to provide further empirical support for the relationship between shame and PTSD symptom severity in a broad trauma exposed sample whilst controlling for potential effects of guilt. To account for the high comorbidity between PTSD and other psychiatric comorbidities such as depression and anxiety (Breslau, 2009; Rytwinski et al., 2013), we also controlled for the effects of these relationships. It was hypothesized that shame would be positively associated, and independently predictive of PTSD symptoms even when controlling for number of previous trauma exposures, generalized anxiety, and depression symptoms.

Given that trauma type appears to be a critically important risk factor for the development of shame, there is a need to understand whether trauma type also influences the relationship between shame and PTSD. In the absence of previous studies answering this question, the study also aimed to examine whether exposure to at least one interpersonal trauma would moderate the relationship between shame and PTSD symptom severity, whilst controlling for the effects of guilt and depression. An investigation into the relationship between shame and PTSD and the possible moderating effects of trauma type could offer greater insight into the variations in psychological responses and potential risk factors toward development of shame and PTSD.

It was predicted that individuals who were exposed to at least one interpersonal trauma across their lifetime would endorse higher levels of shame (rather than guilt) and PTSD symptoms compared to those that did not. It was also hypothesized that interpersonal trauma would moderate the relationship between shame and PTSD symptom severity.

Method

Procedure

Ethical approval for the current study was obtained from the relevant University Human Research Ethics Committee. A series of self-report questionnaires were administered online, and participants were reimbursed at a rate of 5GBP per hour of study completion.

Participants

Participants were recruited from Australia, Canada, Ireland, The United Kingdom, and United States using Prolific Academic (ProA), an online study recruitment platform. Only English-speaking participants who were over the age of 18 and exposed to at least one PTE (e.g., crime, physical and/or sexual assault, transport accidents; Norris & Hamblen, 2004) were included in the study.

One-hundred and eighty-seven participants provided informed consent to participate. Thirty (16%) participants did not endorse exposure to at least one PTE over their lifetime and were thus excluded from the study.

The final sample ($N = 157$) consisted of 67 females (42.7%) and 90 males (57.3%) aged between 18 and 67 ($M = 28.9$, $SD = 10.8$). Just over half the sample ($n = 96$; 51%) endorsed completing at least one post-school qualification. 81 participants (43%) reported either being in a de-facto relationship or were currently married. Majority of participants ($n = 162$; 87%) did not endorse having a current or previous diagnosed mental health disorder and any physical health conditions that interfered with their ability to engage with daily living.

Measures

Trauma exposure. The Trauma History Questionnaire (THQ; Norris & Hamblen, 2004) is a 24 item self-report measure which screens for individual exposure (either direct exposure or witnessing) to common PTEs that would meet a Criterion A stressor in the DSM-V-TR diagnostic criteria for PTSD (American Psychiatric Association [APA], 2022). These include but are not limited to crime, sexual and physical assault and/or general disasters by endorsing yes/no. Sample questions include: “Have you ever had a serious accident at work, in a car, or somewhere else?.” The number of endorsed events were summed to create a proxy quantification of trauma exposure (Martin et al., 2013). In this study, frequency of trauma exposure over an individual’s lifetime is referred to as Trauma Load.

Anxiety. The Generalized Anxiety Disorder 7 (GAD-7; Spitzer et al., 2006) is 7-item self-report measure used to screen for DSM-IV GAD symptoms.

Participants were asked to rate the extent to which they are bothered by symptoms in the past two weeks on a 5-point Likert scale (0 = Not at all to 4 = Nearly every day). Items were summed with a total score between 0–21. A score of 10 and higher indicated moderate to severe anxiety. In the present study, the GAD-7 internal consistency was excellent ($\alpha = .91$).

