

St. John's University

St. John's Scholar

Theses and Dissertations

2022

**EFFECT OF SHAME-PRONENESS, GUILT-PRONENESS AND
POSTTRAUMATIC STRESS SYMPTOMS ON DIFFICULTIES IN
EMOTIONAL REGULATION**

Yekaterina Nikiforova

Follow this and additional works at: https://scholar.stjohns.edu/theses_dissertations



Part of the [Clinical Psychology Commons](#)

EFFECT OF SHAME-PRONENESS, GUILT-PRONENESS AND POSTTRAUMATIC
STRESS SYMPTOMS ON DIFFICULTIES IN EMOTIONAL REGULATION

A thesis submitted in partial fulfillment
of the requirements for the degree of

MASTER OF ARTS

to the faculty of the

DEPARTMENT OF PSYCHOLOGY

of

ST. JOHN'S COLLEGE OF LIBERAL ARTS AND SCIENCES

at

ST. JOHN'S UNIVERSITY

New York

by

Yekaterina Nikiforova

Date Submitted 4/21/2022

Date Approved 4/21/2022

Yekaterina Nikiforova

Melissa Peckins, PhD

© Copyright by Yekaterina Nikiforova 2022

All Rights Reserved

ABSTRACT

EFFECT OF SHAME-PRONENESS, GUILT-PRONENESS AND POSTTRAUMATIC STRESS SYMPTOMS ON DIFFICULTIES IN EMOTIONAL REGULATION

Yekaterina Nikiforova

Exposure to traumatic events will affect most individuals in their lifetimes, with some going on to develop emotional dysregulation difficulties, posttraumatic stress symptoms, shame, and guilt. The present study used a trauma-exposed college sample of adults from a northeastern university ($n = 612$, age $M = 20.79$, $SD = 3.33$, $n = 463$ female, $n = 149$ male) to test for a moderating effect of shame-proneness and guilt-proneness on the relationship between posttraumatic stress symptoms and difficulties in emotional regulation, and lack of emotional awareness, a subcategory of difficulties in emotional regulation. The correlational relationship between these constructs was also investigated. Posttraumatic stress symptoms, difficulties in emotional regulation, shame-proneness and lack of emotional awareness were positively associated, while guilt-proneness was positively associated with shame-proneness but negatively associated with lack of emotional awareness. Posttraumatic stress symptoms predicted difficulties in emotional regulation, as did shame-proneness, above and beyond the effect of posttraumatic stress symptoms alone, but shame-proneness did not serve as a moderator. Guilt-proneness was found to moderate the relationship between posttraumatic stress symptoms and difficulties in emotional regulation. Specifically, the association between posttraumatic stress symptoms and difficulties in emotional regulation increased as guilt-proneness levels increased. Guilt-proneness also moderated the relationship between posttraumatic

stress symptoms and lack of emotional awareness. There was a positive association between posttraumatic stress symptoms and lack of emotional awareness at high, but not low, levels of guilt-proneness. This finding points to low levels of guilt-proneness serving as a potential protective factor for emotional awareness in adults exposed to trauma. Future research on trauma and emotional regulation should explore the utility of low levels of guilt for emotional awareness in clinical treatment for trauma exposure.

ACKNOWLEDGEMENTS

I would like to recognize the guidance and support of my supervisor, Dr. Melissa Peckins, and my second reader, Dr. Allison Jaeger. In addition, I would like to express gratitude to Dr. Kate Walsh (University of Wisconsin–Madison) and Dr. Sarah Lowe (Montclair University) who were the Principal Investigators of the study from which the secondary data originated.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	ii
LIST OF TABLES.....	iv
LIST OF FIGURES.....	v
INTRODUCTION.....	1
Emotional Dysregulation Following Trauma Exposure.....	1
Posttraumatic Stress Following Trauma Exposure.....	3
Posttraumatic Stress Symptoms and Difficulties in Emotional Regulation.....	4
Shame, Guilt, and Trauma Exposure.....	6
Research Aims.....	9
RESEARCH DESIGN AND METHODS.....	11
Participants And Procedures.....	11
Measures.....	13
Statistical Analysis.....	18
RESULTS.....	21
Bivariate Pearson Correlation Analyses.....	21
Posttraumatic Stress Symptoms.....	21
Interaction Between Posttraumatic Stress Symptoms and Shame-Proneness.....	21
Interaction Between Posttraumatic Stress Symptoms and Guilt-Proneness.....	22
DISCUSSION.....	24
Correlational Findings.....	25
Shame-Proneness as a Moderator.....	25
Guilt-Proneness as a Moderator.....	26
Strengths and Limitations.....	27
Implications and Future Directions for Research.....	29
REFERENCES.....	39

LIST OF TABLES

Table 1 Demographic Descriptive Characteristics.....	31
Table 2 Study Construct Descriptive Characteristics.....	32
Table 3 Pearson Correlation of Study Constructs.....	32
Table 4 Shame-Proneness Moderated Regression Analysis with DERS Outcome.....	33
Table 5 Guilt-Proneness Moderated Regression Analysis with DERS Outcome.....	34
Table 6 Guilt-Proneness Moderated Regression Analysis with Lack of Emotional Outcome.....	35

LIST OF FIGURES

Figure 1	Simple Slopes for Guilt-Proneness Moderation with DERS Outcome.....	36
Figure 2	Region of Significance Plot for Guilt-Proneness Moderation with DERS Outcome.....	37
Figure 3	Simple Slopes for Guilt-Proneness Moderation with Lack of Emotional Awareness Outcome.....	37
Figure 4	Region of Significance Plot for Guilt-Proneness Moderation with Lack of Emotional Awareness Outcome.....	38

Introduction

Research has shown that most individuals will experience some type of traumatic event in their lifetime (Benjet et al., 2016; Kilpatrick et al., 2013). Traumatic events can be more broadly defined as experiences that overwhelm the ordinary human adaptations to life and systems of care that give people a sense of control, connection, and meaning, with the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), defining traumatic events more specifically as direct or indirect exposure to actual or threatened death, serious injury, or sexual violence (American Psychological Association, 2013; Herman, 1992). A World Health Organization epidemiological study found that over 70% of individuals in a cross-national sample experienced a traumatic event and a national estimate study in the United States (U.S.) found that approximately 89.7% of individuals are exposed to a traumatic event at some point in their life, with multiple traumatic event exposures being common in both the U.S. and around the world (Benjet et al., 2016; Kilpatrick et al., 2013).

Emotional Dysregulation Following Trauma Exposure

While traumatic event exposure is common, and not everyone who experiences them will have subsequent effects, trauma exposure can lead to long lasting effects on an individuals' psychosocial and emotional functioning (Norman et al., 2007). Traumatic events can impact an individual's worldview and view of themselves and their place in the world (Gluhoski & Wortman, 1996). One deficit that may emerge following exposure to traumatic events is a disruption in the ability to regulate emotions and some research suggests that this disruption is one of the strongest predictors of impairment of psychological health in interpersonal trauma (Lilly & Lim, 2012). Emotional

dysregulation is a prominent feature of psychopathology, a key feature of contemporary models of many psychological disorders (e.g., depression, anxiety, personality disorders), and can precede, and can be a risk factor for developing psychopathology (Cole & Hall, 2008).

According to the process model of emotional regulation proposed by Gross (1999, 2015), emotional regulation is a series of processes (e.g., attention deployment, cognitive change) which influence how an individual experiences and expresses emotions, with newer models incorporating a valuation system that includes the appraisal of emotional identification, selection, and implementation. Emotional regulation dysfunction may more broadly be experienced because emotions that are the most salient and compelling to an individual may not be the most effective ones to prioritize. In addition, the behaviors that follow and are aimed at managing emotions may not be conducive to long term goals and lead to dysfunction (Gross, 1999). A trauma related example is that erratic emotional arousal during trauma exposure can affect emotional regulation and can subsequently cause disproportionate emotional arousal and focus in day to day circumstances following the exposure (Cloitre et al., 2005). Exposure to traumatic events, especially if experienced during childhood, can impact emotional processing, including automatic regulation of emotional processing and the neural pathways involved, and childhood abuse has been shown to lead to severe difficulties in emotional regulation (Marurusak et al., 2014; Rachman, 2001; van der Kolk et al., 1996; Wolfson & Zlotnick, 2001).

There is a growing body of theoretical literature and research that explores difficulties in emotional regulation following exposure to traumatic events (Ehring &

Quack, 2010). Difficulties in emotional regulation, which is the clinical construct often used in relation to psychopathology and the construct used in this study, is the disruption of normal emotional regulation, expression, and impairment in tolerating and regulating emotions (Dan-Glauser & Scherer, 2013; Dvir et al., 2014). Using the process model of emotional regulation as the foundation, Gratz and Roemer (2004) proposed including the deficits and processes that occur when emotional regulation is disrupted as part of the theory of emotional regulation (Gross, 1999). According to the integrative conceptualization of emotional regulation (Gratz & Roemer, 2004), the broad facets that can create difficulties in emotional regulation are: one's ability to be aware and understand one's emotions, one's ability to accept one's emotions, one's ability to engage in goal-directed behavior and inhibit impulses while experiencing negative affect, and one's ability to use strategies for feeling better. Difficulties in emotional regulation may also be a clinically meaningful target for clinical interventions following trauma exposure and therefore, an important research outcome (Jain et al., 2020; McLean & Foa, 2017). The importance of difficulties in emotional regulation is due to both its therapeutic relevance and its significant contribution to functional impairment, which is on par with posttraumatic stress symptoms when interpersonal problems are included (Cloitre et al., 2005).

Posttraumatic Stress Following Trauma Exposure

Exposure to traumatic events can lead to developing posttraumatic stress symptoms, and at the more extreme end of impairment, posttraumatic stress disorder (PTSD), with lower socioeconomic levels, younger age, and gender serving as risk factors for developing PTSD (Koenen et al., 2017). The DSM-5 categorizes PTSD as

involving intrusion symptoms, persistent avoidance of stimuli, negative alterations in cognitions and moods, marked alterations in arousal, and reactivity associated with the traumatic event(s) (American Psychological Association, 2013).

