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The Peritraumatic Distress Inventory (PDI): Factor structure and predictive validity in traumatically injured patients admitted through a Level I trauma center

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Abstract

Peritraumatic distress is defined as the emotional and physiological distress experienced during and/or immediately after a traumatic event and is associated with the development and severity of posttraumatic stress disorder (PTSD) and related psychological difficulties. The Peritraumatic Distress Inventory (PDI) is a widely-used self-report measure for which psychometric evaluation has been limited. This study sought to assess the factor structure and predictive validity of the PDI with a clinical sample of 600 traumatically injured patients admitted to a Level I trauma center, 271 of whom completed a phone-based PTSD screening ~30-days post-injury. The results confirmed previously proposed one- and two-factor solutions for the PDI. PDI scores predicted PTSD severity and positive PTSD screens (i.e., clinically elevated *vs.* non-elevated). Data suggested an optimal cutoff score of 23 (sensitivity = 71%; specificity = 73%) for predicting clinically elevated PTSD 30-days post-injury. This study provides further evidence supporting the PDI as a valid and reliable measure of peritraumatic distress.

Keywords

PDI; peritraumatic distress; psychometric validation; cutoff score; traumatic injury; trauma center

1. Introduction

Posttraumatic distress disorder (PTSD) is diagnostically unique in that it requires exposure to a specific, defining traumatic event or events (i.e., exposure to actual or threatened death, serious injury, or sexual violence) that precedes the onset of symptoms (American

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Psychiatric Association [APA], 2013). Peritraumatic distress is defined as the emotional and physiological distress experienced during and/or immediately after a traumatic event. Elevated peritraumatic distress is associated with a higher likelihood of developing PTSD and related psychological difficulties (Gorman, Engel-Rebitzer, Ledoux, Bovin, & Marx, 2014), and meta-analytic data indicate that peritraumatic distress is associated with increased PTSD severity (pooled correlation coefficient = .55; Thomas, Saumier, & Brunet, 2012). Moreover, peritraumatic psychological processes, such as peritraumatic distress, are the strongest predictors of PTSD, beyond characteristics such as prior trauma and adjustment and family psychological history (Ozer, Best, Lipsey, & Weiss, 2003).

The Peritraumatic Distress Inventory (PDI; Brunet et al., 2001) was developed to better capture the emotional and physiological experience of individuals during and shortly after a traumatic event. The initial psychometric evaluation of the PDI was conducted using a cross-sectional study sample of police officers and non-police peers who had experienced or witnessed traumatic events, the majority of which included physical assault and illnesses, injuries, or deaths, roughly six to nine years prior to assessment. The PDI demonstrated good internal consistency, stability, convergent, and divergent validity. Results from an exploratory factor analysis supported a two-factor solution consisting of negative emotions (items 1, 2, 3, 5, 6, 8, and 10) and perceived life threat and bodily arousal (items 4, 7, 9, 11, 12, and 13), which were mildly correlated (r = .20). This two-factor solution was then confirmed in the sample of non-police peers (Brunet et al., 2001). Since this initial validation, the PDI has been cited in over 370 publications and has been translated into several languages (i.e., Japanese, French, Dutch, Malay, and Persian). Despite its wide use, relatively few studies have examined the psychometric properties of the PDI since its original publication. The majority of these studies aimed to validate translated versions of the measure. Specifically, the PDI has demonstrated adequate internal consistency, test-retest reliability, and divergent and convergent validity for the French (Jehel, Brunet, Paterniti, & Guelfi, 2005), Japanese (Nishi et al., 2009), Malay (Bahari et al., 2017), and Persian (Abasian, Saffarian, Masoumi, & Sadeghkhani, 2016) versions.