Depression. The Patient Health Questionnaire-9 (PHQ-9; Kroenke & Spitzer, 2002) is a 9-item self-report measure to screen for DSM-IV depression symptoms. Respondents rated the extent they were bothered by depressive symptoms (e.g., “feeling down, depressed or hopeless”) on a 4-point Likert scale (0 = Not at all to 3 = Nearly every day) over the past two weeks. Total scores are summed with a score of between 0–27, with scores of 10 or higher indicating the presence of severe major depression (Levis et al., 2019). The PHQ-9 has demonstrated good convergent and discriminant validity with other depression measures (Beard et al., 2016). The internal consistency of the PHQ-9 in the present study was good ($\alpha = .90$).

Posttraumatic Stress Disorder (PTSD) symptoms. The PTSD Checklist for DSM-5 (PCL-5; Weathers, Litz, et al., 2013) was used to screen for current PTSD symptom severity. The PCL-5 consists of 20-items that correspond to the DSM-5 criteria for PTSD. Participants were asked to consider the event they consider the worst event, or the event that currently bothers them the most. Following this, they were asked to endorse whether they have experienced symptoms in the past month (e.g., In the past month how much were you bothered by: “repeated, disturbing dreams of the stressful experience?”) on a 5-point Likert scale (0 = Not at all to 4 = Extremely). Items are summed for a total score, with a score of 31–33 indicating the presence of probable PTSD. The PCL-5 has demonstrated strong validity and reliability and is a psychometrically sound measure of PTSD symptoms (Blevins et al., 2015; Bovin et al., 2016). The internal consistency for the PCL-5 was excellent ($\alpha = .97$).

Shame and guilt. Shame and Guilt were measured using the shame and guilt proneness subscale on the Test of Self-Conscious Affect-3 short form (TOSCA-3; J. Tangney et al., 2000). It is one of the most widely used measures to assess self-conscious emotions (Tangney & Dearing, 2002). The TOSCA-3 has the advantage of utilizing a scenario-based approach, as it is thought to be less reliant on the capacity of participants to distinguish between self-conscious emotions (Tangney & Dearing, 2002). Respondents are asked to imagine themselves in 11 negative hypothetical situations and indicate the likelihood that they would think in the ways described in each situation on a 5-point Likert scale (1 = Not likely to 5 = Very likely). For example, “You break something at work then hide it.” Sample responses include: “You would think . . . a) this is making me anxious; I need to either fix it or get someone else to, b) about quitting, c) a lot of things aren’t made very well these days, or d) it was only an accident.” Further, the use of scenario-based measures

allowed us to compare individual differences of shame and ensures consistency in the events that are being rated regardless of their trauma history.

Scale scores are summed to obtain total scores of shame and guilt proneness. The TOSCA-3 has demonstrated strong internal consistency and construct validity (Rüsch et al., 2007; Woien et al., 2003). In the present study, the internal consistency for TOSCA-3 shame and guilt subscales were acceptable ($\alpha = .81$) and ($\alpha = .78$), respectively.

Power analysis

A power analysis was conducted using G*Power (Faul et al., 2007) which indicated that 109 participants were needed for a multiple regression analysis with eight predictor variables, a power of 0.80 for an expected medium effect size of $f^2 = 0.15$.

Data analytic strategy

All statistical analyses were conducted using SPSS Statistics (Version 26). As the scores for Depression, Anxiety and PTSD symptoms were positively skewed, Spearman's rank-order correlations were run to determine the relationship between study variables. To assess whether participants previously exposed to interpersonal trauma would endorse higher levels of shame and PTSD symptom severity, Mann-Whitney U tests were conducted, with shame and PTSD symptom severity as outcome variables (Field, 2000).

Multiple linear regression was performed to test the relationship between shame and PTSD symptoms. Due to high rates of comorbidity between depression, anxiety and PTSD (Campbell et al., 2007; Price et al., 2019) and given that depression may arise from shame (J. P. Tangney et al., 1992), the effects of these mental health variables were controlled for. The potential effect of trauma load and guilt were also entered as covariates. To examine whether trauma type moderated the relationship between shame and PTSD symptom severity, moderation analysis using Bootstrapping with 10,000 iterations (Model 1; Hayes, 2013) was performed controlling for anxiety, depression and trauma load.

