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Individual Differences in Trauma Disclosure

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Abstract

Background and Objectives—Findings on disclosure and adjustment following traumatic events have been mixed. Better understanding of individual differences in disclosure may help us better understand reactions following trauma exposure. In particular, studying disclosure patterns for those with and without psychopathology and for different types of emotional experiences may help clarify the relationship between disclosure, event emotionality, trauma exposure, and PTSD.

Methods—In this study, 143 men and women with ($n = 67$) and without ($n = 43$) chronic PTSD and without trauma exposure ($n = 33$) provided information on disclosure for a traumatic/severe life event, a negative event, and a positive event.

Results—Individuals with PTSD reported greater difficulty disclosing their traumatic event compared to those with trauma exposure no PTSD and those with no-trauma exposure. However, individuals with PTSD reported disclosing the traumatic event a similar number of times and with similar levels of detail to those with trauma exposure but no PTSD. Both sexual and childhood trauma were associated with greater disclosure difficulty.

Limitations—Although control event types (positive, negative) were selected to control for the passage of time and for general disclosure style, they do not control for salience of the event and results may be limited by control events that were not highly salient.

Conclusions—The present findings point to a dynamic conceptualization of disclosure, suggesting that the differential difficulty of disclosing traumatic events seen in individuals with PTSD is not simply a function of the amount of disclosure or the amount of details provided.

Keywords

disclosure; PTSD; trauma; severe life events; sexual trauma; acculturation

1. Introduction

Disclosure of emotional events, or verbal revelation of experiences to friends, family, or providers, may reduce distress (e.g., Paine & Hansen, 2002; Pennebaker, Zech, & Rimé, 2001). Talking about emotional experiences, such as traumatic events, may promote processing and achieve integration and extinction of the memories. This emotional

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¹We conducted repeated measures ANOVA with extreme scores removed and the pattern of results remained consistent with the non-parametric analyses.

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processing is theorized as crucial for recovery from disorders such as posttraumatic stress disorder (PTSD, e.g., Foa & Kozak, 1986). Indeed, discussing traumatic experiences may result in decreased PTSD symptoms following diverse events including combat, crime, accidents, and sexual abuse (e.g., Bolton, Glenn, Orsillo, Roemer, & Litz, 2003; Davidson & Moss, 2008; Mueller, Moergeli, & Maercker, 2008; Pennebaker & Harber, 1993; Ullman, 2003). Additionally, delayed disclosure predicts PTSD (Ullman, 1996; Ullman, Filipas, Townsend, & Starzynski, 2007), suggesting that disclosure is beneficial soon after trauma. Yet, not all research suggests that social disclosure promotes adjustment (e.g., Rimé, 1995; Schnurr, Ford, Friedman, Green, & Dain, 1997; Southwick, Morgan, & Rosenberg, 2000; Ursano, Fullerton, Vance, & Wang, 2000). Existing studies often do not compare across emotional events to control for general tendency to disclose, which may influence benefits of disclosure. In addition, it is important to look at the relationship of disclosure to not only psychopathology (e.g., PTSD), but also to trauma itself. Finally, mixed findings on the helpfulness of disclosure might be explained by differences in definitions, as self-disclosure is complex and difficult to capture.

To elaborate, positive effects of self-disclosure likely reflect a dynamic processing necessary for psychological benefit. Theorists posit that processing an emotional experience may be related to successful adjustment (e.g., Foa, 1997; Pennebaker, 1993), suggesting that if social disclosure promotes processing then more disclosure would be beneficial. Yet, achieving emotional processing from personal disclosure may be difficult (Rimé, 1995). For example, while greater detail in disclosure predicts better outcomes (Ullman, 2010) it also predicts negative reactions to the discloser, which are related to poorer functioning (e.g., Ullman, 2003). Thus, details during disclosure may influence whether disclosure is helpful or harmful. Initial reluctance to disclose and negative emotions during disclosure also predicts PTSD (Mueller et al., 2008), suggesting that difficulty disclosing may be important to adjustment.

An individual's general tendency to self-disclose emotional events may also relate to trauma disclosure and adjustment. Less social disclosure of trauma is related to greater interpersonal sensitivity, feelings of inferiority, and self-deprecation (Southwick et al., 2000). In individuals with PTSD there may be a general pattern of disclosure that is not trauma specific, with lower disclosure of traumatic events reflecting a general non-self disclosure style or a tendency to avoid disclosing emotional experiences (Brewin & Holmes, 2003; Ullman, Starzynski, Long, Mason, & Long, 2008). If this is the case, than individuals with PTSD may be less likely to disclose emotional events (i.e., positive or negative memories) when compared to those without PTSD. However, comparisons of overall disclosure style for individuals with and without PTSD are not routinely incorporated into research on trauma disclosure.