Although the PDI has demonstrated relatively consistent data with respect to reliability and validity, results relating to its factor structure have varied. Initial findings supporting a two-factor solution were replicated via principal component analysis as part of the validation of the French translation (Jehel et al., 2005). Exploratory factor analysis of the English version supported a four-factor solution, which excluded item 11, and consisted of the following factors: life threat (items 2, 4, 7, 10, & 13), loss of control (items 8, 9, & 12), helplessness/anger (items 1 & 3), and guilt/shame (items 5 & 6; Simeon, Greenberg, Knutelska, Schmeidler, & Hollander, 2003). A one-factor solution was demonstrated using confirmatory factor analysis as part of a study using the Japanese version, although fit statistics for this model were not reported (Shigemura, Tanigawa, Nishi, Matsuoka, Nomura, & Yoshino, 2014). Another study confirmed a one-factor solution for the Malay translation using partial least squares structural equation modeling. Again, fit statistics for the model were not reported, and the authors reported that 62% of the items (i.e., items 1, 2, 3, 5, 6, 7, 8, and 9) demonstrated poor factor loadings (Bahari et al., 2017).

Findings also have been consistent with respect to the PDI's ability to predict PTSD diagnosis and severity (see Thomas et al., 2012 for a review). However, only two studies have recommended cutoff scores for the PDI to predict clinically elevated PTSD, and they differed in their recommendations. Cutoff scores were established based on DSM-IV-TR (APA, 2001) criteria for PTSD, and data were obtained from patients admitted to trauma centers specifically following motor vehicle accidents, limiting generalizability to patients who have experienced this type of accident. A cutoff score of 23 was recommended for the Japanese translation in predicting a diagnosis of PTSD one-month post-injury (Nishi, Matsuoka, Yonemoto, Noguchi, Kim, & Kanba, 2010), whereas analysis with the English version indicated a cutoff score of 14 for predicting full or partial PTSD six-weeks post-injury (Guardia, Brunet, Duhamel, Ducrocq, Demarty, & Vaiva, 2013).

Taken together, the research literature examining the PDI, its factor structure, and the optimal cutoff score for predicting PTSD is limited in several ways. The psychometric properties have not been well established for the English version, and its factor structure has not been thoroughly examined. Additionally, cutoff scores are not well established and have not been updated for DSM-5. The goal of the present study was to examine the factor structure of the English version of the PDI as well as its predictive validity and optimal cutoff score with respect to DSM-5 criteria for PTSD, using a prospective and diverse sample of traumatically injured patients admitted to a Level I trauma center.

2. Method

2.1 Data Collection Procedures

Data were obtained from patients enrolled in the Medical University of South Carolina's (MUSC) Trauma Resilience and Recovery Program (TRRP; Ruggiero, Davidson, Bunnell, Maples-Keller, & Fakhry, 2016) clinical service during its first two years of operation (i.e., August 1, 2015 to June 30, 2017). Traumatically injured patients admitted through MUSC's Level I trauma center were approached almost exclusively on weekdays during working hours (i.e., 8:00AM to 5:00PM) by TRRP staff, who enrolled patients in the clinical service and requested permission to contact them by telephone 30-days post-injury to follow up on their emotional recovery. At the time of enrollment in the program during their hospital stay, patients completed a brief questionnaire battery, which included the PDI. Patients whose injuries or reading ability inhibited completion of questionnaires by hand were given assistance by TRRP staff, who asked questions and presented response options. TRRP staff contacted patients by telephone approximately 30-days post-injury (Median days until contact = 39). The phone screen included a PTSD screen, and referrals for treatment were provided to patients with positive screens.

2.2 Participants

A sample of 600 patients of the 1,055 approached by TRRP staff completed the PDI during their hospital admission and were included in analyses examining its factor structure. A total of 271 (45%) of these 600 patients provided complete data during the 30-day PTSD screen. This subsample was used for analyses examining the PDI's predictive validity, cutoff scores, sensitivity, and specificity. Most patients who did not complete the 30-day PTSD screen

were unreachable over 3 contact attempts. Because these data were collected via standard clinical services, contact attempts were limited and incentives were not provided to patients. Nevertheless, completers and non-completers of the PTSD screen did not differ significantly in age (t[569] = 0.25, p = .802), PDI scores (t[598] = -.20, p = .840), sex (χ^2[1, 600] = 1.41, p = .236, Φ = .05), race (χ^2[5, 598] = 3.28, p = .656, Φ = .07), ethnicity (χ^2[2, 599] = .67, p = .725, Φ = .03), or type of trauma (χ^2[9, 599] = 11.42, p = .248, Φ = .14). Sample characteristics are presented in Table 1.

