



ASSESSING THE LATENT FACTOR ASSOCIATION BETWEEN THE DYSPHORIA MODEL OF PTSD, AND POSITIVE AND NEGATIVE AFFECT IN TRAUMA VICTIMS FROM INDIA



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Introduction

- PTSD has clear conceptual and empirical ties with mood and other anxiety disorders, and literature in recent times has highlighted this overlap based on the factor structure of PTSD (e.g., Elhai, Carvalho, Palmieri, Primi, & Frueh, 2011).
- Most studies gauge the **overlap between PTSD and other disorders** via disorder-specific scales (e.g., depression scale) as a proxy for assessing the underlying common factor of negative affectivity or general distress.
- Debate over **validity of the Dysphoria factor as a non-specific factor of PTSD** within the Dysphoria model (Simms et al., 2002).

Hypotheses

- Negative affect would be significantly more related to the PTSD Dysphoria factor, given that the Dysphoria factor is the general distress (non-specific) factor of PTSD (Simms et al., 2002);
- Association between the factors in the Dysphoria model of PTSD and positive affect would be marginal or non-significant (Watson, Clark, & Stasik et al., 2011).

Methods

Participants

- Sample comprised of 200 participants, in the age range of 19-76 years ($M = 34.75$, $SD = 13.72$; 57.5% females).
- Directly affected by sudden heavy rainfall and flash floods, mudslides, and debris flow as a result of a cloudburst over the Leh region (Ladakh, India) in August of 2010.
- Participants reported a loss of property in terms of damage to their house and/or farm-land (48%), witnessing the flash floods (41.5%), loss a loved one (8%) or losing both a loved one and property (2.5%) as a direct result of the disaster.

Measures

- The Posttraumatic Stress Disorder Checklist-Specific (PCL-S; Weather, Litz, Herman, Huska, & Keane, 1993): It consists of 17 self-report PTSD symptoms/items as described in DSM-IV-TR (APA, 2000).
- The Positive and Negative Affect Schedule-Short Form (PANAS-Short Form; Kercher, 1992).

Analytic Plan

- Confirmatory factor analyses using maximum likelihood estimation with robust standard errors (MLR) conducted for the Emotional Numbing model, the Dysphoria model, and the Dysphoric Arousal model of PTSD, and two orthogonal models of PANAS, separately.
- Assessing the fit indices of the joint model encompassing the Dysphoria model and the optimal PANAS model.
- Comparison of the association between the latent factors of the Dysphoria model and the latent factors of PANAS model by computing Wald chi-square (χ^2) tests of parameter constraints.

Results

- All three models of PTSD as per symptoms described in DSM-IV-TR, had acceptable fit indices (Table 1).
- Dysphoria Model was taken up for further analysis. Factor loadings for the model ranged between 0.45-0.71, and factor correlations ranged between 0.74-0.85.
- The goodness-of-fit indices for the two-factor PANAS model without residual covariance and the two-factor model with residual covariance, were found to be adequate. Since the addition of error covariance lead to only a marginal increase in fit indices, we decided to retain the orthogonal two-factor model of PANAS without the error covariance (Table 2).
- The factor loading for the optimal PANAS model (Model 1) was 0.36-0.84.
- A joint model including the PTSD Dysphoria model and the PANAS two-factor model indicated adequate fit based on certain goodness-of-fit indices (e.g., RMSEA and SRMR), $Y-B \chi^2 (308, N = 200) = 542.94, p < 0.001, CFI = 0.88, TLI = 0.87, RMSEA = 0.05 (90\% CI: 0.04-0.06), SRMR = 0.06$.
- Wald tests indicated that the **Dysphoria factor was not more strongly related with negative affectivity** than the other factors of the Dysphoria model; **Avoidance and Hyperarousal** were significantly **related with positive affect**. No differential relation was found between Avoidance and Positive affect, and Hyperarousal and Positive affect (Fig. 1).

Table 1

Goodness-of-fit indices for the models of Emotional Numbing, Dysphoria, and Dysphoric Arousal of PTSD symptoms as described in DSM-IV-TR

Models	Y-B χ^2	Df	CFI	TLI	SRMR	RMSEA (90% CI)	BIC
Emotional Numbing	243.52	113	0.91	0.90	0.06	0.06 (0.04-0.07)	9844.33
Dysphoria	241.73	113	0.92	0.90	0.06	0.05 (0.04-0.07)	9841.83
Dysphoric Arousal	235.48	109	0.92	0.89	0.05	0.06 (0.04-0.07)	9856.74

Note: Y-B χ^2 = scaled Yuan-Bentler chi-square; CFI= Comparative fit index; TLI= Tucker-Lewis index; SRMR= Standardized root mean square; RMSEA= Root mean square error of approximation; CI= Confidence interval; BIC= Bayesian information criterion

Table 2

Goodness-of-fit indices for the models of the two models for PANAS

Models of PANAS	Y-B χ^2	df	CFI	TLI	SRMR	RMSEA (90% CI)	BIC
Model 1	55.28	34	0.95	0.93	0.05	0.05 (0.02-0.08)	6238.76
Model 2	45.66	33	0.97	0.96	0.05	0.04 (0.00-0.07)	6226.67

