

Posters & images in neuroscience

An overview of the Peritraumatic Distress Scale

Posttraumatic stress disorder (PTSD) occurs when significant intrusion, avoidance, and hyperarousal symptoms are manifest for at least 1 month following exposure to a traumatic event, with at least 1 month elapsed between the event and the diagnosis (Diagnostic and Statistical Manual of Mental Disorders, 4th edition, 1994 [DSM-IV]).¹ However, such symptoms are not necessarily manifest in the immediate aftermath of the trauma,² nor does their initial presence strongly predict who will develop PTSD.³ One immediate response to trauma which has been convincingly linked to PTSD symptoms is peritraumatic dissociation.⁴ In this poster, we briefly introduce a new scale assessing immediate responses distinct from peritraumatic dissociation, and we examine its power to predict PTSD symptoms.

Methods

Participants

Six hundred officers were recruited from the police departments of New York, NY, and Oakland and San Jose, Calif, USA. Fifty-two percent of the sample was Caucasian. Eighty percent were male. The mean age was 36.50 years (standard deviation [SD]=6.96). Years in the police force averaged 12.37 (SD=6.78). Most participants (85%) were living with a partner. Number of exposure to critical incidents ranged from 2 to 670 (mean [M] = 171.27, SD = 130.93).⁵ The incident selected for completing the questionnaires had occurred on average 6.50 (SD=5.11) years ago. A reimbursement of \$100 was provided for participation in the study.

Instruments

The Peritraumatic Distress Scale (PDS) was used to assess emotional, cognitive, and physical reactions occurring during a critical incident and immediately after.⁶ Dissociation at the time of the incident was measured with the Peritraumatic Dissociative Experience Questionnaire (PDEQ).⁷ The Impact of Event Scale–Revised (IES-R) was used to measure PTSD symptoms in the last 7 days.⁸ The Mississippi Scale (MCS) was used to measure PTSD and associated symptoms since the critical incident.⁹

Statistical analyses

We conducted a Cronbach alpha reliability analysis and an oblique principal factor analysis with Promax rotation on the items of the PDS. Two series of hierarchical multiple regression analyses were conducted using sociodemographics (gender, ethnicity, years of service), exposure, the PDEQ and PDS as predictors of either the MCS or the IES-R.

Results and discussion

The PDS scores ranged from 0.10 to 3.57 and the mean was 1.37 (SD=0.56). The distribution of scores approached normality and was deemed suitable for parametric analyses. The scale was internally consistent ($\alpha=0.80$) and showed strong convergent validity with the PDEQ, $r(599)=0.55$, $P<0.001$.

The PDS factor solution is presented in *Table 1*. Items defining factor 1 included dysphoric emotions such as helplessness, sadness and grief, frustration and anger, and horror. Factor 2 was mostly defined by items related to loss of safety and arousal, such as being afraid, thinking one might die, and having intense bodily reactions (sweating, shaking, heart-pounding). Items loading on factor 3 were related to the loss of positive beliefs about the self and others, such as thinking that one had done all he or she could during the critical incident, not feeling prepared by one's experience, and not believing that others understood. We labeled the factors *negative emotions*, *perceived life threat and bodily arousal*, and *appraisal*. Those factors had eigenvalues of 3.32, 2.53, and 2.02, respectively. The sum of the communality estimates was 7.58, explaining 38% of the total variance and 93% of trace. Intercorrelations among the PDS factors were low, ranging from -0.25 to 0.12 ($P<0.05$). The low PDS factor intercorrelation coupled with correlations of 0.17 to 0.42 ($P<0.001$) with the outcome measures (IES-R and MCS) suggest that various forms of peritraumatic distress, as captured by the PDS, can lead to the development of PTSD symptoms.

Two stepwise regression analyses (not fully reported here) were conducted. In predicting the MCS and IES-R, demographic and exposure variables explained very little variance (3%). The PDEQ, entered in the second

step, explained 20% and 16% of unique variance on the MCS and IES-R, respectively. Entering the PDS in step 3 explained 11% and 8% unique variance on the MCS and IES-R, respectively. We repeated this set of analyses with the inclusion order of the PDEQ and PDS reversed. Entered in the second step, the PDS explained 29% and 17% of unique variance on the MCS and IES-R, respectively. Entered in the third step, the PDEQ explained 3% of unique variance on both the MCS and the IES-R. The items and factors of the PDS provide insight as to what some of the salient peritraumatic dimensions may

be, in addition to peritraumatic dissociation. In this study, the PDS explained a significant amount of variance over and above peritraumatic dissociation which is currently considered among the most powerful predictors of PTSD symptoms.³ Test-retest data for the PDS is currently being gathered as well as data from individuals not working in the police. In future, it would be useful to investigate prospectively the power of the PDS in predicting PTSD diagnosis rather than symptoms, as well as other trauma-related disorders.

Abbreviated item description	Item M (SD)	Factor loadings			Communality
		1 Negative emotions	2 Perceived life threat	3 Appraisal	
1. Felt helpless to do more	1.7 (1.4)	0.73	0.07	-0.19	0.53
2. Felt confident that all was being done	2.1 (1.3)	-0.23	-0.14	0.55	0.32
3. Felt sadness and grief	2.0 (1.5)	0.72	0.23	-0.05	0.61
4. Felt frustrated or angry that I did not do more	2.1 (1.5)	0.74	0.10	-0.17	0.55
5. Felt afraid for my safety	1.4 (1.6)	0.13	0.74	-0.02	0.58
6. Felt prepared by my experience	1.7 (1.3)	-0.32	-0.05	0.47	0.27
7. Felt guilty not more was done	1.0 (1.3)	0.59	0.22	-0.32	0.40
8. Felt others were sympathetic	2.1 (1.3)	-0.21	-0.02	0.54	0.42
9. Felt others understood my experience	1.7 (1.2)	-0.06	-0.09	0.58	0.36
10. Felt ashamed of my emotions	0.4 (1.0)	0.37	0.29	-0.29	0.24
11. Felt I did all I could	2.4 (1.3)	-0.32	-0.01	0.54	0.34
12. Was upset by other people's action	1.1 (1.4)	0.22	0.22	-0.36	0.18
13. Worried about the safety of others	1.7 (1.6)	0.09	0.54	-0.14	0.34
14. Was about to lose control over emotions	0.7 (1.1)	0.54	0.30	-0.30	0.38
15. Difficulty controlling bowel and bladder	0.1 (0.4)	0.16	0.26	-0.14	0.10
16. Felt like it would never end	0.8 (1.2)	0.27	0.56	-0.18	0.37
17. Was horrified	1.4 (1.5)	0.57	0.06	-0.12	0.33
18. Had physical reactions	1.5 (1.4)	0.27	0.59	-0.05	0.41
19. Felt I might pass out	0.2 (0.8)	0.24	0.36	-0.16	0.18
20. Thought I might die	0.7 (1.3)	0.09	0.67	-0.06	0.48

Note. Item scores range from 0 (not at all true) to 4 (completely true). The PDS is scored by computing the mean of the 20 items, with items 2, 6, 8, 9, and 11 being reversed for scoring. Items loading above 0.5 are in red.

Table 1.
The PDS factor solution.

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