While the DSM-5 definition of traumatic events (actual or threatened death, serious injury, or sexual violence) is narrow in scope, exposure to other stressful life events that do not involve immediate threat of physical injury or threat to life (e.g., expected loss of family member) and are not considered traumatic events as per the DSM-5, may still impair functioning to various extents (Pai et al., 2017). The current conceptualization of traumatic exposure and responses shows that trauma events and responses occur along a continuum (Breslau & Kessler, 2001). For example, while divorce is not considered a traumatic event according to the DSM-5, this exposure can lead to higher levels of both acute and long-term psychological distress (Hope et al., 1999). Furthermore, individuals whose posttraumatic symptoms are at sub-diagnostic levels of PTSD can still experience impaired functioning (Koenen et al., 2017; Norman et al., 2007). As such, expanding the definition of trauma exposure beyond the DSM-5 criteria may be beneficial in investigating the spectrum of experiences.

Posttraumatic Stress Symptoms and Difficulties in Emotional Regulation

Most of the research conducted on the relationship between posttraumatic stress symptoms and difficulties in emotional regulation has been correlational, with findings showing positive associations in trauma-exposed children and adolescents, university students, veterans, and community samples (Ehring & Quack, 2010; Miles et al., 2015; Seligowski et al., 2014; Tull et al., 2007; Villalta et al., 2018; Weiss et al., 2012). Previous research has also found that posttraumatic stress symptoms mediate the

association between difficulties in emotion regulation and depressive symptoms, such that greater emotional regulation difficulties lead to greater posttraumatic stress symptoms, which lead to more depressive symptoms in female adolescent survivors of childhood sexual abuse (Chang et al., 2018). Other research has found that difficulties in emotional regulation mediated the association between child abuse severity and posttraumatic stress symptoms, such that more severe child abuse leads to greater difficulties in emotional regulation, resulting in more posttraumatic stress symptoms in socio-economically disadvantaged women (Stevens et al., 2013). Researchers have also found that difficulties in emotional regulation predict posttraumatic stress symptoms, with higher levels of difficulties in emotional regulation being associated with higher levels of posttraumatic stress symptoms (Badour & Feldner, 2013; Stevens et al., 2013). Thus, posttraumatic stress symptoms and difficulties in emotional regulation following exposure to traumatic events appear to be linked, and further exploration is needed to understand their directionality.

There is limited research investigating whether emotional regulation difficulties signal the development of psychopathology or whether it is a product of psychopathology (Cole & Hall, 2008). However, in a sample of college-aged students, PTSD resulting from childhood abuse was associated with severe emotional dysregulation (van der Kolk et al., 1996; Wolfson & Zlotnick, 2001). Difficulties in emotional regulation and posttraumatic stress symptoms, may have a bidirectional relationship, with compromised emotional regulation leading to worse posttraumatic stress symptoms, which then leads to even worse ability to regulate emotions, while their changes in treatment have been found to be interrelated (Boden et al., 2013; Jones et al., 2018; Tull et al., 2020). While

difficulties in emotional regulation has been previously examined as a predictor variable in studies focused on trauma exposure, research into difficulties in emotional regulation as the outcome variable is also needed because of clinical significance and effect on functioning (Boden et al., 2013; Ehring & Quack, 2010; Cloitre et al., 2005).

Shame, Guilt, and Trauma Exposure

Two constructs that play a role in both difficulties in emotional regulation and posttraumatic stress are shame and guilt. Both shame and guilt fall under the category of self-conscious affect, which are self-evaluative emotions that are oriented toward how one views themselves and how others perceive them (Lewis et al., 1989). Guilt and shame may develop after an individual experiences trauma exposure (Lee et al., 2001). Feelings of shame include negative self-evaluation and affect, which can cause strong emotional pain or discomfort and often leads to thoughts and experiences of inadequacy and unworthiness (Lewis, 1971; Lewis, 1992). Feelings of guilt include an aversive conscious emotion which can cause self-criticism, and a negative appraisal and regret of one's thoughts, feelings, and/or controllable actions (Klass, 1987; Lewis, 1971). Shame reflects an individual feeling like they are the "bad thing," and guilt reflects an individual feeling like they did a "bad thing" (Tangney et al., 1992). As such, Tangney's (1992) theory of shame and guilt posits that focus and reflection on self vs. action is a distinguishing feature in what elicits the emotions, which emotions arise, and the ways someone may cope with the emotions. Although distinct emotions, shame and guilt are similar in that both require the ability to be self-aware and self-reflect and are related to emotional awareness, a facet of emotional regulation (Smith et al., 2018; Szentágotai-Tătar & Miu, 2017). Moreso, guilt and shame require the ability to form and reflect on

stable self-representations and evaluate one's experiences (Szentágotai-Táatar & Miu, 2017). However, as shame and guilt have also been found to be positively correlated to alexithymia, a difficulty identifying and describing emotions and related to emotional awareness, more research is needed to investigate this connection (Cheok & Proeve, 2019; Powell et al., 2011; Taylor et al., 1990). In addition, alexithymia may be maladaptive reactive construct that arises because of trauma exposure and shame (Franzoni et al., 2013).

There have been a multitude of definitions of shame and guilt and varying interpretations of their relatedness in research literature. Shame and guilt were historically portrayed as polar opposite emotions with different behavioral outcomes, but more recently have been conceptualized as sibling emotions (Leach, 2017). Compared to guilt, shame is seen as more closely tied to psychopathology and psychological maladjustment, but guilt can become problematic when compounded with shame (Saraiya & López-Castro, 2016). In a child and adolescent sample, shame-proneness (disposition to experiencing shame) was found to be linked to more maladaptive emotional regulation and internalizing and externalizing symptoms, while guilt-proneness (disposition to experiencing guilt) was found to be linked to more adaptive emotional regulation strategies and less internalizing and externalizing symptoms (specifically in boys) (Ferguson et al., 1999; Szentágotai-Táatar & Miu, 2017). Shame has been found to be positively associated with posttraumatic stress symptoms in veterans, medical patients, and childhood abuse survivors (Leskela et al., 2002; López-Castro et al., 2019). In addition, shame and guilt have been shown to be significantly higher in women with PTSD than a control sample, and guilt was found to be positively correlated with

posttraumatic stress symptoms but was not a significant predictor of symptoms when accounting for shame (Bockers et al., 2016; Pugh et al., 2015). Shame is also clinically relevant to treatment, as research has found that patients who seek treatment for PTSD may also withhold information or trauma details in therapy due to shame and expected negative reaction from the therapist (Timblin, 2021). Guilt is also clinically relevant to treatment for trauma exposure, as guilt cognitions may maintain post-trauma sequelae and PTSD and event-related guilt are related (Pugh, et al., 2015).

While research is currently lacking, feelings of shame and guilt may moderate the association between posttraumatic stress symptoms and difficulties in emotional regulation due to guilt's relationship with adaptive and shame's relationship with maladaptive emotional regulation strategies, both of their connection with emotion awareness, as well as their potential to exacerbate psychopathological symptoms (Saraiya & López-Castro, 2016; Smith et al., 2018; Szentágotai-Tătar & Miu, 2017). Feelings of shame has been investigated as a moderator in a recent study of PTSD severity and difficulties in emotional regulation, but PTSD severity was explored as the outcome variable (Puhalla et al., 2021). Puhalla et al. (2021) found that that posttraumatic stress symptoms are exacerbated in veterans who have higher levels of feeling of shame and increased emotional awareness, a subcategory of difficulties in emotional regulation. In addition, research has supported feelings of guilt being an emergent product of trauma exposure, although other potential models are plausible (Pugh et al., 2015). Shame- and guilt-proneness may affect the relationship between posttraumatic stress symptoms and difficulties in emotional regulation but may do so differently due to their link to different emotional regulation strategies. Shame was found to be more related to self-blaming and

catastrophizing and less to refocusing on planning and positive appraisal, while guilt-proneness was more related to refocusing on planning, positive appraisal, and less related to blaming and catastrophizing (Smith et al., 2018; Szentágotai-Tătar & Miu, 2017).

Research Aims

The first aim of the present study was to replicate previous correlational research on posttraumatic stress symptoms, difficulties in emotional regulation, and shame- and guilt-proneness. Previous studies found posttraumatic stress symptoms, difficulties in emotional regulation, and feelings of shame or shame-proneness were positively correlated (Ehring & Quack, 2010; Leskela et al., 2002; López-Castro et al., 2019; Miles et al., 2015; Tull et al., 2007; Villalta et al., 2018). Therefore, it was hypothesized that posttraumatic stress symptoms, difficulties in emotional regulation, and shame-proneness would be positively correlated.

The second aim of the present study was to test the moderating effect of shame- and guilt-proneness on the relationship between posttraumatic stress symptoms and difficulties in emotional regulation. Based on research that found feelings of shame and shame-proneness, and feelings of guilt and guilt-proneness are linked to trauma exposure, emotional regulation, and emotional awareness, it was hypothesized that both shame- and guilt-proneness would have a moderating effect (Bockers et al, 2016; Puhalla et al., 2021; Szentágotai-Tătar & Miu, 2017; Tangney et al., 1992). Specifically, the positive association between posttraumatic stress symptoms and difficulties in emotional regulation was expected to increase as levels of shame-proneness increase and decrease as levels of guilt-proneness increase. The moderating effect of shame- and guilt-proneness was expected to differ because shame-proneness has been tied to maladaptive

emotional regulation strategies such as catastrophizing, while guilt-proneness has been tied to adaptive emotional regulations strategies such as refocusing on planning (Frewen et al., 2012; Smith et al., 2018; Szentágotai-Táatar & Miu, 2017).

The third, exploratory aim was to test whether shame-proneness and guilt-proneness moderated the relationship between posttraumatic stress symptoms and lack of emotional awareness. Due to the findings and conceptualization that shame and guilt require emotional and self-awareness, but are also tied to alexithymia, the exploratory analysis was conducted to further explore this connection (Cheok & Proeve, 2019; Powell et al., 2011; Szentágotai-Táatar & Miu, 2017; Taylor et al., 1990). It was hypothesized that both shame- and guilt-proneness would have a moderating effect, with the positive association between posttraumatic stress symptoms and lack of emotional awareness increasing as levels of shame-proneness increased and decreasing as guilt-proneness increased. This was hypothesized because of the expected effect of shame- and guilt-proneness on difficulties in emotional regulation, of which lack of emotional awareness is a category, and because alexithymia, which is related to emotional awareness, may be a maladaptive reactive construct that arises as a consequence of shame and trauma exposure (Franzoni et al., 2013; Frewen et al., 2012; Smith et al., 2018; Szentágotai-Táatar & Miu, 2017). The aims of the present study were tested using cross-sectional data from a large sample of college students between the ages of 18 and 43 years old.

