

FEELINGS OF SHAME AND DISSOCIATION IN SURVIVORS OF HIGH AND LOW
BETRAYAL TRAUMAS

by

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DISSERTATION ABSTRACT

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Title: Feelings of Shame and Dissociation in Survivors of High and Low Betrayal Traumas

Betrayal trauma theory posits that victims of abuse perpetrated by someone close are more likely to dissociate from awareness of the abuse in order to protect the needed relationship. Shame may likewise protect the relationship by turning the victim's attention inward, thereby increasing the likelihood that the abusive environment will be overlooked. In this dissertation, the associations between shame, dissociation, and betrayal trauma were examined in two experimental studies. A third study examined the consequences of chronic shame. Aims were to determine whether shame and dissociation have a unique link with high betrayal traumas (HiBT), to understand the nature of the relationship between shame and dissociation, and to investigate the consequences of chronic shame.

In study 1, 124 female trauma survivors were randomly assigned to a high or low betrayal threat condition. Greater exposure to HiBT but not low betrayal traumas (LoBT) predicted increased shame and dissociation following high betrayal threat. Greater exposure to LoBT but not HiBT predicted increased fear following non-betrayal threat. Compared to non-dissociators, dissociators from threat endorsed more negative psychological consequences.

In study 2, 127 female trauma survivors completed a dissociation induction and battery of questionnaires. The bypassed shame theory, which proposes that dissociation serves to disconnect from the pain of shame, was examined. Results partially supported bypassed shame theory. Although feelings of shame led to a larger dissociation response to the induction, dissociation did not interrupt shame but rather led to even higher shame. Implications are discussed for a possible contributing role of shame to betrayal blindness.

In study 3, 247 trauma survivors completed online questionnaires addressing chronic shame hypotheses. Regression results revealed that all forms of chronic shame, especially trauma-focused shame, predicted negative health consequences. Correlation results revealed that HiBT was associated with more types of negative outcomes compared to LoBT and that HiBT but not LoBT was associated with chronic shame.

Taken together, results indicate that, like dissociation, shame may be both an adaptive and detrimental response following betrayal trauma and that emotional and cognitive responses other than fear warrant attention in trauma research and practice.

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CHAPTER I
GENERAL INTRODUCTION

Overview

Trauma exposure is a very common occurrence in the United States, with an estimated 80 percent of the population experiencing a trauma at some point in their lifetime (Breslau, 2009). Although posttraumatic stress disorder (PTSD) is the only DSM-IV (APA, 2000) diagnosis that explicitly takes into account the contribution of a traumatic event to symptom development, there are numerous additional distress responses to trauma, including depression, anxiety, and dissociation. Furthermore, only about 10% of trauma survivors develop PTSD (Breslau, 2009). Herman (1997) called for attention to posttraumatic responses that had previously been overlooked because they did not fit neatly into the domain of PTSD. Such responses involve fundamental alterations in perceptions of self, others, and the world and/or alterations in consciousness and arise in response to prolonged interpersonal types of trauma such as captivity and childhood sexual abuse (CSA). Freyd (1994; 1996) focuses on the cognitive alterations of dissociation and amnesia for abuse perpetrated by someone upon whom the victim depends for survival. Freyd's work on betrayal trauma theory (BTT) highlights that these alterations may be adaptive, albeit harmful in the long run. This dissertation examines whether feelings of shame may be an affective alteration that, like dissociation and amnesia, serves to protect the relationship in the short-run but has negative long-term consequences.

Betrayal Trauma Theory

BTT (Freyd, 1996) differentiates between traumatic events involving betrayal by a close other (HiBT; e.g., childhood physical or sexual abuse) and traumatic events typically involving lesser degrees of betrayal (LoBT e.g., sexual assault by a stranger, natural disaster). According to BTT, the higher the betrayal level of the trauma, the more adaptive it may be for the victim to be unaware of the trauma or forget that the trauma took place, at least while the relationship with the perpetrator is depended upon for survival. BTT posits that this betrayal blindness may function to protect the victim by discouraging her from taking action that may jeopardize the relationship, such as confronting the abuser or fleeing the abusive situation. According to BTT, dissociation and amnesia are the primary mechanisms for betrayal blindness, but other mechanisms including self-blame and shame may also play a role in protecting the relationship with the needed perpetrator.

Shame

Psychoanalyst Helen Lewis, one of the pioneers in recognizing shame's importance in psychology, focused on operationalizing shame in her book, *Shame and Guilt in Neurosis*. Lewis (1971) described shame as a powerfully painful affective state. In Lewis' view, the source of the shame feeling is unclear; it could originate from the self, the other, or the relationship between the self and the other. For example, when a person feels shame as a result of another person's transgression, the generative source may be partly the self who feels shame, partly the other who acted in a shameful manner, and partly the relationship with the person who acted in a shameful manner. According to Lewis, shame is a superego state in which the self is "focal in awareness" (p. 86). Shame

renders a person unable to communicate much at all, involves a nearly blank cognitive state, and may cause a sensed decrease in both physical size and ability to function.

Michael Lewis (1995) dismantles shame into its state, expression and experience. Like H. Lewis, M. Lewis (no relation) agrees that the shame state involves a specific physiological response involving mental confusion and intense pain. According to M. Lewis, shame expression is the external manifestation of the shame state including a downward gaze and slumped posture. Lewis identifies two forms of shame experience: (1) objective experience which occurs outside of conscious awareness and involves the body's regulation of shame states and (2) subjective experience which involves conscious reflection on the shame state. Like H. Lewis, M. Lewis also argues that it is possible to be in a physiological state associated with self-conscious emotion without awareness of being in that state.

Drawing upon attribution work, M. Lewis' model proposes that shame arises when (1) individual standards are internalized through a process of acculturation to family, community, or other group norms or standards, (2) the self perceives that the self has failed to live up to the internalized standards, (3) attributions for the failure are internal, and (4) attributions for the failure are global. When all of these conditions are met, the evaluation of the self becomes completely consuming, often triggering the desire to hide or disappear in order to get rid of the pain (Lewis, 1995).

H. Lewis and M. Lewis agree that there are probably no universal shame triggers. Whereas a lifelong homemaker may feel deeply ashamed by overcooking the green beans at dinnertime, a 19-year-old student living in the university dormitory may not be triggered at all by the soggy beans. It is not the event, but the interpretation of the event

as a failure of the self against internalized standards that leads to shame. The withdrawal of another's love is the single event that M. Lewis does not rule out as a potential universal shame trigger.

Although shame scholars vary slightly in their conceptualizations of shame, there is consensus that shame involves a sense of the self as being flawed or a failure (Lewis, 1995; Tangney, Stuewig, & Mashek, 2007), a desire to withdraw and disengage from others (Tangney et al., 2007; Haidt, 2003), and a postural display intended to appease others following a perceived transgression (Keltner, 1995; Keltner, Young & Buswell, 1997). Dickerson, Gruenewald, and Kemeny's (2004) social self-preservation model indicates that threats to the social self and resulting feelings of shame also involve coordinated increases in proinflammatory cytokines and cortisol to prepare for the possibility of wound healing and the action tendency to withdraw and halt whatever may be causing the shamed person to be viewed negatively by another. They propose that, much like the fight or flight response is adaptive in the face of survival threat because it mobilizes resources conducive to escaping or protecting oneself from a predator, the social threat response is adaptive in that it creates submissive displays that elicit cooperation and reduce hostility in others, thereby serving to increase acceptance of the shamed person by others upon whom that person depends. Kemeny et al. (2004) state, "...shame is a key emotional response to events in which the positive value or status of one's social self is threatened" (p. 154). In this dissertation, BTT and the social self-preservation model of shame guide research questions regarding the potentially adaptive role of shame in protecting a needed relationship with an abusive other.

Shame scholars diverge a bit in terms of whether or not the shame response should be considered a moral emotion. Haidt (2003) classifies shame as a self-conscious moral emotion along with guilt and embarrassment. Haidt distinguishes protoshame that arises when an individual is simply in the presence of a dominant other from the complex shame defined by Lewis (1995) and others as the response to a perception of having violated a norm. Although Haidt argues that shame is always a very painful experience for a person from an individualist culture, he defines it as a moral emotion because it involves both the disinterested elicitor of a perception of having violated a social norm and a prosocial action tendency of stopping the behavior that violated the norm. Haidt indicates that the self-conscious emotions may be more functional for society than they are for the individual in that they encourage the individual to conform to and uphold the social order.

Tangney et al. (2007) disagree with Haidt's (2003) classification of shame as a moral emotion. The authors review research indicating that shame is an egocentric emotion which can actually impair empathy by turning cognitive and emotional resources intensely inward, whereas guilt involves concern with the effect the guilty individual's actions have on others. Thus, they conclude that guilt is actually a more moral emotion than is shame, although problems can arise when a person feels an exaggerated sense of responsibility for events (e.g., survivor guilt). In this dissertation, the morality of shame is assumed to be peripheral to its function of facilitating survival in a context of betrayal trauma.

Traumatic Shame

Fessler (2004) uses a psychological and ethnographic approach to study cross-

cultural shame expression. Like other affect theorists (e.g., Haidt, 2003; Gilbert, 2007; Tangney et al., 2007), Fessler views shame as the primary emotional response to social threat. Like Haidt (2003), he also divides shame into the form that arises from simply being in the presence of a dominant other and the form that arises from self-conscious awareness of violation of social norms, values, or standards. Budden (2009) expands on Fessler's work in his model of traumatic shame. Budden argues that traumatic shame arises in extreme cases of either type of shame situation. That is, in cases of extreme domination and subjugation, or cases of extreme perceived violations of social norms. Budden argues that under normative conditions, shame plays a regulatory role in helping the shamed person to maintain appropriate boundaries with others and to correct offending behavior in order to facilitate social inclusion. However, in the case of traumatic shame, the shamed person's boundaries may be destroyed, thereby altering her sense of identity. Budden states, "This model [of traumatic shame], unlike the DSM-IV stressor criterion (A1), accounts for threats to the social self within interpersonal dynamics regulated by hierarchy and power asymmetries as well as collective meanings and goals. Thus, it resonates with anthropological perspectives on emotions and selfhood and has significant utility for addressing the social embedding of trauma" (p. 1035). Budden's focus on the dissolution of boundaries in traumatic shame aligns with Herman's (1997) alterations in consciousness and self-perception in complex PTSD.

Budden suggests that peri-traumatic shame (shame occurring during or immediately after a trauma) should lead to the development of PTSD. A growing body of research suggests that shame does in fact predict PTSD (e.g., Karl, Rabe, Zöllner, Maercker, & Stopa, 2009; Leskala, Dieperink, & Thuras, 2002; Owens & Chard, 2001),

but that negative outcomes of traumatic shame are not limited to PTSD. Trauma-related shame has also been linked to depression (Andrews, 1995), suicidality (Wilson, Drozdek, & Turkovic, 2006) and earlier mortality (Dickerson, Gruenewald, & Kemeny, 2009). Memories of events involving profound shame have been found to exhibit similar characteristics to intrusive thoughts and flashbacks associated with criterion A PTSD events (Matos and Pinto-Gouveia, 2010). Just as normative experiences of shame may be associated with adaptive social outcomes, traumatic shame may be adaptive in that the shamed person severely alters her self-perception and behaviors in order to appease the perpetrator as much as possible and thereby avoid further harm. However, such alterations may come at a great cost.

Dissociation

Dissociation was originally conceptualized by Janet (1889; as referenced by Moskowitz, Schäfer, & Dorahy, 2009) as a weakness of character involving a disintegration of mental function. Contemporary scholars agree that dissociation may involve disintegration of thoughts, feelings, behaviors, and/or physiology, but consensus regarding the extent of disintegration necessary to classify as dissociative has not been reached (DePrince & Freyd, 2007). Nijenhuis, Van der Hart and Steele (2010) limit their definition of dissociation to what they and others (e.g., Ross, 2009) refer to as structural dissociation of the personality. Structural dissociation is thought to be common in survivors of interpersonal trauma and to involve a split between an apparently normal part (ANP) responsible for day-to-day functioning, and an emotional part (EP) that experiences the emotional memory of the traumatic event(s). Psychobiological research has supported the idea of distinct ANP and EP states and it has been hypothesized that the

ANP may sometimes fear and avoid the EP. Such avoidance is not always successful, and the EP may manifest itself in nightmares and intrusions (Nijenhuis et al., 2010). Over time the ANP may develop phobias not only of the traumatic events themselves, but also of the emotions that have become associated with EPs.

In this dissertation, a more inclusive definition of dissociation is used. In addition to full-blown dissociation of the personality, other forms of pathological dissociation including depersonalization, derealization, and amnesia for dissociative episodes are included. Non-pathological experiences that are sometimes identified as dissociative are not included due to the lack of empirical evidence that they are associated with pathological dissociation (e.g., hypnotic suggestibility; Van Ijzendoorn & Schneudel, 1996).

Recent work has also focused on the potentially functional role of dissociation as it relates to adapting to interpersonal trauma. As mentioned previously, BTT (Freyd, 1996) posits that dissociation from trauma perpetrated by a depended upon caregiver plays a survival function in that the victim is able to maintain the needed relationship by keeping the abuse out of awareness. Empirical findings support the relationship between betrayal trauma and dissociation (Freyd, Klest & Allard, 2005; Hulette et al., 2008; Goldsmith, Freyd, & DePrince, 2012) as well as the relationship between dissociation and the ability to disconnect from awareness of trauma-relevant stimuli (DePrince & Freyd, 1999; DePrince & Freyd, 2001; Becker-Blease, Freyd, & Pears, 2004; Gobin & Freyd, under review). BTT provides a framework for dissociation-related research questions in this dissertation and also informs discussion of a possible similar role for shame.

Fear Structures and Emotional Processing Theory

In contrast with shame, fear has received a great deal of attention as it has been assumed to be the primary emotional response to trauma and a central feature of PTSD. According to emotional processing theory (EPT; Foa & Kozak, 1986) fear structures are thought to involve a coordinated response involving representations of feared stimuli, psychobiological changes, and cognitive interpretations. The authors explain that the consequences of fear structures may be functional when they serve to protect the individual from danger (e.g., a fear structure that encourages fleeing is activated when a woman sees a bear approaching her) or pathological (e.g., a fear structure that encourages fleeing is activated when a man with social anxiety notices a friend smiling at him). EPT also posits that fear structures may be pathological in and of themselves (e.g., a fear structure that incorporates images and thoughts about the world as completely unsafe). Pathological fear structures are thought to develop due to incomplete processing of traumatic events involving survival threat and maintained due to avoidance of processing the trauma.

EPT has strongly influenced contemporary understanding of posttraumatic distress and recovery and has paved the way for the development of prolonged exposure therapy (PE; Foa, Zoellner, Feeny, Hembree, & Alvarez-Conrad, 2002), and other treatments focused on fear habituation. The American Psychiatric Association (APA; 2009) has identified exposure-based treatments such as PE as the only treatments with established efficacy for PTSD. The APA's endorsement of PE to the exclusion of all other treatments for trauma is troubling given that PE and other exposure-based treatments are less effective for survivors of childhood trauma (Hembree, Street, Riggs,

& Foa, 2004), people with emotion regulation difficulties (Feeny, Zoellner, & Foa, 2002), and people with high trauma-related shame (Ironson, Freund, Strauss, & Williams, 2002), and that dropout rates for exposure therapy are universally high (Hembree et al., 2003). Although exposure therapies are often effective for reducing fear and PTSD symptoms in trauma survivors, shame and dissociation are overlooked by EPT and PE and warrant more empirical and clinical attention, especially given that these constructs have been associated with worse psychological outcome compared to fear (DePrince, 2001). In such cases, there is the potential for an iatrogenic effect of increased shame in exposure therapy even if fear is effectively reduced.

Integrated Specificity of Threat Type and Emotional Response

Traumatic events characterized by betrayal have been shown to be related to dissociation above and beyond traumatic events characterized as eliciting fear (DePrince, 2001). BTT posits that dissociation is a survival strategy for maintaining a depended-upon relationship. It has been proposed that shame-proneness, like dissociation-proneness, is likely to develop in a context of chronic interpersonal trauma (Herman, 2007), and this notion has empirical support (Feiring & Taska, 2005). It is possible that shame-proneness is another adaptive strategy for survival in the case of ongoing abuse by a depended-upon perpetrator in that it involves action tendencies to withdraw and submit to dominant others (Keltner et al., 1997).

Dickerson and colleagues' (2004) integrated specificity model proposes distinct psychobiological responses associated with distinct stressor types (e.g., physical threat, social threat, losing a loved one) and emotional states adaptive in the context of a particular stressor. The social self-preservation model proposed by the authors indicates

that threats to the social self are accompanied by increases in shame, proinflammatory cytokines, and cortisol. They propose that, much like the fight or flight response is adaptive in the face of survival threat because it mobilizes resources conducive to escaping or protecting oneself from a predator, the social threat response is adaptive in that it creates submissive displays that elicit cooperation and reduce hostility of others and encourages disengagement from threat as well as healing from potential wounding. Like dissociation, shame and self-blame may facilitate betrayal blindness by keeping the victim from perceiving any threat from the perpetrator and instead perceiving the self as the source of threat. In this dissertation, an integrated specificity model is proposed such that shame and dissociation are expected to be more likely than fear following betrayal threat and fear is expected to be more likely than shame or dissociation following non-betrayal threat. Although fear may be adaptive in some cases of events involving betrayal by someone who is depended upon for survival (e.g., physical abuse involving threats of injury or death), shame and dissociation should be more adaptive than fear the majority of the time. Unless the victim's life is in imminent danger in the presence of the perpetrator, her chance of survival are greatest is she is able to appease the perpetrator by withdrawing and exhibiting a submissive display, than if she were to flee and be left homeless and possibly also face retribution.

Bypassed Shame

It is possible that shame and dissociation are independent strategies for surviving betrayal trauma. However, the two constructs have been shown to be strongly related to each other (e.g., Irwin, 1998; Talbot, Talbot, & Tu, 2004) and the association may or may not be entirely due to their shared connection with betrayal trauma. Although several

theoretical conceptualizations of the shame-dissociation link have been proposed, quantitative work directly investigating possible directionality is nearly non-existent. The most broadly accepted theory addressing the shame-dissociation link is that of dissociation as a defensive means of bypassing the painful shame state (Kaufman, 1989; Lewis, 1971; Nathanson, 1992). Research supporting this theory is scarce and largely correlational in nature. Irwin (1998) investigated the hypothesis that dissociation “may be employed as a defense against feelings of shame and guilt” (p. 239) by administering self-report questionnaires to university students. Talbot and colleagues (2004) contend that “Dissociation may be employed to modulate and perhaps even eliminate the experience of shame” (p. 446), and tested the relation between shame and dissociation using self-report questionnaires with hospitalized abused women. Both studies revealed significant relations between shame and dissociation.

Statistical associations between self-reported shame and dissociation do not necessarily indicate that dissociation is a means of disconnecting from the pain of shame. It is important to test alternative explanatory models. Using a shame memory-priming paradigm, Matos and Pinto-Gouveia (2010) demonstrated that early experiences of being shamed and feeling ashamed related to later PTSD symptoms including intrusive thoughts, hypervigilance, and symptoms of avoidance upon recall of the shame event. The authors suggest that a shame experience itself may actually function as a traumatic memory, indicating that traumatic dissociation may stem directly from being reminded of the earlier shame state. Thus, rather than dissociation functioning to interrupt shame, it is possible that shame and dissociation may co-occur due to their both being part of a shame-related flashback. One study provides empirical support for this theory of

traumatic shame (Robinaugh & McNally, 2010). In this study, centrality of shame memory was associated with more severe PTSD symptoms including higher frequency and vividness of intrusive memories.

Consequences of Chronic Dissociation and Chronic Shame

Growing bodies of empirical and theoretical work indicate that chronic shame and dissociation are related to each other and are both related to negative psychological and social outcomes, especially in survivors of interpersonal trauma (e.g., DePrince, 2001; Dorahy, 2010). Haggnaars and colleagues (2011) found that trauma chronicity predicted dissociation and shame independently of all PTSD symptoms. The authors conclude that dissociation and shame should be given more attention as they relate to trauma symptom profiles and that they should be considered for inclusion in the PTSD diagnostic criteria for DSM 5 and beyond. In addition to PTSD, shame and dissociation have both been implicated in revictimization (Kessler & Bieschke, 1999) and interpersonal disconnection (Dorahy, 2010). Thus, an understanding of the shame-dissociation link holds important clinical implications for trauma survivors.

It is likely that the negative consequences of chronic shame and dissociation result, at least in part, from the behavioral and cognitive disengagement involved in both reactions. Krause, Kaltman, Goodman, and Dutton (2008) measured the impact of “approach coping” (e.g., problem solving) versus “avoidant coping” (e.g., distraction, denial) on PTSD symptoms related to domestic violence over a one-year period. They predicted a positive relationship between avoidant coping and PTSD and they also predicted that this association would be stronger for more severe levels of stress. Their prediction that avoidance would relate to PTSD was supported, but their dose-response

prediction was not supported. Instead, they found a strong association between avoidance and PTSD regardless of level of severity of stress. This association was present even when controlling for child sexual abuse, social support, and revictimization. The Krause et al., findings support the proposition that avoidant coping has negative consequences. Given the disengagement/avoidant reactions associated with both shame and dissociation, in this dissertation, chronic shame and dissociation are examined as they relate to several psychological health variables as well as physical health.

The Gendered Nature of Betrayal Trauma and Shame

DePrince and Freyd (2002) were the first to hypothesize that women experience more HiBT events compared to men, although they highlight the potential confound with reporting bias. That is, it may be that men experience fewer HiBT events compared to women, or it may be that men are more reluctant to disclose HiBT. In subsequent empirical research, HiBT has been strongly associated with female gender and LoBT has been strongly associated with male gender (e.g., Goldberg & Freyd, 2006), perhaps due to socialization effects and power differential (DePrince & Freyd, 2002). In addition to the relationship between being male or female and reported experience of betrayal trauma, sexism has been found to relate to whether or not abuse disclosures are believed such that higher sexism is related to less believing (Cromer & Freyd, 2007; 2009). Gender differences have likewise been found in psychological outcome of exposure to HiBT. Tang and Freyd (2012) found that HiBT experience mediated the relationship between gender and re-experiencing symptoms of PTSD. Kaehler and Freyd (2012) uncovered differential effects of betrayal exposure on borderline symptoms depending upon gender. PTSD has been related to both dissociation (Najavitz & Walsh, 2012) and

feelings of shame (Leskela et al., 2002). Feelings of shame have also been strongly connected with borderline personality disorder (BPD; Rizvi & Linehan, 2005), and dissociation is one of the symptoms included in the DSM-IV BPD diagnosis (APA, 2000). Thus, gender and betrayal trauma are intimately interconnected in a way that is pertinent to its effects on shame and dissociation. In addition, women have been proposed to be more shame-prone compared to men due to their relatively lower status (Lewis, 1987). This dissertation focuses primarily on women in order to simplify interpretation of the data pertaining to betrayal trauma, dissociation, and shame. Future work should focus on men and/or compare these constructs across genders.