2.3 Assessment Measures

2.3.1 Peritraumatic Distress Inventory—The PDI (Brunet et al., 2001) is a 13-item self-report questionnaire that measures the level of distress experienced by an individual during and shortly after a traumatic event. Items are rated on a 5-point Likert scale with the following anchors: 0 = Not at All True; 1 = Slightly True; 2 = Somewhat True; 3 = Very True; and 4 = Extremely True. Total scores range from 0–52 and are calculated as the sum of all item ratings. The PDI demonstrated good internal consistency (Cronbach's α = .83) in the current sample.

2.3.2 PTSD Checklist for DSM-5 (PCL-5)—The PCL-5 (Weathers et al., 2013) is a 20-item self-report questionnaire that measures DSM-5 PTSD symptom severity. Items are rated on a 5-point Likert scale with the following anchors: 0 = Not at All; 1 = A Little Bit; 2 = Moderately; 3 = Quite A Bit; and 4 = Extremely. Total scores range from 0 to 80 and are calculated as the sum of all item ratings, with a total score ≥ 33 indicating probable PTSD based on a sample of Veterans receiving care at a Veterans Affairs Medical Center (Bovin et al., 2016). The PCL-5 demonstrated good internal consistency (Cronbach's α = .96) in the current sample.

2.4 Data Analytic Plan

2.4.1 Factor Structure—Initial analyses sought to confirm the one-factor (i.e., unidimensional) solution proposed by Shigemura et al. (2014), and the two-factor oblique (i.e., correlated) solution proposed by Brunet et al (2001). Additional analyses sought to confirm the four-factor solution proposed by Simeon et al. (2003). These item-level confirmatory factor analyses (CFAs) were performed separately and in each CFA, the loading of one item per factor was constrained to 1.0 to set the scale for each latent variable. Error terms for items 5 and 6, and items 12 and 13 were allowed to correlate due to similarity in wording and item content.

Specifically, the PDI covers a range of responses that can occur during a traumatic experience, and some items could be construed as having similar meanings. For example, items 5 and 6 ask about feelings of guilt and shame. These emotions are useful to assess from a clinical standpoint, but may not be easily differentiated during a traumatic experience. Similarly, items 12 and 13 ask about feelings or thoughts about passing out and dying, which might not be considered mutually exclusive to someone who has just been severely injured. Therefore, it appeared justified to include correlated uniquenesses for these 2 pairs of items, given their similarity (Cole, Ciesla, & Steiger, 2007). Model fit was assessed using recommended cutoffs by Hu and Bentler (1999). All models were estimated

with LISREL 8.80 (Jöreskog & Sörbom, 1996) using maximum likelihood estimation (i.e., all variables were treated as continuous).

2.4.2 Total Score and Individual Item Comparisons—Independent Samples *t*-Tests were used to compare PDI scores and individual item ratings between patients with elevated and non-elevated PCL-5 scores 30-days post-injury. The Benjamini and Hochberg (1995) procedure with a false discovery rate critical *p* of .05 was used to adjust for multiple comparisons.

2.4.3 Predictive Validity—Linear regression was used to predict PCL-5 scores from PDI scores. An equation derived from this analysis was used to predict probable PCL-5 scores based on their associated PDI scores. Logistic regression was then used to predict clinically elevated 30-day PCL-5 total scores (coded as either 0 [not clinically elevated] or 1 [clinically elevated]) from PDI scores. Analyses were conducted using SPSS 24.0 (IBM Corp., 2016).