One way to look at disclosure style is to compare disclosure of different event types (negative, positive, trauma) within individual. In non-clinical samples it appears that events of varying emotionality are disclosed similarly, with negative events disclosed slightly more than positive events (Pasupathi, McLean, & Weeks, 2009; Rimé, Finkenauer, Luminet, Zech, & Philippot, 1998). The nature of an event may also influence disclosure. Rates of disclosure vary by trauma type, with disclosure of childhood sexual abuse (CSA) being lower (66–72%; Ruggerio et al., 2004; Ullman et al., 2007) than other event types and there also being observed differences between samples with groups such as police officers (84.5%; Davidson & Moss, 2008) and military personnel (84%; Bolton et al., 2003) having higher rates of disclosure. In addition, trauma characteristics such as weapons and injuries predict increased disclosure (Fisher et al., 2003; Ullman & Filipas, 2001). It may be that disclosure of these events is less stigmatizing than those that are interpersonal or non-violent (Ullman, 2003) and disclosed less often (Ullman, 2007).

Another factor that may affect trauma-related disclosure is culture. In the U.S., ethnic minority women are less likely to disclose trauma than white women (e.g., Ullman et al., 2008; Ullman, 2010). Often theories address differences between individualistic cultures, which tend to value insight, and collectivist cultures, which tend to value social integration (Draguns, 1996; Hofstede, 1991). Cultural norms may impact not only amount but also benefit of disclosure, with ethnic minorities more likely to receive negative reactions to trauma disclosure (Root, 1996; Ullman & Filipas, 2001). In addition, acculturation may impact disclosure with those more connected to the dominant culture disclosing more similar to the majority culture (e.g., Garcia, Hurwitz, & Kraus, 2005; Rennison, 2007).

In this study, we looked at disclosure following traumatic or most severe life events. Specifically, we compared disclosure across psychopathology, comparing individuals with current PTSD, trauma-exposed individuals without PTSD, and non-trauma-exposed, psychologically healthy individuals. We also compared disclosure across event types including traumatic/most severe, negative, and positive events. Also, we examined whether more stigmatizing events (e.g., CSA) and an individual's ethnic/cultural identification were associated with lower differential trauma disclosure compared with other events. Consistent with lower self-disclosure being associated with worse psychological functioning, we hypothesized that individuals with PTSD would report lower self-disclosure, including disclosing fewer times, reporting more difficulty, and giving less details than individuals without PTSD for traumatic but not negative or positive events. We further hypothesized that trauma-related characteristics, particularly CSA, would be associated with lower self-disclosure, when examining disclosure of traumatic compared to negative or positive events. Finally, we hypothesized that greater identification with a minority culture and less acculturation to the majority culture would be associated with lower self-disclosure when examining differential disclosure of traumatic events.

2. Method

2.1 Participants

One hundred and forty-three individuals were recruited through community advertisement and local referrals. Participants were between 18 and 65 and fluent in English. Exclusion criteria included a current diagnosis of schizophrenia or delusional disorder; medically unstable bipolar disorder; depression with psychotic features or severe enough to require immediate psychiatric treatment (e.g., actively suicidal); or current diagnosis of alcohol/substance dependence. Sample characteristics are in Table 1.

2.1.1 PTSD—The PTSD group included 67 individuals that met DSM-IV criteria for chronic PTSD (i.e., symptoms greater than three months) as their primary mental health diagnosis (APA, 1994). These individuals were treatment-seeking, completing all measures before starting treatment.

2.1.2 Trauma-exposed, No PTSD—The trauma-exposed group included 43 individuals who experienced a Criterion A event but did not meet criteria for current PTSD, and were a minimum of three months post Criterion A event. Participants in this group were not currently treatment-seeking, but were not excluded for treatment history.

2.1.3 Control—The control group was comprised of 33 individuals with neither Criterion A trauma exposure nor current psychopathology. Participants were not currently treatment seeking, but were not excluded for treatment history. To ensure absence of significant depression or anxiety, participants in this group scored less than 10 on the Beck Depression

Inventory (BDI; Beck, Ward, Mendelson, Mock & Erbaugh, 1961) and less than 40 on both subscales of the State-Trait Anxiety Inventory (STAI; Spielberger, 1988).

2.2 Interview Measures

2.2.1 Structured Clinical Interview for the DSM-IV (SCID-IV; First, Spitzer, Gibbon, & Williams, 1994)—The SCID-IV is a semi-structured diagnostic interview that assesses current Axis I disorders. The SCID-IV has acceptable inter-rater reliability with kappas between .70 – .94 (Skre et al., 1991). The SCID was used to screen for Criterion A trauma exposure for all individuals, establish PTSD as the primary diagnosis for individuals with PTSD and to confirm lack of diagnoses in the control group.