Current Studies

As mentioned previously, BTT (Freyd, 1996) proposes that dissociation serves as a mechanism for maintaining a depended-upon attachment by disconnecting from awareness of abuse by a close other. It is also possible that shame serves a similar function in that the person experiencing shame turns her attention and attributions acutely inward, which may be another pathway toward keeping the abusive party's dangerous behavior out of awareness. The current studies were designed to elucidate the relationships between shame, dissociation, and traumatic betrayal of trust. Given the attention to fear in the rationale and evaluation of exposure-based therapies (e.g., prolonged exposure), fear is also examined in this dissertation. Study aims were threefold. First, it was necessary to determine if there was the predicted association between HiBT and both shame and dissociation. This relationship was established experimentally in study 1. Second, the nature of the relationship between shame and dissociation was to be examined in depth in study 2. The most commonly accepted theory

of the shame-dissociation link, the theory of bypassed shame (Lewis, 1971; Nathanson, 1992) was examined. It was also of interest whether shame and dissociation co-occur in HiBT survivors as complementary or even overlapping contributors to betrayal blindness, or whether they function independently. Third, given previous research demonstrating the potentially toxic effects of chronic shame, the goal of study 3 was to replicate findings that chronic shame is related to increased PTSD (Leskala et al., 2002), interpersonal/relational health (Covert et al., 2003), physical health problems (Dickerson et al., 2009), and dissociation (Talbot, Talbot, & Tu, 2004), and to investigate the possible relationship between chronic shame and hallucination symptoms.

Research Questions and Hypotheses

Study 1. In Study 1 the role of trauma type (HiBT versus LoBT) in predicting shame, fear, and dissociation responses to various types of threat was investigated. First, the study addressed the applicability of the integrated specificity model (Dickerson et al., 2004) to shame, dissociation, and fear. In particular, study 1 addressed whether shame and dissociation were more likely to be elicited in a betrayal threat condition and fear was more likely to be elicited in a non-betrayal threat condition. Support for the integrated specificity model would also support a possible place for shame in betrayal trauma theory. That is, if shame and dissociation were more likely to arise following betrayal threat it may be that shame, like dissociation, serves an adaptive function in HiBT survivors (although additional work will still be needed to determine whether shame is indeed adaptive for HiBT survivors). Second, study 1 investigated whether betrayal trauma may predispose individuals to feel generally shame-prone even outside of a traumatic context and, finally, whether a dissociative response to threat would be related

to psychological and/or physical health problems.

Regarding the integrated specificity question, it was hypothesized that exposure to HiBT would predict a shame and dissociation response, but not a fear response, to betrayal threat images, and that exposure to LoBT would predict a fear response to non-betrayal threat images, but not a shame or dissociation response. Regarding the generalization of shame-proneness question, it was hypothesized that HiBT, but not LoBT would predict an increase in shame following false negative feedback on a problem set. Regarding the third question, it was hypothesized that a dissociative response to any of the threat conditions would relate to a variety of health problems. This last hypothesis is informed by the emotion suppression literature indicating that emotional avoidance comes at a cost (e.g., Roberts, Levenson, & Gross, 2008).

Study 2. Study 2 investigated the notion of bypassed shame using an experimental design. The primary research questions were whether higher feelings of reported shame may in fact predict a tendency to dissociate and whether the dissociation does serve to disconnect from shame feelings. It was hypothesized that: (1) Exposure to traumatic events high in betrayal would relate to higher baseline shame ratings, (2) Exposure to traumatic events low in betrayal would relate to higher baseline fear ratings, (3) Higher baseline shame, but not higher baseline fear, would relate to a more pronounced dissociation response following a dissociation manipulation, (4) Higher dissociation following a dissociation induction would predict a decrease in shame, but not a decrease in fear from baseline.

Study 3. In study 3, several potential health correlates of chronic shame were examined. Study 3 also addressed the fact that chronic shame may take several different

forms. A person may feel ashamed when thinking about traumatic event(s) (trauma-focused shame), when involved in or imagining particular non-trauma situations (shame-proneness), or when reflecting on self-worth as a whole (trait shame). Drawing on the centrality of shame literature (Robinaugh & McNally, 2010), it was predicted that trait shame, shame-proneness, and trauma-focused shame would all relate to health consequences, but that trait shame would relate the most strongly. It was also hypothesized that HiBT, but not LoBT, would relate to all types of chronic shame and health consequences.

Table 1.1
Summary of Study 1-3 Hypotheses

Study	Hypothesis
<p>Study 1: Trauma type and threat-induced shame, fear, and dissociation in female trauma survivors</p>	<p>1a. HiBT will predict increased shame following betrayal threat. LoBT will not add to shame change.</p> <p>1b. HiBT will predict increased dissociation following betrayal threat. LoBT will not add to dissociation change.</p> <p>1c. Neither HiBT nor LoBT will predict increased fear following betrayal threat.</p> <p>1d. LoBT will predict increased fear following non-betrayal threat. HiBT will not add to fear change.</p> <p>1e. Neither LoBT nor LoBT will predict increased shame or dissociation following non-betrayal threat.</p> <p>1f. HiBT will predict increased shame and dissociation following intrapersonal threat. LoBT will not add to shame or dissociation change.</p> <p>2. Shame and dissociation will increase more in betrayal threat compared to non-betrayal threat condition.</p> <p>3. Physical and relational health problems, PTSD, hallucinations, and chronic dissociation will be higher for dissociators from threat compared to non-dissociators</p>
<p>Study 2: Testing a model of bypassed shame in female survivors of high and low betrayal traumas</p>	<p>1. HiBT will predict baseline shame.</p> <p>2. LoBT will predict baseline fear.</p> <p>3. Baseline shame, but not fear, will predict increased dissociation.</p> <p>4. Dissociation will predict decreased shame, but not fear.</p>
<p>Study 3: Psychological and physical health consequences of chronic shame</p>	<p>1. Trait shame, shame-proneness, and trauma-focused shame will all relate to health consequences, but trait shame will relate most strongly.</p> <p>2. HiBT, but not LoBT, will relate to all types of shame and health consequences.</p>

CHAPTER II

STUDY 1: TRAUMA TYPE AND THREAT-INDUCED SHAME, FEAR, AND DISSOCIATION IN FEMALE TRAUMA SURVIVORS

Introduction

Betrayal Trauma Theory: Dissociation, Shame, and Fear

Research has demonstrated a relationship between shame and dissociation in trauma survivors (Dorahy 2010; Hagennaars et al., 2011; Kessler & Bieschke, 1999). Although theories addressing the shame/dissociation link exist, empirical tests of such theories are few and nearly all correlational (Irwin, 1998; Talbot, Talbot, & Tu, 2004). The most frequently discussed psychoanalytic theory regarding the connection between shame and dissociation is that dissociation serves as a means of avoiding the overwhelming pain that shame causes (Irwin, 1998; Talbot, Talbot, & Tu, 2004). However, experimental or longitudinal tests of this theory are lacking. This study addresses a gap in the literature by examining dissociation, shame, and fear in female trauma survivors. Although it will be important to replicate findings with men in the future, the current study focuses on women for the sake of clarity given the gendered nature of betrayal trauma (DePrince & Freyd 2002) and shame (Lewis, Alessandri, & Sullivan, 1992).

BTT suggests an alternative explanation of the relationship between shame and dissociation. Rather than dissociation serving to interrupt shame for the sake of avoiding pain, it may be that both dissociation and shame play a part in protecting the needed relationship with the perpetrator. In the case of dissociation, the victim is able to attend to

the love and positive connection in the relationship while keeping the abuse out of awareness. In the case of shame, the victim may attribute her negative emotions to her own perceived flaws and inadequacies rather than recognize that she is being harmed by someone she trusts. Thus, both shame and dissociation may serve as mechanisms of betrayal blindness (Freyd, 1996), protecting the relationship while the abuse is ongoing, but potentially leading to psychological, physical, and relational health problems in the long run (Covert et al., 2003; Dickerson et al., 2009; Leskala et al., 2002).

BTT suggests that fear may or may not co-occur with betrayal. Freyd (1994; 1996) presents betrayal and fear as orthogonal dimensions of a 2 x 2 plot. Fear can occur without betrayal, betrayal can occur without fear, and fear and betrayal can occur together. However, BTT does suggest that when the perpetrator is depended upon for survival, fear may not be the most adaptive response because the associated action tendencies to flee or fight could lead to the loss of needed resources.

Integrated Specificity Model and Betrayal Trauma Theory

Although BTT explicitly addresses the adaptive role of dissociation from betrayal, feelings of shame are not a primary focus of BTT. Literature on the integrated specificity model of emotion (Dickerson et al., 2004; Weiner, 1992) may shed light on the adaptive nature of shame following betrayal trauma. This model proposes that different types of threats and challenges are accompanied by integrated biological, emotional, and behavioral response patterns adaptive for surviving a given threat type. Dickerson and colleagues (2004) apply the integrated specificity model to social evaluative types of threat in their social self-preservation theory of shame. The authors provide evidence that following social evaluative threat, shame co-occurs with a submissive display, release of

proinflammatory cytokines and cortisol, and withdrawal or disengagement. The submissive display increases the chances of appeasing the depended-upon perpetrator, thereby de-escalating violence. The physiological changes prepare the body to heal from wounding in the case of attack. Kemeny, Gruenewald, and Dickerson (2004) describe shame as “the key emotional response to events in which the positive value of one’s social self is threatened” p. 154. Thus, shame may serve as an alarm to avoid any further transgression from the self who the perpetrator wants the victim to be (e.g., loyal, compassionate, and submissive to the perpetrator at all costs). Given the potential of the shame display to appease the perpetrator (Keltner, Young, & Buswell, 1997), shame, like dissociation, may play a protective function in betrayal trauma. In contrast to a victim who recognizes the abuse and fights back in anger, or runs away in fear, the ashamed victim stands a better chance of preserving the dangerous relationship upon which she depends.

Historical Emphasis on Trauma-Related Fear

A great deal of attention has been paid to the role of fear and anxiety in the post-trauma response with relatively less attention to other emotional and cognitive processes. PE, a widely implemented trauma-focused treatment, has been informed by EPT (Foa & Kozak, 1986), which posits that fear structures play a central role in the development of posttraumatic distress. Once the pathological fear structure is addressed, posttraumatic stress would be expected to diminish according to EPT. Cahill and Foa (2008) do recognize a potential limitation of EPT in that it does not account for the fact that, “Other emotions [than fear] may be associated with PTSD-like symptoms.” (p. 66). Although PE is the only treatment specifically based on emotional processing theory, all treatments

that include exposure rely on fear extinction as the core mechanism of action.

In addition to the emphasis on fear extinction in trauma treatment, the DSM-IV (APA, 2000) necessitates the presence of peritraumatic fear, helplessness, or horror in order for an event to be considered traumatic enough to meet PTSD criteria (though this requirement will be removed in the forthcoming DSM-5; APA, 2012). Research indicates that several peri-traumatic factors not listed in the DSM-IV PTSD criteria carry important implications for post-traumatic adjustment. For example, Rizvi, Kaysen, Gutner, Griffin, and Resick (2008) examined peri- and post-traumatic reactions of female victims of violent sexual and physical crime. The authors explored the associations between peritraumatic emotions other than fear (e.g., shame, anger) and posttrauma symptoms. They found that negative affect other than fear predicted symptoms of depression above and beyond peritraumatic fear and concluded that fear alone may not be a good discriminator for post-trauma adjustment, particularly when the trauma is severe and interpersonal in nature.

The Emergence of Complex Posttraumatic Stress Disorder

Judith Herman (1997) coined the term “Complex Posttraumatic Stress Disorder” to recognize the complex pain associated with surviving repeated interpersonal traumas.

She states:

Even the diagnosis of “post-traumatic stress disorder,” as it is presently defined, does not fit accurately enough. The existing diagnostic criteria for this disorder are derived mainly from survivors of circumscribed traumatic events. They are based on prototypes of combat, disaster, and rape. In survivors of prolonged, repeated trauma, the symptom picture is often far more complex. Survivors of

prolonged abuse develop characteristic personality changes, including deformations of relatedness and identity... The syndrome that follows upon prolonged, repeated trauma needs its own name. I propose to call it “complex post-traumatic stress disorder.” (p. 199)

Herman’s complex PTSD involves changes in emotion regulation, consciousness, self-perception, perceptions of the perpetrator, relations with others, and/or meaning systems. The current study focuses on two possible such alterations that would be included under the symptom clusters of changes in self-perception and consciousness respectively: feelings of shame and dissociation.

Disconnection as Source of Altered States

Judith Jordan (1997) sheds light on a potential source of such alterations. Jordan states, “If there is a consistent imbalance so that one person is always altering her experience to fit the other person’s needs or, alternately, demanding that the other person be a certain way in order to stay in relationship, there will be serious distortion in self- and other-expression” (p. 142). Lewis (1987) previously highlighted that women often find themselves on the former side of the power imbalance, and are thus particularly susceptible to feelings of shame. According to BTT (Freyd, 1994; 1996), victims of trauma perpetrated by someone who is depended upon for survival may dissociate from awareness of the abuse in order to maintain the necessary attachment. Thus, both shame and dissociation may be more likely to occur in women who have had to keep parts of themselves out of connection. Survivors of traumatic events involving betrayal of trust by a close other should be especially prone to more extreme relational and intrapersonal disconnections and therefore more prone to shame and dissociation. Much research

supports the supposition that dissociation is increased among survivors of HiBT (Freyd, Klest & Allard, 2005; Hulette et al., 2008; Goldsmith, Freyd, & DePrince, 2012).

Empirical support for the role of shame in betrayal trauma survivors is in the nascent stage, with a bit more empirical attention to shame in survivors of interpersonal trauma more generally (Amstadter & Vernon, 2008).

The Current Study

The primary aim of the current study was to assess the association between betrayal trauma and shame, fear, and dissociation responses to threat. This aim was achieved by 1) assessing the contribution of HiBT and LoBT history to shame, fear, and/or dissociation responses within high versus low betrayal threat conditions, and 2) investigating the overall between-condition tendency to become more dissociative, ashamed, or fearful depending upon threat type. In addition to the betrayal and non-betrayal threat conditions, a third condition involving intrapersonal threat was examined. In this third condition participants were given false negative feedback on an academic task. This manipulation was found to increase feelings of shame in a previous study (Platt & Freyd, 2012). In the current study, a secondary goal was to examine whether dissociation and shame-proneness may be more likely for survivors of HiBT versus LoBT when faced with a perceived personal shortcoming. Another secondary goal of the study was to assess the effect of proneness to dissociation from threat on various psychological symptoms as well as physical health. The hypothesis that dissociation from threat could lead to problematic outcomes is based on the literature indicating that emotional avoidance comes at a cost (e.g., Roberts, Levenson, & Gross, 2008).

Method

Participants

One hundred and twenty-four participants were recruited via SONA Systems, the University of Oregon's system for online participant recruitment and data management. Participants were selected for the study based on their schedule availability. They were not aware of the focus of the study prior to participation and were therefore unable to self-select based on study content. Participants were pre-screened for a history of at least one experience of psychological trauma using the Brief Betrayal Trauma Survey (BBTS; Goldberg & Freyd, 2006). Participants were also pre-screened for female gender. Ninety-eight (79%) identified as White/Caucasian, 9 (7%) identified as Hispanic, 2 (1%) identified as African American/Black, 20 (16%) identified as Asian or Asian American, and 5 (4%) identified as other. Participants were allowed to select more than one racial/ethnic group. Given the relatively large proportion of Asian/Asian Americans compared to all other groups except White/Caucasian, mean differences were assessed for Asian/Asian Americans compared to all other groups. Baseline shame was significantly higher for Asians/Asian Americans ($M = 3.45$, $SD = 3.64$) compared to all other participants ($M = 1.24$, $SD = 1.89$), $t(122) = 2.64$, $p < .05$. No additional mean differences were revealed.

Measures

Demographics. Participants' ethnicity, age, country of birth, number of siblings, religion and sexual orientation were assessed in a brief demographics questionnaire.

State Shame and Guilt Scale (SSGS; Marschall et al., 1994). The SSGS is a self-rating scale of current (state) feelings of shame, guilt and pride. Only the shame items were

included in the study. Fifteen items (five for each subscale) are rated on a 5-point Likert scale. Examples of shame items include, “I want to sink into the floor and disappear” and “I feel like I am a bad person.” In Marschall et al.’s study, participants reported higher levels of shame following a shame induction, as compared to nonshamed control participants. Convergent validity has been demonstrated with an additional measure of state shame, and predictive validity has been demonstrated in that the SSGS shame subscale was sensitive to a shame induction (Platt & Freyd, 2012).

Brief Betrayal Trauma Survey (BBTS; Goldberg & Freyd, 2006). The BBTS is a 14-item self-report measure. Items distinguish between noninterpersonal events (e.g., a major car accident), and interpersonal events perpetrated by someone close or not close (e.g., assault). Each item is assessed before age 12, at ages 12 to 17 and age 18 or older. For each event, the participant is asked to respond yes or no according to whether or not the event ever happened to him or her. Construct validity has been demonstrated based on agreement between traumatic events endorsed on the BBTS and an existing trauma inventory (DePrince, 2001). The BBTS has been employed in research investigating issues such as trauma disclosure (Foynes, Freyd & DePrince, 2009), revictimization (Gobin & Freyd, 2009), and borderline personality disorder (Kaehler & Freyd, 2009).

State Scale of Dissociation (SSD; Krüger & Mace, 2002). The SSD is a 56-item scale factor analyzed by the authors to include identity confusion, conversion, amnesia, identity alteration, and hypermnesia subscales. The authors of the scale provided evidence of good discriminant and convergent validities as well as good content, and predictive validities. They also found good internal consistency and split-half reliability. Prior to inclusion in this study, the SSD was pilot tested using a dissociation induction

(Zoellner et al., 2007) and only items with suitable variability (items 1-24) were retained. To assess the possibility that SSD items and hallucination items were measuring the same construct, a principal components analysis using Varimax rotation was conducted including the 24 SSD items and 3 hallucination items. Hallucination items all loaded onto the same factor with no overlap with SSD items.

Positive and Negative Affect Schedule - Expanded Form, fear subscale (PANAS-X; Watson & Clark, 1994). The fear subscale of the PANAS-X consists of six mood states which participants are asked to endorse on a 5-point Likert scale. Mood states assessed include: afraid, scared, frightened, nervous, jittery, and shaky. Construct validity of the PANAS-X fear subscale has been demonstrated in that fear items loaded onto a single factor in a principal factor analysis and no items from other scales loaded onto the fear factor (Watson & Clark, 1994).

Physical health. Physical health was assessed using the single item, “compared to others of your same age and sex, would you say that in general your health is...” Participants were given the option to respond, “excellent,” “very good,” “good,” “fair,” or “poor.” Previous work has indicated that single item self-reports of physical health reliably correspond to mortality and health status (Klest, 2009; McGee et al., 2009).

Hallucination symptoms. Hallucination symptoms were briefly assessed using the following items (World Health Organization, 1990): 1. Have you ever had the experience of seeing something or someone that others present could not see - that is, had a vision when you were wide awake? 2. Have you ever had the experience of hearing things other people could not hear, such as noises or a voice? 3. Have you ever had unusual feelings inside or on your body, like being touched when nothing was there or

feeling something moving inside your body? Some SSD items contained wording that could have potentially been measuring hallucination symptoms (e.g., “Things around me look different right now from the way they usually do”; “My inner voices are talking”). To assess the possibility that SSD items and hallucination items were measuring the same construct, a principal components analysis using Varimax rotation was conducted including the 24 SSD items and 3 hallucination items. Hallucination items all loaded onto the same factor with no overlap with SSD items. In addition, the Pearson’s correlation between the SSD at baseline and hallucination items was small to medium ($r = .27, p < .05$). An additional correlation was run between the hallucination items and SSD items including language that seemed to potentially overlap with hallucination symptoms. The included items were, “Things around me look different right now from the way they usually do,” “At the moment my body feels vague, indefinite, strange,” “There is a dialogue in my head now,” and, “My inner voices are talking.” The correlation was medium ($r = .33, p < .01$), indicating that the constructs are related, but not the same.

Dissociative Experiences Scale (DES; Carlson et al., 1993). The DES is a 28-item measure assessing self-reported dissociative experiences. Participants are asked to rate how often they have each dissociative experience. Examples of items include, “Some people have the experience of finding themselves in a place and having no idea how they got there,” and, “Some people have the experience of looking in a mirror and not recognizing themselves.” In a meta-analysis of studies using the DES the authors found an alpha of .96 and higher DES scores in people with compared to without dissociative disorders (Van IJzendoorn & Schneugel, 1996).

Relational Health Indices (RHI; Liang et al., 2002). The RHI assess self-reported strength of relationships in three domains: relationship with a peer, relationship with a mentor, and relationship with community. Participants are instructed to think of a relationship with one close friend and one mentor for the friend and mentor subscales respectively. Examples of items include, “Even when I have difficult things to share, I can be honest and real with my friend,” “I feel as though I know myself better because of my mentor,” and, “I have a greater sense of self-worth through my connection with this community.” The scale authors provided evidence of good reliability and internal validity. In the current study, factor analysis indicated that the three proposed subscales did not cleanly load on separate factors. Therefore, a combined RHI score was used rather than individual subscale scores.

Posttraumatic Stress Disorder Symptom Checklist – Civilian version (PCL-C; Weathers et al., 1993). The PCLC-C is a 17-item self-report measure. Each item assesses one of the 17 PTSD symptoms according to the DSM-IV. Items are rated on a scale ranging from 1 (“not at all”) to 5 (“extremely”) and responses are time-bound within the past month. The PCL-C has demonstrated adequate re-test reliability ($r=0.68-0.92$) and excellent internal consistency (0.94 ; Ruggiero, Del Ben, Scotti, & Rabalais, 2003). Good concurrent validity has also been shown with the CAPS ($r=.90$), the “gold standard” clinical interview assessment tool for PTSD (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996).

Procedure

Following the prescreening for female gender and for lifetime exposure to at least one traumatic event, participants who met inclusion criteria were given the opportunity to

participate in the study. The SONA study name, which was entirely unrelated to study content, was included in a list of studies they could choose from based on schedule availability. The study took place in the Dynamics Lab at the University of Oregon Psychology Department. During the informed consent procedure, participants were notified that participation was voluntary and that they could choose to leave at any time. Participants who completed the study received partial fulfillment of a research requirement for psychology and linguistics courses.