2.4.4 Sensitivity, Specificity, and Optimal Cutoff—A receiver operating characteristic (ROC) curve analysis was conducted to establish a cutoff score for the PDI for predicting clinically elevated PCL-5 scores (coded as either 0 [not clinically elevated] or 1 [clinically elevated]) while optimizing sensitivity (i.e., true positive rate) and specificity (i.e., false positive rate). The ROC curve analysis was conducted using SPSS 24.0.

3. Results

3.1 Factor Structure

PDI item and total score means, standard deviations, and correlations are shown in Table 2. The results of the CFAs suggested good fit for the one-factor (root mean square error of approximation [RMSEA] = .06, 90% CI [.05, .07]; Tucker–Lewis index [TLI] = .96; comparative fit index [CFI] = .97; standardized root mean square residual [SRMR] = .05) and two-factor (RMSEA = .06, 90% CI [.05, .07]; TLI = .96; CFI = .97; SRMR =.04) solutions, but poor fit for the four-factor solution (RMSEA = .11, 90% CI [.10, .12]; TLI = .81; CFI = .86; SRMR = .15). Most of the standardized parameter estimates for the factor loadings were reasonable (average loading = .51 for the one-factor solution and .53 for the two-factor solution), however, the factor loadings for items 5 and 9 were poor (i.e., ≤ .30) for both solutions. The factor correlation between the negative emotions and perceived life threat and bodily arousal factors was strong (r = .91), and the average correlations for the error terms of like-items was r = .22 and .21 for the one- and two-factor solutions, respectively (see Table 3).

3.2 Total Score and Individual Item Comparisons

Means and standard deviations for the PDI total score and individual item ratings based on PCL-5 elevation (i.e., elevated *vs.* non-elevated) are presented in Table 4. Patients with clinically elevated 30-day PCL-5 scores had significantly higher PDI scores compared to patients who did not screen positive at 30-days (p < .001). These patients also endorsed significantly higher values with respect to individual PDI items (ps < .004), with the exception of items 5 and 9.

3.3 Predictive Validity

The linear regression analysis predicting 30-day PCL-5 scores from the PDI was significant (β= .45, F[1, 269] = 68.85, $p < .001$, $R^2 = .20$). A patient's predicted PCL-5 score 30-days post-injury is equal to 5.66 + .81*(PDI Score). Predicted PCL-5 scores based on corresponding PDI scores were calculated using this equation and are presented in Table 5. The results of the logistic regression analysis indicated that PDI scores predicted clinically elevated 30-day PCL-5 scores ($\beta = .10$, SE = .02, Wald = 46.30, $p < .001$, OR = 1.10, 95% CI [1.07, 1.14]), accounting for roughly 29% of the variance ($R^2_{Nag} = .29$).

3.4 Sensitivity, Specificity, and Optimal Cutoff

The results of the ROC curve analysis predicting 30-day PCL-5 elevations based on PDI scores was significant ($p < .001$). The AUC was good (AUC = .78, $SE = .03$, 95% CI [.72, .84]). Examination of the coordinate points of the ROC curve suggested an optimal PDI cutoff score of 23 (sensitivity = 71%; specificity = 73%) for predicting clinically elevated PCL-5 scores.

4. Discussion

This study aimed to examine the factor structure of the English version of the PDI and its predictive validity and optimal cutoff scores with respect to DSM-5 criteria for PTSD. The use of this prospective sample of traumatically injured patients admitted to a Level I trauma center is a particular strength of this study. Specifically, the sample was diverse with respect to trauma-type, improving the generalizability of the results, and extending previous studies using samples consisting solely of motor vehicle accident survivors (Guardia et al., 2013; Nishi et al., 2010). Further, the length of time between the index trauma and assessment of PTSD symptoms was controlled, extending prior work where peritraumatic distress and PTSD symptoms were reported much later after the traumatic event (Brunet et al., 2001; Jehel et al., 2005).