2.2.2 Posttraumatic Symptom Scale-Interview Version (PSS-I; Foa, et al., 1993)—The PSS-I is a semi-structured interview that assesses PTSD diagnosis and severity. Items are rated from 0–3, with higher scores indicating more severity (range: 0–51). Interrater reliability for diagnosis ($\kappa = .91$) and overall severity ($r = .97$) are good (Foa et al., 1993). The PSS-I was administered by trained doctoral-level clinicians and was used to establish diagnosis in individuals with PTSD and to confirm lack of diagnosis for the trauma-exposed no PTSD group.

2.3 Self-report Measures

2.3.1 Posttraumatic Diagnostic Scale (PDS; Foa, Cashman, Jaycox, & Perry, 1997)—The PDS is a 49-item self-report measure that assesses for DSM-IV Criteria A traumatic events and PTSD symptoms. It shows good sensitivity and specificity with interview measures (Foa et al., 1997). The PDS assessed self-reported trauma characteristics, including injury and fear of death, and PTSD severity in the trauma-exposed groups. Since the control group did not report a Criterion A trauma, they did not complete the PDS.

2.3.2 Beck Depression Inventory (BDI; Beck et al., 1961)—The BDI is a 21-item self-report inventory that assesses symptoms of depression. The concurrent validity with other depression scales is high (Beck, Steer, & Garbin, 1988).

2.3.3 State-Trait Anxiety Inventory (STAI-S/T; Spielberger et al., 1983)—The STAI is a 40-item measure of current and general anxiety. The STAI-T shows high convergent validity with other anxiety measures (Spielberger et al., 1983). STAI-S shows good validity (Lazarus & Opton, 1966).

2.3.4 Multi-group Ethnic Identity Measure (MEIM; Phinney, 1992)—A 12-item adapted version of the MEIM was used to evaluate identification with ethnic group (Roberts et al., 1999). Statements about behavior in relation to identified ethnocultural group are rated from 1 “*strongly agree*” to 4 “*strongly disagree*”. Two subscales were coded: 1) belonging/affirmation; and 2) ethnic identity search/exploration. Higher scores on belonging indicate greater positive affect towards one’s ethnic group, and higher scores on identity search represent greater ethnic identity development. The MEIM shows good internal consistency and convergent validity (Roberts et al., 1999).

2.3.5 Pan-Acculturation Scale (PAN; Soriano & Hough, 2000)—This 16-item measure evaluates assimilation into US culture. Participants are asked to rate statements about cultural beliefs and traditions on relevance to either minority or American culture. Two subscales are derived reflecting affiliation with ethnic and American culture, where higher scores indicate stronger affiliation. The PAN shows good internal consistency (alphas = .90 – .91; Lau et al., 2005).

2.4 Event-related Disclosure

2.4.1 Event selection—To examine general disclosure style, trauma/most severe, negative, and positive events were identified. Given that memory degrades over time (e.g., Hepp et al., 2006) and more time allows for more disclosure, we controlled for time since event by matching negative and positive events within a year of the traumatic or severe life event. For individuals in the trauma exposed groups, the traumatic event was a Criterion A trauma determined in the PTSD assessment. For the control group, the most severe life event was the event participants indicated as their “most traumatic” but did not meet the Criterion A1 (injury, death, or threat to personal integrity) or Criterion A2 (response of fear, helplessness, or horror; APA, 1994) trauma definition. The use of a most “severe life event” as a proxy for a traumatic experience is common (e.g., Pennebaker & Graybeal, 2001). Table 1 displays Criterion A events for the trauma-exposed groups. Each event is included in only one category. For the control group, most severe life events included: 18.2% death/illness of a loved one, 15.2% illness, 33.3% accident/disaster, 18.2% relationship breakup/conflict, 6.1% falsely accused, 3.0% assault, and 6.1% financial/housing loss.

The directions for identifying each type of event were:

Traumatic/Most Severe Life Event: “By trauma we are referring to the event that you identify as the most traumatic thing that has ever happened to you.”

Negative: “....a negative event that has happened in your life, other than your trauma. This negative event should be something that was upsetting to you, but that you would not call traumatic. Sometimes people discuss things such as funerals, arguments with friends/family members, losing a job, etc.”

Positive: “....a positive event that has happened in your life. Sometimes people discuss things such as birthdays, anniversaries, weddings, job promotions, etc.”

For the negative and positive events, participants were instructed to recall something that happened 6 months earlier or later than their traumatic/most severe event. Events were rated on 7-point Likert scales, ranging from -3 (*extremely negative*) to 3 (*extremely positive*). For event severity, there was a main effect of event type ($F(2, 272) = 1209.37, p < .001$) and a group X event type interaction ($F(4, 272) = 4.08, p < .005$), with trauma/most severe events rated more negative than negative events and negative events rated more negative than positive events, especially by individuals with PTSD. All events were rated as highly emotional, and the most severe life event appeared to be a reasonable proxy for a traumatic experience.