The informed consent process took place with a trained research assistant in the lab. Participants were given the opportunity to ask questions prior to beginning the study. Study questionnaires were administered on a lab computer via Qualtrics software. Participants were randomly assigned without replacement by Qualtrics to one of three conditions: (1) betrayal threat, (2) non-betrayal threat, and (3) intrapersonal threat. Research assistants were unaware of the study condition to which each participant was assigned. Each participant completed all of the same study questionnaires in a randomized order before and after the induction. The following inductions were used:

Betrayal threat condition. The International Affective Picture System (IAPS; Lang, Bradley, & Cuthbert, 1997) was used for the betrayal threat condition. Ten pictures were chosen from the IAPS and matched with images in the non-betrayal threat condition based on arousal and valence norms (Lang et al. 1997) and threat ratings (Mogg, Bradley, Miles, & Dixon, 2004). Each picture was displayed for 6 seconds with a 2 second pause between pictures. In the betrayal threat condition, only images including an interpersonal component were used. Examples of images include depictions of intimate partner violence and child abuse.

Non-betrayal threat condition. The International Affective Picture System (IAPS; Lang, Bradley, & Cuthbert, 1997) was used for the non-betrayal threat condition. Ten pictures were selected from the IAPS and matched with images in the betrayal threat condition based on arousal and valence norms (Lang et al. 1997) and threat ratings (Mogg, et al., 2004). Each picture was displayed for 6 seconds with a 2 second pause between pictures. In the non-betrayal threat condition, only images without an interpersonal component were included. Examples of images include depictions of major automobile accidents and natural disasters.

Intrapersonal threat condition. The intrapersonal threat induction involves a problem set consisting of three math items and three verbal items. This problem set and feedback were created for a previous study (Platt & Freyd, 2012). For each of the verbal items and the math items there is one easy question, one question of moderate difficulty and one very difficult question. After completing the problem set, participants received negative feedback (“Your work needs improvement”). Platt & Freyd (2012) used the intrapersonal threat condition as a shame induction and found that shame increased following the negative feedback as measured by two different state shame scales.

Prior to the induction, participants completed a brief demographics questionnaire. Prior to and immediately following the induction in each condition, participants completed the SSGS, SSD, and PANAS-X fear subscale. Following the induction, the BBTS, DES, RHI, PCL-C, hallucination symptom items and health question were also administered. Upon completion of all questionnaires and induction, a debriefing form appeared on the screen and a trained research assistant explained the debriefing to the participant aloud. Although no adverse events were reported during the study,

participants were given a list of resources in case they felt distressed at any time after leaving.

Statistical Analyses

Data were analyzed using PASW statistical software (SPSS Inc., 2009). In order to test the hypothesis that the betrayal threat manipulation would predict shame and dissociation but not fear, especially for people with a more extensive betrayal trauma history, a series of regressions were conducted. For each regression, HiBT history was entered in the first step and LoBT history was entered in the second step in order to determine whether LoBT would contribute to variance not accounted for by HiBT. This was repeated three times with the dependent variable being (1) shame change scores, (2) dissociation change scores and (3) fear change scores. It was expected that individual differences in HiBT would significantly predict change in shame and dissociation but not fear, and that LoBT would not contribute significantly to shame or dissociation change scores. The same pattern was expected for the intrapersonal threat condition. In order to test the hypothesis that non-betrayal threat would predict fear but not shame or dissociation, especially for people with more extensive LoBT histories, another series of three regressions were conducted with the same predictors and outcome variables as in the previous analyses. In this case, it was expected that LoBT, but not HiBT, would contribute significantly to increase in fear following the non-betrayal induction. Shame, dissociation, and fear difference scores were to be compared across the three conditions using between subjects ANOVAs. However, a manipulation check revealed that, despite contrary findings in prior research, the intrapersonal threat condition was not effective in eliciting shame, dissociation, or fear regardless of trauma history. Therefore, only the

betrayal threat and non-betrayal threat conditions were included in the means comparisons. It was expected that shame and dissociation change scores would be greater (increase more) for the betrayal condition and that fear change scores would be greater (increase more) for the non-betrayal condition. Finally, to test the hypothesis that individuals who dissociate following threat would have more severe symptom profiles, dissociation from threat was coded dichotomously such that any increase in dissociation would correspond to a “dissociator” category and no dissociation will correspond to a “non-dissociator” category. The two groups were compared on all outcome variables using independent samples *t*-tests. It was expected that dissociators would have worse outcome on all measured variables compared to non-dissociators.

Results

Descriptive Statistics and Correlations

No differences were found between threat induction conditions in baseline shame, fear, or dissociation, nor were any demographic differences found. Significant skew was found in HiBT, LoBT, dissociative experiences scale scores (DES), hallucination symptoms, and posttraumatic stress symptoms (PCLC). Natural log transformations were performed on each of these variables to resolve skew. Sixty-nine (56%) participants endorsed at least one lifetime traumatic event high in betrayal and fifty-nine (48%) endorsed at least one lifetime traumatic event low in betrayal. Items included in high betrayal were physical, sexual, and emotional abuse by someone close. Items included in low betrayal were physical and sexual abuse by someone not close and major automobile accidents. Pearson’s correlations demonstrated significant relationships between HiBT

and baseline shame, baseline SSD dissociation, and DES dissociation as well as LoBT and baseline SSD dissociation (see Table 2.1).

Hypothesis Testing

Research question 1: Does type of trauma history predict shame, dissociation, and fear responses to different types of threat?

Hypothesis 1a. HiBT will predict increased shame following betrayal threat for subjects in the betrayal threat induction. LoBT will not add to shame change. A regression was run predicting shame change scores with HiBT entered in step 1 and LoBT in step 2; see Table 2.2 and Figure 2.1. The step 1 model accounted for 14% of the variance in shame change scores. There was no significant change in R^2 in step 2.

Table 2.1
Means, Standard Deviations, and Correlations

Measure	HiBT	LoBT	Baseline Shame (SSGS)	Baseline Fear (PANAS-X)	Baseline Dissociation (SSD)	Mean	SD
HiBT	-					4.35	6.63
LoBT	.39***	-				1.09	1.69
Baseline Shame (SSGS)	.21*	.09	-			1.74	2.46
Baseline Fear (PANAS-X)	.05	.11	.53***	-		2.39	2.77
Baseline Dissociation (SSD)	.22*	.21*	.58***	.59***	-	10.35	12.40
Dissociation (DES)	.25*	.19	.30**	.29**	.47***	12.99	11.67

Note. LoBT = Low Betrayal Traumas, HiBT = High Betrayal Traumas, SSGS = State Shame and Guilt Scale, PANAS = Positive and Negative Affect Schedule, SSD = State Scale of Dissociation.

* $p < .05$, *** $p < .001$

Hypothesis 1b. HiBT will predict increased dissociation following betrayal threat. LoBT will not add to dissociation change. A regression was run predicting

dissociation change scores with HiBT entered in step 1 and LoBT in step 2; see Table 2.2 and Figure 2.2. The step 1 model accounted for 23% of the variance in dissociation change scores. There was no significant change in R^2 in step 2.

Table 2.2
Regression Results for Prediction of Shame, Dissociation, and Fear Change from High and Low Betrayal Traumas Reported

Measure	Variable	Betrayal Threat				Non-Betrayal Threat			
		B	SE	β	Adj. R^2	B	SE	β	Adj. R^2
Shame Δ (SSGS)	HiBT	2.22	.86	.40*	.14*	-.65	.92	-.14	.04
	LoBT	2.77	2.63	.19		4.23	2.30	.37	
Dissociation Δ (SSD)	HiBT	7.57	2.60	.52**	.23**	1.23	2.94	.09	.01
	LoBT	-.95	6.47	-.03		6.62	3.18	.44	
Fear Δ (PANAS-X)	HiBT	1.24	1.42	.14	.02	-1.94	1.30	-.31	.07*
	LoBT	-.90	4.43	-.04		6.62	3.18	.44*	

Note. HiBT = High Betrayal Traumas, LoBT = Low Betrayal Traumas, SSGS = State Shame and Guilt Scale, SSD = State Scale of Dissociation, PANAS-X = Positive and Negative Affect Schedule.

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

Hypothesis 1c. HiBT will not predict increased fear following betrayal threat.

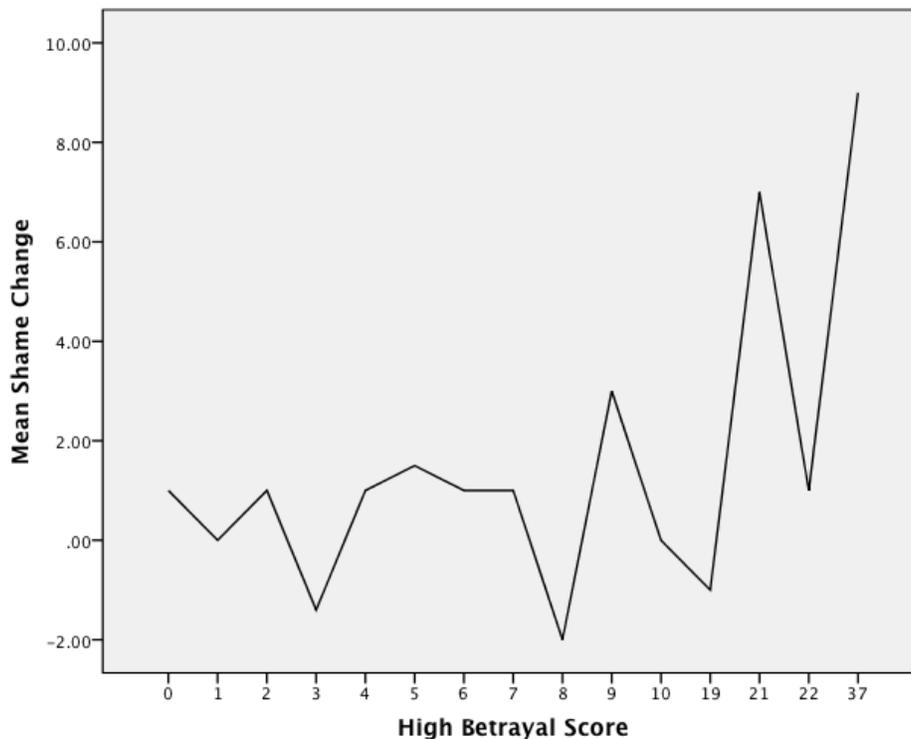
LoBT will also not predict fear change. A regression was run predicting fear change scores with HiBT entered in step 1 and LoBT in step 2; see Table 2.2. The step 1 model was nonsignificant. There was no significant change in R^2 in step 2.

Hypothesis 1d. LoBT will predict increased fear following non-betrayal threat.

HiBT will not add to fear change. A regression was run predicting fear change scores with LoBT entered in step 1 and HiBT in step 2; see Table 2.2 and Figure 2.3. The step 1

model was significant and accounted for 7% of the variance in fear change scores. There was no significant change in R^2 in step 2.

Figure 2.1
Mean Shame Change by Exposure to High Betrayal Traumas – Betrayal Threat Condition



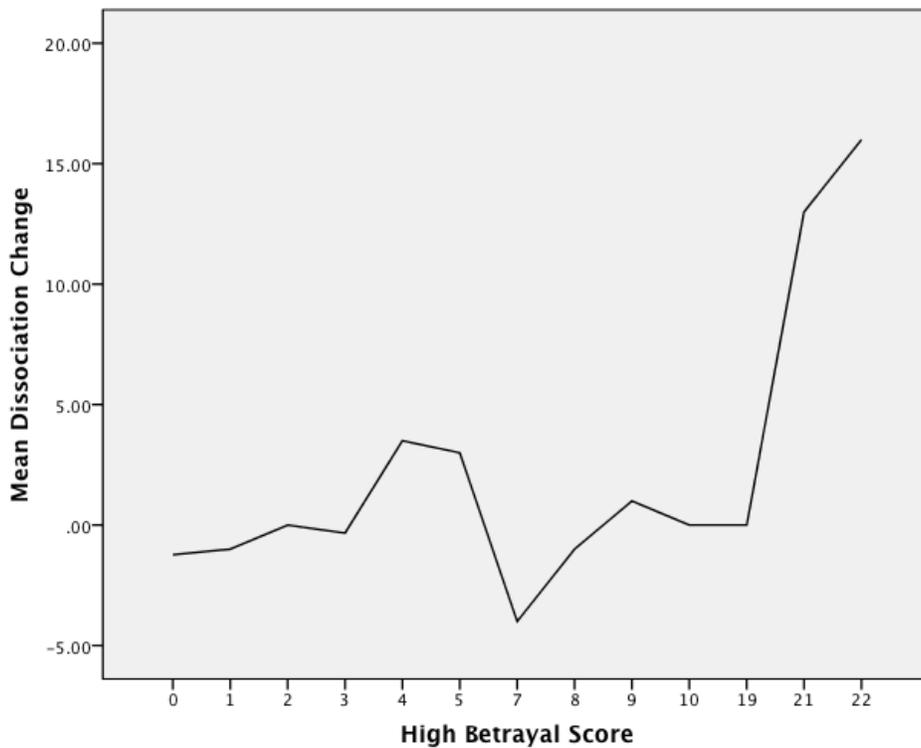
Note. High betrayal score represents sum of trauma experience categories (e.g., 0 sexual abuse events + 2-5 physical abuse events + 6-20 emotional abuse events), and not simply total numbers of events.

Hypothesis 1e. LoBT will not predict increased shame or dissociation following non-betrayal threat. HiBT will not predict shame or dissociation change. Regressions were run predicting shame change scores and dissociation change scores with LoBT entered in step 1 and HiBT in step 2; see Table 2.2. Steps 1 and 2 were nonsignificant for both regressions.

Hypothesis 1f. HiBT will predict increased shame and dissociation following intrapersonal threat. LoBT will not add to shame or dissociation change. A test of

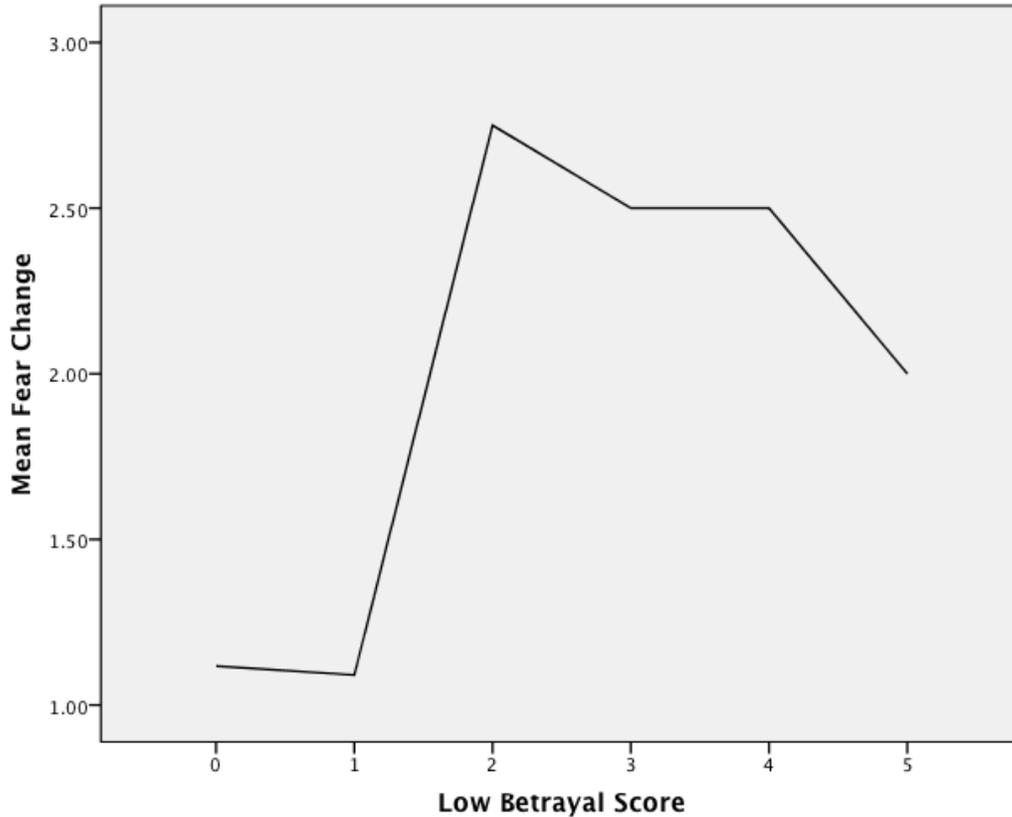
hypothesis 1f revealed no significant changes in shame, fear or dissociation for survivors of high or low betrayal traumas. In fact, all three outcome measures decreased (nonsignificantly) rather than increased. Thus, it seems that the intrapersonal threat condition was not successful as a threat manipulation. Remaining analyses focus only on the betrayal and non-betrayal threat conditions. Participants in the intrapersonal threat condition are excluded from analyses which collapse across conditions.

Figure 2.2
Mean Dissociation Change by Exposure to High Betrayal Traumas – Betrayal Threat Condition



Note. High betrayal score represents sum of trauma experience categories (e.g., 0 sexual abuse events + 2-5 physical abuse events + 6-20 emotional abuse events), and not simply total numbers of events.

Figure 2.3
Mean Fear Change by Low Betrayal Trauma Score – Non-Betrayal Threat Condition



Note. Low betrayal score represents sum of trauma experience categories (e.g., 0 sexual abuse events + 1 physical abuse events + 2-5 major automobile accidents), and not simply total numbers of events.

Research question 2: Do shame, dissociation, and fear responses vary according to threat type?

Hypothesis 2. In order to test the hypothesis that shame and dissociation would increase more in the betrayal threat compared to the non-betrayal threat condition and fear would increase more in the non-betrayal compared to the betrayal threat condition, three independent-samples *t*-tests were run comparing mean change scores on each

outcome measure for the betrayal threat and non-betrayal threat conditions. No significant differences were found in shame, dissociation, or fear change between the two conditions (See Table 2.3).

Table 2.3
Shame, Dissociation, and Fear Change Score Differences Between Betrayal and Non-Betrayal Threat Conditions

Measure	Condition	Mean(SD)
Shame Δ (SSGS)	Betrayal ($n = 41$)	.76(2.35)
	Non-Betrayal ($n = 41$)	.22(1.52)
Dissociation Δ (SSD)	Betrayal ($n = 34$)	.50(5.39)
	Non-Betrayal ($n = 39$)	-.33(4.23)
Fear Δ (PANAS-X)	Betrayal ($n = 40$)	1.73(3.49)
	Non-Betrayal ($n = 40$)	1.38(2.03)

Note. SD = Standard Deviaton, SSGS = State Shame and Guilt Scale, SSD = State Scale of Dissociation, PANAS-X = Positive and Negative Affect Schedule
 All comparisons non-significant.

Research question 3: Do symptom profiles vary depending upon whether people are dissociators or non-dissociators?

Hypothesis 3. In order to test the hypothesis that physical health, PTSD, relational health, hallucination symptoms, and chronic dissociation would be higher for people who dissociate from either of the threat conditions compared to people who do not dissociate, independent samples *t*-tests were run comparing mean outcome scores between the two groups. Dissociators endorsed significantly higher hallucination symptoms and chronic dissociation compared to non-dissociators. There was also a trend toward higher PTSD in

dissociators compared to non-dissociators. No differences were found in relational health or physical health between dissociators and non-dissociators (See Table 2.4 and Figure 2.4).

Discussion

This study examined the role of history of betrayal trauma in proneness to shame, fear, and dissociation in a sample of female trauma survivors. Freyd's (1996) BTT and Dickerson and colleagues' (2004) integrated specificity model served as the basis for hypothesis development and testing. Predictions were supported overall, with both hypothesis testing and descriptive explorations leading to a more nuanced understanding of the role of trauma history in proneness to shame, fear, and dissociation. As predicted, more exposure to HiBT predicted increased shame and dissociation, but not fear, in response to viewing images involving interpersonal threat. Also as predicted, more exposure to LoBT predicted increased fear, but not shame or dissociation in response to viewing images involving non-interpersonal threat. When betrayal trauma history was not taken into account, there were not overall differences in shame, dissociation, or fear response to the interpersonal threat images compared to the non-interpersonal threat images.

Although statistical analyses revealed significant linear associations between high betrayal and shame and dissociation, as well as low betrayal and fear, visual examination of plots of the data (Figures 2.1 and 2.2) revealed a more nuanced picture. Both a shame and dissociation response to the interpersonal threat images were elevated only among survivors of a large number of HiBT. Specifically, shame was elevated for participants with a HiBT score of more than 8, and dissociation was elevated for participants with a

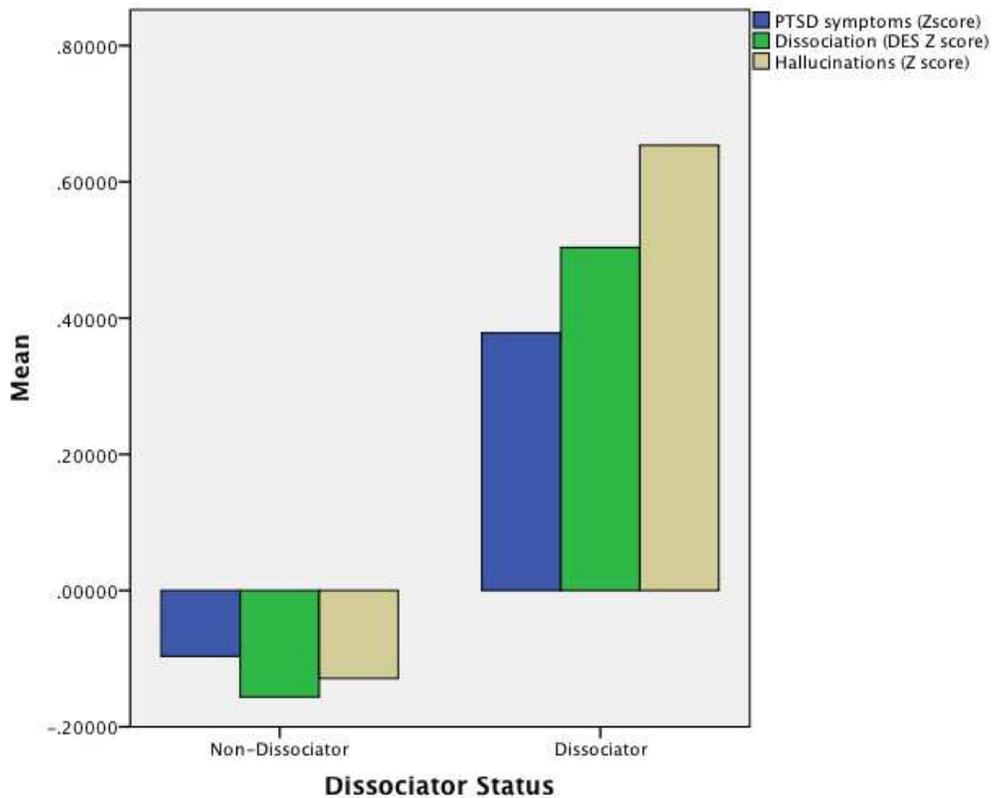
HiBT score of more than 18. The pattern was quite different for elevated fear in survivors of LoBT. Having a history of one LoBT did not contribute to an elevated fear response. Rather, the tipping point for fear-proneness to non-interpersonal threat seemed to occur once there had been more than one LoBT event. Although the sample used in the current study was

Table 2.4
Symptom Differences for Dissociators Versus Non-Dissociators

Measure	Dissociator Status	Mean(SD)
Chronic Dissociation (lnDES)	Dissociator (<i>n</i> = 21)	5.93(.76)**
	Non-Dissociator (<i>n</i> = 40)	5.33(.92)
Hallucination Symptoms (lnWHO)	Dissociator (<i>n</i> = 23)	1.37(.22)**
	Non-Dissociator (<i>n</i> = 39)	1.24(.21)
PTSD Symptoms (lnPCLC)	Dissociator (<i>n</i> = 23)	3.57(.44)†
	Non-Dissociator (<i>n</i> = 50)	3.39(.37)
Physical Health	Dissociator (<i>n</i> = 23)	2.48(1.04)
	Non-Dissociator (<i>n</i> = 50)	2.52(.97)
Relational Health (RHI)	Dissociator (<i>n</i> = 22)	129.09(16.93)
	Non-Dissociator (<i>n</i> = 45)	133.51(14.00)

Note. ln = Natural Log, DES = Dissociative Experiences Scale, PCLC = Posttraumatic Stress Disorder Symptom Checklist – Civilian Version, RHI = Relational Health Indices
† $p < .1$, * $p < .05$, ** $p < .01$.