The results of this study confirmed the two-factor (i.e., negative emotions and perceived life threat and bodily arousal) solution found in the initial validation of the PDI (Brunet et al., 2001) and its subsequent French translation (Jehel et al., 2005). The factor correlation in the present study was stronger than the association reported by the original authors (Brunet et al., 2001). The one-factor (unidimensional) solution demonstrated using the Japanese (Shigemura et al., 2014) and Malay (Bahari et al., 2017) versions of the measure also was confirmed. The four-factor solution proposed by Simeon et al. (2003) was not supported. The average factor loadings for the one- and two-factor solutions were adequate, and were similar to those observed in prior work (e.g., Shigemura et al., 2014). The factor loadings for items 5 (i.e., "I felt guilty") and 9 (i.e., "I had difficulty controlling my bowel and bladder") were poor (i.e., ≤ .30) for both solutions. These findings also were consistent with prior studies that found poor factor loadings for these items (e.g., Bahari et al., 2017; Shigemura et al., 2014). Notably, item-level comparisons between patients with clinically elevated on non-clinically elevated PTSD screens 30-days post-injury revealed significant differences for all but these two items. It is possible that these two items may have less relevance to the experience of peritraumatic distress in this population. It also is possible that individuals

experiencing difficulty with controlling their bowel or bladder and/or greater levels of shame might have been more likely to decline participation. Further investigation of these factors is warranted.

The results of this study corresponded to prior work supporting the predictive validity of the PDI with respect to the development of PTSD symptomatology (see Thomas et al., 2012 for a review). Specifically, PDI scores predicted PTSD scores 30-days post-injury and predicted clinically elevated PTSD at this time point. This is notable as the PCL-5 assesses DSM-5 criteria for PTSD, which eliminated Criterion A2 (i.e., requiring a response of intense fear, helplessness, or horror to the traumatic event). However, the rationale for removal of this criterion was based largely on the fact that a substantial minority of individuals who would otherwise receive a diagnosis of PTSD fail to meet the A2 criterion (Friedman, Resick, Bryant, & Brewin, 2011), which does not negate its relevance. Although requiring replication, another unique contribution of this study to the current research literature is the presentation of predicted PCL-5 scores based on corresponding PDI scores (presented in Table 5). The PCL-5 is a widely-used screening tool for PTSD, and its authors emphasize that PCL-5 scores cannot be used interchangeably with scores from the DSM-IV version (Weathers et al., 2013). As such, the provision of these predictive scores may be useful for future work, particularly for smaller pilot studies that aim to assess early intervention/ prevention strategies for PTSD without the ability to make group comparisons (e.g., Price et al., 2014).

This investigation adds to the two prior studies that recommended cutoff scores for the PDI in predicting clinically elevated PTSD at follow-up (i.e., Guardia et al., 2013; Nishi et al., 2010). This work extended the findings of these studies by including patients who had experienced a variety of traumatic events *vs.* solely motor vehicle accidents, and DSM-5 criteria for PTSD. The results of the ROC curve analysis suggested a cutoff score of 23 for predicting clinically elevated PTSD 30-days post-injury, consistent with findings for the Japanese translation of the PDI (Nishi et al., 2010). This cutoff was higher than previously recommended for the English version (Guardia et al., 2013). This could possibly be due, in part, to the authors' inclusion of patients diagnosed with partial PTSD, as well as the use of a diagnostic interview using DSM-IV-TR criteria for PTSD *vs.* the PCL-5, a self-report measure of PTSD severity based on DSM-5 criteria. With respect to the AUC, sensitivity, and specificity, the results were similar to those observed previously.

There are limitations of the current study that provide areas for future research. First, the study used the PCL-5, a self-report questionnaire that assesses DSM-5 PTSD symptom severity, sofirm conclusions about PTSD diagnosis cannot be made. It should also be noted that self-report measures can overestimate the true rate of PTSD (Griffin, Uhlmansiek, Resick, & Mechanic, 2004; Ruggiero, Rheingold, Resnick, Kilpatrick, & Galea, 2006), which adds to this limitation. A strength of previous investigations was the use of a diagnostic interview, which would have been ideal for this study. However, the data used in this investigation were from a clinical sample of patients admitted to a Level I trauma center, where mental health screening and follow-up is rare (Love & Zatzick, 2014), and screening tools such as the PCL-5 are cost-effective and low-burden approaches to follow-up. Second, only one measure of PTSD was used in this study, whereas there are numerous measures