2.4.2 Disclosure measures—To assess amount of disclosure participants were asked, “How many times have you talked about this event?”. To examine depth of disclosure, participants were asked, “How many times have you told the full story (including your surroundings, feelings, thoughts, and the involvement of yourself/others) of what happened?”. When completing these questions the researcher worked closely with the participant to ascertain the most accurate estimates possible.

Using a standardized 7-point Likert scale, three additional ratings were obtained on the extent, detail, and difficulty of disclosure. To rate extent of disclosure, participants were asked, “Since it happened I have talked about this event...” on a scale from 1 “*not at all*” to 7 “*a lot*”. They were also asked to rate the detail, “When you talk about this event, how much detail do you include?”, rated from 1 “*no detail*” to 7 “*a lot of detail*”. Finally, participants were asked to rate, “How difficult is it for you to talk about this event?”, from 1 “*not at all difficult*” to 7 “*extremely difficult*”.

To examine event characteristics and ethnic identity differences associated with disclosure, we calculated difference scores to examine whether individuals were less prone to discuss their trauma than their negative (trauma - negative) or positive event (trauma - positive). Difference scores were calculated for the ratings of extent, difficulty, and detail of disclosure. Higher difference scores reflect greater likelihood to disclose the traumatic event for both extent and detail variables and greater difficulty associated with the trauma for the difficulty outcome.

2.5 Procedure

Participants were screened on the phone for initial eligibility for trauma exposure and current PTSD symptoms and scheduled for an in-person assessment. After obtaining informed consent, participants were administered interviews (SCID-IV, PSS-I) to determine Criterion A and PTSD diagnosis. Next, screening measures (BDI, STAI) were administered.

Participants identified their traumatic/severe, negative, and positive events with the help of a research assistant. For each event, participants completed the disclosure questions. Order of events was counterbalanced. Participants then completed additional questionnaires (PDS, MEIM, PAN). Participants were debriefed and paid \$20 per hour.

3. Results

To explore main hypotheses we looked at differences in disclosure by group and event type. Means, standard deviations, and ranges are presented in Table 2.

3.1 Amount of Event-related Disclosure

As shown in Table 2, the number of times an individual disclosed *the event itself* and the number of times an individual disclosed *the full story* of the event were not normally distributed. Accordingly, non-parametric statistics, specifically Friedman tests followed by Wilcoxon signed rank tests, were utilized. These statistical methods rank each individual based on their relative position within the distribution, do not utilize the numeric value of the data, and analyze the data based on rank position₁.

There was a significant difference in the PTSD group on number of times the event was disclosed between event types ($\chi^2(2, 62) = 14.24, p < .001$), with individuals with PTSD disclosing traumatic events ($Mdn = 15.00, p < .01$) more frequently than negative events ($Mdn = 5.00; z = -3.09, p < .01, r = -.28$). However, when examining full story disclosure for individuals with PTSD there was no difference between event types ($\chi^2(2, 66) = 3.53, p = .17$).

For the trauma-exposed no PTSD group, there was a difference in event types for number of times ($\chi^2(2, 42) = 30.01, p < .001$). Individuals with trauma exposure disclosed both traumatic ($Mdn = 20.00; z = -5.14, p < .001, r = -.56$), and positive events ($Mdn = 10.00; z = -3.67, p < .001, r = -.33$) more than negative events ($Mdn = 5.00$). Trauma exposed individuals also disclosed traumatic events more than positive events, ($z = -3.00, p < .01, r = -.40$). There was also a difference on disclosure of the full story ($\chi^2(2, 43) = 12.01, p < .01$), with both trauma ($Mdn = 5.00; z = -3.01, p < .01, r = -.32$) and positive events ($Mdn = 3.00; z = -2.40, p < .05, r = -.25$), being fully disclosed more frequently than negative events ($Mdn = 3.00$).

Finally, for the control group, there was a difference between event types for number of times ($\chi^2(2, 31) = 11.52, p < .01$). Individuals in this group also disclosed severe life events ($Mdn = 5.00$) and positive events ($Mdn = 5.00$) more frequently than negative events ($Mdn = 5.00$), however they did not disclose severe life events more or less than positive events.

There was no difference for number of times the full story was told ($\chi^2(2, 32) = 2.57, p = .28$).

3.2 Extent, Difficulty, and Detail of Event-related Disclosure

To examine Likert ratings of the extent, difficulty, and details of disclosure, we conducted 3 (Group: PTSD, trauma-exposed No PTSD, Control) x 3 (Event: Trauma/most severe, Negative, Positive) repeated-measures ANOVAs. Post hoc comparisons were conducted using paired sample t-tests.