Results

Trauma exposure

Participants had been exposed to an average of 3 PTEs across their lifetime (see, Table 1). Just over half (52.2%) of participants endorsed exposure to at least one interpersonal traumatic event, reporting higher levels of shame

Table 1. Prevalence of Trauma exposure.

Potentially Traumatic Event	<i>n</i> (%)	Trauma type
Robbery	28 (17.8%)	Interpersonal
Attempted break in ^a	37 (23.6%)	Interpersonal
Serious accident	46 (29.3%)	Non-interpersonal
Natural Disaster	36 (22.9%)	Non-interpersonal
Manmade Disaster	11 (7.0%)	Non-interpersonal
Exposure to toxic chemicals	13 (8.3%)	Non-interpersonal
Physical Injury	32 (20.4%)	Non-interpersonal
Feared injury or death	38 (24.2%)	Non-interpersonal
Witnessed someone injured or death	39 (24.8%)	Non-interpersonal
Handled dead bodies ^b	30 (19.1%)	Non-interpersonal
Close family or friend murdered or killed by drunk driver	6 (3.8%)	Interpersonal
Close friend or family member die	4 (2.5%)	Non-interpersonal
Life-threatening illness	16 (10.2%)	Non-interpersonal
Received news of serious injury, life threatening illness/death of someone close	103 (65.6%)	Non-interpersonal
Engaged in military service in a combat zone	-	Interpersonal
Sexual Assault and/or any form of unwanted sexual contact ^c	21 (21%)	Interpersonal
Being attacked at knife and/or gunpoint	15 (9.6%)	Interpersonal
Being attacked without a weapon	10 (6.4%)	Interpersonal
Being attacked by a family member	27 (17.2%)	Interpersonal

^aIncludes whether the individual was present during the time. ^bExcluding funerals. ^cThis includes any form of unwanted sexual contact. ^d22 out of 27 (17.2%) participants specified the event they endorsed, all of them included psychosocial stressors that would not meet a Criterion A traumatic stressor according to the DSM-V diagnostic criteria for PTSD. None of the events specified met the definition for an interpersonal trauma event.

(Mdn = 85.75), guilt (Mdn = 86.23) and PTSD symptoms (Mdn = 89.03), compared to those that were not exposed to at least one interpersonal trauma event ([Mdn = 70.51], $U = 2,510.50$, $p = .04$; [Mdn = 67.46], $U = 2,280$, $p = .01$, respectively).

Descriptive statistics and correlations

The mean, standard deviation, range, and inter-correlations of measures are reported in Table 2. Forty-five (28.7%) participants scored in the clinical range for PTSD (≥ 31 ; Weathers, Litz, et al. 2013). On average, participants fell within the mild range of anxiety and mild-moderate range for depression. These correlations were small to large in magnitude (Fritz et al., 2012), with anxiety and depression sharing the strongest relationship with PTSD

Table 2. Means, Standard Deviations, Range and Correlations among Study Variables (N = 157).

Variable	Mean (SD)	Range	1	2	3	4	5	6	7
1. Anx	7.64 (5.37)	0–21	-	.76**	.28**	.46**	.23**	.27**	.65**
2. Dep	9.92 (6.60)	0–27		-	.14	.42**	.24**	.21*	.60**
3. Guilt	45.31 (6.38)	25–55			-	.52**	.11	.19*	.11
4. Shame	37.87 (8.08)	15–55				-	.05	.18*	.32**
5. Load	3.61 (2.53)	1–11					-	.51**	.30**
6. Type	0.52 (0.50)	0,1						-	.28**

Anx = Anxiety (GAD-7); Dep = Depression (PHQ-9); Load = Number of cumulative traumatic experiences; Type = Exposure to at least one Interpersonal trauma; PTSD = posttraumatic stress disorder (PCL-5).

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

symptoms, followed by shame. Shame and guilt were not significantly associated trauma load.