available for use in clinical settings (see Spoont et al., 2013 for a review), limiting the generalizability of results. Despite this, the PCL-5 is a valid and widely-used measure of PTSD (Belvins et al., 2015; Weathers et al., 2013), thus, its use in this study also is a strength. Third, although the sample used in this study was diverse with respect to demographic characteristics and the type of trauma experienced by patients, the results may not generalize to patients who have experienced other types of trauma (e.g., natural disasters, indirect exposure to aversive details of a trauma), or samples where certain types of trauma are more prevalent (e.g., domestic violence or abuse). As such, replication using these types of samples is needed. Finally, because this study used data from a clinical sample, rather than using an a priori research design, certain psychometric properties (e.g., test-retest reliability, convergent and divergent validity) were not assessed. Future research should examine these specific psychometric properties where possible.

5. Conclusions

In conclusion, this study provides further data supporting the psychometric properties of the English version of the PDI with a diverse sample of traumatically injured patients admitted to a Level I trauma center. The results supported the one- and two-factor structures proposed in prior research. Further, the PDI predicted DSM-5 PTSD severity and clinically elevated PTSD screens 30-days post-injury, with an optimal cutoff score of 23. Future research would benefit from investigating these findings in samples with varying traumatic experiences and clinical settings. This future work should also seek to examine additional psychometric properties of the English version of the PDI that were not addressed in this study, including different types of reliability, convergent and divergent validity, and measurement equivalence.

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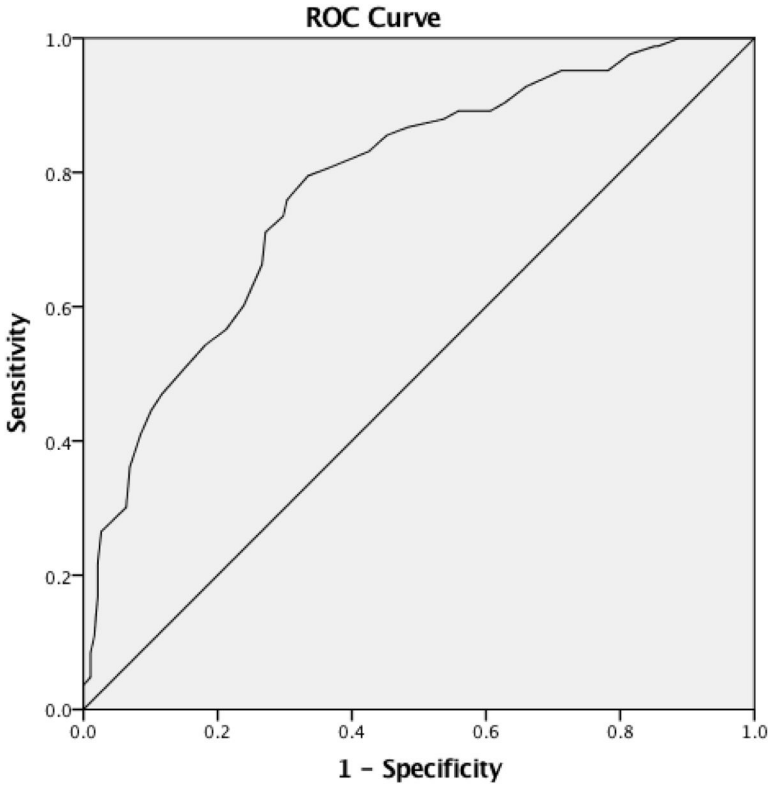

Figure 1.
Receiver Operating Characteristic (ROC) Curve for Clinically Elevated PCL-5 Scores