Research Design and Methods

Participants And Procedures

The present study included a subsample of participants from an online cross-sectional study of undergraduate college students attending a large, Northeast public university conducted in 2017 (Walsh et al., 2019). The initial study included 991 college students of all genders, with no exclusion criteria and focused on sexual consent and trauma. Of those that completed the demographics survey, 73.5% were female ($n = 728$), 25.7% were male ($n = 255$) and 0.8% were Transgender ($n = 8$). The participants' ages ranged from 15 to 53 years old ($M = 21.07$ years, $SD = 3.57$). In the original sample, 526 participants identified as European American/White/Caucasian (53.1%), 126 participants identified as African American/Black (12.7%), 206 participants identified as Hispanic/Latina (20.8%), 42 participants identified as Asian American (4.2%), 7 participants identified as Hawaiian/Pacific Islander (0.7%), 1 participant identified as Native American (0.2%), 45 participants identified as Other (4.2%), and 41 participants did not report their race or ethnicity (4.1%).

Participants were recruited in three different ways: (1) Participants were recruited from the university's SONA system, an online participant pool platform of undergraduate students from introductory psychology courses that would receive course credit for participation or were entered into a lottery for an Amazon gift card worth \$100; (2) participants were drawn from recruitment posters on campus; and (3) participants were drawn from a campus-wide recruitment email. Of the 991 participants who were recruited through the three recruitment methods, 43.6% received SONA credit, with the rest being entered into the raffle. There were no external funding sources for this study. The study

was conducted virtually in 2017 through Qualtrics (Qualtrics, Provo, UT), an online survey platform. Participants completed an array of survey measures, including a demographics questionnaire, measurements of posttraumatic stress symptoms, difficulties in emotional regulation, and measures of shame- and guilt-proneness.

The focus of the present study was on posttraumatic stress symptoms for prior traumatic events. Therefore, only participants who endorsed a trauma on the Lifetime Events Checklist (LEC) and started completing the PTSD Checklist for DSM-5 (PCL-5) were considered eligible for the present study ($n = 628$). Of the 628 participants who endorsed a trauma on the LEC and began completing the PCL-5, 16 participants were excluded because they did not complete the PCL-5 fully or correctly ($n = 2$), they did not complete the adapted version of the Test of Self-Conscious Affect-3 (TOSCA-3) fully or correctly ($n = 4$), they were under the age of 18 or age information was missing ($n = 4$), or they did not endorse a gender of Male or Female in the demographics questionnaire ($n = 6$). The structure of gender question in the demographics questionnaire caused difficulty in including Transgender and Gender Non-Conforming (TGNC) participants due to their gender identity not being assessed beyond the “Transgender” category.

The final sample size for the present study included 612 participants ($n = 463$ female, $n = 149$ male). As shown in Table 1, participant ages ranged from 18 to 43 years old ($M = 20.79$ years, $SD = 3.33$) and 17.0% of the participants ($n = 104$) fell outside of the 18–22-year-old range. In the final subsample, 348 participants identified as European American/White/Caucasian (56.9%), 74 participants identified as African American/Black (12.1%), 130 participants identified as Hispanic/Latina (21.2%), 29 participants identified as Asian American (4.7%), 4 participants identified as

Hawaiian/Pacific Islander (0.7%), 1 participant identified as Native American (0.2%), 25 participants identified as Other (4.1%), and 1 participant did not report their race or ethnicity (0.2%).

Independent t-tests were performed to test whether participants excluded from the present study ($n = 379$) and the final subsample included in the present study ($n = 612$) varied significantly on age, posttraumatic stress symptoms, difficulties in emotional regulation, shame-proneness, guilt-proneness, and lack of emotional awareness. There was a significant difference in guilt-proneness between the excluded participants and subsample included in the present study, $t(807) = 3.41, p = .001$. On average, the final subsample of participants ($n = 612, M = 44.63, SD = 7.16$) reported greater levels of guilt-proneness (Table 2) than excluded participants ($n = 197, M = 42.49, SD = 8.98$). This significant difference in guilt-proneness is consistent with research showing that experiencing traumatic events can be associated with increased feelings of guilt, as the final sample were only those individuals who experienced a traumatic event (Pugh et al., 2015). The final subsample and the excluded participants did not significantly differ in age, posttraumatic stress symptoms, total difficulties in emotional regulation, lack of emotional awareness, and shame- and guilt-proneness ($p > .05$).

Measures

Demographic Characteristics

Participants first completed a survey that assessed different demographic characteristics including age, gender, sexual orientation, and ethnicity. Participants reported their age in years using a slide bar. Participants were also asked to report their gender as “Male,” “Female” or “Transgender” and biological sex as “Male” or “Female.”

Participants reported their ethnicity as “European American/White/Caucasian,” “African American/Black,” “Hispanic/Latina,” “Asian American,” “Native American,” or “Hawaiian/Pacific Islander,” with an option for a write in for “Other.” Participants were only able to select one ethnicity. Other demographic variables such as student and employment status were also assessed but were not included in the present study.

Posttraumatic Stress Symptoms

Participants completed a Life Events Checklist for DSM-5 (LEC-5), a self-report measure that assesses lifetime exposure to traumatic events, according to the DSM-5 (Weathers et al., 2013). For the LEC-5, participants were asked to review a list of difficult or stressful things that sometimes happen to people and for each of the events, check one or more of the following options according to their entire life experiences: “(a) it happened to you personally,” “(b) you witnessed it happen to someone else,” “(c) you learned about it happening to a close family member or close friend,” “(d) you were exposed to it as part of your job (for example, paramedic, police, military, or other first responder),” “(e) you’re not sure if it fits,” or “(f) it doesn’t apply to you.” The LEC-5 contains 17 items, and examples of difficult or stressful things include: “Natural disaster (for example, flood, hurricane, tornado, earthquake),” “Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)” and “Sudden violent death (for example, homicide, suicide).”

If a participant endorsed experiencing at least one traumatic experience as the victim, witnessing, or learning about it happening to someone close to them or as part of their job, they were asked to fill out the PTSD Checklist for DSM-5 (PCL-5) for their worst trauma endorsed. Qualitative descriptions of traumas endorsed were provided by

some participants, and answers varied in quality and level of detail, with some exposures provided not meeting DSM-5 criteria for traumatic events. The PTSD Checklist for DSM-5 (PCL-5) is a 20-item self-report measure that assesses severity of the DSM-5 symptoms of PTSD (Weather et al., 2013). Participants were asked to rate how much they were bothered by the 20 DSM-5 PTSD symptoms in the past month on a 5-point Likert scale ranging from 0 (“Not at all”) to 4 (“Extremely”). DSM-5 PTSD symptoms include: “Repeated, disturbing, and unwanted memories of the stressful experience”, “Avoiding memories, thoughts, or feelings related to the stressful experience”, and “Being “superalert” or watchful or on guard.” The possible range of scores for the PCL-5 is 0 to 80 with individual items being summed together for a total symptom severity score. The PCL-5 has been shown to have a Cronbach’s Alpha of .94 in validation studies (Blevins et al., 2015) and a Cronbach’s Alpha of .96 for this sample. Higher scores indicate greater PTSD symptom severity and the clinical cutoff for the PCL-5 are scores of 31-33 (Weathers et al., 2013).

Difficulties in Emotional Regulation

The Difficulties in Emotional Regulation Scale (DERS) is a 36-item measure that assesses subjective trait-level emotional ability based on four broad facets of emotion regulation: (a) awareness and understanding of emotions; (b) acceptance of emotions; (c) the ability to control impulses and behave in accordance with goals in the presence of negative affect; and (d) access to emotion regulation strategies that are perceived to be effective for feeling better (Gratz & Roemer, 2004). These four facets were used in creating the six subscales of the DERS, which include: Nonacceptance of emotional response (Nonacceptance; 6 items), Difficulty engaging in goal-directed behavior (Goals;

5 items), Impulse control difficulties (Impulse; 6 items), Lack of emotional awareness (Awareness; 6 items), Limited access to emotional regulation strategies (Strategies; 8 items), and Lack of emotional clarity (Clarity; 5 items) (Gratz & Roemer, 2004).

Participants were asked to indicate how often the following statements apply to them on a 5-point Likert scale ranging from 1 (“Almost Never [0-10%]”) to 5 (“Almost Always [91-100%]”) with some items being reverse scored. Sample items include: “When I’m upset, I become angry at myself for feeling that way” (Nonacceptance), “When I’m upset with myself, I have difficulty getting work done” (Goals), “I experience my emotions as overwhelming and out of control” (Impulse), “I pay attention to how I feel” (Awareness-reversed), “When I’m upset, I believe there’s nothing I can do to make myself feel better” (Strategies), and “I have no idea how I am feeling” (Clarity).

The subscales were calculated by summing the individual questions (with some questions being reverse scored) and total difficulties in emotional regulation was calculated by summing the six subscales. Total difficulties in emotional regulation scores can range from 36 to 164 and higher scores indicate higher levels of difficulty in regulating emotion. Total difficulties in emotional regulation has been shown to have a Cronbach’s Alpha of .93 in validation studies (Gratz & Roemer, 2004) and a Cronbach’s Alpha of .88 for this sample for difficulties in emotional regulation and .82 for the lack of emotional awareness subscale. There are no standardized clinical cutoffs for this measure, however prior research suggests that the clinical range on the total difficulties in emotional regulation score is approximately 80 to 127 (Harrison et al., 2010; Staples & Mohlman, 2012).

Shame- and Guilt-Proneness

The Test of Self-Conscious Affect (TOSCA-3) is an 11 item scenario-based measure that assesses affective, cognitive, and behavioral features related to self-conscious emotions with the following indices: shame-proneness (disposition to experiencing shame), guilt-proneness (disposition to experiencing guilt), externalization (disposition to blaming others), detachment/unconcern (disposition to emotionally disengaging), alpha pride (disposition to prideful inward gratification), and beta pride (disposition to prideful emotional expression) (Tangney et al., 2000). The TOSCA-3 has been validated as a measure of shame- and guilt-proneness for various populations (e.g. college students from the United States, women with Borderline Personality Disorder) and shame- and guilt-proneness assessed by the TOSCA-3 has been found to be more strongly related to psychopathology, when compared to another measure for self-conscious affect, the Personal Feelings Questionnaire-2 (PFQ-2), (Rüsch et al., 2007; Woien et al., 2003).