Figure 2.4
Z-scored Mean Hallucination Symptoms, PTSD Symptoms, and Dissociation Symptoms for Dissociators and Non-Dissociators



Note. DES = Dissociative Experiences Scale.

prescreened for a history of at least one traumatic event, it was a sample of university students who we can presume are reasonably high-functioning given they managed to maintain their status as college students at the time of participating in this research . The findings that people with a very high number of HiBT are susceptible to feeling ashamed and dissociative to threats that may not faze others suggest that a replication with a clinical sample is warranted. Given that consumers of services at public-sector mental health clinics have a rate of trauma victimization as high as 98 percent (Frueh et al.,

2005) and that trauma is highly prevalent among people with severe mental illness (Cusack, Frueh, Hiers, Suffoletta-Maierle, & Bennett, 2003), it is likely that the findings observed in the current study would be more robust in a clinical population.

Although not a focus of the current study, it is notable that participants endorsed far more HiBT compared to LoBT. This is not surprising given that perpetrators who are close to the victim are much more often in contact with the victim compared to strangers. HiBT events including physical, sexual, and emotional abuse are much more likely to recur on a regular basis compared to LoBT events like major car accidents. The frequency of HiBT events, combined with the more complex associated responses including shame and dissociation, may mean that they contribute to a very different outcome compared to LoBT events.

In addition to answering the research questions pertaining to betrayal, shame, dissociation, and fear, a secondary aim of the current study was to determine whether dissociation-proneness may be related to negative psychological and physical health outcomes. It was predicted that all examined variables including PTSD, hallucination symptoms, relational health, physical health, and chronic dissociation would be elevated for people who dissociated from any threat type, compared to people who did not dissociate from the threat. This prediction was informed by research on emotional suppression, which indicates negative consequences of disconnection compared to experiencing the emotion (Roberts, Levenson, & Gross, 2008). Previous work has linked dissociation to psychosis (Moskowitz, 2011), PTSD (Najavitz & Walsh, 2012), and physical health problems (Haven & Pearlman, 2004). Relational health was also included as a possible correlate of dissociation-proneness because dissociation may be a method of

keeping parts of oneself out of connection in relationship (Jordan, 1997), and therefore may have an effect on perceived relational health. Findings pertaining to dissociation-proneness partially supported predictions. Chronic dissociation and hallucination symptoms significantly related to increased dissociation from threat, PTSD symptoms were marginally related to increased dissociation from threat, and relational and physical health were not related to increased dissociation from threat. Given the relatively small *n* of “dissociators” in the current study, replication with a clinical sample would help to determine whether there is indeed a relationship between dissociation-proneness and PTSD.

The finding that people who dissociate from threat have higher self-reported hallucination symptoms compared to people who do not dissociate from threat may have implications in terms of how psychotic symptoms are conceptualized. Rather than resulting from biological disturbances, the possibility that visual, auditory, and/or tactile hallucinations may serve a protective function in cases of HiBT should be taken into consideration. For example, a survivor of childhood sexual abuse may disconnect from awareness that she is being abused by a caregiver because awareness of the abuse would pose a dilemma: the caregiver is needed, but the caregiver is abusive. It may therefore be in the best interest of the victim to experience hallucinations rather than awareness of the abuse. For example, a child may see a green monster rather than seeing a needed caregiver perpetrating abuse (Gómez, Kaehler, & Freyd, under review). Additional work is needed to elucidate the possible functionality of hallucination symptoms and their co-occurrence with dissociation.

Limitations

This study has several limitations. As noted previously, the use of a non-clinical sample (albeit a sample of trauma survivors) limits the variability of the data in terms of number of traumatic events, severity of symptoms, and proneness to increases in shame, fear, and dissociation. Data were variable enough for interesting and significant patterns to emerge, but findings would likely be more robust with the use of a clinical sample.

Another limitation is that the intrapersonal threat condition did not prove sufficiently threatening to elicit shame, fear, or dissociation responses from participants. Although the same manipulation was used successfully in a previous study examining shame (Platt & Freyd, 2012), the survey program used differed between the two studies. It seems that the false negative feedback was convincing in the original study, but not in the current study. Unfortunately, research questions regarding the generalization of shame-proneness and dissociation-proneness to intrapersonal threat could not be addressed due to the ineffective manipulation.

Generalization of results should be made with caution given the difference in baseline shame between Asian/Asian Americans and all other groups. Future work should focus explicitly not only on racial and ethnic differences in shame, but more importantly on differences in contextual variables including cultural values and oppression. Asian values have been found to be more highly predictive of trauma disclosure compared to ethnicity alone (Foynes, Platt, Hall, & Freyd, in press). Discrimination has been found to have a large effect on mental health symptoms independent of demographic variables (Foynes, Shipherd, & Harrington, 2013). Elevated baseline shame in Asian/Asian

Americans in the current study, combined with the relevance of the Asian value of loss of face to shame as well as the relevance of discrimination to shame, suggest that future examination of contextual factors pertaining to shame in Asian/Asian American groups would be fruitful. Given the different function of shame in Asian cultures compared to Western culture (Mesquita & Karasawa, 2004), and in individualist versus collectivist cultures (Bagozzi, Verbeke, & Belschak, 2009), these groups may be of particular interest in future studies focusing on shame.

Conclusion

Overall, this study suggests that betrayal trauma theory (Freyd, 1996) may shed light not only on the functionality of dissociation in survivors of HiBT, but also the functionality of shame. This study presents a first step in establishing a place for shame in betrayal trauma theory in that it linked shame-proneness to HiBT history using an experimental design. Findings also revealed elevated fear-proneness to non-interpersonal threat among LoBT survivors. The findings that shame and dissociation-proneness are increased for HiBT survivors in response to interpersonal threat and fear-proneness is increased for LoBT survivors in response to non-interpersonal threat has implications for future research and clinical practice. A large body of evidence suggests that exposure-based treatments may be effective and helpful (Foa, Rothbaum, Riggs, & Murdoch, 1991; Ehlers et al., 2009; Ironson, Freund, Strauss, & Williams, 2002). However, research also indicates that exposure therapy is less effective for survivors of childhood trauma (Hembree, Street, Riggs, & Foa, 2004), people with emotion regulation difficulties (Feeny, Zoellner, & Foa., 2002), and people with high trauma-related shame (Ironson, Freund, B., Strauss, J., & Williams, 2002) In addition, published reports of treatment

efficacy typically compare a treatment of interest to a control group or another active treatment condition, but often do not take into account treatment dropout rates and symptom exacerbation (Schottenbauer, Glass, Arnkoff, Tendrick, & Gray, 2008). Dropout rates for exposure therapy are universally high (Hembree et al., 2003). It is important to determine whether shame and dissociation may lead to even higher dropout rates and/or symptom exacerbation in response to exposure, especially among survivors of extensive HiBT. It is also important to determine whether the mental health system is reliably capturing trauma responses involving shame and/or dissociation, especially if people exhibiting these problems do not meet full criteria for PTSD or any other DSM diagnosis. Finally, the findings suggest that the interpersonal harm that occurs for HiBT survivors may be particularly insidious in that it leads to alterations in self-perception (i.e., shame) and consciousness (i.e., dissociation) not seen in survivors of LoBT. It therefore stands to reason that healing of HiBT must occur relationally (Birrell & Freyd, 2006). The therapeutic relationship, friendships, significant other, support groups, and other positive relational environments provide the healing grounds in which the HiBT survivor can gradually and courageously begin to reconnect.

CHAPTER III

STUDY 2: TESTING A MODEL OF BYPASSED SHAME IN FEMALE SURVIVORS OF HIGH AND LOW BETRAYAL TRAUMAS

Introduction

The results of study 1 demonstrated that female survivors of traumatic events high in betrayal may be particularly prone to both dissociation and feelings of shame, and that this is especially true among survivors of extensive HiBT. Study 1 results also indicated that shame and dissociation do not seem to be related in the same way to LoBT history. The primary aim of study 2 is to explore the nature of the relationship between shame and dissociation. As in study 1, the current study focuses on women for the sake of clarity given the gendered nature of betrayal trauma (DePrince & Freyd 2002) and shame (Lewis, Alessandri, & Sullivan, 1992).

Although empirical evidence in addition to the results of study 1 supports the link between feelings of shame and dissociation (Dorahy, 2010), experimental investigations of the nature of the link are lacking. As described in the introduction to this dissertation, the most broadly accepted theory addressing the shame-dissociation link is that of dissociation as a defensive means of bypassing the painful shame state (Irwin, 1998; Talbot, Talbot, & Tu, 2004). Lewis (1971) was the first to articulate the hypothesized phenomenon of bypassed shame. She proposed that shame is such a threat to sense of identity, that ashamed individuals will develop an arsenal of tools to escape feeling it. Among these tools are denial of feeling ashamed, repression or holding back of shame, and dissociation of shame from awareness. Nathanson (1992) identified four methods of avoiding or bypassing shame: avoidance, attack self, attack other, and withdraw. In a

study of compassion training for people with high shame and self-criticism, Gilbert and Proctor (2006) state, *Control of internally aversive experiences can be via dissociation, substance misuse, cutting oneself, reminding oneself of one's faults and weaknesses or trying to rid oneself of 'bad things inside me'* (p. 360). Research supporting the theory of bypassed shame is scarce and largely correlational in nature (e.g., Irwin, 1998; Talbot, Talbot, & Tu, 2004).

In describing his escape theory of suicide, Baumeister (1990) explains that the individual will be motivated to escape the self after realizing that she has failed to meet an important standard, attributed the blame internally, and experienced an acute negative emotional state as a result of the self-conscious sense of shortfall. These conditions implicated in escape theory are nearly identical to those posited by Lewis (1995) to evoke a shame state. However, escape theory adds additional steps beyond those leading to the creation of what Lewis would consider to be a shame state in order to explain suicidal thoughts and actions. Baumeister does not posit that negative affect leads directly to suicidal thought as means of escape. Instead, he posits that an intermediate step of *cognitive deconstruction* first occurs which results in *an ongoing struggle to stop time and avoid meaning*, (p. 93). Although Baumeister does not use the term *dissociation*, his *cognitive deconstruction* aligns with dissociation defined as unintegrated elements of information processing that would ordinarily be integrated (DePrince & Freyd, 2007). Baumeister continues, *The subjective state alternates between an emotionally dead emptiness (akin to boredom) and strong doses of negative affect*, (p. 93). This description aligns closely with both the alternation of avoidance and intrusion characteristic of PTSD (DSM-IV-TR; APA, 2000) as well as Nijenhuis and colleagues' (2010) description of the

split between the apparently normal part (ANP) of the dissociative individual and the emotional part (EP). It is possible that the struggle between experiencing shame and attempting to disconnect from shame may thus manifest as avoidance and reexperiencing symptoms of PTSD. Escape theory indicates that suicide becomes a viable course of action not only when the individual is inconsolable following the perceived shortfall (and resulting shame) but when cognitive deconstruction has subsequently failed to adequately block negative affects and thoughts from entering awareness. Empirical findings support the contention that perceived failure to achieve standards predicts the desire for an altered state of consciousness and escape from the self (Chatard & Selimbegovic, 2011).

Escape theory, like the theory of bypassed shame, suggests that dissociation serves as a method of interrupting feelings of shame in order to protect the shamed individual from emotional pain. Taken together, the theory of bypassed shame and escape theory indicate that dissociation should increase as feelings of shame increase and, if dissociation functions as intended, shame should subsequently decrease, or at least fail to increase any further. This study tests the supposition that dissociation interrupts shame. To the extent that supposition is not supported, alternative models of the interplay between shame and dissociation should be considered.

BTT provides the framework for an alternative explanation of the relationship between shame and dissociation. According to BTT, dissociation may be an adaptive mechanism for disconnecting from awareness of abuse by a depended-upon perpetrator in order to maintain the relationship, thereby facilitating survival. It is possible that shame serves a similar function to dissociation for HiBT survivors. The shamed person may focus on her own sensed flaws and inadequacies rather than attending to the abuse in her

environment. Although BTT suggests that shame and dissociation may have similar survival functions, it does not suggest how shame and dissociation may work together. Perhaps some HiBT survivors are prone to shame and others are prone to dissociation. Alternatively, shame and dissociation may fuel one another as strategies of disconnection (Miller & Stiver, 1995). Strategies of disconnection are methods of staying connected in a relationship by paradoxically keeping threatening elements of self out of connection. For example, a shamed person may keep feelings of fear or anger out of the relationship and a dissociative person may keep awareness of abuse out of the relationship. It is possible that a shamed person is more prone to dissociation because she is already primed for disconnection by her feelings of shame. Likewise, it is possible that being in a dissociative state increases shame-proneness for the same reason. Shame and dissociation have both been empirically linked to disconnection (Dorahy, 2010).

Study Hypotheses

The primary aim of the current study is to test a model of bypassed shame. Although this model has guided clinical practice, especially among psychoanalysts and psychodynamic clinicians, it has never been evaluated experimentally. The current study tests a model of bypassed shame using a dissociation induction. It is hypothesized, in accordance with most extant literature on the shame-dissociation link, that higher baseline shame will predict an increase in dissociation following the induction. In accordance with the theory of bypassed shame, it is predicted that dissociation will interrupt the shame response and therefore shame will decrease in response to the induction. It is also predicted that HiBT experience will relate to higher shame at baseline. This prediction is based on previous research revealing higher shame in

survivors of interpersonal compared to non-interpersonal trauma (Amstadter & Vernon, 2008), as well as the results of Study 1. Finally, to assess whether the relationship between shame and dissociation is unique, it is predicted that unlike shame, feelings of fear will not lead to an increase in dissociation following the induction.

Rather than dissociation serving as a method of interrupting the pain of shame, as posited by the theory of bypassed shame, it is possible that shame and dissociation enhance one another. Survivors of HiBT in particular may disconnect from the reality of the abusive situation by blaming themselves rather than placing the blame on the perpetrator of the abuse. The disconnection of shame may beget the disconnection of dissociation and vice versa. If this is the case, higher baseline shame would predict larger increases in dissociation following the induction, but increased dissociation would predict subsequent increases rather than decreases in shame. It is possible that self-blame and shame may contribute to dissociation by guiding the victim's attention inward toward an exaggerated sense of badness and away from thoughts, feelings, behaviors, and situations indicative of the abuse.

Method

Participants

One hundred twenty-seven participants were recruited via SONA Systems, the University of Oregon's system for online participant recruitment and data management. Participants were pre-screened for a history of at least one experience of psychological trauma using the Brief Betrayal Trauma Survey (BBTS; Goldberg & Freyd, 2006), and were also prescreened for female gender. Participant demographics reflect the demographics of the Human Subjects Pool at the University of Oregon. For Spring, 2012,

when data collection took place, the mean participant age was 19.9. Seventy-five percent of the pool identified as White, 11% Asian, 4% African American, 2% Native Hawaiian or other Pacific Islander, 1% American Indian or Alaskan Native, and 7% other.

Measures

See study 1 for descriptions and psychometric information for the State Shame and Guilt Scale (SSGS; Marschall et al., 1994), Brief Betrayal Trauma Survey (BBTS; Goldberg & Freyd, 2006), State Scale of Dissociation (SSD; Krüger & Mace, 2002), and Positive and Negative Affect Schedule - Expanded Form, fear subscale (PANAS-X; Watson & Clark, 1994).

Procedure

Following the prescreening for trauma experience using the BBTS and the prescreening for female gender, participants were invited to the Dynamics Lab at the University of Oregon Psychology department to complete the study. During the informed consent procedure, participants were notified that participation was voluntary and that they could choose to leave at any time. The informed consent process took place with a trained research assistant in the lab. Participants were given the opportunity to ask questions prior to beginning the study. Study questionnaires were administered on a lab computer via Qualtrics software. All participants completed the same questionnaires prior to the dissociation induction as follows: BBTS, SSGS, SSD, PANAS-X fear subscale. Following the induction, all participants completed the SSGS, SSD, and PANAS-X once more.

Dissociation induction. The dissociation induction asked participants to recount up to four experiences in which they knew they should feel an emotion and yet felt

detached from emotion, followed by a period of guided reflection on the disconnected feeling, and finally viewing a series of phrases characteristic of dissociation. The example given to participants involves feeling happy at a graduation without fully experiencing the happiness (Zoellner et al., 2007). This induction was chosen for the current study, because unlike other dissociation inductions (see Leonard, Telch, & Harrington, 1999 for a review), this method does not mention traumatic experiences. The induction was created by Zoellner and colleagues (2007) who provided evidence of its effectiveness.

Following the induction and self-report questionnaires, participants were thoroughly debriefed regarding the hypotheses and purpose of the study and offered a list of community resources in the event that they found any element of the study to be distressing. No adverse reactions were reported during the debriefing.

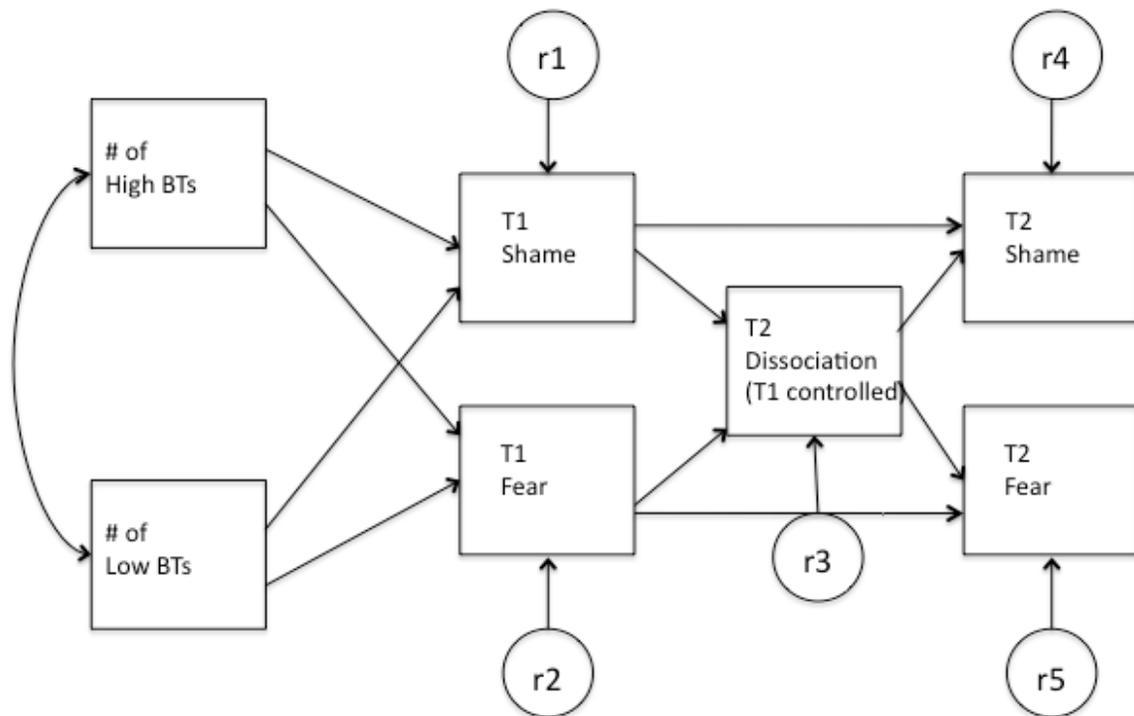
Statistical Analyses

Structural equation modeling (SEM) with Amos (Arbuckle & Wothke, 1999) software was used to test a model of bypassed shame in study 2. See figure 3.1 for the tested model. It was hypothesized that the path between HiBT and baseline shame would be significant. It was also predicted that higher baseline shame, but not higher baseline fear, would lead to increased dissociation following the induction. It was expected that the dissociation induction would lead to decreased feelings of shame, but would not affect feelings of fear.

A baseline model was created including LoBT and HiBT as exogenous variables and pre- and post-induction log transformed shame and fear scores and dissociation change scores as endogenous variables (see Figure 3.2). Log transformations were performed to address skew in the variables. The path model was estimated using

maximum likelihood estimation of means and intercepts in order to deal with missing data. An additional model was run excluding non-significant paths (see Figure 3.3) and a third model was run with correlated residuals between time 1 fear and shame and between time 2 fear and shame to account for the possibility of a latent time 1 negative affect and time 2 negative affect factor (see figure 3.4).

Figure 3.1
Bypassed Shame Model



Note. BT = Betrayal Trauma, T = Time, r = residual.

Results

Descriptive Statistics and Manipulation Check

Sixty-one percent of participants ($n = 77$ participants) reported at least one traumatic event high in betrayal. Seventy percent ($n = 89$ participants) reported at least one traumatic event low in betrayal. Thirty-two percent of the sample ($n = 41$

participants) reported at least one HiBT and at least one LoBT. See Table 3.1 for means, standard deviations, and correlations. The dissociation induction successfully induced dissociation in that self-reported scores on the SSD significantly ($p < .001$) increased by a mean of .08 (log transformed), $t(57) = 4.03$.

Table 3.1
Means, Standard Deviations, and Correlations

Measure	HiBT	LoBT	SSGS ^a	PANAS-X ^a	SSD ^a	Mean	SD
HiBT	-					3.79	5.49
LoBT	.43 ^{***}	-				1.22	1.80
SSGS	.27 ^{**}	.34 ^{***}	-			1.95	3.45
PANAS-X	.15	.41 ^{***}	.71 ^{***}	-		3.06	4.12
SSD	.23 [*]	.27 [*]	.86 ^{***}	.74 ^{***}	-	20.56	25.97

Note. ^aBaseline measures.

HiBT= High Betrayal Traumas, LoBT = Low Betrayal Traumas, SSGS = State Shame and Guilt Scale, PANAS-X = Positive and Negative Affect Schedule, SSD = State Scale of Dissociation.