3.2.1 Extent of disclosure—Examining ratings of the extent to which individuals had talked about events, there were no group or group x event type interaction effects for the extent of disclosure. There was a main effect of event, $F(2, 268) = 16.01, p < .001$, with traumatic/most severe life events (adjusted $M = 4.69, SE = .14, t(139) = 5.48, p < .001$, Cohen's $d = .64$) and positive events (adjusted $M = 4.51, SE = .18, t(137) = -4.46, p < .001$, Cohen's $d = .48$) discussed more than negative events (adjusted $M = 3.56, SE = .16$).

3.2.2 Difficulty of disclosure—We next examined ratings of disclosure difficulty. Main effects of group, $F(2, 136) = 23.80, p < .001$, and event type, $F(2, 272) = 86.52, p < .001$, were modified by a group x event interaction, $F(4, 272) = 9.22, p < .001$. Examining this interaction, individuals with PTSD reported greater difficulty disclosing traumatic than negative ($t(65) = 6.61, p < .001$, Cohen's $d = 1.71$) and positive events ($t(64) = 13.19, p < .001$, Cohen's $d = 1.46$), and more difficulty disclosing negative than positive events ($t(65) = 5.82, p < .001$, Cohen's $d = 0.94$). In contrast, trauma-exposed individuals without PTSD did not report more difficulty disclosing trauma than negative events (Cohen's $d = 0.14$), but reported greater difficulty disclosing trauma than positive events ($t(41) = 6.33, p < .001$, Cohen's $d = 1.39$) and more difficulty disclosing negative than positive ones ($t(42) = 5.71, p < .001$, Cohen's $d = 1.21$). Similarly, control individuals did not report more difficulty disclosing severe life events than negative events (Cohen's $d = 0.08$), but did report greater difficulty disclosing severe life events than positive events ($t(31) = 5.24, p < .001$, Cohen's $d = 1.29$) and more difficulty disclosing negative than positive events ($t(31) = 4.89, p < .001$, Cohen's $d = 1.21$).

3.2.3 Amount of detail during disclosure—Finally, examining the amount of details disclosed, there was an effect of event, $F(2, 256) = 7.27, p < .005$, but no effect of group or group x event interaction. Individuals reported providing more detail when disclosing trauma (adjusted $M = 4.31, SE = .14, t(139) = 2.20, p < .005$, Cohen's $d = .23$) and positive events (adjusted $M = 4.44, SE = .15, t(131) = -3.15, p < .005$, Cohen's $d = .36$) than negative events (adjusted $M = 3.84, SE = .14$).

3.3 Prediction of Lower Differential Extent, Difficulty, and Detail of Disclosure

We next examined traumatic event characteristics and ethnic identity differences associated with disclosure, using difference scores (trauma – negative and trauma – positive) for extent, difficulty, and detail of disclosure. For extent and detail of disclosure, greater difference scores show a greater likelihood to disclose the traumatic event and for the difficulty variable greater difference scores represent greater difficulty disclosing the traumatic event. Linear regressions were conducted on the trauma-exposed sample only. Zero-order correlations are presented in Table 3.

3.3.1 Traumatic event characteristics and disclosure—Simultaneous linear regressions were conducted with the trauma-exposed sample ($n = 110$) to examine the association between trauma characteristics and differential disclosure using the following variables: CSA ($n = 17$, coded 1 for *present* 0 for *absent*), sexual assault ($n = 40$, child or

adult coded 1 for *present* 0 for *absent*), childhood assault ($n = 28$, sexual or physical, coded 1 for *present* 0 for *absent*), injuries ($n = 46$, coded 1 for *present* 0 for *absent*), and belief that life was in danger ($n = 86$, coded 1 for *present* 0 for *absent*). We conducted three different simultaneous regression analyses (extent, difficulty, details) and trauma characteristic variables were not mutually exclusive (e.g., events may be in more than one category). Only significant regressions are described.

For extent of disclosure, trauma characteristics did not predict less disclosure of the trauma compared with negative or positive events. For difficulty of disclosure, as shown in Table 4, if the event was sexual, individuals reported more difficulty disclosing this event than a negative event ($\beta = .32$, $t = 3.23$, $p < .01$). Similarly, if a childhood assault occurred, individuals reported more difficulty disclosing this event than a positive event ($\beta = .35$, $t = 2.84$, $p < .01$).

Finally, for details of disclosure, in Table 4, if the event was sexual, individuals reported disclosing less details of the traumatic than the positive event ($\beta = -.28$, $t = 2.87$, $p < .01$). CSA, being injured, or feeling like one's life was in danger did not reliably predict differential disclosure across indices.