During the TOSCA, participants are presented with 11 scenarios such as “You make plans to meet a friend for lunch. At five o'clock, you realize you have stood your friend up.” After each scenario, participants are asked to imagine themselves in the scenario and indicate the likelihood that they would experience the three self-conscious emotional reactions on a 5-point Likert scale ranging from 1 (“Not Likely”) to 5 (“Very Likely”). Sample self-conscious emotional reactions include “a.) You would think, ‘I'm inconsiderate’” (Shame-Proneness), “b.) You'd think you should make it up to your friend as soon as possible” (Guilt Proneness), and “c.) You would think: ‘My boss distracted me just before lunch’” (Externalization) (Tangney et al., 2000). For this study,

an adapted TOSCA-3 was used, and the detachment/unconcern, alpha pride, and beta pride responses were not provided to the participants in the survey.

The possible range of scores for the TOSCA is 11 to 55 for each of the sub-scales with individual items being summed together per sub-scale and higher scores indicating higher levels of shame- and guilt-proneness. According to TOSCA validation studies, Cronbach's Alpha for the shame-proneness and guilt-proneness scales are .77 and .66, respectively (Tangney et al., 2000). In the present study, Cronbach's Alpha for the shame-proneness and guilt-proneness scales are .79 and .81, respectively. The TOSCA was created from the shame and guilt model proposed by Lewis (1971) and does not have clinical cutoffs.

Statistical Analysis

Analyses were first conducted to investigate skewness and kurtosis of the variables in the analyses (posttraumatic stress symptoms, total difficulties in emotional regulation, lack of emotional awareness and shame- and guilt-proneness) in SPSS, version 26 (IBM Corp, 2021). When the predictor variable (posttraumatic stress symptoms) was identified as having a skewness of 1.07, a log transformation was applied, which did not substantially impact the results. Bivariate Pearson Correlation analyses were performed to test for linear associations between posttraumatic stress symptoms, total difficulties in emotional regulation, shame-proneness, guilt-proneness, and lack of emotional awareness. Correlations were evaluated using the correlation coefficient to determine strength, direction, and statistical significance.

Hierarchical Linear Regression models were performed to test whether shame-proneness and guilt-proneness moderated the association between posttraumatic stress

symptoms and total difficulties in emotional regulation. In the regression models, total posttraumatic stress symptoms was entered into the first block, shame-proneness or guilt-proneness was entered in the second block, and the interaction term between total posttraumatic stress symptoms and shame- or guilt-proneness was entered into the third block. Gender was included as a covariate because research has shown that gender may affect how shame and guilt is experienced as well how emotional dysregulation manifests (Bender et al., 2012; Benetti-McQuoid & Bursik, 2005; Nolen-Hoeksema & Aldao, 2011). Gender was added to the fourth and final block to investigate whether shame- or guilt-proneness moderated the association between posttraumatic stress symptoms and total difficulties in emotional regulation with and without the gender covariate. For each model, the variance inflation factor (VIF) was calculated to assess multicollinearity of the predictor variables using a cutoff of 4.0 (Hair et al., 2012). Multicollinearity was not considered to be problematic in any of the models ($VIF < 4.0$).

The addition of blocks to the regression models were evaluated based on statistical significance of the omnibus F test and change in total explained variance between subsequent blocks (ΔR^2). When the change in R^2 was statistically significant, regression coefficients for predictors within the block were evaluated for directionality and statistical significance. When significant moderation was found, planned hierarchical linear regression models were performed to test whether the moderating effect of shame- or guilt-proneness also holds for lack of emotional awareness. When significant moderation was found, the simple intercepts and simple slopes were calculated at one standard deviation below the mean, the mean, and one standard deviation above the mean of the moderators, shame- or guilt-proneness. Regions of significance were determined

using the Johnson-Neyman technique (Johnson & Neyman, 1936; Preacher et al., 2006). Simple slope plots were created using the Quantpsy website and the region of significance plots were created using RStudio (Preacher et al., 2006; RStudio Team, 2020). An α of 0.05 was used to determine statistical significance for all analyses.

Results

Bivariate Pearson Correlation Analyses

Descriptive statistics and bivariate correlations of study variables are presented in Table 3. As hypothesized, posttraumatic stress symptoms, total difficulties in emotional regulation, and shame-proneness were all positively correlated ($p < .01$). Shame-proneness was also positively correlated with guilt-proneness ($p < .01$). Interestingly, guilt-proneness was negatively correlated with lack of emotional awareness ($p < .01$) but was not associated with total difficulties in emotional regulation

Posttraumatic Stress Symptoms

Posttraumatic stress symptoms explained a significant proportion of the variance in difficulties in emotional regulation, $\Delta R^2 = .20$, $F(1,610) = 155.25$, $p < .0001$, as presented in Table 4. Greater levels of posttraumatic stress symptoms were associated with increased total difficulties in emotional regulation, $b = 0.49$, $SE = 0.05$, $p < .001$. Posttraumatic stress symptoms also explained a significant proportion of the variance in lack of emotional awareness, $\Delta R^2 = .018$, $F(1,610) = 11.11$, $p = .001$ as presented in Table 6. As expected, greater levels of posttraumatic stress symptoms were associated with greater lack of emotional awareness, $b = 0.04$, $SE = 0.01$, $p = .001$.

Interaction Between Posttraumatic Stress Symptoms and Shame-Proneness

Shame-proneness explained a significant proportion of the variance in difficulties in emotional regulation, above and beyond posttraumatic stress symptoms, $\Delta R^2 = .123$, $F(1,609) = 111.15$, $p < .0001$, as presented in Table 4. Greater levels of shame-proneness were associated with increased total difficulties in emotional regulation, $b = 1.07$, $SE = 0.10$, $p < .001$. The addition of the two-way interaction term between posttraumatic stress

symptoms and shame-proneness did not contribute to the explanation of total difficulties in emotional regulation, above and beyond posttraumatic stress symptoms and shame-proneness, $\Delta R^2 = .002$; $F(1,608) = 1.48$, $p = .22$. Similarly, the addition of gender as a covariate was not associated with total difficulties in emotional regulation after accounting for posttraumatic stress symptoms, shame-proneness, and the two-way interaction, $\Delta R^2 = .002$; $F(1,607) = 1.77$, $p = .18$.

Interaction Between Posttraumatic Stress Symptoms and Guilt-Proneness

Guilt-proneness did not explain a significant proportion of the variance in difficulties in emotional regulation, above and beyond posttraumatic stress symptoms, $\Delta R^2 = .001$, $F(1,609) = 0.87$, $p = .35$, as presented in Table 5. Guilt-proneness moderated the association between posttraumatic stress symptoms and total difficulties in emotional regulation, $\Delta R^2 = .01$, $F(1,608) = 4.55$, $p = .03$; $b = 0.01$, $SE = 0.01$, $p = .03$. The simple slopes, determined using the Johnson-Neyman technique, were significant at 1 standard deviation below the mean of guilt-proneness ($b = 0.49$, $SE = 0.06$, $t = 7.89$, $p < .001$), at the mean of guilt proneness ($b = 0.59$, $SE = 0.05$, $t = 12.42$, $p < .001$) and 1 standard deviation above the mean of guilt-proneness ($b = 0.68$, $SE = 0.063$, $t = 10.68$, $p < .001$) (Figure 1). A region of significance analysis indicated that the positive effect of posttraumatic stress symptoms on total difficulties in emotional regulation was significant at levels of guilt-proneness outside -458.96 and 23.58 (Figure 2), which captured 99.5% of participants (Figure 2). The addition of gender as a covariate was not associated with a statistically significant increase in the model R^2 , $\Delta R^2 = .001$; $F(1,607) = 0.77$, $p = .38$.

Guilt-proneness also moderated the association between posttraumatic stress symptoms and lack of emotional awareness, $\Delta R^2 = .01$; $F(1,608) = 8.85$, $p = .003$, as

presented in Table 6. Increased guilt-proneness was associated with a stronger positive association between posttraumatic stress symptoms and lack of emotional awareness, $b = 0.004$, $SE = 0.001$, $p = .004$. The effect of posttraumatic stress symptoms on lack of emotional awareness was significant at high ($b = 0.06$, $SE = 0.01$, $t = 4.67$, $p < .001$) and Mean ($b = 0.04$, $SE = 0.01$, $t = 3.74$, $p < .001$) levels of guilt-proneness, but not 1SD below the Mean ($b = 0.01$, $SE = 0.01$, $t = 0.89$, $p = 0.38$) (Figure 3). The positive effect of posttraumatic stress symptoms on lack of emotional awareness was significant outside of the -35.14 to -4.25 range and included 75.7% of the sample (Figure 4). Gender did not contribute to the explanation of lack of emotional awareness, above and beyond posttraumatic stress symptoms, guilt-proneness, and the two-way interaction between posttraumatic stress symptoms and guilt-proneness, $\Delta R^2 = .004$; $F(1,607) = 2.77$, $p = .10$.

Discussion

The present study aimed to expand on existing research by testing the moderating effect of shame- and guilt-proneness on the relationship between posttraumatic stress symptoms and difficulties in emotional regulation, as well lack of emotional awareness, a category of difficulties in emotional regulation. A secondary aim was to replicate previous correlational research on these constructs. Previously, posttraumatic stress symptoms have been examined as an outcome of difficulties in emotional regulation and not a predictor (Boden et al., 2013; Ehring & Quack, 2010). Thus, this study adds to the existing research by being the first to test whether posttraumatic stress symptoms explain difficulties in emotional regulation, and whether this association is moderated by guilt- and shame-proneness.

Findings indicate that in unconditional models, greater posttraumatic stress symptoms predict greater difficulties in emotional regulation and lack of emotional awareness. Interestingly, guilt-proneness, but not shame-proneness served as a moderator of the association between posttraumatic stress symptoms and difficulties in emotional regulation, with greater levels of guilt-proneness strengthening the relationship between posttraumatic stress symptoms and difficulties in emotional regulation. Guilt-proneness also moderated the association between posttraumatic stress symptoms and lack of emotional awareness. Specifically, our analysis indicated that at high levels of guilt-proneness, the relationship between posttraumatic stress symptoms and lack of emotional awareness strengthened, while at low levels, it weakened the relationship.