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

Hypothesis Testing

In the baseline model, model fit was poor according to several fit indices ($\chi^2(10) = 89.42$, $p < .001$; CFI = .79; RMSEA = .25, $p_{close} < .001$). In the second model with non-significant paths removed, fit remained poor ($\chi^2(12) = 89.94$, $p < .001$, $\chi^2 \Delta(2) = .00$, ns; CFI = .79; RMSEA = .23, $p_{close} < .001$). In the third model, the residuals between time 1 shame and fear and time 2 shame and fear were correlated in order to account for the possibility of a latent negative affect factor. The addition of paths between the residuals

resulted in significant improvement in model fit ($\chi^2 \Delta(2) = 38.0, p < .001$), and adequate to good fit for this final model ($\chi^2(10) = 14, ns$; CFI = .99; RMSEA = .06, $p_{close} = .39$).

HiBT was not related to baseline fear ($p = .72$), nor was baseline fear related to dissociation change ($p = .34$); thus these paths were omitted from the final model. In the final model, the hypothesis that HiBT would be related to higher baseline shame was supported ($\beta = .22, p < .01$). LoBT was also found to relate to baseline fear ($\beta = .40, p < .001$) as well as baseline shame ($\beta = .23, p < .05$). The hypothesis that baseline shame would predict an increase in dissociation following the induction was supported with marginal significance ($\beta = .20, p = .07$). As expected, baseline fear did not predict an increase in dissociation.

Remaining hypotheses regarding the bypassed shame model were not supported. Shame did not decrease following an increase in dissociation. Rather, shame increased in response to an increase in dissociation ($\beta = .69, p < .001$). Likewise, self-reported fear increased following the dissociation induction ($\beta = .71, p < .001$).

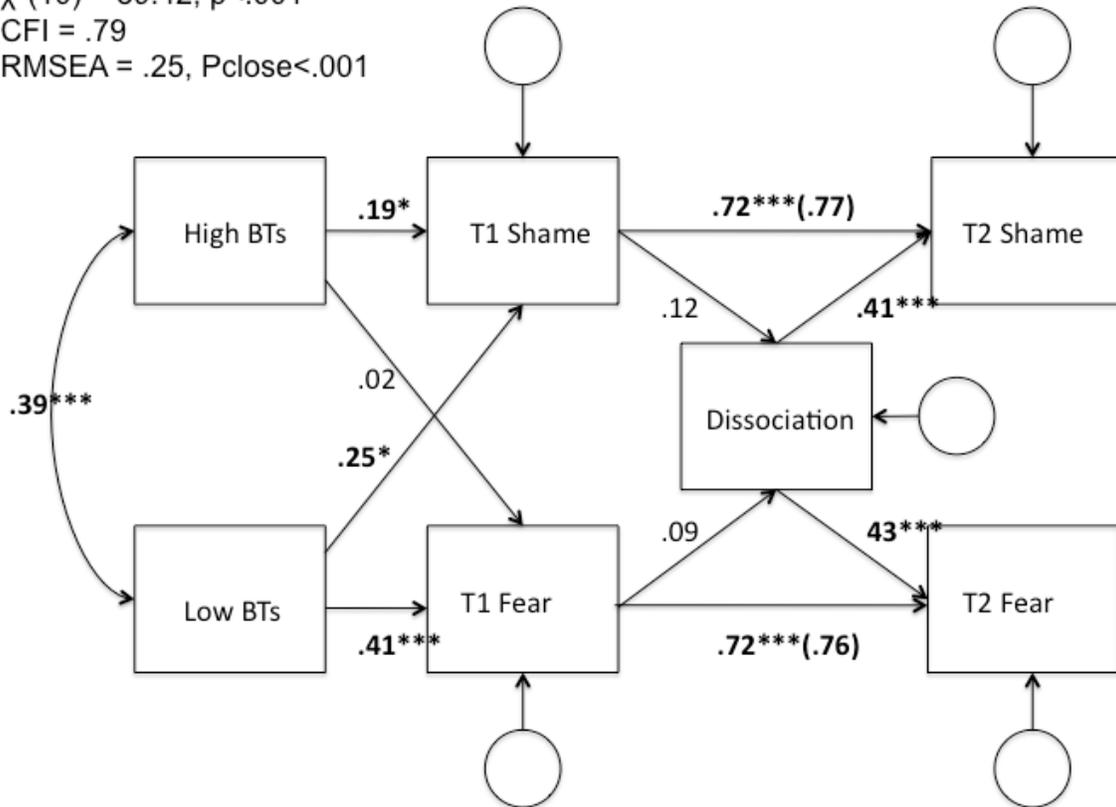
Discussion

The current study examined the nature of the link between shame and dissociation in survivors of traumatic events high and low in betrayal. The most prominent theory addressing the connection between shame and dissociation – the bypassed shame theory – (Kaufman, 1989; Lewis, 1995), which posits that dissociation is a means of protecting the self from the painful shame state, was examined. Results revealed that although higher feelings of shame at baseline predicted, with marginal significance, an increase in dissociation following the dissociation induction, bypassed shame theory was not

supported on the whole. Rather than shame being interrupted by dissociation and thereby decreasing, shame in fact increased following the dissociation induction. In addition, feelings of fear increased following the induction.

Figure 3.2
Test of Bypassed Shame Model 1

$\chi^2(10) = 89.42, p < .001$
 CFI = .79
 RMSEA = .25, Pclose < .001

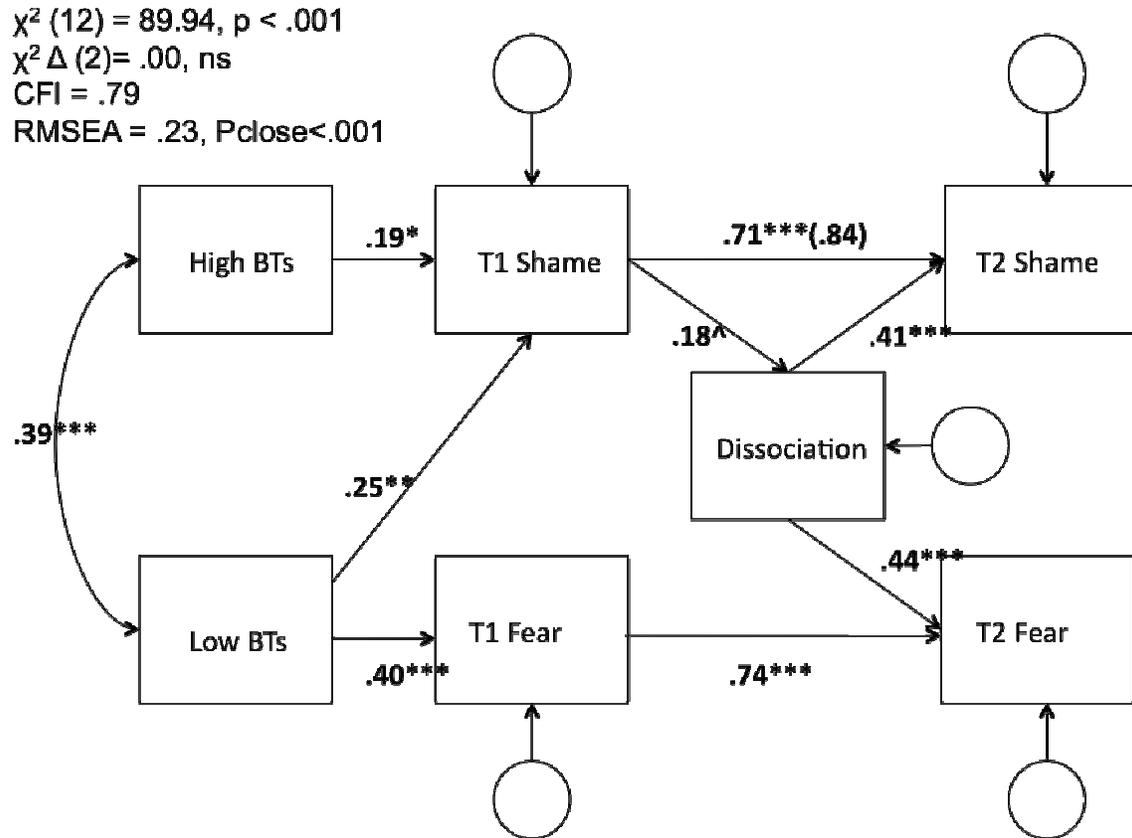


Note. BT = Betrayal Trauma, T = Time, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, Pclose = Probability of a close fit.
 * $p < .05$, *** $p < .001$

This result lends support to the literature on shame as a traumatic memory (Matos & Pinto-Gouveia, 2010), which suggests that among trauma survivors, feelings of shame may take the form of a flashback, in which the shaming situation is relived in the current moment. Using a shame memory priming paradigm, Matos and Pinto-Gouveia (2010)

demonstrated that early experiences of being shamed and feeling ashamed related to later PTSD symptoms including intrusive thoughts, hypervigilance, and symptoms of

Figure 3.3
Test of Bypassed Shame Model 2



Note. BT = Betrayal Trauma, T = Time, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, Pclose = Probability of a close fit.

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

avoidance upon recall of the shame event. The authors suggest that a shame experience itself may actually function as a traumatic memory, indicating that traumatic dissociation may stem directly from being reminded of the earlier shame state. An additional study provides empirical support for this theory of traumatic shame (Robinaugh & McNally,

2010). In this study, centrality of shame memory was associated with more severe PTSD symptoms including higher frequency and vividness of intrusive memories.

Brewin (2005) describes the process by which traumatic memories are formed and how it differs from the process of non-traumatic memory formation. Traumatic memories are formed in the context of often extreme physiological and emotional arousal. Elements of the traumatic event may be dissociated from awareness due to narrowed attention at the time of the trauma and the inability to attend to all relevant details of the situation. In contrast to verbally accessible memories, *situationally accessible memories* (SAM; p. 140) are formed, which are later recalled involuntarily in response to trauma-related cues. Brewin states, *The emotions that accompany SAM memories are restricted to those that were experienced during the trauma or subsequent moments of intense arousal (“primary emotions”). They usually consist of fear, helplessness, and horror, but may less often include other emotions such as shame.* (p. 140).

The dissociative state induced by the manipulation was accompanied by increases in both shame and fear, suggesting the possibility of intrusive reliving of traumatic events. It is possible that shame and fear increased following the dissociation induction as a result of SAM memories being triggered by the combination of completing a trauma questionnaire and a dissociation induction. Although the dissociation induction did not at all mention traumatic events, qualitative review of the events participants chose to write about revealed that roughly one-third of the events were clearly traumatic (e.g., “When my mom passed away after killing herself”), another third of the events were ambiguous (e.g., “When I think about my family situation), and another third were less likely to be

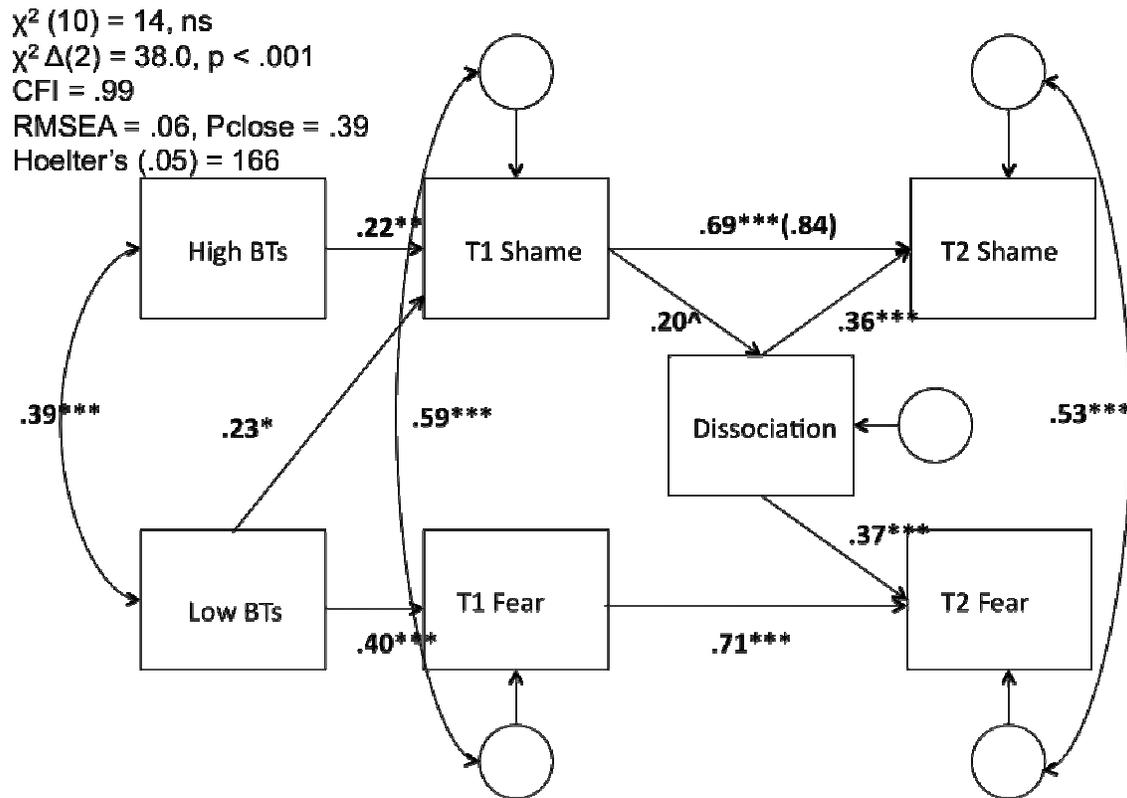
traumatic (e.g., “Graduation”). Considering that all participants in the study endorsed events considered traumatic on the BBTS, these rough categorizations should not obscure the possibility that even the events less likely to be traumatic may have involved SAM memories of past traumas.

Based on the results of study 1 which linked HiBT to shame, prior research associating shame with interpersonal trauma (Amstadter & Vernon, 2008), and the theoretical proposition that shame may be an adaptive response to HiBT, it was hypothesized that HiBT would relate to baseline shame. This hypothesis was supported. LoBT events were also found to relate to intensity of both baseline shame and fear. The association between LoBT and shame was not predicted but may be explained by Janoff-Bulman’s (1992) theory of shattered assumptions. Janoff-Bulman suggests that traumatic events alter an individual’s fundamental beliefs about the self, the world, or others. It is possible that even non-relational traumatic events may alter beliefs about the self as competent or safe. In both study 1 and study 2, HiBT related to baseline shame (see Table 2.1), whereas LoBT related to baseline shame in study 2, but not study 1. The discrepancy in baseline correlations may be the result of a procedural difference between the two studies. In study 1, the BBTS was administered after the SSGS, whereas in Study 2, the order was reversed. Therefore, it seems that whereas LoBT is related to shame only after being reminded of traumatic events by answering trauma-related questions, HiBT is related to baseline shame regardless of trauma priming.

As noted earlier, BTT posits that dissociation is more likely to be related to HiBT than LoBT given the adaptive nature of dissociation for surviving HiBTs. If the victim is able to distance herself from awareness of the abuse via dissociation, she is less likely to

act in ways that could jeopardize the relationship with the perpetrator, such as fighting or fleeing. In this study, HiBT was associated with shame which in turn predicted dissociation, which in turn predicted more shame. Thus, results of this study support the proposition that shame and dissociation may function together as mechanisms of betrayal blindness. Shame and dissociation have both been linked to interpersonal disconnection (Dorahy, 2010). It may be that shame helps the HiBT victim to attend to an exaggerated

Figure 3.4
Test of Bypassed Shame Model 3



Note. BT = Betrayal Trauma, T = Time, CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, Pclose = Probability of a close fit.
[^] $p = .05$, * $p < .05$, ** $p < .01$, *** $p < .001$

sense of inner badness rather than attending to the abuse by the perpetrator. This attentional shift warrants further study as a possible mechanism of disconnection.

Limitations

Structural equation modeling techniques were used in the current study in order to model the predicted relationships between several proposed variables at once in a cohesive model. The sample size in the current study ($n = 127$) may limit the statistical power of the data analysis using SEM. Hoelter (1983) argued that to ensure adequate power for structural equation modeling analysis, a minimum sample size of 200 is needed. However, there is little consensus on the necessary sample size. It has been argued that the number of participants needed depends upon the number of free parameters estimated. In particular, Schreiber, Nora, Stage, Barlow, and King (2006) recommend 10 participants for each free parameter estimated. Using this criteria, sample size for the current study is adequate.

Another limitation related to the SEM analyses is that the initial proposed model lacked adequate fit according to several fit indices. For this reason, the most theoretically sensible modification was made, correlating the time 1 fear and shame residuals as well as the time 2 fear and shame residuals. These added paths were based on the supposition that shame and fear both load on a latent factor representing negative affect and that their residuals may be partially composed of this latent factor. Replication of the results using the model with correlated residuals will bolster support for the model.

Although the sample used in the current study was composed entirely of participants who endorsed events considered traumatic on the BBTS, participants were drawn from a population of undergraduates rather than a clinical population. Future

studies should assess the shame-dissociation link with a clinical population. Replications with more diverse samples are also warranted. Although evidence suggests that shame expression is universal (Tracy & Matsumoto, 2008), the cultural significance of shame differs across cultures (Mesquita & Karasawa, 2004), which could possibly affect its relationship with both traumatic experiences and dissociation.

Conclusion

Feelings of shame and dissociation have both been associated with interpersonal disconnection (Dorahy, 2010) and revictimization (Kessler & Bieschke, 1999), little empirical work has examined the relationship between these two trauma-related variables. Study 1 results indicated that shame and dissociation may have a special association with HiBT history, whereas LoBT history has no such association with either variable. The theory of bypassed shame (Kaufman, 1989; Lewis, 1971) is the most prominent psychological theory explicitly addressing the nature of the relationship between shame and dissociation. A dissociation induction was used to test this theory in the current study. It was found that trauma history related to increased shame at baseline, which predicted a more substantial increase in dissociation in response to the induction, but bypassed shame theory was not supported in that dissociation did not interrupt or decrease shame. Rather, both shame and fear increased following the induction, indicating that dissociation may possibly facilitate increased intrusive feelings of shame in survivors of trauma. This study represents an additional step toward understanding the role of shame as it interacts with dissociation in betrayal trauma survivors. Future work is needed in order to determine whether shame and dissociation together make HiBT survivors less aware of the betrayal they have endured.

CHAPTER IV

STUDY 3: PSYCHOLOGICAL AND PHYSICAL HEALTH CONSEQUENCES OF CHRONIC SHAME

Introduction

Chronic shame has been found to predict depression (Andrews, 1995), PTSD (Andrews et al., 2000; Karl et al., 2009; Leskala et al., 2002; Owens & Chard, 2011), interpersonal problem solving deficits (Covert et al., 2003), physical health problems, and earlier mortality (Dickerson et al., 2009). Shame has also been associated with increased suicidality (Wilson, Drozdek, & Turkovic, 2006). Attention to the role of shame in traumatic stress was relatively absent from the literature until recently. As of the year 2000, there was, “no direct evidence that shame was implicated in the onset or course of PTSD” (Andrews et al., 2000, p.69). Since that time, converging evidence suggests that chronic shame may indeed play a causal role in the disorder.

Shame researchers are in nearly perfect agreement that chronic shame leads to negative health and behavioral consequences (e.g., Andrews, 1995; Leskala et al., 2002; Dickerson et al., 2009). However, little attention has been paid to whether the type of chronic shame experienced makes a difference. Shame is differentiated from guilt in that the shamed person is focused on the badness of the self whereas the guilty person places the badness on the behavior (Lewis, 1971, Tangney et al., 2007). Shame-prone individuals are inclined to experience “bad self” thoughts, emotion, and related physiology following particular day-to-day circumstances such as receiving negative feedback on a homework assignment. An example of a measure of shame-proneness is

the Test of Self-Conscious Affect (TOSCA; Tangney et al., 2000). The TOSCA consists of several vignettes and asks participants to rate how they would feel, think, and behave in response to each potentially shame-provoking scenario. The Guilt and Shame Proneness (GASP; Cohen, Wolf, Panter, & Insko, 2011) scale also includes a shame-proneness subscale. Individuals with trait shame tend to label the self as bad on an ongoing basis, regardless of situational factors. An example of a scale measuring trait shame is the Experience of Shame Scale (ESS; Andrews, Qian, & Valentine, 2002). The ESS consists of a series of statements such as, “I feel ashamed of the sort of person I am” and asks participants to what extent they agree with each statement. People who experience trauma-focused shame may feel flawed only when explicitly reminded of the traumatic event. An example of a measure of trauma-focused shame is the Trauma Appraisal Questionnaire shame subscale (TAQ; DePrince, Zurbriggen, Chu & Smart, 2011), which asks participants to consider their worst traumatic event and respond to a series of items based on how they feel when thinking about that traumatic event. Thus, trauma-focused shame and shame-proneness measures are both measures of situational shame, whereas measures of trait shame assess shame that endures across situations.

Greater autobiographical centrality of a traumatic event has been associated with more severe PTSD symptoms including dissociative experiences (Robinaugh & McNally, 2010; Berntsen & Rubin, 2006; Matos & Pinto-Gouveia, 2010). Events with high autobiographical centrality are those that have been incorporated into a person’s self-concept. It has been suggested that shame-proneness may originate from the internalization of the abusive behaviors and cold demeanor of the perpetrator toward the traumatized individual (Matos & Pinto-Gouveia, 2010). It is possible that traumatic

events may become internalized even further such that the individual feels ashamed most of the time without any obvious precipitating event. Trait shame without any situational trigger may represent a complete internalization of earlier traumatic events with or without awareness of the traumatic origins of the shame (“It happened to me because I am bad” may become simply, “I am bad.”)

Study Hypotheses

In this study, it was posited that it is centrality of *shame* rather than centrality of *trauma* that leads to worse psychological and physical health symptoms. Therefore it was hypothesized that shame-proneness, trauma-focused shame, and trait shame would all relate to dissociation, poorer physical health, poorer relational health, PTSD, and hallucination symptoms, but that trait shame would be the most strongly related to these outcomes compared to the other types of shame. In addition, because betrayal trauma is so infused with the social-evaluative threat that often leads to the development of shame and negative health consequences (Gruenewald, et. al, 2004), it was predicted that history of HiBT would relate to all types of shame and health outcomes, whereas LoBT history would not relate to shame or health outcomes.