3.3.2 Ethnic identity and acculturation and disclosure—Finally, to explore the effects of ethnic identity and acculturation on disclosure, stepwise linear regressions were conducted (see Table 5). Given the previously found association between sexual assault and differential disclosure, this variable was entered in Step 1. In Step 2, cultural identification (PAN), American culture identification (PAN), belongingness with ethnic culture (MEIM), and ethnic identity search/exploration (MEIM) were simultaneously entered. Across analyses only prediction of differential disclosure details was significant. When sexual assault was covaried, ethnic identity and acculturation were only broadly predictive of differential disclosure of event details when comparing traumatic versus positive events, improving prediction of differential disclosure, $F(4,106) = 10.24$, $p < .01$, but none of the individual predictors approached significance.

4. Discussion

Contrary to theories positing the psychological benefit of disclosure, in this study, the act of disclosing, defined by either repetitions or more details, was not strongly associated with PTSD or trauma exposure. Individuals with chronic PTSD reported disclosing their trauma both as much and in as much detail as those without PTSD, but reported greater difficulty with disclosure than both trauma-exposed individuals without PTSD and non-trauma exposed individuals. Why, even with repetition and details, does difficulty of disclosure persist in individuals with PTSD? Undoubtedly, event characteristics and other individual differences may contribute, with adult sexual and childhood physical/sexual assault associated with increased difficulty and less detail during trauma disclosure compared to other emotionally-laden events.

As noted, individuals with PTSD reported more difficulty disclosing traumatic and, to a lesser extent, positive events than trauma-exposed individuals without PTSD and non-trauma exposed individuals, despite similar overall disclosure. These findings are in contrast to theories suggesting that disclosure of emotional events is associated with increased ease in talking about them (e.g., Pennebaker et al., 2001). Although theories posit that sharing should facilitate coping and decrease distress following trauma (e.g., Fontana & Rosenheck, 1994; Pennebaker et al., 2001), these results suggest that it is not the amount of disclosure that distinguishes those with PTSD from those without. Furthermore, it does not appear that disclosure of traumatic events is unique compared to other emotional experiences.

Our findings support recent research showing that attitudes toward trauma disclosure, namely both a greater reluctance and a strong desire to disclose, are predictors of PTSD (Mueller et al., 2008). Since amount of trauma disclosure does not necessarily predict PTSD (e.g., Schnurr et al., 1997; Southwick et al., 2000), it may be the process of disclosure that is more crucial, such as wanting to share the event but not having the opportunity (Mueller et al., 2008). Psychological adjustment after trauma may be related to the meaning attributed to the event that is being disclosed (e.g., Ehlers & Clark, 2000). This is consistent with emotional processing theories that suggest that activation of a schema is not necessarily sufficient for successful processing (e.g., Foa & Kozak, 1986) and processing may require more than social disclosure (e.g., Rimé, 1995). Furthermore, reactions to disclosure of emotional experiences are important (e.g., Taku, Tedeschi, Cann, & Calhoun, 2009; Ullman, 2003), but were not measured in this study. Individuals with PTSD might be more likely to receive negative reactions (e.g., Filipas & Ullman, 2001) or less reciprocal disclosure (Taku et al., 2009). This might explain why amount of disclosure did not differentiate between PTSD and no PTSD but difficulty of disclosure did. Regardless of the explanation, the fact that amount of disclosure does not relate to PTSD is consistent with our clinical experience, as many individuals with PTSD report frequent disclosure of the trauma but also report powerful, associated emotions and continued difficulty disclosing.

In general, traumatic/worst life events and positive events were disclosed more than negative events, with more details. These differences may reflect the broad life impact of experiencing a trauma (e.g., Janoff-Bulman, 2006) and the relative ease of disclosing positive events, however, individuals with PTSD reported more difficulty disclosing positive events than other groups. We controlled for the effect of time for positive and negative events, yet there is likely a difference in the emotional salience, with the trauma/worst life events more salient than other events, possibly explaining increased disclosure. The difficulty for those with PTSD in disclosing positive events also makes sense given autobiographical memory deficits for positive cue words for individuals with PTSD, where they have difficulty retrieving specific, positive autobiographical memories (Moore & Zoellner, 2007).

Events of a sexual nature and childhood assaults predicted more difficulty with disclosure, and sexual events predicted less detail, for traumatic events compared to other events. These events may be stigmatizing and less likely to be disclosed (Ullman, 2003), with sexual trauma particularly associated with negative social reactions (Fontana, Swartz, & Rosenheck, 1997), resulting in lack of social support, a predictor of worse adjustment (e.g., Brewin, Andrews, & Valentine, 2000). Taken together, reactions to disclosure may be an important factor to consider when looking at sexual trauma disclosure and adjustment. It is concerning that these stigmatized trauma types predict lower disclosure, and if reactions to disclosure are a contributing factor then this might be an appropriate target for prevention. Yet, the experience of CSA itself did not reduce differential disclosure, with associations being small and non-significant. Our analyses focused on lower differential trauma disclosure, and CSA may be associated with avoidant coping of all emotionally-laden material (e.g., Fortier et al., 2009). Further, our CSA sample was low ($n = 17$), potentially reducing our ability to see an association.