Table 1

Sample Characteristics

Variable	Overall Sample (*n* = 600)	Sub-Sample (*n* = 271)
	M *(SD)*	**M *(SD)***
Age	44.22 (19.73)	44.00 (18.72)
PDI Total Score	20.38 (12.01)	20.49 (11.84)
PCL-5 Total Score	-	22.16 (21.11)
	***n* (%)**	***n* (%)**
PCL-5 Elevation		
Clinically Elevated	-	83 (30.6)
Non-Clinically Elevated	-	188 (69.4)
Sex		
Male	422 (70.3)	184 (67.9)
Female	178 (29.7)	87 (32.1)
Race		
Black	238 (39.7)	104 (38.5)
White	311 (51.8)	143 (53.0)
Asian	1 (0.2)	1 (0.4)
Am. Indian/Alaska Native	1 (0.2)	0 (0.0)
Other/Bi-Racial	47 (7.9)	22 (8.1)
Ethnicity		
Non-Hispanic	566 (94.3)	257 (94.8)
Hispanic	29 (4.8)	13 (4.8)
Unknown	5 (0.8)	1 (0.4)
Trauma Type		
Motor Vehicle Collision	266 (44.3)	128 (47.2)
Motorcycle Collision	71 (11.8)	33 (12.2)
Fall	106 (17.7)	51 (18.8)
Gunshot Wound/Stabbing	77 (12.8)	28 (10.3)
Pedestrian *vs.* Auto	45 (7.5)	20 (7.4)
Burn	2 (0.3)	-
Animal Attack/Bite	1 (0.2)	-
Assault/Abuse	10 (1.7)	5 (1.8)
Medical Injury	1 (0.2)	1 (0.4)
Other	21 (3.5)	5 (1.8)

Note. PDI = Peritraumatic Distress Inventory; PCL-5 = PTSD Checklist for DSM-5.

Table 2

Descriptive Statistics and Correlations Among PDI Items, PDI Total Scores, and PCL-5 Total Scores

Item/Total Score	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	PDI	PCL-5
1. I felt helpless	2.32	1.65	-														
2. I felt sadness and grief	1.89	1.66	.43	-													
3. I felt frustrated or angry	2.08	1.67	.24	.38	-												
4. I felt afraid for my own safety	1.85	1.72	.41	.40	.27	-											
5. I felt guilty	1.10	1.51	.11	.25	.23	.14	-										
6. I felt ashamed of my emotional reactions	0.69	1.26	.26	.32	.27	.29	.37	-									
7. I felt worried about the safety of others	1.87	1.73	.19	.23	.18	.35	.16	.20	-								
8. I had the feeling I was about to lose control of my emotions	1.20	1.55	.32	.44	.30	.36	.20	.39	.35	-							
9. I had difficulty controlling my bowel and bladder	0.49	1.12	.11	.18	.06[a]	.17	.14	.18	.15	.19	-						
10. I was horrified by what I saw	1.61	1.69	.30	.34	.23	.44	.07	.22	.33	.33	.19	-					
11. I had physical reactions like sweating, shaking, and my heart pounding	1.99	1.75	.35	.38	.30	.42	.10	.19	.29	.39	.19	.44	-				
12. I felt I might pass out	1.82	1.77	.21	.28	.22	.42	.07	.16	.20	.26	.23	.30	.41	-			
13. I thought I might die	1.51	1.73	.30	.34	.23	.43	.08	.21	.26	.31	.18	.39	.36	.45	-		
PDI Total Score	20.38	12.01	.58	.67	.53	.70	.37	.52	.53	.64	.36	.63	.66	.58	.62	-	
PCL-5 Total Score	21.90	21.12	.21	.32	.31	.31	.14	.26	.15	.40	.16	.25	.25	.25	.34	.45	-

Note. N = 271; PDI = Peritraumatic Distress Inventory; PCL-5 = PTSD Checklist for DSM-5; All *p*s <.05 unless otherwise indicated;

[a] *NS*.