Method

Participants

Study 3 data were collected online via Qualtrics software. Two hundred forty-seven self-reported trauma survivors were recruited via SONA Systems, the University of Oregon’s system for online participant recruitment and data management. Participants who were not at least 18 years of age were prescreened out as a University of Oregon Human Subjects Pool requirement. Participants were included in the study if they

endorsed having experienced at least one lifetime traumatic event. Due to an oversight involving the prescreening measures, participants were not prescreened for female gender. As a result, both males and females are included in the study. Participant data were analyzed for the current study if the participant replied in the affirmative to having experienced at least one lifetime traumatic event using the Brief Betrayal Trauma Survey (BBTS; Goldberg & Freyd, 2006). Participant demographics reflect the demographics of the Human Subjects Pool at the University of Oregon. For Winter to Spring, 2012, when data collection took place, the mean participant age was 19.8. Seventy-six percent of the pool identified as White, 11% Asian, 3% African American, 2% Native Hawaiian or other Pacific Islander, 1% American Indian or Alaskan Native, and 8% other. Sixty-six percent of the sample identified as female.

Measures

See study 1 for descriptions and psychometric information for the BBTS, hallucination symptom items, PCLC-C, RHI, physical health item, and DES. The following additional measures were included in study 3.

Guilt and Shame Proneness (GASP; Cohen, Wolf, Panter, & Insko, 2011).

The GASP is a new measure of shame-proneness and guilt-proneness comprised of 16 items rated on a 1-7 Likert scale. In initial psychometric studies by the authors, the GASP demonstrated good convergent validity with the Test of Self-Conscious Affect (TOSCA; Tangney, Deiring, Wagner, & Gramzow, 2000), the current “gold-standard” measure of shame-proneness. The GASP is also much shorter than the TOSCA and wording is simpler. The shame-withdraw subscale assesses the tendency toward withdrawal action tendencies, whereas the shame-negative-self-evaluation (shame-NSE) subscale assesses

the tendency toward self-judgment and self-criticism. According to the authors, people high in shame-NSE are, “more likely to be plagued by neuroticism, personal distress, low self-esteem, and low self-compassion” (p. 964). An example of an item from the shame-withdraw subscale is, “Your home is very messy and unexpected guests knock on your door and invite themselves in. What is the likelihood that you would avoid the guests until they leave?” An example from the shame-negative-self-evaluation subscale is, “You rip an article out of the journal in the library and take it with you. Your teacher discovers what you did and tells the librarian and your entire class. What is the likelihood that this would make you feel like a bad person?”

The Experience of Shame Scale (ESS; Andrews, Qian, & Valentine, 2002).

The Experience of Shame Scale (ESS; Andrews, Qian, & Valentine, 2002) consists of 25 items used to assess characterological, behavioral, and bodily trait shame. Participants are asked about shame feelings they have experienced “at any time in the past year” from “not at all” (1) to “very much” (4). The authors of the scale found high test-retest reliability.

The Trauma Appraisal Questionnaire (TAQ; DePrince, Zurbriggen, Chu & Smart, 2011), shame subscale. The ESS shame subscale allows assessment of peritraumatic and current feelings of shame when considering the worst traumatic event. The TAQ has demonstrated excellent internal consistency and test-retest reliability, as well as significant convergent, divergent and concurrent validity (DePrince et al., 2011). Psychometric properties were generally excellent across three separate samples, including one community and two undergraduate (DePrince et al., 2011).

Procedure

Prior to completion of study questionnaires, an informed consent form appeared on the screen and the participant was given the option to click “I agree” or “I do not agree.” There was no penalty for deciding not to complete the study. All study questionnaires were administered online in a counterbalanced order such that half of the participants completed the BBTS at the beginning of the study, and the other half completed the BBTS at the end of the study. This counterbalancing was done to mitigate the possibility of priming effects of answering trauma questions. Upon completion of all questionnaires, a debriefing form appeared on the screen.

Statistical Analyses

Data were analyzed using PASW statistical software (SPSS Inc., 2009). Hypotheses regarding the relative contributions of shame-proneness, trauma-focused shame, and trait shame were examined using hierarchical regressions in which trauma-focused shame (TAQ) was entered first, followed by shame-proneness (GASP), and then trait shame (ESS). Order of variable entry into regressions was based on centrality of shame theory which posits that shame that is more central to a person’s identity should cause more problematic outcomes (Pinto-Gouveia & Matos, 2010). It was predicted that for all outcome measures (DES, RHI, physical health, PCLC-C, and hallucination symptoms) all three types of shame would make significant contributions, but the contribution to R^2 would be largest for trait shame followed by shame-proneness and then trauma-focused shame. Simple correlations were examined to test the hypothesis that HiBT would significantly relate to all shame types and outcomes, whereas LoBT would not significantly relate to any shame type or outcome.

Results

Dimension Reduction

In order to determine whether to use the full scale or individual subscales for the GASP, RHI, and ESS, a factor analysis was run on each measure. All factor analyses were performed using principal axis factoring with direct oblimin rotation. For the GASP, two separate factors were revealed with items perfectly corresponding to the withdraw and negative self-evaluation (NSE) subscales. The negative self-evaluation factor accounted for 29 percent of the variance and the withdraw factor accounted for 24 percent of the variance in the items. For this reason, the separate subscales were retained for the GASP scale. Analysis of the RHI items revealed no consistent pattern of items loading on factors corresponding with particular subscales. The first factor accounted for 32 percent of the variance, with another 41 percent of the variance spread across the following four factors. For this reason, the entire RHI scale was used in the current study rather than partitioning into subscales. Likewise, no consistent pattern was found in the ESS items. The first factor accounted for 45 percent of the item variance, with an additional four factors accounting for 25 percent of the variance. The entire ESS was included in analyses in the current study rather than including individual subscales.

Construct Validity of the GASP Measure

Given that the GASP is a very new measure of shame-proneness, convergent validity with the other included shame measures was examined. The GASP-NSE significantly correlated with the other two measures of shame: the TAQ and the ESS. The GASP-withdraw subscale correlated with the TAQ, but not the ESS.

The GASP-NSE subscale correlated negatively with LoBT, hallucination symptoms, and dissociative symptoms. No other shame scale correlated negatively with any of these measures, indicating that the GASP-NSE may be measuring a different construct than the other shame measures. For this reason, the GASP-withdraw subscale, but not the GASP-NSE subscale, is included in analyses.

DES Missing Data

Given that the DES scale contained a larger proportion of missing items compared to any other scale (missing data $n = 86$, 37%), the cause and pattern of missingness were investigated. It is possible that the use of the sliding scale response indicator may have increased the likelihood that participants would skip items. As opposed to the Likert scales used in all other measures, the sliding scale required that participants click on an indicator, hold the mouse button, and slide the indicator to the appropriate location. On all other measures, participants simply needed to click the appropriate response. In general, 0 was the most likely response for a missing item because participants who wished to choose 0 may have left the slide rule at 0, which was the default location, instead of clicking on it, which would have been necessary in order for the software to register the response.

To investigate the pattern of missingness, a logistic regression was run with HiBT and LoBT entered as simultaneous predictors and a dichotomous missing data item (any versus no missing DES data) entered as the outcome. Results revealed that HiBT

Table 4.1
Means, Standard Deviations, and Correlations

Measure	HiBT	LoBT	ESS	TAQ	GASP-NSE	GASP-with-draw	RHI	Health	PCL-C	Hallucinations	Mean	SD
HiBT	-										3.16	5.35
LoBT	.46^{***}	-									1.81	3.13
ESS	.11 [^]	-.05	-								57.65	15.35
TAQ	.29^{***}	.07	.36^{***}	-							13.88	7.19
GASP-NSE	-.02	-.25^{***}	.30^{***}	.13[*]	-						21.02	4.54
GASP-with-draw	-.05	.08	.08	.22^{**}	.05	-					12.39	3.98
RHI	-.22^{**}	-.13	-.20^{**}	-.25^{***}	.12	-.13	-				59.24	29.22
Phys. Health	.12 [^]	.08	.26^{***}	.25^{***}	.04	-.07	-.29^{***}	-			2.42	.82
PCLC	.21[*]	.29[*]	.43^{***}	.41^{***}	.01	.33^{***}	-.40^{***}	.24^{***}	-		34.20	11.78
Hallucinations	.20^{**}	.21^{***}	.11	.18^{**}	-.20[*]	.08	-.01	-.04	.22^{**}	-	.79	.99
DES	.16[*]	.35^{**}	.17[*]	.12 [^]	-.23^{**}	.29^{***}	-.24	-.04	.45^{***}	.39^{***}	13.71	12.49

Note. HiBT = High Betrayal Traumas, LoBT = Low Betrayal Traumas, ESS = Experience of Shame Scale, TAQ = Trauma Appraisal Questionnaire, GASP = Guilt and Shame Proneness Scale, RHI = Relational Health Indices, PCLC = Posttraumatic Stress Disorder Symptom Checklist, DES = Dissociative Experiences Scale.

[^] $p < .1$, ^{*} $p < .05$, ^{**} $p < .01$, ^{***} $p < .001$

history significantly increased the odds of skipping DES items such that for each HiBT, odds of skipping an item increased by seven percent (Wald = 5.76, Exp(B) = 1.07, $p = .01$). LoBT history did not predict likelihood of skipping an item. It should be noted that the missing data issue was not as relevant in study 1 because study 1 participants were shown a message alerting them to missing items and asking whether they wanted to complete the missing items. In Study 1, there were no significant differences in any measured variables between people with and without missing DES data. Although

missing items were conservatively estimated to be 0, it is also quite possible that people with a history of HiBT were also more likely to skip items that would not have resulted in a 0 score. Thus, DES results in this study may well be underestimated for people with HiBT history and should be interpreted with caution.

Trauma Experience

Forty-nine percent ($n = 114$) of participants reported experiencing at least one HiBT. Sixty percent ($n = 141$) reported experiencing at least one LoBT. Twenty-eight percent ($n = 65$) reported at least one LoBT and at least one HiBT.

Hierarchical Regressions

PCLC. The introduction of each shame measure significantly increased the R^2 value for the model. All three measures contributed significantly to the final model, which is presented in Table 4.2. The final model accounts for 32 percent of the variance in the PCLC scores.

Table 4.2
Trauma-Focused Shame, Shame-Proneness, and Trait Shame Predict PTSD

Measure	Variable	B	SE B	B	Adj. R^2
PTSD (PCLC)	Trauma-focused shame (TAQ)	.39	.10	.24**	.32***
	Shame-proneness (GASP-Withdraw)	.76	.17	.26***	
	Trait shame (ESS)	.26	.05	.33***	

Note. PCLC = Posttraumatic Stress Disorders Symptom Checklist – Civilian Version, TAQ = Trauma Appraisal Questionnaire, ESS = Experience of Shame Scale

** $p < .01$, *** $p < .001$

DES. Steps 2 and 3 significantly contributed to the R^2 value. The final model, accounting for 8 percent of the variance in DES scores, includes the all three shame variables, though the TAQ in step 1 is non-significant (Table 4.3).

Table 4.3
Shame-Proneness and Trait Shame Predict Dissociation

Measure	Variable	B	SE B	B	Adj. R^2
Dissociation (DES)	Trauma-focused shame (TAQ)	.01	.12	.01	.08***
	Shame-proneness (GASP-Withdraw)	.76	.20	.25***	
	Trait Shame (ESS)	.12	.06	.16*	

Note. DES = Dissociative Experiences Scale, TAQ = Trauma Appraisal Questionnaire, GASP = Guilt and Shame Proneness Scale, ESS = Experience of Shame Scale.

* $p < .05$, *** $p < .001$

RHI. Only the TAQ significantly contributed to the model. The model including only the TAQ accounts for six percent of the RHI variance (Table 4.4).

Table 4.4
Trauma-Focused Shame Predicts Relational Health

Measure	Variable	B	SE B	B	Adj. R^2
Relational Health (RHI)	Trauma-focused shame (TAQ)	-.63	.18	-.25***	.06**

Note. RHI = Relational Health Indices, TAQ = Trauma Appraisal Questionnaire

*** $p < .001$

Physical health. Both the TAQ and the ESS contributed significantly to the R^2 change. The GASP-withdraw subscale was not significant at the .05 level. The model accounted for eight percent of the physical health variance (Table 4.5).

Table 4.5

Trauma-Focused Shame, Shame-Proneness, and Trait Shame Predict Relational Health

Measure	Variable	B	SE B	B	Adj. R ²
Physical health	Trauma-focused shame (TAQ)	.02	.01	.20**	.08**
	Shame-proneness (GASP-Withdraw)	-.03	.01	-.12 [^]	
	Trait shame (ESS)	.01	.004	.18*	

Note. TAQ = Trauma Appraisal Questionnaire, GASP = Guilt and Shame Proneness Scale, ESS = Experience of Shame Scale

[^] $p < .1$, * $p < .05$, ** $p < .01$

Hallucination symptoms. Only the TAQ contributed to the R^2 , accounting for three percent of the variance (Table 4.6).

Table 4.6

Trauma-Focused Shame Predicts Hallucination Symptoms

Measure	Variable	B	SE B	B	Adj. R ²
Hallucination symptoms	Trauma-focused shame (TAQ)	.03	.01	.18**	.03**

** $p < .01$

Regressions Controlling for HiBT

Due to the significant correlations between HiBT and relational health, PTSD, hallucination symptoms, and dissociation, regressions were re-run for these variables with HiBT entered in the first step to determine whether shame variables predicted health outcomes when controlling for HiBT. The final models are presented in table 4.7. Shame variables remained significant when controlling for HiBT. When shame variables were added to the regressions, HiBT became non-significant in every case except for the

dissociation regression, indicating that feelings of shame may potentially be mediating the relationship between HiBT and health variables.

BBTS Correlations

As shown in the correlation table (Table 4.1), HiBT history correlated with LoBT history, the TAQ, PCLC, DES, hallucination symptoms, and relational health. LoBT history correlated with the PCLC, DES, hallucination symptoms, and HiBT. The only significant correlation between LoBT and a shame measure was with the GASP-NSE subscale, which was negatively associated with LoBT exposure.

Table 4.7
PCLC, RHI, Hallucination, and DES Regressions Controlling for HiBT

Measure	Variable	B	SE B	B	Adj. R ²
	HiBT	.25	.13	.11 [^]	.33 ^{***}
PCLC	Trauma-focused shame (TAQ)	.33	.11	.20 ^{**}	
	Shame-proneness (GASP-Withdraw)	.80	.17	.27 ^{***}	
	Trait shame (ESS)	.26	.05	.33 ^{***}	
RHI	HiBT	-.15	.25	-.05	.06 ^{**}
	TAQ	-.59	.19	-.24 ^{**}	
Hallucinations	HiBT	.02	.01	.13 [^]	.04 ^{**}
	TAQ	.02	.01	.15 ^{**}	
DES	HiBT	.34	.15	.15 [*]	.10 ^{***}
	TAQ	-.07	.13	-.04	
	GASP	.81	.20	.27 ^{***}	
	ESS	.12	.06	.15 ^{**}	

Note. PCLC = Posttraumatic Stress Disorder Checklist, RHI = Relational Health Indices, DES = Dissociative Experiences Scale, HiBT = High Betrayal Trauma, LoBT = Low Betrayal Trauma, TAQ = Trauma Appraisal Questionnaire, GASP = Guilt and Shame Proneness Scale, ESS = Experience of Shame Scale
[^] $p < .1$, ^{*} $p < .05$, ^{**} $p < .01$, ^{***} $p < .001$

Discussion

Prior research has demonstrated that chronic shame is associated with myriad problematic psychological, physical, and behavioral health consequences (Andrews et al., 2000; Wilson et al., 2006; Dickerson et al., 2009; Yi, 2012). The current study replicated findings that shame is related to PTSD (Leskala, et al., 2002), interpersonal/relational health (Covert et al., 2003), physical health (Dickerson, 2009) problems, and dissociation (Talbot, Talbot, & Tu, 2004). In addition, this is the first study to my knowledge to reveal a significant association between shame and sub-clinical hallucination symptoms though an association has been found between paranoid anxiety and shame (Matos, Pinto-Gouveia, & Gilbert, 2012). An association between dissociation-proneness and subclinical hallucination symptoms was found in study 1.

Studies investigating the health correlates and consequences of shame tend to rely on a single instrument without explicitly differentiating between measures of shame-proneness, trait shame, and trauma-focused shame. Analysis of the nuanced functioning of the three different shame types as they covary with psychological and physical health measures is a step forward in the study of the complex emotion of shame. This study examined the relative contributions of trait shame, shame-proneness, and trauma-focused shame to five health correlates: PTSD, dissociation, relational health, physical health, and hallucination symptoms.

Informed by research regarding centrality of shame (Pinto-Gouveia & Matos, 2010) it was hypothesized that all three forms of chronic shame would be related to each of the five health symptoms but that trait shame, which occurs regardless of situational cues, would be the most strongly associated with all five health symptoms given the high

autobiographical centrality of this type of shame. It was predicted that shame-proneness, which may be triggered the next most frequently on a day-to-day basis would be the next most strongly related to symptoms. Finally it was predicted that trauma-focused shame, which only occurs when the individual thinks specifically of the trauma, would be the least strongly related to symptoms. The results did not follow the predicted pattern.

Trauma-focused shame related to everything except for dissociation, trait shame related to PTSD, dissociation, and physical health symptoms, and shame-proneness related to PTSD and dissociation and marginally to physical health.

Regression results linking trauma-focused shame with nearly all health variables indicate that it may not be centrality of shame per se, but centrality of *traumatic* shame that may be playing such an insidious role in the psychological and physical health of trauma survivors. Budden (2009) proposes that shame mediates peritraumatic threat and damage to the social self and orchestrates many aspects of posttraumatic symptom development. He describes *traumatic shame* as involving the experience of acute domination and subjugation or acute violation of norms, values, or expectations. If Budden's proposition is correct, it stands to reason that trauma-focused shame should be especially notable in survivors of betrayal trauma, given that betrayal trauma often involves such toxic power differentials and violation of expectations of trust. This is precisely what the data showed in the current study. That is, trauma-focused shame was positively and strongly associated with HiBT, and not associated with LoBT.

All participants in the current study endorsed events considered traumatic on the BBTS, but some experienced traumatic events high in betrayal, others experienced traumatic events lower in betrayal, and others experienced both types of trauma. Betrayal

trauma has been associated with dissociation (DePrince & Freyd, 2004), physical health and psychological distress (Freyd, Klest, & Allard, 2005), posttraumatic symptoms in children (Hulette et al., 2008), revictimization (Gobin & Freyd, 2009), and alexithymia, depression and anxiety in young adults (Goldsmith, Freyd, & DePrince, 2012). Relational health has been found to mediate the relationship between betrayal trauma and borderline personality characteristics such that more betrayal trauma experience predicts worse relational health with predicts more borderline features (Belford, Kaehler, & Birrell, 2012). In the current study, it was predicted that HiBT history, but not LoBT history would correlate with all five psychological and physical health measures. Shame has been shown to increase over time post-trauma for victims of interpersonal trauma but not other types of trauma (Amstadter & Vernon, 2008). It was predicted that HiBT but not LoBT would correlate with all three chronic shame measures.

Results revealed that HiBT was correlated with trauma-focused shame, relational health, PTSD symptoms, hallucination symptoms, dissociation, and marginally related to trait shame and physical health. Thus, other than HiBT not correlating with shame-proneness, hypotheses regarding HiBT were supported. However, the null hypotheses that were predicted for the relation between LoBT and symptoms were in a few cases rejected. LoBT correlated significantly with PTSD, hallucination symptoms, and dissociation. As expected, LoBT did not relate to any shame measure except for an unusual *negative* correlation with the GASP-NSE measure of shame-proneness.

Shame is beginning to receive more attention as it relates to posttraumatic sequelae. In the proposed DSM-V criteria for PTSD, the addition of three new symptoms

to the criterion D cluster have been proposed which all incorporate shame. The portions relevant to shame have been changed to boldface type to highlight them:

PTSD DSM V proposed criterion D. Negative alterations in cognitions and mood associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred), as evidenced by two or more of the following:

2. persistent and exaggerated negative beliefs or expectations about oneself, others, or the world (e.g., **“I am bad,”** “No one can be trusted,” “The world is completely dangerous”). (Alternatively, this might be expressed as, e.g., **“I’ve lost my soul forever,”** or **“My whole nervous system is permanently ruined”**).
3. persistent, distorted **blame of self** or others about the cause or consequences of the traumatic event(s)
4. persistent negative emotional state (e.g., fear, horror, anger, guilt, or **shame**)

(APA, 2012)

The proposed additions align with the results of the current study which revealed that all three forms of shame uniquely predicted PTSD symptoms.

The withdraw subscale of the GASP related strongly to dissociation, even when trauma-focused shame was controlled. Other than PTSD, dissociation was the only psychological or physical health measure significantly related to GASP shame-proneness. All of the shame-proneness items included in the regression analyses focus on the behavioral element of withdrawal from the source of shame; it is understandable that the tendency to withdraw would be related to the tendency to dissociate. Avoidant coping has been associated with physical health problems (Krause et al., 2008). Thus, withdrawers/dissociators may be an important group of focus for additional studies and

interventions. Indeed, participants who dissociated from threat in study 1 were found to have higher hallucination symptoms, chronic dissociation, and marginally higher PTSD.

Physical health significantly correlated with trait shame. This result supports previous research showing a relation between low self-esteem and poorer physical health (Antonucci, Peggs, & Marquez, 1989) and may be partially explained by ongoing cross-situational shame that renders the individual unable to be aware of his/her own physical needs or causes her to believe that she is unworthy of a healthy lifestyle. Additional work is needed to determine explanatory variables for the association between trait shame and physical health.

Limitations

Although this study was the first to my knowledge to differentiate between trauma-focused shame, shame-proneness, and trait shame as they relate to negative psychological and physical health consequences, several limitations restrict the generalizability of the results. First, the study was cross-sectional. As such, it is impossible to infer causality or directionality from the data. Second, although participants were prescreened for experience of at least one lifetime traumatic event, a clinical sample was not included. Additional work is needed to assess whether high and low betrayal traumas and the various forms of chronic shame show the same relationships with each other and with PTSD, dissociation, physical health, relational health, and psychosis in a treatment-seeking population. Third, the sample from a northwestern university was relatively homogenous. For this reason, cultural variables were not included in the study. Cultural variables are important to include in the study of shame and other self-conscious emotions whenever feasible. Shi-xu (2009) advises that emotion researchers continuously

ask the question, “Who has the authority over such versions of emotion and why?” (p.369). Taking multiple types of chronic shame as well as their relations to trauma exposure into account is a good start in providing a more inclusive conceptualization of shame. However, the collection of rich cultural data accounting for both Western and non-Western shame conceptualizations is an important future direction. Finally, DES results should be interpreted with caution given the high proportion of missing data for this variable and the finding that HiBT significantly predicted DES missingness. It is possible that DES scores are underestimated for HiBT survivors in this study.

Conclusion

Feelings of shame and exposure to betrayal trauma are both gaining attention in the field of traumatic stress. This study enhances understanding of the relationship between chronic shame and psychological and physical health problems by dismantling chronic shame into three forms: Trait shame, shame-proneness, and trauma-focused shame. The results indicate that among the three shame types, trauma-focused shame makes the strongest contribution to nearly all measured health outcomes, but that shame-proneness and/or trait shame also play independent roles in several cases. The results also highlight the unique relationship between trauma-related shame and traumas that are high, but not low in betrayal. In sum, the current study adds to the growing literature indicating that not all traumatic events are created equal when it comes to symptom development and to the growing attention to shame in post-traumatic adjustment.