Correlational Findings

In the present study, posttraumatic stress symptoms were positively correlated with difficulties in emotional regulation and lack of emotional awareness. This finding replicates existing effects found in literature showing that exposure to traumatic events and posttraumatic stress symptoms can lead to emotional regulation dysfunction, including deficient emotional awareness and alexithymia (Ehring & Quack, 2010; Frewen et al., 2012; Marurusak, et al., 2014; Rachman, 2001). Consistent with previous research, posttraumatic stress symptoms and difficulties in emotional regulation were both positively associated with shame-proneness, but not guilt-proneness (Leskela et al., 2005; Miles et al., 2015; Szentágotai-Tătar & Miu, 2017; Tull et al., 2007; Villalta et al., 2018). Lack of emotional awareness was positively associated with shame-proneness and negatively associated with guilt-proneness, which fits into existing research linking shame-proneness with maladaptive emotional regulation strategies and guilt-proneness with adaptive emotional regulation strategies, further pointing to guilt's potential utility in emotional salience and awareness (Frewen et al., 2012; Smith et al., 2018; Szentágotai-Tătar & Miu, 2017).

Shame-Proneness as a Moderator

The present study found that shame-proneness accounted for significant variance in difficulties in emotional regulation, above and beyond the effect of posttraumatic stress symptoms. Specifically, greater shame-proneness was associated with greater difficulties in emotional regulation when controlling for posttraumatic stress symptoms. This finding is consistent with previous research linking shame-proneness with maladaptive emotional regulation strategies, such as self-blaming and catastrophizing (Szentágotai-Tătar & Miu,

2017). However, shame-proneness did not serve as a moderator for the relationship between posttraumatic stress symptoms and difficulties in emotional regulation. The most recent research investigating shame-proneness as a moderator found that shame-proneness moderated the relationship between both limited access to emotional regulation strategies and lack of emotional awareness, with posttraumatic stress symptoms, and that overall emotional dysregulation may only predict posttraumatic stress symptoms in individuals with less shame (Puhalla et al., 2021). Puhalla et al. (2012) used posttraumatic stress symptoms as the outcome and used a measure focused on characterological, behavioral, and bodily dimensions of shame (state shame). While there is a relationship between trait and state shame, they differ in both their focus (sensitivity to experiencing shame vs. feelings of inferiority and emptiness), which may have implications for research and treatment (Goss et al., 1994).

Guilt-Proneness as a Moderator

Guilt-proneness on its own did not significantly account for unique variance in difficulties in emotional regulation but did serve as a moderator. As levels of guilt-proneness increased, the association between posttraumatic stress symptoms and difficulties in emotional regulation increased. This finding is counter to the hypothesis that guilt-proneness would weaken or buffer the relationship between posttraumatic stress symptoms and difficulties in emotional regulation and may be due to the guilt-proneness levels of participants in this study. Specifically, guilt-proneness levels in the present study were closer to levels of guilt-proneness in previous clinical samples than community samples and thus, potentially more clinically impactful (Rüsch et al., 2007). Guilt-proneness predicted lack of emotional awareness, a component of difficulties in

emotional regulation, when controlling for posttraumatic stress symptoms. The research on the connection between guilt-proneness and psychopathology and functional impairment has been mixed, but the results from the present study show that increased guilt-proneness is associated with increased difficulties in emotional regulation (Ferguson et al., 1999; Saraiya & López-Castro, 2016; Szentágotai-Tátar & Miu, 2017).

Guilt-proneness served as a moderator for the relationship between posttraumatic stress symptoms and lack of emotional awareness. Interestingly, there was a positive association between posttraumatic stress symptoms and lack of emotional awareness at high, but not low, levels of guilt-proneness. The lack of association between posttraumatic stress symptoms and lack of emotional awareness at low levels of guilt points to the potential of low levels of guilt serving as a protective factor. This interpretation, as well as the discrepancy between findings for difficulties in emotional regulation and lack of emotional awareness aligns with the view that guilt is connected to self-awareness through self-reflectiveness and drive toward constructive reparation (Leary, 2007; Tangney, 1992). In addition, previous studies investigating self-injury in adolescents showed that while high levels of guilt served as a risk factor, low levels of guilt were protective (VanDerhei et al., 2013). Trauma exposure is linked to deficient emotional awareness and rumination, an element of self-conscious affect which affects emotional salience, has been shown to account for the relationship between difficulties in emotional regulation and posttraumatic stress disorder (Pugach et al., 2019).

Strengths and Limitations

This present study has many strengths in its data collection and implementation. For example, this study included a large sample ($n = 618$) and although previous research

implicates the association between posttraumatic stress symptoms and difficulties in emotional regulation as being important for functional impairment and symptom exacerbation (Boden et al., 2013; Ehring & Quack, 2010), this is the first study to empirically test whether posttraumatic stress symptoms predict difficulties in emotional regulation and examine shame- and guilt-proneness as moderators. However, there were also limitations. First, the sample only included participants from a single northeastern university, limiting geographic and socioeconomic generalizability. While every participant in the subsample had endorsed experiencing a traumatic event, this was neither a community nor a clinical sample, which limits the clinical and community implications of the study. While this sample is representative of the United States population in terms of racial and ethnic identity, it still predominantly consisted of white, cisgender, heterosexual participants, and did not explore the cultural components of the variables used (United States Census Bureau, 2017). Second, due to the study setting, as well as the focus of the overall survey (sexual consent and trauma), the sample was disproportionately female. This demographic breakdown limits generalizability to different genders, as gender has been shown to affect how shame-proneness and guilt-proneness are experienced, with women generally experiencing higher levels of these emotions following (Benetti-McQuoid & Bursik, 2005; Woien et al., 2003). Finally, the effect of different trauma exposure types, as laid by Criterion A in the DSM-5 was not investigated and no longitudinal follow up data collection was completed, limiting the conclusions that can be drawn about directionality, causation, and effects of specific trauma types (American Psychological Association, 2013; Aakvaag, et al., 2016).

Implications and Future Directions for Research

There are several clinical implications from this present study. While higher levels of guilt may potentially exacerbate the relationship between posttraumatic stress symptoms and difficulties in emotional regulation, at low levels, it may serve as a protective factor, specifically for lack of emotional awareness. Previous research has shown that while high levels of guilt are a risk factor, low levels of guilt may be protective (VanDerhei et al., 2013). Thus, it may be beneficial to incorporate a guilt-intervention alongside posttraumatic stress symptom treatment. A guilt-focused intervention may decrease guilt to levels where it can benefit emotional awareness, which may further increase capacity to undergo exposure therapy for posttraumatic stress symptoms (Bradley et al., 2005; Jaycox & Foa, 1996). Emotion dysregulation itself may be a clinically meaningful target for clinical interventions following trauma exposure (Cloitre et al., 2005; Jain et al., 2020). This present study's findings also add further evidence supporting the positive associations between posttraumatic stress symptoms, difficulties in emotional regulation, and shame-proneness, and the importance of continuing to consider these constructs in treatment post-trauma exposure.

There are several areas of study that may be explored as part of future directions for research on posttraumatic stress symptoms, difficulties in emotional regulation, lack of emotional awareness, and shame- and guilt-proneness. First, future research can focus on identifying a more complete model for these constructs and their measurements, such as testing whether difficulties in emotional regulation would serve better as a predictor or outcome variable with guilt-proneness as a moderator (Gefen et al., 2000; Klem, 2000). Second, future studies can investigate how the relationship between posttraumatic stress

symptoms, difficulties in emotional regulation, shame-proneness, and guilt-proneness differs depending on the type of traumatic event(s) participants experienced, as exposure to different types of traumatic experiences may have stronger or weaker associations with guilt and shame (Aakvaag et al., 2016). Lastly, shame and guilt may be experienced as both state (feeling) and trait (proneness) emotions as well as trauma-specific emotions. While feelings of shame and guilt and shame- and guilt-proneness are interrelated, these different conceptualizations have a different focus, internal experience, and measurement (Goss et al., 1994; Tangney, 1996). Future studies can explore whether state and trait shame and guilt and trauma-specific shame and guilt affect the relationship between posttraumatic stress symptoms and difficulties in emotional regulation differently, with a specific focus on trauma-related emotions, as they are most closely tied to the trauma exposure. Taken together, the findings of the present study point to the potential utility of low levels of guilt-proneness for emotional awareness and a target for treatment and the continued need to refine our understanding of the effects and utility of self-conscious affects.

Table 1*Demographic Descriptive Characteristics*

Demographics	Mean (SD) or Frequency	Min, Max or %
Gender		
Female	463	75.7%
Male	149	24.3%
Age (years)	20.79 (3.33)	18, 43
Race/Ethnicity		
European American/ White/Caucasian	348	56.9%
African American/Black	74	12.1%
Hispanic/Latina	130	21.2%
Asian American	29	4.7%
Hawaiian/Pacific Islander	4	0.7%
Native American	1	0.2%
Other	25	4.1%
No Response	1	0.2%
Sexual Orientation		
Heterosexual	490	80.1%
LGBQ+	122	19.9%

Note. Final sample for the study was 612 participants.

Table 2*Study Construct Descriptive Characteristics*

Constructs	Mean (SD)	Min, Max
Posttraumatic Stress Symptoms	19.14 (18.78)	0, 80
Total Difficulties in Emotional Regulation	86.01 (24.41)	36, 164
Lack of Emotional Awareness	14.75 (4.85)	6, 30
Shame-Proneness	33.23 (8.41)	11, 54
Guilt-Proneness	44.63 (7.16)	11, 55

Note. Final sample for the study was 612 participants. Posttraumatic stress symptoms were measured using the PCL-5 (Weather et al., 2013). Total Difficulties in Emotional Regulation and Lack of Emotional Awareness were measured using the DERS (Gratz & Roemer, 2004). Shame- and Guilt-proneness were measured used the TOSCA-3 (Tangney et al., 2000).

Table 3*Pearson Correlation of Study Constructs*

Constructs	1	2	3	4	5
1. Posttraumatic Stress Symptoms	-				
2. Total Difficulties in Emotional Regulation	.45**	-			
3. Shame-Proneness	.24**	.45**	-		

4. Guilt- Proneness	.03	-.02	.42**	-
5. Lack of Emotional Awareness	.13**	.50**	.11**	-.17**

Note. ** $p < .01$. Final sample for the study was 612 participants. Posttraumatic stress symptoms were measured using the PCL-5 (Weather et al., 2013). Total Difficulties in Emotional Regulation and lack of emotional awareness were measured using the DERS (Gratz & Roemer, 2004). Shame- and Guilt-proneness were measured used the TOSCA-3 (Tangney et al., 2000).