Table 3

Confirmatory Factor Analyses of the PDI

	Factor Loadings	
PDI Item	**1 Factor**	**2 Factor**
1	.55	.56[1]
2	.64	.67[1]
3	.46	.47[1]
4	.68	.70[2]
5	.25	.26[1]
6	.44	.47[1]
7	.46	.47[2]
8	.61	.63[1]
9	.29	.30[2]
10	.60	.59[1]
11	.64	.65[2]
12	.51	.54[2]
13	.57	.58[2]
Fit indices		
$\chi^2(df)$	201.37*(63)	178.93*(62)
RMSEA (90% CI)	.06 (.05, .07)	.06 (.05, .07)
TLI/CFI/SRMR	.96/.97/.05	.96/.97/.04

Note. N = 600; PDI = Peritraumatic Distress Inventory;

[1] negative emotions factor;

[2] perceived life threat and bodily arousal factor;

* significant χ^2 value with probability of .05;

df = degrees of freedom; RMSEA = root mean square of approximation; TLI = Tucker–Lewis index; CFI = comparative fit index; SRMR = standardized root mean square residual; CI = confidence interval. Completely standardized solutions. Factor correlation = .91. The error terms for the following items were allowed to correlate where applicable based on contextual similarity: 5 and 6; 12 and 13.

Table 4

Comparison of Individual PDI Items and Total Scores

Variable	Non-Elevated PCL-5	Elevated PCL-5				
	M (SD)	M (SD)	*t*	df	*sig.*	B-H *sig.*
1. I felt helpless	2.24 (1.64)	2.87 (1.41)	−2.99	268	.003	.003
2. I felt sadness and grief	1.52 (1.59)	2.54 (1.51)	−4.96	268	<.001	.001
3. I felt frustrated or angry	1.80 (1.64)	2.86 (1.52)	−4.99	269	<.001	.001
4. I felt afraid for my own safety	1.52 (1.61)	2.81 (1.57)	−6.12	268	<.001	.001
5. I felt guilty	0.97 (1.43)	1.36 (1.63)	−2.00	269	.046	.050
6. I felt ashamed of my emotional reactions	0.39 (0.97)	1.12 (1.46)	−4.86	269	<.001	.001
7. I felt worried about the safety of others	1.63 (1.66)	2.39 (1.72)	−3.43	268	.001	.001
8. I had the feeling I was about to lose control of my emotions	0.74 (1.26)	2.05 (1.68)	−7.05	269	<.001	.001
9. I had difficulty controlling my bowel and bladder	0.39 (0.99)	0.65 (1.28)	−1.79	269	.074	.074
10. I was horrified by what I saw	1.35 (1.60)	2.33 (1.73)	−4.51	269	<.001	.001
11. I had physical reactions like sweating, shaking…	1.78 (1.71)	2.61 (1.66)	−3.69	267	<.001	.001
12. I felt I might pass out	1.48 (1.71)	2.60 (1.61)	−5.07	268	<.001	.001
13. I thought I might die	1.13 (1.51)	2.51 (1.76)	−6.58	269	<.001	.001
PDI Total Score	16.90 (10.57)	28.61 (10.48)	−8.43	269	<.001	.001

Note. N = 271; PDI = Peritraumatic Distress Inventory; PCL-5 = PTSD Checklist for DSM-5; B-H *sig.* = Benjamini-Hochberg *p*-value.

Table 5

PDI Scores and Probable PCL-5 Scores at 30-Days Post-Injury

PDI	PCL-5	PDI	PCL-5
0	6	27	27
1	6	28	28
2	7	29	29
3	8	30	30
4	9	31	31
5	10	32	31
6	10	33	32
7	11	34	33
8	12	35	34
9	13	36	35
10	14	37	35
11	15	38	36
12	15	39	37
13	16	40	38
14	17	41	39
15	18	42	39
16	19	43	40
17	19	44	41
18	20	45	42
19	21	46	43
20	22	47	43
21	23	48	44
22	23	49	45
23	24	50	46
24	25	51	47
25	26	52	≥48
26	27		

Note. N = 271; PDI = Peritraumatic Distress Inventory; PCL-5 = PTSD Checklist for DSM-5; Patients' predicted PCL-5 scores at 30-days is equal to 5.66 + .81*(PDI Score).