CHAPTER V

GENERAL DISCUSSION

The aims of this dissertation were to examine the relationship between traumatic events involving differing degrees of betrayal as they relate to shame, dissociation, and fear, to examine the nature of the link between shame and dissociation, and to investigate the consequences of chronic shame as well as the consequences of proneness to dissociation from threat. Overall, results of the three studies indicated that shame and dissociation are more strongly related to HiBT compared to LoBT, although some nuances were revealed (See Table 5.1). In the past, the connection between shame and dissociation has been most commonly explained by the model of bypassed shame (Lewis, 1971; Nathanson, 1992) which indicates that dissociation is a means of disconnecting from the pain of shame. Results did not fully support the bypassed shame model. Instead, evidence emerged for a model of enhanced shame in which shame facilitates dissociation, which in turn facilitates additional shame. Negative psychological and physical health correlates emerged for both chronic shame and dissociation-proneness. See Table 5.2 for a summary of study 1-3 findings.

Table 5.1
Overall Pattern of Results

	HiBT	LoBT
Shame	Baseline state shame (S2) Baseline state shame (S1) Shame response to betrayal threat (S1) Trauma-focused shame (S3) Trait shame (marginal; S3)	Baseline state shame (S2) - - - -
Dissociation	Baseline state dissociation (S1) Chronic dissociation (S3) Chronic dissociation (S1) Dissociation response to betrayal threat (S1)	Baseline state dissociation (S1) Chronic dissociation (S3) - -
Fear	- -	Baseline state fear (S2) Fear response to non-betrayal threat (S1)

Note. HiBT = High Betrayal Trauma, LoBT = Low Betrayal Trauma, S1 = Study 1, S2 = Study 2, S3 = Study 3.

- Corresponding null finding

Betrayal Trauma and Shame

Results of all three studies revealed a more robust association between shame and HiBT compared to shame and LoBT. Baseline associations between state shame and HiBT were present in studies 1 and 2. Study 3 did not assess baseline shame. In study 1, HiBT history, but not LoBT history, predicted an increase in shame following exposure to betrayal threat. In study 3, which examined chronic shame, HiBT but not LoBT related to trauma-focused shame and marginally related to trait shame. The only finding positively linking LoBT to shame occurred in study 2. In the study 2 bypassed shame model, both HiBT and LoBT were significantly associated with baseline shame. This was not the case in study 1 where only HiBT related to baseline shame. The discrepancy

Table 5.2
Summary of Study 1-3 Findings

Study	Hypothesis	Finding
Study 1: Trauma type and threat-induced shame, fear, and dissociation in female trauma survivors	1a. HiBT will predict increased shame following betrayal threat. LoBT will not add to shame change.	This hypothesis was supported.
	1b. HiBT will predict increased dissociation following betrayal threat. LoBT will not add to dissociation change.	This hypothesis was supported.
	1c. Neither HiBT nor LoBT will predict increased fear following betrayal threat.	This hypothesis was supported.
	1d. LoBT will predict increased fear following non-betrayal threat. HiBT will not add to fear change.	This hypothesis was supported.
	1e. Neither LoBT nor LoBT will predict increased shame or dissociation following non-betrayal threat.	This hypothesis was supported.
	1f. HiBT will predict increased shame and dissociation following intrapersonal threat. LoBT will not add to shame or dissociation change.	Intrapersonal threat manipulation was ineffective. Results inconclusive.
	2. Shame and dissociation will increase more in betrayal threat compared to non-betrayal threat condition.	No between-group difference was found when BT history was not taken into account.
3. Physical and relational health problems, PTSD, hallucinations, and chronic dissociation will be higher for dissociators from threat compared to non-dissociators	Dissociators endorsed more hallucinations and chronic dissociation, and marginally higher PTSD. No difference in physical or relational health.	

Table 5.2 continued
Summary of Study 1-3 Findings

Study	Hypothesis	Finding
Study 2: Testing a model of bypassed shame in female survivors of high and low betrayal traumas	1. HiBT will predict baseline shame.	This hypothesis was supported.
	2. LoBT will predict baseline fear.	This hypothesis was supported.
	3. Baseline shame, but not fear, will predict increased dissociation.	This hypothesis was (marginally) supported.
	4. Dissociation will predict decreased shame, but not fear.	Increase in dissociation predicted increases in both shame and dissociation.
	Non-hypothesized discovery	LoBT predicted baseline shame.
Study 3: Psychological and physical health consequences of chronic shame	1. Trait shame, shame-proneness, and trauma-focused shame will all relate to health consequences, but trait shame will relate most strongly.	This hypothesis was supported.
	1a. PTSD	Trait shame, shame-proneness, and trauma-focused shame all independently predicted PTSD.
	1b. Relational health	Trauma-focused shame negatively predicted relational health.
	1c. Chronic dissociation	Shame-proneness and trait shame predicted dissociation.
	1d. Physical health	Trauma-focused shame and trait shame negatively predicted physical health.
	1e. Hallucinations	Trauma-focused shame predicted hallucinations.

Table 5.2 continued
Summary of Study 1-3 Findings

Study	Hypothesis	Finding
	2. HiBT, but not LoBT, will relate to all types of shame and health consequences.	HiBT related to trauma-focused shame, trait shame (marginal), relational health, physical health (marginal), PTSD, hallucinations, and chronic dissociation. LoBT predicted PTSD, hallucinations, and chronic dissociation.

between study 1 and study 2 baseline shame and betrayal findings may be a result of differing study designs. In study 1, the BBTS was presented to participants after they had completed the baseline shame measure as well as several other measures and a threat condition. In study 2, the BBTS was presented prior to completion of the baseline shame measure. It is possible that survivors of HiBT may be more prone to shame states regardless of being primed with trauma, whereas survivors of LoBT may experience shame states only after being primed to think about trauma. Additional work is needed in order to test this hypothesis. Across the three studies though, the clear overall pattern was that HiBT was more strongly related to both state and trait shame compared to LoBT.

Betrayal Trauma and Dissociation

Several previous studies have established an empirical connection between HiBT and dissociation (Freyd, Klest & Allard, 2005; Hulette et al., 2008; Goldsmith, Freyd, & DePrince, 2012) and a directional relationship has been suggested such that HiBT should predict dissociation (Freyd, 1996). In this dissertation, results for the most part reinforced this prior work, although some evidence suggested that LoBT also relates to dissociation. In study 1, HiBT and LoBT both related to baseline state dissociation, but only HiBT related to chronic dissociation. Experimental results in study 1 revealed that HiBT history, but not LoBT history predicted an increase in dissociation following exposure to betrayal threat. In study 3, HiBT was related to dissociation as well. Interestingly, as participants endorsed more HiBT, they also became more likely to skip an item on the dissociation questionnaire. This missing data pattern emerged in study 3 but not study 1 most likely as a result of a message that was in place in study 1, which alerted participants who skipped an item, asking them if they would like to complete the skipped

items. This message, which likely resulted in the lower degree of missing data in study 1, was not in place in study 3. Unlike study 1 in which LoBT history was not related to chronic dissociation, LoBT did significantly relate to chronic dissociation in study 3.

In sum, HiBT was consistently related to dissociation across all three studies. The betrayal threat manipulation resulted in increased dissociation among survivors of larger numbers of HiBT, but not LoBT. Results linking LoBT to dissociation were more mixed, with baseline state dissociation being related to LoBT in study 1, and chronic dissociation being related to LoBT in study 3 but not study 1. Thus, it appears that post-traumatic dissociation, like post-traumatic shame, should be considered following all types of trauma, but may be particularly relevant for HiBT survivors.

Betrayal Trauma and Fear

Feelings of fear were examined in studies 1 and 2. Compared to feelings of shame and dissociation, the relation between fear and HiBT was much less apparent. In fact, HiBT did not significantly relate to fear in any of the analyses conducted. However, LoBT did relate to fear in both studies. In study 1, although neither LoBT or HiBT related to baseline fear, LoBT history did predict an increase in fear following exposure to non-betrayal threat. In contrast, shame and dissociation did not increase in response to exposure to non-betrayal threat, nor did fear increase in response to betrayal threat. In study 2, LoBT, but not HiBT related to baseline fear. The discrepancy in the link between LoBT and baseline fear which was present in study 2 but not study 1 may likely be accounted for by a difference in priming between the two studies. In study 1, questions about trauma were not asked until after the baseline fear questionnaire was completed, whereas in study 2, trauma questions were asked prior to administration of the baseline

fear items. As was also the case with feelings of shame, it appears that feelings of fear may arise in LoBT survivors only when trauma memories are primed.

Shame and Dissociation

Given that shame and dissociation were found to both be related to HiBT, but not LoBT in study 1, the primary aim of study 2 was to examine the nature of the relationship between shame and dissociation. The bypassed shame model of dissociation (Lewis, 1971; Nathanson, 1992), which posits that dissociation is a method of disconnecting from the pain of shame, was partially supported. Although, as expected, dissociation increased more in response to a dissociation induction for people with higher baseline shame, dissociation did not interrupt or “bypass” feelings of shame. Instead, shame increased even further following the dissociation induction. Feelings of fear were also assessed to determine whether dissociation tends to follow negative emotion in general, or whether there is something about shame that makes it more likely to lead to dissociation. In contrast to shame, feelings of fear did not predict dissociation in response to the induction.

Rather than shame and dissociation being orthogonal pathways for surviving betrayal trauma, the results of study 2 suggest that shame and dissociation tend to co-occur, at least to some degree. It is possible that shame is a method of turning the HiBT survivor’s attention acutely inward at the time of the abuse, thereby causing her to fail to encode details of the abusive environment in memory. That is, it may be that shame facilitates dissociation at the time of the trauma by turning attention away from awareness of external events.

When events involving traumatic shame are later recalled, accompanying

increased dissociation may reflect a shame flashback, or situationally-accessible memory (SAM; Brewin, 2005). SAM memories may be formed due to incomplete processing of a traumatic event at the time of occurrence. Future work is needed to determine whether dissociation of betrayal traumas may lead to formation of SAM memories which are later triggered by relevant cues, including feelings of shame. Study 3 results further support the proposition that shame and dissociation go hand-in-hand. In study 3, chronic dissociation was independently predicted by all three forms of chronic shame: trait shame, trauma-focused shame, and shame-proneness.

Consequences of Dissociation-Proneness and Chronic Shame

Study 1 examined dissociation from threat as it related to PTSD, chronic dissociation, physical health, relational health, and hallucinations. Relationships were revealed between dissociation from threat and both chronic dissociation and hallucinations. A marginal association was also revealed between dissociation from threat and PTSD.

Study 3 examined trait shame, trauma-focused shame, and shame-proneness as they related to PTSD, chronic dissociation, physical health, relational health, and hallucinations. Associations were revealed between trauma-focused shame and PTSD, relational health, physical health, and hallucinations. No significant relationship was found between trauma-focused shame and chronic dissociation but given the large proportion of missing DES data, the conservative imputation of zeros for the missing data, and the results showing that HiBT predicted missingness, DES results should be interpreted with caution. It is likely that DES scores are underestimated for HiBT survivors in this study. Trauma-focused shame is defined as feelings of shame that arise

specifically when thinking about the worst traumatic event the person has endured. Although trauma-focused shame was related to nearly all negative consequences, both trait shame and shame-proneness also made independent contributions to negative outcome. Trait shame related to PTSD, physical health, and chronic dissociation, and shame-proneness related to PTSD and chronic dissociation.

Associations between PTSD and both dissociation from threat and chronic shame indicate that continued attention to posttraumatic responses beyond fear and anxiety is warranted. It is interesting to note that self-reported hallucinations were also related to both dissociation-proneness and trauma-focused shame. Trauma-focused shame, dissociation, and hallucinations could all be viewed as strategies of disconnection (Jordan, 1997) for surviving betrayal trauma (Freyd, 1996). The ashamed person may attend to her own perceived flaws instead of recognizing the abuse, the dissociative person may likewise disconnect certain elements of abuse from awareness, and hallucinations may be symbolic replacements of the depended-upon perpetrator. Indeed, hallucinations have been found to be predicted by history of interpersonal trauma (Shevlin, Dorahy, & Adamson, 2007; Gómez, Kaehler, & Freyd, under review). It is noteworthy that, in Study 3, the trauma-focused type of shame which related to PTSD and hallucinations was associated with HiBT, but not LoBT.

Implications

Results of this dissertation demonstrate that shame and dissociation may be more likely responses than fear to HiBT, and that both shame and dissociation are related to PTSD. As shame and dissociation have each been shown to interfere with the effectiveness of therapy (Pitman et al., 1991; Foa & Kozak, 1986), whereas no such

interference has been found with fear, a thorough investigation of these constructs is crucial for advancement in best practice with betrayal trauma survivors. Although attention to peri- and post-traumatic responses other than fear is increasing, there remains a lot of work to be done. Because shame and dissociation are absent from DSM-IV criteria for PTSD, these issues may often be overlooked and exposure or other types of therapies may be applied without regard to whether they may be contraindicated.

Some recent work has focused specifically on working with shame and self-criticism in therapy (Gilbert & Proctor, 2006; Dearing & Tangney, 2011). Although exposure techniques may be one component of working with trauma involving a high degree of shame, shame researchers and clinicians tend to converge around the need to apply compassion-focused approaches prior to or in lieu of exposure (Gilbert & Proctor, 2006; Lee, 2010; Brown, 2007). Gilbert and Proctor note that the ability to self-soothe is often lacking in adults who did not have a secure attachment in childhood. This inability may not only result in severe emotional dysregulation following exposure therapy, but also a tendency to blame oneself for the perceived therapy failure. Thus, attention to shame is critical if the trauma therapist seeks to avoid harm. Due to the relational nature of HiBT, it is reasonable to assume that the therapeutic relationship will have an effect on the HiBT survivor independent of the specific interventions applied during the course of treatment. Relational approaches such as relational-cultural therapy (Baker-Miller & Stiver, 1997), which encourage self-reflection on the part of the therapist may increase awareness of the ways in which the therapy environment and therapist behaviors may be shame-inducing for the client. Given the inherent power differential in therapy, attention to such dynamics is critical especially when working with HiBT survivors. Peer support

or group therapy situations with co-therapists who encourage self-reflection in one another may be worthwhile alternatives for HiBT survivors for whom this power differential of individual psychotherapy may be problematic. As noted by Boon, Steele, and Van der Hart (2011), complex trauma involves harm to the whole person. In addition to psychotherapy, attention to self-care including adequate sleep, nutrition, relaxation, and both intrapersonal and interpersonal relationships fosters the optimal environment in which healing may occur.

In addition to the findings regarding shame and dissociation, interesting results emerged regarding hallucinations. Hallucinations are typically viewed as indications of an underlying psychotic disorder with biological origin. In this dissertation, hallucinations were significantly related to trauma-focused shame, and marginally related to the tendency to dissociate from threat. These results add to the growing literature suggesting that experiences of hallucinations may arise from trauma rather than a biological predisposition to psychosis (Shevlin, Dorahy, & Adamson, 2007; Moskowitz, 2011; Gómez, Kaehler, & Freyd, under review). This has major implications for the chosen course of treatment for hallucinations, especially if the hallucinations initially arose as an adaptive mechanism of maintaining awareness of threat from *somewhere* while disconnecting from awareness of threat caused by the needed perpetrator. Rather than attempting to eliminate implicit memories of threatening experiences with anti-psychotic medications, hallucinations arising from betrayal trauma may be more successfully and respectfully addressed by honoring and working to integrate the split-off memories.

As Goetz and Keltner (2007) highlight, because shame is considered an

undesireable emotional experience in the United States (in contrast to East Asian cultures, where shame is regarded as a valuable emotion), the experience of shame itself may be shaming for a Westerner. By directly labeling, examining and discussing shame in a nonjudgemental and compassionate manner, researchers and clinicians can play an important role in reducing the stigma of shame, thereby removing a roadblock toward healing from betrayal trauma.

Limitations and Future Directions

Although the participants recruited for the 3 studies in this dissertation were prescreened for experience of at least one lifetime traumatic event, they were presumably mostly also relatively high-functioning college students. Results of study 1 indicated that exposure to extensive HiBT, rather than just a few HiBT may lead to increased proneness to shame and/or dissociation in response to threat. Replication of these studies with a clinical sample may therefore give a more accurate indication of the relationship between shame, dissociation/shame and HiBT, and the ways in which shame and dissociation function together. Replication of the findings linking both dissociation-proneness and trauma-focused shame to hallucinations would likely also be more robust if a clinical sample were used.

Although the BBTS is a validated measure of betrayal trauma that is very useful in many respects, it does not reliably differentiate between traumas involving a small degree of betrayal and those involving a large degree of betrayal. For example, the item, “You were made to have some form of sexual contact, such as touching or penetration, by someone with whom you were very close (such as a parent or lover)” could capture instances of date rape as well as childhood sexual abuse by a parent. Both instances

clearly involve betrayal, but the level of trust and dependence upon a parent as a child is higher than the trust and dependence upon a dating partner, and therefore involves higher betrayal. Future work teasing apart high from very high betrayal may lead to more nuanced results.

Another limitation pertaining to the participants recruited for these studies is that they were relatively homogenous racially and ethnically. Related to this point is that the role of specific cultural values were not assessed in this dissertation. Previous research has indicated that values, such as the Asian values of conformity to norms, emotional self-control, and collectivism, compared to demographic variables *per se* may be more relevant to trauma disclosure (Foynes, et al., in press). Disclosure has implications for trauma-related shame and dissociation in that disclosure has the potential to enhance connection whereas shame and dissociation tend to facilitate disconnection (Dorahy, 2010). Attention to recruitment of more diverse samples as well as deliberate inclusion of variables pertinent to cultural values will enhance future studies of shame, dissociation, and betrayal trauma. Future work should also focus on men in addition to women. Comparisons of the nature of function of shame and dissociation in men compared to women would be beneficial.

Although clear patterns emerged when considering together the results of the 3 studies in this dissertation, some nuances warrant further consideration. The most consistent finding was the connection between fear and LoBT, but not HiBT. This pattern of results is surprising given BTT's proposal that betrayal can occur with or without fear. Additional work is needed to determine under which circumstances, if any, fear and HiBT may actually be related. It may be that the relatively high-functioning and young

samples recruited in this dissertation were not frequently enough exposed to the types of HiBT that would be expected to result in fear (e.g., sadistic abuse, domestic violence, holocaust). Again, the use of a clinical sample in future studies may help to shed light on this issue.

The results linking HiBT, but not LoBT to shame and dissociation were more nuanced. Findings indicating a link between shame and HiBT, but not LoBT were consistent for the most part, but LoBT was found to predict baseline shame in study 2. As noted previously, it may be that LoBT may relate to shame only after trauma priming which could explain why LoBT predicted baseline shame after completion of the BBTS in study 2. In study 1, however, LoBT was *not* found to predict an increase in shame following exposure to non-betrayal threat. Additional work is needed to determine whether the specific types of priming may be necessary for LoBT survivors to demonstrate a shame response. Non-betrayal images used in study 1 included only non-interpersonal events and did not include LoBT events such as abuse perpetrated by a stranger that are included in the BBTS. In addition to the questions that remain regarding when and how shame is elicited for LoBT survivors, it is also unclear whether the type of shame experienced may differ between LoBT and HiBT survivors. It may be useful for future work on shame and betrayal to include the role of appraisals as a measured variable. Perhaps HiBT survivors are more likely make sense of their trauma history by determining that they are evil, despicable, or disgusting, whereas LoBT survivors may be more likely to endorse appraisals of being incompetent or helpless. The types of shame associated with the different appraisals may differ only in severity or there may be qualitative differences.

Results regarding betrayal trauma and dissociation were even more nuanced. For the most part, findings supported BTT in that dissociation was more often associated with HiBT compared to LoBT. However, in study 1, experimental results linking HiBT to dissociation were driven by a few people with very extensive HiBT history. Once again, replication with a clinical sample is called for in order to examine how HiBT influences dissociation for survivors of a great deal of HiBT compared to survivors of a few HiBT events. A complication in measuring dissociation among HiBT survivors emerged in study 3. In this study, HiBT survivors, especially survivors of extensive HiBT, were more likely to skip items on the DES. This pattern did not emerge when LoBT was examined. The skipped items raise the issue of possible under-reporting of dissociation among HiBT survivors when the DES is used. Future work should assess whether answering questions about dissociation may be triggering a dissociative state in HiBT survivors rendering them more likely to skip items. This missing DES data pattern did not emerge in Study 1 because Study 1 participants were shown a message alerting them whenever an item was skipped.

Although one of the aims of this dissertation was to determine whether shame, like dissociation, may be a mechanism of betrayal blindness, more work is needed to answer this question. Results of the studies included in this dissertation indicate that shame and dissociation do appear to have a unique relationship to HiBT and that the most commonly referred-to explanation of the shame-dissociation link appears to be incorrect. At this point discussion of the findings as they relate to the potentially adaptive function of shame in facilitating betrayal blindness is purely speculative. It is difficult to conceive of an ethical study that could accurately assess the adaptiveness of shame during

instances of abuse. However, creative experimental designs could be implemented such as drawings depicting ambiguous interpersonal relationships as used to investigate betrayal blindness by Gobin (2011). Mediation analyses could be run to determine whether feelings of shame may make HiBT survivors more likely to rate the drawings as non-abusive. Such studies, combined with retrospective reports of feelings of shame and dissociation at the time of the trauma, and experimental results linking shame and dissociation to HiBT like the results of study 1 will together create a more solid foundation for the theory that shame, like dissociation, may be adaptive in surviving HiBT.

Summary and Conclusion

This dissertation examined dissociation and feelings of shame and fear in survivors of traumatic events high or low in betrayal. Overall, the pattern of results among the 3 studies revealed that HiBT tends to be related to dissociation and shame, but not fear and that LoBT tends to be related to fear, and less often to shame and dissociation. Results indicated that frequency of HiBT exposure mattered, with survivors of more extensive HiBT being more prone to shame and dissociation in the face of betrayal-related threat. On the other hand, LoBT survivors of just two or more events tended to be prone to fear in the face of non-betrayal threat. The link between shame and dissociation was investigated by testing the frequently referenced but never experimentally evaluated model of bypassed shame (Lewis, 1971; Nathanson, 1992), which proposes that dissociation is a defense against the pain of shame. The bypassed shame theory was not supported; shame appeared to facilitate dissociation but then shame continued to increase rather than being interrupted by dissociation. Results of the test of

bypassed shame indicate that like dissociation, shame may also serve to defend against awareness of abuse by a depended-upon perpetrator, rather than to defend against pain. Additional work is needed to reinforce or refute this hypothesis. Finally, results indicated that both dissociation-proneness from threat as well as chronic shame have psychological and physical health consequences in the long run. Trauma-focused shame (shame when reminded of the trauma) appeared to be particularly egregious, and was related to HiBT, but not LoBT. Although results indicate that HiBT survivors may suffer greatly from human disconnection, continued attention to traumatic shame may be the key to ameliorating the harm of betrayal.