Table 4

Shame-Proneness Moderated Regression Analysis with DERS Outcome

Variable	b	SE	t	p-value	ΔR^2	F	p-value	VIF
Intercept	-0.38	0.95	-0.40	.69				
PCL Total	0.49	0.05	10.74	<.001	.20	155.25	<.001	1.10
Shame- Proneness	1.07	0.10	10.59	<.001	.12	111.15	<.001	1.10
PLC x Shame- Proneness	-0.01	0.01	-1.30	.19	.002	1.48	.224	1.04
Gender	2.57	1.93	1.33	.18	.002	1.77	.184	1.05

Note. PCL Total is the total posttraumatic stress symptoms and measured using the PCL-5 (Weather et al., 2013). DERS is total Difficulties in Emotional Regulation and measured using the DERS (Gratz & Roemer, 2004).

Table 5

Guilt-Proneness Moderated Regression Analysis with DERS Outcome

Variable	b	SE	t	p-value	ΔR^2	F	p-value	VIF
Intercept	0.39	1.01	0.39	.70				
PCL Total	0.59	0.05	12.42	<.001	.20	155.25	<.001	1.01
Guilt-Proneness	-0.15	0.12	-1.17	.24	.001	0.87	.35	1.02
PLC x Guilt-Proneness	0.01	0.01	2.18	.03	.006	4.55	.03	1.01
Gender	-0.182	2.08	-0.88	.38	.001	0.77	.38	1.03

Note. PCL Total is the total posttraumatic stress symptoms and measured using the PCL-5 (Weather et al., 2013). DERS is total Difficulties in Emotional Regulation and measured using the DERS (Gratz & Roemer, 2004).

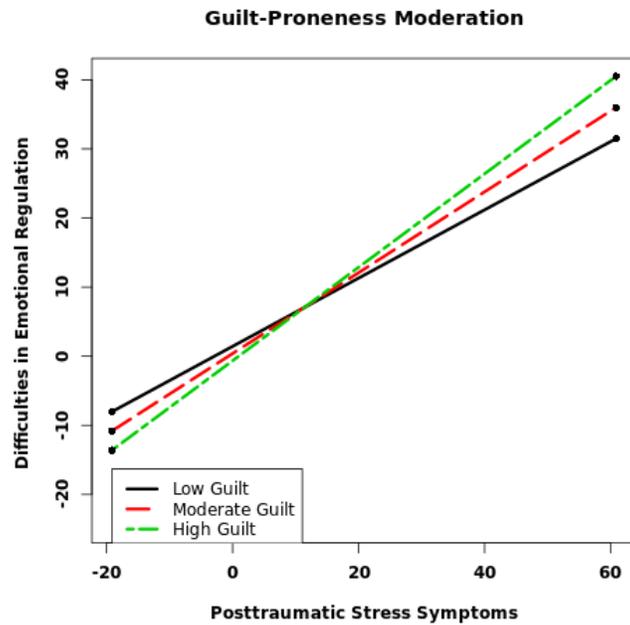
Table 6*Guilt-Proneness Moderated Regression Analysis with Lack of Emotional Awareness**Outcome*

Variable	b	SE	t	p-value	ΔR^2	F	p-value	VIF
Intercept	-.20	0.22	-0.90	.37				
PCL Total	0.04	0.01	3.73	<.001	.02	11.11	.001	1.10
Guilt-Proneness	-0.12	0.03	-4.48	<.001	.03	20.20	<.001	1.02
PCL Total x Guilt-Proneness	0.004	0.001	2.87	.004	.01	8.85	.003	1.01
Gender	0.75	0.45	1.67	.10	.004	2.77	.10	1.03

Note. PCL Total is the total posttraumatic stress symptoms and measured using the PCL-5 (Weather et al., 2013). Lack of emotional awareness is a subscale of Difficulties in Emotional Regulation and measured using the DERS (Gratz & Roemer, 2004).

Figure 1

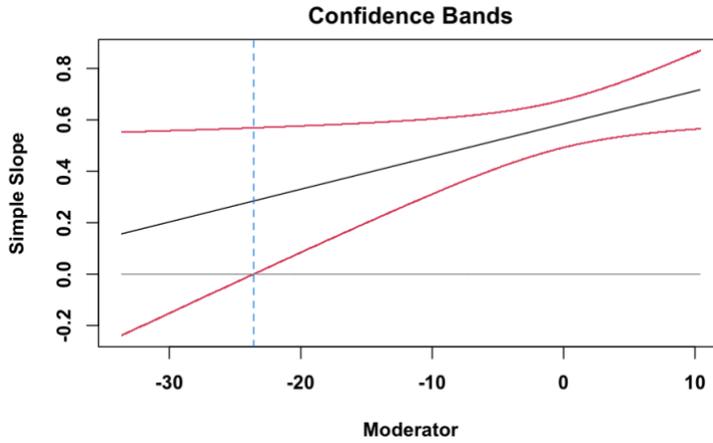
Simple Slopes for Guilt-Proneness Moderation with DERS Outcome



Note. The simple slopes for guilt-proneness moderation were significant at Low Guilt at 1 standard deviation below the mean of guilt-proneness ($b = 0.4$, $SE = 0.06$), $t = 7.89$, $p < .001$), at moderate guilt at the mean of guilt proneness ($b = 0.59$, $SE = 0.05$, $t = 12.42$, $p < .001$) and at high guilt at 1 standard deviation above the mean of guilt-proneness ($b = 0.68$, $SE = 0.63$, $t = 10.68$, $p < .001$).

Figure 2

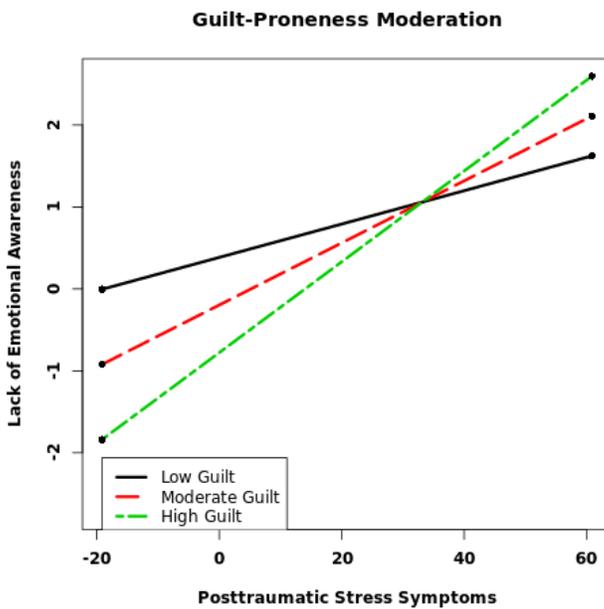
Region of Significance Plot for Guilt-Proneness Moderation with DERS Outcome



Note. The region of significance falls to the right of the dashed line (outside -458.96 to -23.58) and includes 99.5% of the sample.

Figure 3

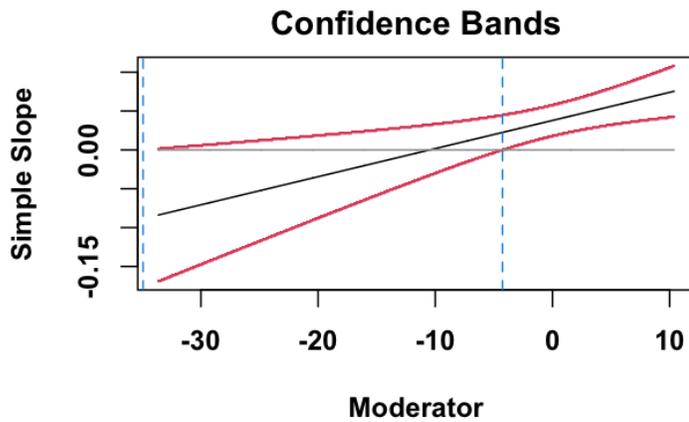
Simple Slopes for Guilt-Proneness Moderation with Lack of Emotional Awareness Outcome



Note. The effect of posttraumatic stress symptoms on lack of emotional awareness was significant 1 standard deviation above the mean of guilt-proneness ($b = 0.06$, $SE = 0.01$, $t = 4.67$, $p < .001$) and Moderate Guilt at the mean of guilt-proneness ($b = 0.04$, $SE = 0.01$, $t = 3.73$, $p < .001$) levels of guilt-proneness, but not Low Guilt at 1 standard deviation below the mean of guilt-proneness ($b = 0.01$, $SE = 0.1$, $t = 0.89$, $p = 0.38$).

Figure 4

Region of Significance Plot for Guilt-Proneness Moderation with Lack of Emotional Awareness Outcome



Note. The region of significance falls to the right of the dashed line (-35.14 to -4.25) and includes 75.7% of the sample.