The relationship between shame and PTSD symptoms

To investigate the relationship between shame and PTSD independent of guilt and other associated variables, a regression analysis was conducted controlling for the effects of trauma load, depression, anxiety, and guilt (Table 3). Shame was not an independent positive predictor of PTSD symptom severity. Both Depression ($\beta = .60, t = 2.10, p < .38$) and Anxiety ($\beta = 1.6, t = 4.7, p < .001$) significantly predicted PTSD symptom severity. Overall, the model was significant, $F(5,151) = 27.24, p < .001$ and explained more than 47% of variance in PTSD symptom severity. When the regressions were re-run as a sensitivity analysis with only those who were exposed to at least one interpersonal trauma, the pattern of results were the same (see, Table 4).

Moderation effect of trauma type on the relationship between shame and PTSD symptoms

Table 5 presents the estimated regression coefficients testing the moderating effect of interpersonal trauma exposure on the relationship between shame

Table 3. Multiple Linear Regression Analyses Predicting PTSD Symptom Severity.

	B	SE	95%CI		β	p
			LL	UL		
Depression	.60	.29	.03	1.17	.20	.04*
Anxiety	1.69	.36	.98	2.40	.45	.00*
Trauma load	1.26	.49	.30	2.22	.16	.01*
Guilt	-.32	.22	-.76	.12	-.10	.15
Shame	.18	.19	-.20	.55	.07	.36

Note. Items 12–14 (Cluster D) and 19–20 (Cluster E) were removed from the PCL-5 to obtain a total PTSD score which excludes overlapping symptoms with depression. The overall

Table 4. Multiple Linear Regression Analyses Predicting PTSD Symptom Severity Among Participants Endorsing Interpersonal Trauma (n = 83).

	B	SE	95%CI		β	p
			LL	UL		
Depression	.95	.38	.18	1.71	.30	.02a
Anxiety	1.33	.48	.38	2.28	.34	.01a
Trauma load	1.30	.64	.02	2.58	.16	.04a
Guilt	-.13	.34	-.80	.54	-.04	.69
Shame	.48	.29	-.09	1.06	.17	.10

Note. The sample was derived from the original sample (N = 157). Analyses was run using only participants who had endorsed at least one interpersonal trauma exposure (n= 83). The overall model was significant, $F(5,77) = 17.77, p < .001$, explaining 54% of variance in PTSD symptoms.

ap < .05

Table 5. Trauma Type Moderating the Relationship between Shame and PTSD Symptom Severity.

	β	SE	95% CI		p
			LL	UL	
<i>Outcome: PTSD symptom severity</i>					
Constant	17.17	.23	-2.01	36.35	.08
Shame	-.20	.23	-.65	.26	.40
Trauma Type ^a	-27.90	11.70	-51.1	-4.79	.018
Shame x Trauma Type	.78	.30	.12	2.28	.01
Trauma Load	1.20	.55	.12	2.28	.03
Depression	.56	.28	-.01	1.12	.05
Anxiety	1.62	.35	.92	2.31	.00
Guilt	-.27	.22	-.70	.16	.22
^c					
<i>Conditional effects</i>	Effect	SE	95% CI		p
			LL	UL	
Interpersonal Trauma	.59	.25	.10	1.08	.02
Non-Interpersonal Trauma	-.20	.23	-.65	.26	.40

^aTrauma type is coded as Interpersonal trauma = 1, Non-Interpersonal trauma = 0. ^c Conditional effects of trauma type on PTSD at values of the moderator. An additional post-hoc analysis was also conducted to assess whether interpersonal trauma exposure would moderate guilt and PTSD symptoms when controlling for the effects of anxiety, depression, trauma load and shame. Results indicated that interpersonal trauma exposure did not moderate the relationship between guilt and PTSD symptoms.

^ap < .05

and PTSD severity. The interaction term was statistically significant indicating that the effect of shame and PTSD symptoms is contingent on trauma type ($\beta = .78$, $SE = .30$, $p = .01$). This suggests that the association between shame and PTSD symptoms was stronger among participants who had been exposed to at least one interpersonal trauma compared to those who did not.