Ethnic identity and acculturation did not emerge as strong predictors of lower trauma-related disclosure. This is consistent with past research showing that across cultures most people disclose emotional events (Rimés et al., 1998), suggesting that trauma disclosure is not unique. However, the finding that disclosure is not related to acculturation is surprising given theories that increased disclosure is related to connection to dominant culture (Hofstede, 1991). One explanation could be that in the US perceptions of disclosure of traumatic events are so pervasive (Ullman, 2010) that it is not affected by acculturation.

Alternatively, measures of acculturation, which assess experiences such as language and interests, may not capture sharing of emotional experiences. For example, Asian American women tend to disclose traumatic experiences more to informal sources (e.g., friends) than to formal sources (e.g., police; Shenoy et al., 2009), a difference not assessed with these measures.

Several limitations should be noted. First, we utilized a broad definition of disclosure; however, comparison events and examination of general disclosure versus “telling the full story” likely minimized interpretation differences. Second, we controlled time since event, limiting error introduced by time, but possibly restricting ability to look at most salient positive and negative events, which might be disclosed more than traumatic events. Childhood events may be particularly vulnerable to this bias, as it may not be surprising that positive or negative events, not considered severe or traumatic, may not be discussed in adulthood. Nevertheless, traumatic or worst life events were consistently disclosed the most and childhood events did not significantly predict differential trauma disclosure compared to positive or negative events. Third, our PTSD sample was treatment seeking, and it may be that these individuals have a history of higher trauma-related disclosure and a greater history of treatment. This potentially reduces the generalizability of the findings and highlights the need for replication in a non-treatment seeking sample. Finally, our analyses on ethnic identity and acculturation are limited by a largely Caucasian, U.S. sample and the use of stepwise regression analyses, arguing for replication in more diverse and larger samples. Nevertheless, measures were chosen to be relevant for individuals who primarily identify with the dominant American culture, and these measures showed a full range.

Ultimately, the present findings highlight the differential difficulty of disclosing traumatic events for individuals with PTSD, arguing that it is not simply the amount or details of disclosure that differentiate them from trauma-exposed individuals without PTSD. Clinically, better understanding why, even with repeated and detailed disclosure, these individuals report persistent difficulty with disclosure may help us better understand key mechanisms underlying natural recovery following trauma.

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Research Highlights

- Individuals with PTSD report greater difficulty disclosing traumatic events
- Individuals with PTSD reported disclosing the traumatic event a similar number of times
- Individuals with PTSD reported disclosing in a similar levels of detail
- Sexual and childhood trauma were associated with greater difficulty in disclosure

Table 1

Summary of Sample Characteristics

	PTSD (<i>n</i> = 67) <i>M</i> (<i>SD</i>)	No PTSD (<i>n</i> = 43) <i>M</i> (<i>SD</i>)	Control (<i>n</i> = 33) <i>M</i> (<i>SD</i>)
Age	37.56 (11.48)	34.21 (12.87)	24.79 (8.51)
Gender (% Female)	80.0	55.8	66.7
Ethnicity (%)			
Caucasian	67.3	79.1	60.6
Asian American	9.1	2.3	30.3
African American	16.4	2.3	3.0
Other	7.4	16.2	6.0
Primary Criterion A Event Type (%)			
Adult Sexual Assault	25.4	9.3	-
Adult Non-sexual Assault	22.4	16.3	-
Child Sexual Assault	20.9	11.6	-
Child Non-sexual Assault	13.4	0.0	-
Serious accident, fire, or explosion	10.4	39.5	-
Natural Disaster	1.5	9.3	-
Death Friend/Family/etc.	6.0	11.6	-
Years Since Criterion A Event	13.27 (13.92)	14.95 (13.93)	-
PTSD Severity (PDS)	32.03 (9.54)	2.75 (3.51)	-
Ethnic Identity (MEIM)			
Belonging/Affirmation	2.68 (.75)	2.39 (.71)	2.31 (.67)
Identity Search	2.21 (.75)	2.39 (.72)	2.31 (.67)
Acculturation (PAN) (Mean %)			
Ethnic Culture	.12 (.23)	.07 (.16)	.16 (.22)
American Culture	.53 (.36)	.47 (.30)	.40 (.32)

Note. PDS = Posttraumatic Diagnostic Scale; MEIM=Multigroup Ethnic Identity Measure; PAN = Pan-Acculturation Scale