APPENDIX A

STUDY MEASURES

Demographics Questionnaire

Please answer the following questions.

- 1) Sex
 - i. male
 - ii. female
 - iii. other
- 2) Ethnicity – Check all that apply
 - i. Caucasian
 - ii. Hispanic
 - iii. African American/Black
 - iv. Asian American
 - v. Native American
 - vi. Jamaican
 - vii. Asian
 - viii. Other (Please specify) _____
- 3) Country of birth: _____
- 4) Year of birth: _____
- 5) Country in which you were raised: _____
- 6) How many siblings do you have? _____
- 7) Religion
 - i. Catholic
 - ii. Jewish
 - iii. Methodist
 - iv. Protestant
 - v. Nondenominational
 - vi. Baptist
 - vii. Other (Please specify) _____
- 8) Sexual orientation
 - i. Heterosexual
 - ii. Homosexual
 - iii. Bisexual
 - iv. Unsure/Other (Please specify)

State Shame and Guilt Scale: Shame Subscale:

The following are some statements which may or may not describe how you are feeling *right now*.

Please rate each statement using the 5-point scale below. Remember to rate each statement based on how you are feeling *right at this moment*.

Not Feeling This Way At All	Feeling This Way Slightly	Feeling This Way Somewhat	Feeling This Way Strongly	Feeling This Way Very Strongly
0	1	2	3	4

I want to sink into the floor and disappear.

I feel small.

I feel like a bad person.

I feel humiliated, disgraced.

I feel worthless, powerless.

Positive and Negative Affect Schedule - Expanded Form, fear subscale

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment. Use the following scale to record your answers.

very slightly or not at all 1	a little 2	moderately 3	quite a bit 4	extremely 5
<input type="checkbox"/> afraid				
<input type="checkbox"/> scared				
<input type="checkbox"/> frightened				
<input type="checkbox"/> nervous				
<input type="checkbox"/> jittery				
<input type="checkbox"/> shaky				

State Scale of Dissociation:

Not at all _____ Very much so

1 Right now things around me seem unreal or Dreamlike.

2 Things around me look different right now from the way they usually do

3 At this moment it is as if I am looking at things around me through a fog.

4 At this moment I feel far away from what is happening around me.

5 Right now things around me are looking smaller than they usually do.

6 Right now things around me are looking much larger than they usually do.

7 I am in a world of my own at this moment.

8 I am in a trance now.

9 At this moment my body feels vague, indefinite, strange.

10 Right now my body seems disconnected from my thoughts, my feelings, my self.

11 It feels as if I am going through the motions of living, but the real me is far away from what is happening to me now.

12 It feels as if I am watching my body from a distance now.

13 It feels now as if parts of my body or my whole being is unreal.

14 My hands or feet or other parts of my body are feeling as if they have just changed in size.

- 15 Right now I am feeling like a stranger to myself.
- 16 It seems that my emotions or thoughts are not all my own at this moment.
- 17 Right now I do not feel like my real self.
- 18 This is not me.
- 19 Right now I do not know who I really am.
- 20 I do not feel like a whole person now.
- 21 There is a struggle going on inside of me.
- 22 I am feeling torn between one thing and another.
- 23 There is a dialogue in my head now.
- 24 My inner voices are talking.
25. Right now we are more than one person looking at this statement.
26. Someone else is about to enter now (for example the child).
27. Right now there is another person waiting to come out and take control of my actions and speech.
28. Another person wants to take over now.
29. Someone else is in control now.
30. It feels as if I am being possessed by something or someone.
31. I am not in control of my emotions right now.
32. My mood is changing right now (for example into anger, anxiety, happiness, or a feeling of mystical awareness).

33. I am unusually weak or paralysed in one or more of my muscles now.
34. I am feeling immobile like a statue, while being aware of what is going on around me.
35. If I try to speak now, my voice will be gone or different from usual.
36. I cannot control my speech now.
37. My skin sensation is abnormal at this moment.
38. I have numbness in one or more places on my skin now.
39. I feel as if I am going to faint now.
40. It feels as if I am about to have a fit or a seizure of some kind now.
41. I am having difficulty taking in new information.
42. I am forgetting what I want to do or say.
43. I do not remember much of what has happened so far today.
44. I think I may have forgotten to tick one or more of the preceding statements.
45. I am feeling quite uncertain of where we are in time.
46. I am feeling uncertain of how I arrived at this place today.
47. This situation feels as if it has happened before in exactly the same way.
48. I am having a strange feeling as if I know what will happen next.
49. I am remembering things that I have not

thought about for some time.

50. Unwanted memories are entering my mind.

51. I am seeing a past event in my mind's eye right now.

52. I am experiencing a flashback now.

53. It feels as if some past event is occurring again now.

54. I am hearing one of my memories now.

55. I am experiencing a smell now that reminds me of something in my past.

56. Right now there is a taste in my mouth that reminds me of something in my past.

Relational Health Indices

PEER (RHI-P)

Next to each statement below, please indicate the number that best applies to your relationship with a close friend.

1= Never; 2= Seldom; 3= Sometimes; 4= Often; 5= Always

1. Even when I have difficult things to share, I can be honest and real with my friend.
2. After a conversation with my friend, I feel uplifted.
3. The more time I spend with my friend, the closer I feel to him/her.
4. I feel understood by my friend.
5. It is important to us to make our friendship grow.
6. I can talk to my friend about our disagreements without feeling judged.
7. My friendship inspires me to seek other friendships like this one.
8. I am uncomfortable sharing my deepest feelings and thoughts with my friend.
9. I have a greater sense of self-worth through my relationship with my friend.
10. I feel positively changed by my friend.
11. I can tell my friend when he/she has hurt my feelings.
12. My friendship causes me to grow in important ways.

MENTOR (RHI-M)

Next to each statement below, please indicate the number that best applies to your relationship with your most important mentor.

1= Never; 2= Seldom; 3= Sometimes; 4= Often; 5= Always

1. I can be genuinely myself with my mentor.
2. I believe my mentor values me as a whole person (e.g., professionally/academically and personally).
3. My mentor's commitment to and involvement in our relationship exceeds that required

by his/her social/
professional role.

4. My mentor shares stories about his/her own experiences with me in a way that enhances my life.
5. I feel as though I know myself better because of my mentor.
6. My mentor gives me emotional support and encouragement.
7. I try to emulate the values of my mentor (such as social, academic, religious, physical/athletic).
8. I feel uplifted and energized by interactions with my mentor.
9. My mentor tries hard to understand my feelings and goals (academic, personal, or whatever is relevant).
10. My relationship with my mentor inspires me to seek other relationships like this one.
11. I feel comfortable expressing my deepest concerns to my mentor.

COMMUNITY (RHI-C)

Next to each statement below, please indicate the number that best applies to your relationship with or involvement in this community.

1= Never; 2= Seldom; 3= Sometimes; 4= Often; 5= Always

1. I feel a sense of belonging to this community.
2. I feel better about myself after my interactions with this community.
3. If members of this community know something is bothering me, they ask me about it.
4. Members of this community are not free to just be themselves.
5. I feel understood by members of this community.
6. I feel mobilized to personal action after meetings within this community.
7. There are parts of myself I feel I must hide from this community.
8. It seems as if people in this community really like me as a person.
9. There is a lot of backbiting and gossiping in this community.

10. Members of this community are very competitive with each other.
11. I have a greater sense of self-worth through my connection with this community.
12. My connections with this community are so inspiring that they motivate me to pursue relationships with other people outside this community.
13. This community has shaped my identity in many ways.
14. This community provides me with emotional support.

Brief Betrayal Trauma Survey

Instructions: For each of the following events, please circle your response to indicate your best estimate of how many times the event has happened to you.

1. Been in a major earthquake, fire, flood, hurricane, or tornado that resulted in significant loss of personal property, serious injury to yourself or a significant other, the death of a significant other, or the fear of your own death.

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

2. Been in a major automobile, boat, motorcycle, plane, train, or industrial accident that resulted in similar consequences.

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

3. Witnessed someone with whom you were very close (such as a parent, brother or sister, caretaker, or intimate partner) committing suicide, being killed, or being injured by another person so severely as to result in marks, bruises, burns, blood, or broken bones. This might include a close friend in combat.

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

4. Witnessed someone with whom you were not so close undergoing a similar kind of traumatic event.

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

5. Witnessed someone with whom you were very close deliberately attack another family member so severely as to result in marks, bruises, blood, broken bones, or broken teeth.

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

6. You were deliberately attacked that severely by someone with whom you were very close.

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

7. You were deliberately attacked that severely by someone with whom you were not close.

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

8. You were made to have some form of sexual contact, such as touching or penetration, by someone with whom you were very close (such as a parent or lover).

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

9. You were made to have such sexual contact by someone with whom you were not close

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

10. You were emotionally or psychologically mistreated over a significant period of time by someone with whom you were very close (such as a parent or lover).

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

11. Experienced the death of one of your own children.

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

12. Experienced a seriously traumatic event not already covered in any of these questions.

Before age 14: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age 14-17: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

Age18 or Older: never 1 time 2-5 times 6-20 times 21-100 times
more than 100 times

PTSD CheckList – Civilian Version (PCL-C)

Below is a list of problems and complaints that veterans sometimes have in response to stressful life experiences. Please read each one carefully, and indicate how much you have been bothered by that problem *in the last month*.

No.	Response	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, disturbing <i>memories, thoughts, or images</i> of a stressful experience from the past?					
2.	Repeated, disturbing <i>dreams</i> of a stressful experience from the past?					
3.	Suddenly <i>acting or feeling</i> as if a stressful experience <i>were happening</i> again (as if you were reliving it)?					
4.	Feeling <i>very upset</i> when <i>something reminded</i> you of a stressful experience from the past?					
5.	Having <i>physical reactions</i> (e.g., heart pounding, trouble breathing, or sweating) when <i>something reminded</i> you of a stressful experience from the past?					
6.	Avoid <i>thinking about</i> or <i>talking about</i> a stressful experience from the past or avoid <i>having feelings</i> related to it?					
7.	Avoid <i>activities or situations</i> because they <i>remind you</i> of a stressful experience from the past?					
8.	Trouble <i>remembering important parts</i> of a stressful experience from the past?					
9.	Loss of <i>interest in things that you used to enjoy</i> ?					
10.	Feeling <i>distant</i> or <i>cut off</i> from other people?					
11.	Feeling <i>emotionally numb</i> or being unable to have loving feelings for those close to you?					
12.	Feeling as if your <i>future</i> will somehow be <i>cut short</i> ?					
13.	Trouble <i>falling or staying asleep</i> ?					
14.	Feeling <i>irritable</i> or having <i>angry</i>					

	<i>outbursts?</i>					
15.	Having <i>difficulty concentrating?</i>					
16.	Being " <i>super alert</i> " or watchful on guard?					
17.	Feeling <i>jumpy</i> or easily startled?					

Physical health Questionnaire

Compared to others of your same age and sex, would you say that in general your health is....

Excellent Very good Good Fair Poor

Hallucination symptoms

1. Have you ever had the experience of seeing something or someone that others present could not see - that is, had a vision when you were wide awake?

2. Have you ever had the experience of hearing things other people could not hear, such as noises or a voice?

3. Have you ever had unusual feelings inside or on your body, like being touched when nothing was there or feeling something moving inside your body?

Dissociative Experiences Scale

Directions: This questionnaire consists of twenty-eight questions about experiences that you may have in your daily life. We are interested in how often you have these experiences. It is important, however, that your answers show how often these experiences happen to you when you are not under the influence of alcohol or drugs. To answer the questions, please determine to what degree the experience described in the question applies to you and circle the number to show what percentage of the time you have the experience.

Example:

0% 10 20 30 40 50 60 70 80 90 100%
(never) (always)

1. Some people have the experience of driving a car and suddenly realizing that they don't remember what has happened during all or part of the trip. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

2. Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear all or part of what was said. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

3. Some people have the experience of finding themselves in a place and having no idea how they got there. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

4. Some people have the experience of finding themselves dressed in clothes that they don't remember putting on. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

5. Some people have the experience of finding new things among their belongings that they do not remember buying. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

6. Some people sometimes find that they are approached by people that they do not know who call them by another name or insist that they have met them before. Circle a number

to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

7. Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something as if they were looking at another person. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

8. Some people are told that they sometimes do not recognize friends or family members. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

10. Some people have the experience of being accused of lying when they do not think that they have lied. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

11. Some people have the experience of looking in a mirror and not recognizing themselves. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

12. Some people sometimes have the experience of feeling that other people, objects, and the world around them are not real. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

13. Some people sometimes have the experience of feeling that their body does not belong to them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

17. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

18. Some people sometimes find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

19. Some people find that they are sometimes able to ignore pain. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

20. Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

21. Some people sometimes find that when they are alone they talk out loud to themselves. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

22. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were different people. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they have just mailed a letter or have just thought about mailing it). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

25. Some people find evidence that they have done things that they do not remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

26. Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

27. Some people find that they sometimes hear voices inside their head that tell them to do things or comment on things that they are doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

28. Some people sometimes feels as if they are looking at the world through a fog so that people or objects appear far away or unclear. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Trauma Appraisal Questionnaire Shame Subscale

The following questions have to do with your feelings and emotions. Please think about an event you said you experienced (physical/emotional punishment, sexual experience or general life events). If you experienced many of the events asked about, please think about one event that was the most distressing to answer the following questions.

We are interested in how you feel **now** when thinking about the event. For each of the following items, please indicate how much you agree or disagree with the **description of your thoughts, feelings or experiences now** when you think about the event. You may skip any question you do not wish to answer.

	1	2	3	4	5
	strongly disagree	somewhat disagree	neutral	somewhat agree	strongly agree
1 No shower can wash away how dirty I feel.	1	2	3	4	5
2 It's as is my insides are dirty.	1	2	3	4	5
3 I feel embarrassed.	1	2	3	4	5
4 I feel disgust.	1	2	3	4	5
5 I feel ashamed.	1	2	3	4	5
6 I feel humiliated.	1	2	3	4	5
7 I've lost my sense of womanhood/manhood.	1	2	3	4	5

Guilt and Shame Proneness Scale

In this questionnaire, you will read about situations that people are likely to encounter in day-to-day life, followed by common reactions to those situations. As you read each scenario, try to imagine yourself in that situation. Then indicate the likelihood that you would react in the way described.

1	2	3	4	5	6	7
Very Unlikely	Unlikely	Slightly Unlikely	About 50% Likely	Slightly Likely	Likely	Very Likely

_____ 1. After realizing you have received too much change at a store, you decide to keep it because the salesclerk doesn't notice. What is the likelihood that you would feel uncomfortable about keeping the money?

_____ 2. You are privately informed that you are the only one in your group that did not make the honor society because you skipped too many days of school. What is the likelihood that this would lead you to become more responsible about attending school?

_____ 3. You rip an article out of a journal in the library and take it with you. Your teacher discovers what you did and tells the librarian and your entire class. What is the likelihood that this would make you would feel like a bad person?

_____ 4. After making a big mistake on an important project at work in which people were depending on you, your boss criticizes you in front of your coworkers. What is the likelihood that you would feign sickness and leave work?

_____ 5. You reveal a friend's secret, though your friend never finds out. What is the likelihood that your failure to keep the secret would lead you to exert extra effort to keep secrets in the future?

_____ 6. You give a bad presentation at work. Afterwards your boss tells your coworkers it was your fault that your company lost the contract. What is the likelihood that you would feel incompetent?

_____ 7. A friend tells you that you boast a great deal. What is the likelihood that you would stop spending time with that friend?

_____ 8. Your home is very messy and unexpected guests knock on your door and invite themselves in. What is the likelihood that you would avoid the guests until they leave?

_____ 9. You secretly commit a felony. What is the likelihood that you would feel remorse about breaking the law?

_____ 10. You successfully exaggerate your damages in a lawsuit. Months later, your lies are discovered and you are charged with perjury. What is the likelihood that you would think you are a despicable human being?

_____ 11. You strongly defend a point of view in a discussion, and though nobody was aware of it, you realize that you were wrong. What is the likelihood that this would make you think more carefully before you speak?

_____ 12. You take office supplies home for personal use and are caught by your boss. What is the likelihood that this would lead you to quit your job?

_____ 13. You make a mistake at work and find out a coworker is blamed for the error. Later, your coworker confronts you about your mistake. What is the likelihood that you would feel like a coward?

_____ 14. At a coworker's housewarming party, you spill red wine on their new cream-colored carpet. You cover the stain with a chair so that nobody notices your mess. What is the likelihood that you would feel that the way you acted was pathetic?

_____ 15. While discussing a heated subject with friends, you suddenly realize you are shouting though nobody seems to notice. What is the likelihood that you would try to act more considerately toward your friends?

_____ 16. You lie to people but they never find out about it. What is the likelihood that you would feel terrible about the lies you told?

Experience of Shame Scale

Everybody at times can feel embarrassed, self-conscious or ashamed. These questions are about such feelings if they have occurred at any time in the past year. There are no 'right' or 'wrong' answers. Please indicate the response which applies to you with a tick.

	not at all	a little	moderately	very much
1. Have you felt ashamed of any of your personal habits?	()	()	()	()
2. Have you worried about what other people think of any of your personal habits?	()	()	()	()
3. Have you tried to cover up or conceal any of your personal habits?	()	()	()	()
4. Have you felt ashamed of your manner with others?	()	()	()	()
5. Have you worried about what other people think of your manner with others?	()	()	()	()
6. Have you avoided people because of your manner?	()	()	()	()
7. Have you felt ashamed of the sort of person you are?	()	()	()	()
8. Have you worried about what other people think of the sort of person you are?	()	()	()	()
9. Have you tried to conceal from others the sort of person you are?	()	()	()	()
10. Have you felt ashamed of your ability to do things?	()	()	()	()
11. Have you worried about what other people think of your ability to do things?	()	()	()	()
12. Have you avoided people because of your inability to do things?	()	()	()	()
13. Do you feel ashamed when you do something wrong?	()	()	()	()
14. Have you worried about what other people think of you when you do	()	()	()	()
15. Have you tried to cover up or conceal things you felt ashamed of having done?	()	()	()	()

- | | | | | |
|---|-----|-----|-----|-----|
| 16. Have you felt ashamed when you said something stupid? | () | () | () | () |
| 17. Have you worried about what other people think of you when you said something stupid? | () | () | () | () |
| 18. Have you avoided contact with anyone who knew you said something stupid? | () | () | () | () |
| 19. Have you felt ashamed when you failed in a competitive situation? | () | () | () | () |
| 20. Have you worried about what other people think of you when you failed in a competitive situation? | () | () | () | () |
| 21. Have you avoided people who have seen you fail? | () | () | () | () |
| 22. Have you felt ashamed of your body or any part of it? | () | () | () | () |
| 23. Have you worried about what other people think of your appearance? | () | () | () | () |
| 24. Have you avoided looking at yourself in the mirror? | () | () | () | () |
| 25. Have you wanted to hide or conceal your body or any part of it? | () | () | () | () |

APPENDIX B

STUDY MANIPULATIONS

Study 1 Betrayal threat condition

IAPS images:

- 2245.1 – Boy with black eye
- 2276 – Girl crying
- 2703 – Children crying and begging
- 3191 – Bruised nude woman
- 4621 – Sexual harassment
- 6315 – Man grabbing woman's neck
- 6360 – Man punching woman
- 6530 – Men hitting woman
- 6561 – Woman recoiling as man tries to kiss her
- 6838 – Little girl screaming as police arrest caregivers

Study 1 Non-betrayal threat condition

IAPS images:

- 5971 – Tornado
- 9470 – Exploded building
- 9471 – Exploded building
- 9610 – Plane crash
- 9611 – Plane crash
- 9900 – Auto accident
- 9911 – Auto accident
- 9920 – Auto accident
- 9922 – Fire
- 9930 – Boat capsizing

Study 1 Intrapersonal threat condition

In the next section, you will be asked three questions assessing some basic math skills followed by three questions assessing verbal skills. When you have completed the problems, some feedback about how well you performed will appear on the screen.

1. Which is the average (mean) of the following set of scores: 5, 6, 7, 7, 8, 9
 - 5.5
 - 6
 - 6.5
 - 7
 - 7.5

2. If $X^2/4 = 1$, then $X =$
 - ± 2
 - ± 1
 - 0
 - -3
 - 3

3. In a certain shop, notebooks that normally sell for 59 cents each are on sale at 2 for 99 cents. How much can be saved by purchasing 10 of these notebooks at the sale price?
 - \$.85
 - \$.95
 - \$1.10
 - \$1.15
 - \$2.00

4. Which of the following is the best choice as the opposite of the word “scholarly?”
 - Leisurely
 - Crass
 - Academic
 - Illiterate
 - Boring

5. Which of the following defines the word, “disinterested?”
 - Impartial
 - Not interested
 - Not paying attention

- Opinionated
- Excited

6. Early_____ of hearing loss is _____ by the fact that the other senses are able to compensate for moderate amounts of loss, so that people frequently do not know that their hearing is imperfect.

- Discovery...indicated
- Development...prevented
- Detection...complicated
- Treatment...facilitated
- Incidence...corrected

Study 2 Dissociation induction

“Sometimes people experience an emotion but feel detached from that emotion. For example, it is possible to feel happy during a graduation without fully experiencing the happiness. Think of up to four occasions during which you felt disconnected and detached from an emotional situation. Write these situations in the space below.”

[Participants were then be shown the following phrases]

There are days when I really lose track of time.
Sometimes I space out about what I am doing or where I am going.
A lot of things are happening that I'm not aware of.
I feel like I'm on “automatic pilot.”
I feel detached and distant today.
I can imagine watching myself in this room from above, or from outside.
Sometimes I don't know whether I have actually done something or just thought about doing it.
What's happening to me feels unreal.
I feel out of touch with other people.
Sometimes I don't notice things that are happening around me.
I feel like just sitting and letting the time pass by.
Being in this room feels like being in a dream.
I do things and later realize I hadn't actually decided to do them.
I feel like I'm not part of this experience.
Things feel like they're happening in slow motion.
I feel disconnected from my own body.
I feel like I don't notice a lot of things that are happening.
I feel like I don't always pay attention.
I feel like a spectator, watching what is happening here.
I am blanking out on what is happening.

Now that you're feeling very detached, concentrate on that feeling. Feel it getting stronger and stronger; more and more distant. Let it continue to build. Think about things that have happened in your life that have made you feel very, very detached. Concentrate on it. Let yourself feel very disconnected, spacey, very uninvolved, very withdrawn. As you do, you'll feel the mood build. It'll become more intense, more detached. This in turn will make you think of other things in your life that have made you feel very, very detached. The mood will continue to build. Feel it become more intense. Feel it get stronger and stronger. It will happen. Do and think whatever you can to build this very detached mood. Feel very, very detached. Begin now.

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