On the basis that there are overlapping symptoms between depression and PTSD (e.g., concentration difficulties, sleep disturbance), we repeated all analyses without any of the common symptoms in the PTSD total score. In the regression analysis, depression did not independently predict PTSD symptom severity, however the overall pattern of results remained the same.

Discussion

To our knowledge, our study was the first to systematically examine the role of shame in PTSD when guilt, trauma exposure and trauma type are considered. The findings are informative for clinicians, who frequently encounter trauma survivors reporting prominent shame, as well as for informing further research.

The first aim was to examine whether shame and guilt independently predict PTSD symptom severity. As hypothesized, shame, not guilt, demonstrated a significant association with PTSD symptom severity, noting that when controlling for anxiety, depression, trauma load and guilt, this relationship fell to non-significance. These findings mirror those of Shin et al. () which

found that once depression was controlled for, shame proneness was also not related to PTSD.

The non-significant findings so far as shame independently predicting PTSD may also be an artifact of our measurement of shame and guilt. One of the key advantages noted of the TOSCA is the use of scenario-based items, which limits recall bias inherent in self-report measures and does not rely on an individual's capacity to identify their emotional states. Conversely, the TOSCA may not capture the intense emotional experiences of a traumatic event that may be phenomenologically distinct from responses to everyday negative situations, with shame proneness functioning as a distal individual vulnerability risk factor exacerbated through trauma exposure and vice versa (Beck et al., 2019; Lee et al., 2001). For example, in a study with violent crime victims, Semb et al. (2011) found that trauma-related shame mediated the relationship between trait related shame and PTSD symptoms. It is possible that we were less likely to detect an effect due to the inclusion of anxiety and depression as predictors, which share significant variance with PTSD symptom severity. This may be due to high levels of comorbidity between depression, anxiety, and PTSD. Whilst the co-occurrence between disorders is likely due to overlapping psychological and biological vulnerabilities (see, Spinhoven et al., 2014), it could also be attributed to diagnostic symptom overlap.

Although speculative, shame may also predict PTSD symptom severity via other psychological mechanisms and trauma related factors. For instance, it may be that cumulative trauma exposure, rather than shame per se, contributes the greatest to PTSD symptoms once anxiety and depression symptoms are considered. Indeed, increased trauma exposure confers a greater risk toward the development of PTSD over time (Martin et al., 2013). Conceivably, the bivariate shame-PTSD relationship could be contingent on trauma load, in that shame may only arise after repeated trauma exposures (Stotz et al., 2015), and is independent of PTSD symptom severity (Hagenaars et al., 2011).

A second objective of the study was to investigate whether the type of trauma exposure would influence the relationship between shame and PTSD symptom severity. Contrary to our hypothesis, individuals exposed to interpersonal trauma endorsed higher levels of guilt as well as higher levels of shame and PTSD symptoms.

Although shame and guilt are theoretically distinct constructs, they are not mutually exclusive, and an individual can simultaneously endorse both feelings of shame and guilt. Further, it is possible that individuals who tend to experience shame are likely to interpret and respond to negative situations that also reflect higher levels of guilt-proneness. Regardless, as predicted, exposure to at least one interpersonal trauma only moderated the relationship between shame and PTSD symptom severity, which is consistent with both theoretical and empirical findings asserting that interpersonal trauma confers a greater

risk of PTSD development and experiences of shame (La Bash & Papa, 2014; Beck et al., 2011; Feiring & Taska, 2005).