Note: Model 1 = Two-factor PANAS model without residual covariance. Model 2 = Two factor PANAS with residual covariance. Y-B χ^2 = scaled Yuan-Bentler chi-square; CFI= Comparative fit index; TLI= Tucker-Lewis index; SRMR= Standardized root mean square; RMSEA= Root mean square error of approximation; CI= Confidence interval; BIC= Bayesian information criterion

Figure

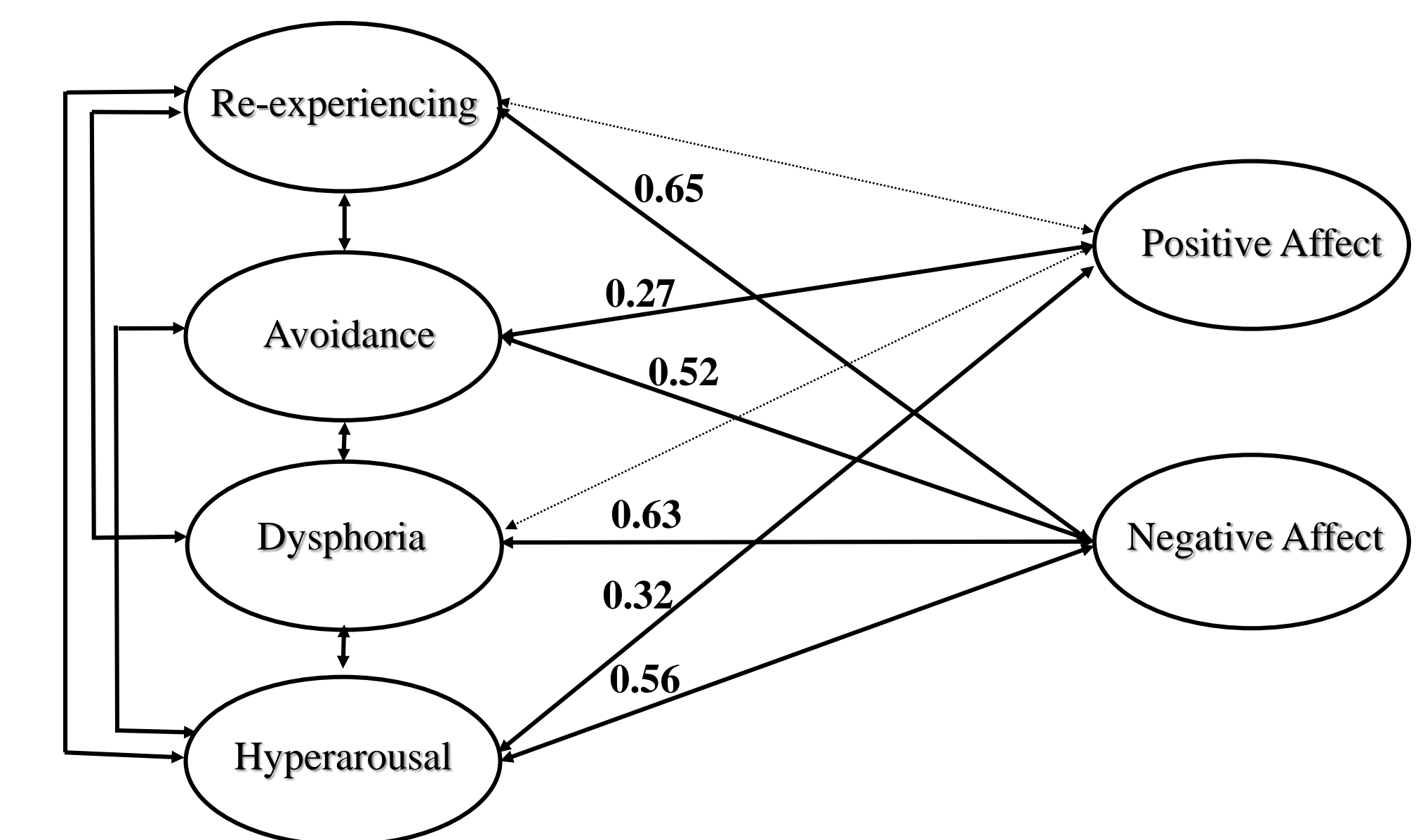


Figure 1.

Association between the five inter-correlated factors of the Dysphoria model of PTSD (DSM-IV-TR), Positive Affect, and Negative Affect. Dotted lines indicate non-significant pathways.

Conclusion

- Among the three competing PTSD models based on DSM IV-TR symptoms namely, Emotional Numbing (King et al., 1998), Dysphoria (Simms et al., 2002), and Dysphoric Arousal (Elhai et al., 2011), all had acceptable fit indices.
- Association between negative affect and Dysphoria was not significantly different from the association between negative affect with the other factors in the PTSD Dysphoria model.
- Avoidance and Hyperarousal were significantly and positively correlated with positive affect.
- This stands in contrast to previous literature which shows no correlation or a marginal negative correlation between positive affect and anxiety disorders (Mineka, Watson, & Clark, 1998; Watson, Clark, & Stasik, 2011).
- The 8-item **Dysphoria factor** (C3-C7 and D1-D3) is **not the only factor** that accounts for the **general distress** in PTSD (DSM-IV-TR symptoms; Marshall, Schell, & Miles, 2010; Miller et al., 2010).
- The present findings **support the decision to retain the Dysphoria items in the DSM-5 PTSD symptoms** (APA, 2013) as against some prior studies suggesting their removal on the pretext of representing a non-specific factor of PTSD.

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