Table 2

Disclosure Across Individuals with PTSD, no PTSD, and Controls and Across Type of Event

	PTSD				No PTSD				Control			
	M	SD	Range		M	SD	Range		M	SD	Range	
Trauma/Worst												
# Times	57.63	176.27	1–1000		124.60	479.39	0–3000		12.67	21.12	1–100	
# Full story	29.36	135.02	0–1000		10.93	17.73	0–100		3.15	3.68	0–20	
Extent	4.68	1.62	1–7		5.23	1.62	1–7		4.30	1.53	2–7	
Difficulty	5.11	1.57	1–7		2.79	1.69	1–7		2.76	1.79	1–7	
Detail	4.23	1.59	1–7		4.30	1.61	1–7		4.24	1.15	2–6	
Negative Event												
# Times	29.95	123.10	0–1000		7.14	8.77	0–50		7.24	10.83	0–50	
# Full story	20.16	121.72	0–1000		4.56	5.76	0–30		2.91	2.92	0–11	
Extent	3.85	1.96	1–7		3.57	1.74	1–7		3.33	1.36	1–6	
Difficulty	3.12	1.89	1–7		2.58	1.71	1–7		2.61	1.75	1–6	
Detail	4.29	1.56	1–7		3.60	1.36	1–7		3.64	1.50	1–7	
Positive Event												
# Times	90.80	581.22	0–4700		18.07	32.18	0–200		8.06	6.15	0–21	
# Full story	82.09	577.46	0–4700		23.51	108.99	0–720		3.59	4.51	0–20	
Extent	4.49	2.12	1–7		4.55	1.92	1–7		4.53	1.83	1–7	
Difficulty	1.58	1.33	1–7		1.09	.29	1–2		1.06	0.25	1–2	
Detail	4.81	1.65	1–7		4.15	1.69	2–7		4.35	1.54	1–7	

Note. # times and # full story were open-ended response items; extent, difficulty, and detail were rated on a 7-point Likert scale.

Table 3
Association Among Differential Trauma Disclosure and Traumatic Event Characteristics and Ethnic Identity and Acculturation

Event Characteristics	Amount of Disclosure		Difficulty of Disclosure		Details in the Disclosure	
	Trauma-Negative	Trauma-Positive	Trauma-Negative	Trauma-Positive	Trauma-Negative	Trauma-Positive
Childhood Sexual Abuse	.09	.13	.08	.13	-.11	-.14
Sexual Assault	-.01	-.05	.28*	.22*	-.19*	-.29*
Childhood Assault	.11	.13	.12	.26*	-.10	-.17
Injured	.03	.11	-.07	-.05	.16	.06
Life Threat	.14	.05	.03	-.02	.03	.09
Acculturation/Identity						
Non-white ($0=no, 1=yes$)	.03	.03	-.04	.05	.17	.20*
Ethnic Culture (PAN)	.10	-.08	-.16	-.13	.02	.17
American Culture (PAN)	-.09	-.08	.16	.16	-.10	-.21*
Affirm/Belong (MEIM)	.08	.03	-.10	-.13	.16	.19*
Ethnic Id Search (MEIM)	.09	.07	-.02	-.03	.17*	.17

Note. Childhood sexual assault ($0 = no, 1 = yes$); childhood assault ($0 = no, 1 = yes$); sexual assault ($0 = no, 1 = yes$); injured during trauma ($0 = no, 1 = yes$); and life threat ($0 = no, 1 = yes$).

* $p < .05$

Table 4

Trauma Characteristics Associated With Differential Disclosure of the Traumatic/Worst Event

Variables	R^2	β
Difficulty of Disclosure (Trauma-Negative)	.09	
Childhood Sexual Abuse		-.18
Childhood Assault		.12
Sexual Assault		.32*
Injured		-.07
Life Threat		.05
Difficulty of Disclosure (Trauma-Positive)	.11	
Childhood Sexual Abuse		-.22
Childhood Assault		.35*
Sexual Assault		.19
Injured		-.05
Life Threat		-.01
Detail of Disclosure (Trauma-Positive)	.10	
Childhood Sexual Abuse		.09
Childhood Assault		-.12
Sexual Assault		-.28*
Injured		.02
Life Threat		.07

*
 $p < .05$

Table 5

Acculturation and Ethnic Identity Predicting Differential Disclosure of the Traumatic/Worst Event

Predictor	ΔR^2	β
Details in Disclosure (Trauma-Positive)		
Step 1	.08**	
Sexual Assault		-.29*
Step 2	.11*	
Non-white (<i>0 = no, 1 = yes</i>)		.11
Ethnic Culture (PAN)		.04
American Culture (PAN)		-.18
Affirm/Belong (MEIM)		-.12
Ethnic Identity Search (MEIM)		.24

Note.

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