Interpersonal trauma, particularly sexual/emotional abuse involves a degree of degradation and devaluation of the victim at the hands of the perpetrator (Kennedy & Prock, 2018; Shapiro, 2003). In turn, the individual may be more likely to self-blame, and attribute themselves as flawed and worthless (La Bash & Papa, 2014; Lee et al., 2001). Interpersonal trauma often carries associated social stigma, which in turn may become a source of shame (La Bash & Papa, 2014; Dworkin et al., 2017). It is possible that exposure to interpersonal trauma may place individuals with higher trait shame at greater risk of future psychopathology and PTSD following subsequent exposure to traumatic events. Conversely, exposure to interpersonal trauma may increase an individuals' propensity to interpret and respond to negative situations and thus exhibit higher levels of trait shame on measures such as the TOSCA.

Limitations and directions for future research

The current study has several limitations worth considering and provides directions for future research. First, the use of cross-sectional data precludes any causal inferences. Although the study suggests that shame proneness may be a potential risk factor toward PTSD, with interpersonal trauma survivors having a higher propensity toward shame than guilt, the use of prospective data is needed to test the predictive effect of shame and PTSD symptom severity. If so, individuals with higher levels of pre-trauma shame propensity may be at risk of developing PTSD following exposure to interpersonal trauma. The use of prospective data can also advance our understanding of how shame emerges at different phases following trauma exposure, whilst controlling for the effects of individual predispositions (Bryant et al., 2017).

Despite its advantages, the scenarios utilized in the TOSCA represent everyday scenarios that may not be personally relevant or salient, as compared to situations which would be appraised as highly aversive and potentially traumatic. Thus, future studies may seek to complement this with a trauma-related shame measure to assess for the differential relationship between both trait shame and trauma-specific shame (e.g., Økstedalen et al., 2014) with PTSD and the study's associated variables.

Second, we recruited participants from Prolific, an online recruitment platform, which may not be representative of the broader population. Further, the sample consisted of participants within subclinical levels of PTSD, who were predominantly well-educated individuals engaged in some form of paid employment, which limits generalizability of findings. Further replication among more diverse populations through other recruitment methods and within clinical samples, using diagnostic clinical interviews (e.g., The Clinician-Administered PTSD Scale for DSM-5 (CAPS-5; Weathers, Blake, et al., 2013) is warranted.

Finally, although interpersonal trauma exposure was related to both shame and PTSD as predicted, we only assessed for historical and broad categories of trauma exposure. However, we can expect PTSD symptom profiles and subsequent reactions to differ according to the nature of nature of both trauma itself (e.g., sexual versus physical abuse; Bucich et al., 2022), or appraisals of the trauma and its sequelae (Ehlers & Clark, 2000; Tracy & Robins, 2004). Thus, future search could seek to investigate the differential associations between distinct trauma presentations, individual trauma responses and its influence on shame, guilt, and PTSD symptom typologies.

Conclusion

The current findings suggest that shame is associated with PTSD symptom severity and survivors of interpersonal trauma may experience higher levels of shame and more severe PTSD symptoms. As suggested previously, shame typically prompts physical and psychological withdrawal, which can impair the therapeutic alliance and undermine treatment effectiveness (Black et al., 2013). Thus, clinicians should be mindful of the potential presence of shame through behavioral indicators (e.g., withdrawal, avoidance of eye contact, or redness of the face).

There have been suggestions that shame may impede emotional processing during exposure-based therapies (Cusack et al., 2016; Foa et al., 2007) leading to suboptimal treatment outcomes. Although limited, responses of shame to trauma and non-trauma focused treatment modalities, indicate that shame may be a key response to PTSD symptom improvement and recovery (Ginzburg et al., 2009; Harned et al., 2014; Øktedalen et al., 2015; Resick et al., 2008). The incorporation of emotion focused therapies (e.g., self-compassion therapy; Neff, 2003) as an adjunct to standalone trauma-focused treatments could also be utilized, especially among interpersonal trauma survivors where shame may be more prominent and pathological, noting that further empirical investigation is warranted.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Ethical standards and informed consent

All procedures followed were in accordance with the ethical standards of the University of Technology Sydney's Human Research Ethics Committee (HREC) (Ref No. ETH20-4718) and with the Australian government National Statement on Ethical Conduct in Human Research (2007). Informed consent was obtained from all participants for being included in the study.

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