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Anxiety sensitivity in traumatized Cambodian refugees: A discriminant function and factor analytic investigation

Devon E. Hinton[a,b,c,*], Vuth Pich[b], Steven A. Safren[a,c], Mark H. Pollack[a,c], Richard J. McNally[c]

[a]*Massachusetts General Hospital and Harvard Medical School, Boston, MA, USA*
[b]*Southeast Asian Clinic, Arbour Counseling Center, Lowell, MA, USA*
[c]*Harvard University, Cambridge, MA, USA*

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Abstract

We examined the psychometric properties and factor structure of a Cambodian translation of the Anxiety Sensitivity Index (ASI) and an Augmented ASI (the ASI supplemented with a 9-item addendum that assesses additional Cambodian concerns about anxiety-related sensations). Both the ASI and the Augmented ASI distinguished among three diagnostic groups: highest score, PTSD with panic disorder (PP group); next, panic disorder without PTSD (P group); and then, other disorders than PTSD or panic disorder (O group). In the discriminant function analysis using the Augmented ASI, the best classificatory predictor (PP vs. P vs. O) was an Addendum item (''It scares me when I stand up and feel dizzy''). The principal component analysis (oblimin rotation) of the ASI yielded a 3-factor solution (I, Weak Heart Concerns; II, Control Concerns; III, Social Concerns) and of the Augmented ASI, a 4-factor solution (I, Weak Heart Concerns; II, Control Concerns; III, Wind Attack Concerns; IV, Social Concerns). The item clustering within the factor solution of both the ASI and Augmented ASI illustrates the role of cultural syndromes in generating fear of mental and bodily events.

Keywords: Anxiety Sensitivity Index; Cambodian refugees; Posttraumatic stress disorder; Panic disorder; Factor analysis; Discriminant function analysis

*Corresponding author. Massachusetts General Hospital and Harvard Medical School, Boston, MA, USA. Fax: +1 978 453 5595.
E-mail address: devon_hinton@hms.harvard.edu (D.E. Hinton).

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Introduction

Background

The Anxiety Sensitivity Index (ASI) assesses the fear of anxiety-related sensations (Reiss, Peterson, Gursky, & McNally, 1986). Elevated scores on the ASI indicate increased risk for spontaneous panic attacks (Schmidt, Lerew, & Jackson, 1997) and anxious response to symptom-provocation procedures such as hyperventilation or carbon dioxide inhalation (McNally & Eke, 1996). The ASI distinguishes among diagnostic groups. For example, patients with panic disorder score higher than those with generalized anxiety disorder even when their scores on measures of trait anxiety are the same (Taylor, Koch, & McNally, 1992).

Most factor analyses of the ASI (the standard 16-item version) in Western populations have revealed a 3-factor solution: Physical Concerns, Mental Incapacitation Concerns, and Social Concerns (Zinbarg, Barlow, & Brown 1997). Taylor and Cox (1998) argue that the ASI contains too few items to assess lower-order factors; they found that a principal component analysis of a 36-item ASI (ASI-R) revealed a 4-factor solution: Fear of Respiratory Symptoms; Fear of Publicly Observable Anxiety Reactions; Fear of Cardiovascular Symptoms; and Fear of Cognitive Dyscontrol.

Previous cross-cultural studies with the ASI

Some researchers have examined the ASI factor structure in US ethnic groups, demonstrating some differences in the number and item mix of the factors. A factor analysis in an American Indian (Zvolensky, McNeil, Porter, & Stewart, 2001) and a Spanish (Sandin, Chorot, & McNally, 1996) population revealed a 3-factor structure similar to that described in previous investigations of Western populations (e.g., Zinbarg et al., 1997). A study of Native Americans revealed a 1-factor solution to be optimal (Norton, De Coteau, Hope, & Anderson, 2004), and a study of African Americans, a 4-factor solution (Carter, Miller, Sbrocco, Suchday, & Lewis, 1999): Mental Incapacitation Fear; Unsteadiness Fear (e.g., "It scares me when I am faint," and "It scares me when I am shaky"); Emotional Control Concerns (e.g., "It is important for me to stay in control of my emotions," and "It is important for me not to appear nervous"); and Cardiovascular Concerns.

The ASI and syndrome-generated fear of anxiety symptoms

A culture may have elaborate ideas about anxiety symptoms that increase catastrophic cognitions, and hence scores on the ASI. Cambodians have a complex ethnophysiology and several culturally specific syndromes that generate great anxiety about arousal-reactive sensations; the panicogenic nature of these culturally specific catastrophic cognitions has been demonstrated in several studies, including an orthostatic challenge (e.g., Hinton et al., 2004).

"Weak heart" (khsaoy beh doung)

Cambodians interpret many anxiety symptoms—such as palpitations—as evidence of cardiac weakness, or "weak heart" (*khsaoy beh doung*), and believe that "heart weakness" most often