References

- Aakvaag, H. F., Thoresen, S., Wentzel-Larsen, T., Dyb, G., Røysamb, E., & Olff, M. (2016). Broken and guilty since it happened: A population study of trauma-related shame and guilt after violence and sexual abuse. *Journal of Affective Disorders, 204*, 16-23. <https://doi.org/10.1016/j.jad.2016.06.004>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. <https://doi.org/10.1176/appi.books.9780890425596>
- Badour, C. L., & Feldner, M. T. (2013). Trauma-related reactivity and regulation of emotion: Associations with posttraumatic stress symptoms. *Journal of Behavior Therapy and Experimental Psychiatry, 44*(1), 69-76. <https://doi.org/10.1016/j.jbtep.2012.07.007>
- Bender, P. K., Reinholdt-Dunne, M. L., Esbjørn, B. H., & Pons, F. (2012). Emotion dysregulation and anxiety in children and adolescents: Gender differences. *Personality and Individual Differences, 53*(3), 284-288. <https://doi.org/10.1016/j.paid.2012.03.027>
- Benetti-McQuoid, J., & Bursik, K. (2005). Individual differences in experiences of and responses to guilt and shame: Examining the lenses of gender and gender role. *Sex Roles, 53*, 133-142. <https://doi.org/10.1007/s11199-005-4287-4>
- Benjet, C., Bromet, E., Karam, E. G., Kessler, R. C., McLaughlin, K. A., Ruscio, A. M., Shahly, V., Stein, D. J., Petukhova, M., Hill, E., Alonso, J., Atwoli, L., Bunting, B., Bruffaerts, R., Caldas-de-Almeida, J. M., de Girolamo, G., Florescu, S., Gureje, O., Huang, Y., Lepine, J. P., & Koenen, K. C. (2016). The epidemiology of traumatic event exposure worldwide: results from the World Mental Health

- Survey Consortium. *Psychological Medicine*, 46(2), 327-343. <https://doi.org/10.1017/S0033291715001981>
- Blevins, C. A., Weathers, F. W., Davis, M. T., Witte, T. K., Domino, J. L. (2015). The posttraumatic stress disorder checklist for DSM-5 (PCL-5): development and initial psychometric evaluation. *Journal of Traumatic Stress*, 28(6), 489-98.
- Bockers, E., Roepke, S., Michael, L., Renneberg, B., & Knaevelsrud, C. (2016). The role of generalized explicit and implicit guilt and shame in interpersonal traumatization and posttraumatic stress disorder. *Journal of Nervous & Mental Disease*, 204(2), 95–99. <https://doi.org/10.1097/nmd.0000000000000428>
- Boden, M. T., Westermann, S., McRae, K., Kuo, J., Alvarez, J., Kulkarni, M. R., ... & Bonn-Miller, M. O. (2013). Emotion regulation and posttraumatic stress disorder: A prospective investigation. *Journal of Social and Clinical Psychology*, 32(3), 296-314.
- Bradley, R., Greene, J., Russ, E., Dutra, L., Westen, D. (2005). A multidimensional meta-analysis of psychotherapy for PTSD. *Am J Psychiatry*, 162, 214–227
- Breslau, N., & Kessler, R. C. (2001). The stressor criterion in DSM-IV posttraumatic stress disorder: An empirical investigation. *Biological Psychiatry*, 50, 699–704. [https://doi.org/10.1016/s0006-3223\(01\)01167-2](https://doi.org/10.1016/s0006-3223(01)01167-2)
- Chang, C., Kaczurkin, A. N., McLean, C. P., & Foa, E. B. (2018). Emotion regulation is associated with PTSD and depression among female adolescent survivors of childhood sexual abuse. *Psychological Trauma: Theory, Research, Practice, and Policy*, 10(3), 319–326. <https://doi.org/10.1037/tra0000306>

- Cheok, F., & Proeve, M. (2019). The role of perspective taking and alexithymia in associations between shame, guilt, and social anxiety. *Journal of Cognitive Psychotherapy, 33*(4), 286-300.
- Cloitre, M., Miranda, R., Stovall-McClough, K. C., & Han, H. (2005). Beyond PTSD: Emotion regulation and interpersonal problems as predictors of functional impairment in survivors of childhood abuse. *Behavior Therapy, 36*(2), 119–124. [https://doi.org/10.1016/S0005-7894\(05\)80060-7](https://doi.org/10.1016/S0005-7894(05)80060-7)
- Cole, P. M., & Hall, S. E. (2008). Emotion dysregulation as a risk factor for psychopathology. In P. Beauchaine & S. P. Hinshaw (Eds.), *Child and adolescent psychopathology* (pp. 265-298). John Wiley & Sons Inc.
- Dan-Glauser, E. S., & Scherer, K. R. (2013). The Difficulties in Emotion Regulation Scale (DERS): Factor structure and consistency of a French translation. *Swiss Journal of Psychology, 72*(1), 5-11. <https://doi.org/10.1024/1421-0185/a000093>
- Dvir, Y., Ford, J. D., Hill, M., & Frazier, J. A. (2014). Childhood maltreatment, emotional dysregulation, and psychiatric comorbidities. *Harvard Review of Psychiatry, 22*(3), 149-161. <https://doi.org/10.1097/HRP.0000000000000014>
- Ehring, T., & Quack, D. (2010). Emotion regulation difficulties in trauma survivors: The role of trauma type and PTSD symptom severity. *Behavior therapy, 41*(4), 587-598.
- Ferguson, T. J., Stegge, H., Miller, E. R., & Olsen, M. E. (1999). Guilt, shame, and symptoms in children. *Developmental Psychology, 35*, 347–357.
- Frewen, P. A., Dozois, D. J. A., Neufeld, R. W. J., & Lanius, R. A. (2012). Disturbances of emotional awareness and expression in posttraumatic stress disorder: Meta-

- mood, emotion regulation, mindfulness, and interference of emotional expressiveness. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4(2), 152-161. <https://doi.org/10.1037/a0023114>
- Gefen, D., Straub, D., & Boudreau, M. C. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the Association for Information Systems*, 4, pp-pp. <https://doi.org/10.17705/1cais.00407>
- Gluhoski, V. L., & Wortman, C. B. (1996). The impact of trauma on world views. *Journal of Social and Clinical Psychology*, 15(4), 417-429.
- Goss, K., Gilbert, P., & Allan, S. (1994). An exploration of shame measures—I: The other as Shamer Scale. *Personality and Individual Differences*, 17(5), 713–717. [https://doi.org/10.1016/0191-8869\(94\)90149-x](https://doi.org/10.1016/0191-8869(94)90149-x)
- Gratz, K.L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the Difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment*, 26, 41-54. <https://doi.org/10.1023/B:JOBA.0000007455.08539.94>
- Gross, J. (1999). Emotion regulation: Past, present, future. *Cognition and Emotion*, 13(5), 551-573. <https://doi.org/10.1080/026999399379186>
- Gross, J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, 26(1), 1-26. <https://doi.org/10.1080/1047840X.2014.940781>
- Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2012). *Multivariate data analysis* (6th ed.). Pearson Prentice Hall.

- Harrison, A., Sullivan, S., Tchanturia, K., & Treasure, J. (2010). Emotional functioning in eating disorders: attentional bias, emotion recognition and emotion regulation. *Psychological medicine, 40*(11), 1887-1897.
- Herman, J. (1992). *Trauma and recovery: The aftermath of violence – from domestic abuse to political terror*. Basic Books.
- Hope, S., Rodgers, B., & Power, C. (1999). Marital status transitions and psychological distress: longitudinal evidence from a national population sample. *Psychological medicine, 29*(2), 381-389.
- Jain, S., Ortigo, K., Gimeno, J., Baldor, D. A., Weiss, B. J., & Cloitre, M. (2020). A randomized controlled trial of brief Skills Training in Affective and Interpersonal Regulation (STAIR) for veterans in primary care. *Journal of Traumatic Stress, 33*, 401-409. <https://doi.org/10.1002/jts.22523>
- Jaycox, L. H., & Foa, E. B. (1996). Obstacles in implementing exposure therapy for PTSD: Case discussions and practical solutions. *Clinical Psychology & Psychotherapy: An International Journal of Theory and Practice, 3*(3), 176-184.
- Johnson, P. O., & Neyman, J. (1936). Tests of certain linear hypotheses and their application to some educational problems. *Statistical Research Memoirs, 1*, 57–93.
- Jones, A. C., Badour, C. L., Brake, C. A., Hood, C. O., & Feldner, M. T. (2018). Facets of emotion regulation and posttraumatic stress: An indirect effect via peritraumatic dissociation. *Cognitive Therapy and Research, 42*, 497-509. <https://doi.org/10.1007/s10608-018-9899-4>

- Kilpatrick, D. G., Resnick, H. S., Milanak, M. E., Miller, M. W., Keyes, K. M., & Friedman, M. J. (2013). National estimates of exposure to traumatic events and PTSD prevalence using DSM-IV and DSM-5 criteria. *Journal of Traumatic Stress, 26*(5), 537-547. <https://doi.org/10.1002/jts.21848>
- Klass, E. T. (1987). Situational approach to assessment of guilt: Development and validation of a self-report measure. *Journal of Psychopathology and Behavioral Assessment, 9*, 35-48. <https://doi.org/10.1007/BF00961630>
- Klem, L. (2000). Structural equation modeling. In L. G. Grimm & P. R. Yarnold (Eds.), *Reading and understanding MORE multivariate statistics* (pp. 227-260). American Psychological Association.
- Koenen, K. C., Ratanatharathorn, A., Ng, L., McLaughlin, K. A., Bromet, E. J., Stein, D. J., Karam, E. G., Meron Ruscio, A., Benjet, C., Scott, K., Atwoli, L., Petukhova, M., Lim, C., Aguilar-Gaxiola, S., Al-Hamzawi, A., Alonso, J., Bunting, B., Ciutan, M., de Girolamo, G., Degenhardt, L., ... Kessler, R. C. (2017). Posttraumatic stress disorder in the World Mental Health Surveys. *Psychological Medicine, 47*(13), 2260–2274. <https://doi.org/10.1017/S0033291717000708>
- Leach, C. W. (2017) Understanding shame and guilt. In L. Woodyatt, E. Worthington, Jr., M. Wenzel, & B. Griffin (Eds.), *Handbook of the Psychology of Self-Forgiveness*. Springer. https://doi.org/10.1007/978-3-319-60573-9_2
- Leary, M. R. (2007). How the self became involved in affective experience: Three sources of self-reflective emotions. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp. 38–52). Guilford Press.

