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## PTSD's latent structure in Malaysian tsunami victims: Assessing the newly proposed Dysphoric Arousal model

Cherie Armour<sup>a,\*</sup>, Siti Raudzah Ghazali<sup>b</sup>, Ask Elklit<sup>a</sup><sup>a</sup> The National Centre for Psychotraumatology, University of Southern Denmark, Odense, Denmark<sup>b</sup> Faculty of Medicine and Health Sciences, University Malaysia Sarawak, Malaysia

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## ABSTRACT

The underlying latent structure of Posttraumatic Stress Disorder (PTSD) is widely researched. However, despite a plethora of factor analytic studies, no single model has consistently been shown as superior to alternative models. The two most often supported models are the Emotional Numbing and the Dysphoria models. However, a recently proposed five-factor Dysphoric Arousal model has been gathering support over and above existing models. Data for the current study were gathered from Malaysian Tsunami survivors ( $N=250$ ). Three competing models (Emotional Numbing/Dysphoria/Dysphoric Arousal) were specified and estimated using Confirmatory Factor Analysis (CFA). The Dysphoria model provided superior fit to the data compared to the Emotional Numbing model. However, using chi-square difference tests, the Dysphoric Arousal model showed a superior fit compared to both the Emotional Numbing and Dysphoria models. In conclusion, the current results suggest that the Dysphoric Arousal model better represents PTSD's latent structure and that items measuring sleeping difficulties, irritability/anger and concentration difficulties form a separate, unique PTSD factor. These results are discussed in relation to the role of Hyperarousal in PTSD's on-going symptom maintenance and in relation to the DSM-5.

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## 1. Introduction

Despite a plethora of factor analytic studies, spanning in excess of two decades of research, Posttraumatic Stress Disorder (PTSD)'s underlying dimensionality has yet to be finalised. A key finding within the extant factor analytic research is that the current tripartite model of Re-experiencing, Avoidance/Numbing and Hyperarousal, proposed by the Diagnostic and Statistical Manual (DSM-IV-TR: American Psychiatric Association [APA], 2000) is a poor reflection of PTSD's latent structure (cf. Asmundson et al., 2004). Further, two four-factor models termed the Emotional Numbing model (King et al., 1998) and the Dysphoria model (Simms et al., 2002) have received a wealth of factor analytic support. Indeed, support for these models has been provided across many trauma populations and assessment and measurement conditions (cf. Armour and Shevlin, 2010; Yufik and Simms, 2010). The latter is important given that factor analytic studies are essentially assessing the structure of PTSD instruments rather than the PTSD construct (Elhai and Palmieri, 2011). However, the structure of a PTSD measure is regarded as a good proxy or indicator of the PTSD

construct given that the majority of PTSD measures map directly onto the 17 PTSD items of Criteria B, C, and D for PTSD in DSM-IV-TR (APA, 2000).

Most recently, a newly proposed five-factor model, termed the Dysphoric Arousal model (Elhai et al., 2011), has received empirical support over and above the Emotional Numbing and Dysphoria models. Given the pressing matter that the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; APA) is tentatively scheduled for publication in 2013, the identification of the correct PTSD symptom groupings is imperative. Specifically, the resultant symptom groupings are directly associated with diagnostic algorithms and thus PTSD prevalence rates (Elhai et al., 2009). Therefore, the current study investigates the latent structure of PTSD in a sample of Malaysian natural disaster survivors who were traumatised by directly experiencing a Tsunami.

The DSM-IV-TR (APA, 2000) tripartite model of PTSD operationalizes the 17 PTSD symptoms across Re-experiencing, Avoidance/Numbing, and Hyperarousal factors (cf. Table 1, Model 1). There has been limited empirical support for this model conceptualisation and the scant data supporting the model are questionable. For example, Cordova et al. (2000) specified, estimated, and supported the three-factor DSM-IV model with a second order PTSD factor. However, post-hoc modifications (deviating from the original model) were required to ensure that the model adequately fit the data.

\* Correspondence to: The National Centre for Psychotraumatology, University of Southern Denmark, Campusvej 55, Odense, Denmark. Tel.: +45 44 07876142643. E-mail address: [armour.cherie@gmail.com](mailto:armour.cherie@gmail.com) (C. Armour).