- Lee, D. A., Scragg, P., & Turner, S. (2001). The role of shame and guilt in traumatic events: A clinical model of shame-based and guilt-based PTSD. *British Journal of Medical Psychology, 74*, 451-466. <https://doi.org/10.1348/000711201161109>
- Leskela, J., Dieperink, M., & Thuras, P. (2002). Shame and posttraumatic stress disorder. *Journal of Traumatic Stress, 15*, 223-226. <https://doi.org/10.1023/A:1015255311837>
- Lewis, H. B. (1971). Shame and Guilt in Neurosis. *Psychoanalytic Review, 58*(3), 419.
- Lewis, M., Alessandri, S. M., & Sullivan, M. W. (1992). Differences in shame and pride as a function of children's gender and task difficulty. *Child Development, 63*, 630-638. <https://doi.org/10.1111/j.1467-8624.1992.tb01651.x>
- Lewis, M., Sullivan, M. W., Stanger, C., & Weiss, M. (1989). Self development and self-conscious emotions. *Child Development, 60*(1), 146. <https://doi.org/10.2307/1131080>
- Lilly, M. M., & Lim, B. H. (2012). Shared Pathogeneses of posttrauma pathologies: Attachment, emotion regulation, and Cognitions. *Journal of Clinical Psychology, 69*(7), 737-748. <https://doi.org/10.1002/jclp.21934>
- López-Castro, T., Saraiya, T., Zumberg-Smith, K., & Dambreville, N. (2019). Association between shame and posttraumatic stress disorder: A meta-analysis. *Journal of Traumatic Stress, 32*, 484-495. <https://doi.org/10.1002/jts.22411>
- Marusak, H. A., Martin, K. R., Etkin, A., & Thomason, M. E. (2014). Childhood trauma exposure disrupts the automatic regulation of emotional processing. *Neuropsychopharmacology, 40*(5), 1250–1258. <https://doi.org/10.1038/npp.2014.311>

- Mazloom, M., Yaghubi, H., & Mohammadkhani, S. (2016). Post-traumatic stress symptom, metacognition, emotional schema and emotion regulation: A structural equation model. *Personality and Individual Differences, 88*, 94-98.
<https://doi.org/10.1016/j.paid.2015.08.053>
- McLean, C. P., & Foa, E. B. (2017). Emotions and emotion regulation in posttraumatic stress disorder. *Current Opinion in Psychology, 14*, 72-77.
<https://doi.org/10.1016/j.copsyc.2016.10.006>
- Miles, S. R., Menefee, D. S., Wanner, J., Teten Tharp, A., & Kent, T. A. (2015). The relationship between emotion dysregulation and impulsive aggression in veterans with posttraumatic disorder symptoms. *Journal of Interpersonal Violence, 31*(10), 1795–1816. <https://doi.org/10.1177/0886260515570746>
- Nolen-Hoeksema, S., & Aldao, A. (2011). Gender and age differences in emotion regulation strategies and their relationship to depressive symptoms. *Personality and Individual Differences, 51*(6), 704–708.
<https://doi.org/10.1016/j.paid.2011.06.012>
- Norman, S. B., Stein, M. B., & Davidson, J. R. (2007). Profiling posttraumatic functional impairment. *Journal of Nervous & Mental Disease, 195*(1), 48–53.
<https://doi.org/10.1097/01.nmd.0000252135.25114.02>
- Pai, A., Suris, A. M., & North, C. S. (2017). Posttraumatic stress disorder in the DSM-5: Controversy, change, and conceptual considerations. *Behavioral sciences, 7*(1), 7.
<https://doi.org/10.3390/bs7010007>

- Powell, S., Coll, K. M., Trotter, A., Thobro, P., & Haas, R. (2011). Psychosocial correlates of alexithymia in a rural adolescent residential population. *Residential Treatment for Children & Youth, 28*(4), 327-344.
- Preacher, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational tools for probing interactions in multiple linear regression, multilevel modeling, and latent curve analysis. *Journal of Educational and Behavioral Statistics, 31*(4), 437-448.
<https://doi.org/10.3102/10769986031004437>
- Pugh, L. R., Taylor, P. J., & Berry, K. (2015). The role of guilt in the development of post-traumatic stress disorder: A systematic review. *Journal of Affective Disorders, 182*, 138-150. <https://doi.org/10.1016/j.jad.2015.04.026>
- Pugach, C. P., Campbell, A. A., & Wisco, B. E. (2019). Emotion regulation in posttraumatic stress disorder (PTSD): Rumination accounts for the association between emotion regulation difficulties and PTSD severity. *Journal of Clinical Psychology, 76*(3), 508-525. <https://doi.org/10.1002/jclp.22879>
- Puhalla, A., Flynn, A., & Vaught, A. (2021). Shame as a moderator between emotion dysregulation and posttraumatic stress disorder severity among combat veterans seeking residential treatment. *Journal of Affective Disorders, 283*, 236–242.
<https://doi.org/10.1016/j.jad.2021.01.079>
- Rachman, S. (2001). Emotional processing, with special reference to post-traumatic stress disorder. *International Review of Psychiatry, 13*(3), 164-171.
<https://doi.org/10.1080/09540260120074028>

- Rüsch, N., Corrigan, P. W., Bohus, M., Jacob, G. A., Brueck, R., & Lieb, K. (2007). Measuring shame and guilt by self-report questionnaires: A validation study. *Psychiatry Research, 150*(3), 313-325.
- Saraiya, T., & López-Castro, T. (2016). Ashamed and afraid: A scoping review of the role of shame in post-traumatic stress disorder (PTSD). *Journal of Clinical Medicine, 5*(11), 94.
- Seligowski, A. V., Lee, D. J., Bardeen, J. R., & Orcutt, H. K. (2014). Emotion regulation and posttraumatic stress symptoms: A meta-analysis. *Cognitive Behaviour Therapy, 44*(2), 87-102. <https://doi.org/10.1080/16506073.2014.980753>
- Smith, R., Quinlan, D., Schwartz, G. E., Sanova, A., Alkozei, A., & Lane, R. D. (2018). Developmental contributions to emotional awareness. *Journal of Personality Assessment, 101*(2), 150–158. <https://doi.org/10.1080/00223891.2017.1411917>
- Staples, A. M., & Mohlman, J. (2012). Psychometric properties of the GAD-Q-IV and DERS in older, community-dwelling GAD patients and controls. *Journal of Anxiety Disorders, 26*(3), 385-392.
- Stevens, N. R., Gerhart, J., Goldsmith, R. E., Heath, N. M., Chesney, S. A., Hobfoll, S. E. (2013). Emotion regulation difficulties, low social support, and interpersonal violence mediate the link between childhood abuse and posttraumatic stress symptoms. *Behavior Therapy, 44*(1), 152-161. <https://doi.org/10.1016/j.beth.2012.09.003>
- Szentágotai-Táatar, A., & Miu, A. C. (2017). Correction: Individual differences in emotion regulation, childhood trauma and proneness to shame and guilt in adolescence. *PLOS ONE, 12*(1). <https://doi.org/10.1371/journal.pone.0171151>

- Tangney, J. P. (1996). Conceptual and methodological issues in the assessment of shame and guilt. *Behaviour Research and Therapy*, 34(9), 741-754.
[https://doi.org/10.1016/0005-7967\(96\)00034-4](https://doi.org/10.1016/0005-7967(96)00034-4)
- Tangney, J. P., Wagner, P., & Gramzow, R. (1992). Proneness to shame, proneness to guilt, and psychopathology. *Journal of Abnormal Psychology*, 101(3), 469-478.
<https://doi.org/10.1037/0021-843X.101.3.469>
- Tangney, J. P., Dearing, R. L., Wagner, P. E., & Gramzow, R. (2000). Test of Self-Conscious Affect-3 (TOSCA-3)[Database record]. APA PsycTests.
- Taylor, G. J., Bagby, R. M., Ryan, D. P., & Parker, J. D. (1990). Validation of the alexithymia construct: a measurement-based approach. *The Canadian Journal of Psychiatry*, 35(4), 290-297.
- Timblin, H. R. (2021). *Investigating the role of expectations of disclosure in the relationship between trauma-related shame and seeking mental health services* [Master's thesis, California State University, San Bernardino]. CSU ScholarWorks:
<https://scholarworks.lib.csusb.edu/cgi/viewcontent.cgi?article=2384&context=etd>
- Tull, M. T., Barrett, H. M., McMillan, E. S., & Roemer, L. (2007). A Preliminary investigation of the relationship between emotion regulation difficulties and posttraumatic stress symptoms. *Behavior Therapy*, 38(3), 303-313.
<https://doi.org/10.1016/j.beth.2006.10.001>.
- United States Census Bureau. (n.d.). *ACS demographic and housing estimates*. Explore census data. Retrieved from
<https://data.census.gov/cedsci/table?tid=ACSDP5Y2017.DP05>

- van der Kolk, B. A., Pelcovitz, D., Roth, S., Mandel, F. S., et al. (1996). Dissociation, somatization, and affect dysregulation: The complexity of adaption to trauma. *The American Journal of Psychiatry*, *153*(Suppl), 83–93.
- VanDerhei, S., Rojahn, J., Stuewig, J., & McKnight, P. E. (2013). The effect of shame-proneness, guilt-proneness, and internalizing tendencies on nonsuicidal self-injury. *Suicide and Life-Threatening Behavior*, *44*(3), 317-330.
<https://doi.org/10.1111/sltb.12069>
- Villalta, L., Smith, P., Hickin, N., & Stringaris, A. (2018). Emotion regulation difficulties in traumatized youth: A meta-analysis and conceptual review. *European Child & Adolescent Psychiatry*, *27*, 5274544. <https://doi.org/10.1007/s00787-018-1105-4>
- Walsh, K., Honickman, S., Valdespino-Hayden, Z., & Lowe, S. R. (2019). Dual measures of sexual consent: A confirmatory factor analysis of the internal consent scale and external consent scale. *The Journal of Sex Research*, *56*(6), 802-810.
<https://doi.org/10.1080/00224499.2019.1581882>
- Weathers, F. W., Blake, D. D., Schnurr, P. P., Kaloupek, D. G., Marx, B. P., & Keane, T. M. (2013). The life events checklist for DSM-5 (LEC-5).
- Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). The PTSD checklist for DSM-5 (PCL-5).
- Weiss, N. H., Tull, M. T., Davis, L. T., Dehon, E. E., Fulton, J. J., & Gratz, K. L. (2012). Examining the association between emotion regulation difficulties and probable posttraumatic stress disorder within a sample of African Americans. *Cognitive Behaviour Therapy*, *41*(1), 5-14. <https://doi.org/10.1080/16506073.2011.621970>

Wojen, S. L., Ernst, H. A. H., Patock-Peckham, J. A., & Nagoshi, C. T. (2003).

Validation of the TOSCA to measure shame and guilt. *Personality and Individual Differences*, 35(2), 313-326. [https://doi.org/10.1016/s0191-8869\(02\)00191-5](https://doi.org/10.1016/s0191-8869(02)00191-5)

Wolfsdorf, B. A., & Zlotnick, C. (2001). Affect management in group therapy for women with posttraumatic stress disorder and histories of childhood sexual abuse. *Journal of Clinical Psychology*, 57(2), 169-181.

Vita

Name	<i>Yekaterina Nikiforova</i>
Baccalaureate Degree	<i>Bachelor of Arts, Cornell University, Ithaca, NY Major: Psychology</i>
Date Graduated	<i>December, 2012</i>