



ELSEVIER

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

SCIENCE @ DIRECT®

Behaviour Research and Therapy 43 (2005) 799–810

**BEHAVIOUR  
RESEARCH AND  
THERAPY**

[www.elsevier.com/locate/brat](http://www.elsevier.com/locate/brat)

# A cross-sectional evaluation of the factorial invariance of anxiety sensitivity in adolescents and young adults<sup>☆</sup>

Christopher Dehon<sup>a</sup>, Carl F. Weems<sup>a,\*</sup>, Timothy R. Stickle<sup>b</sup>,  
Natalie M. Costa<sup>a</sup>, Steven L. Berman<sup>c</sup>

<sup>a</sup>*Department of Psychology, University of New Orleans, New Orleans, LA 70148, USA*

<sup>b</sup>*Department of Psychology, University of Vermont, USA*

<sup>c</sup>*Department of Psychology, University of Central Florida, USA*

Accepted 25 May 2004

---

## Abstract

This study examined the cross-sectional factorial invariance of anxiety sensitivity in an ethnically diverse sample of adolescents ( $n = 173$ ; mean age 15.5 years) and young adults ( $n = 291$ ; mean age 20.1 years). Research in adult and youth samples suggests that anxiety sensitivity is best understood as a hierarchical construct with several lower-order factors. Factor models based on previous research using both adult and youth samples were compared and a hierarchical model with three lower-order factors provided the best fit to the data. Results supported the hypothesis that the factor structure of the Anxiety Sensitivity Index was invariant across age and gender. The factor scores also demonstrated differential correlations with symptoms of anxiety and depression. Results are discussed with regard to construct validation and understanding the structure of anxiety sensitivity in youth.

© 2004 Elsevier Ltd. All rights reserved.

*Keywords:* Anxiety sensitivity; Anxiety; Factorial invariance; Developmental differences; Youth; Depression

---

<sup>☆</sup>The research was supported in part by a grant from the National Institute of Mental Health (MH067572) Awarded to Carl F. Weems.

\*Corresponding author. Tel.: +1-504-280-6772; fax: +1-504-280-6049.

*E-mail address:* [cweems@uno.edu](mailto:cweems@uno.edu) (C.F. Weems).

## 1. Introduction

Research evidence has supported the theory that anxiety sensitivity (Reiss, 1991) is a risk factor in the development of panic attacks (Maller & Reiss, 1992; Schmidt, Lerew, & Jackson, 1997, 1999; Taylor, 1999 for review). For example, Schmidt et al. (1999) found that Anxiety Sensitivity Index (ASI) scores (the most commonly used and well-validated measure of anxiety sensitivity; Peterson & Reiss, 1987) predicted the development of spontaneous panic attacks in a large sample of young adults (i.e., army cadets,  $N = 1296$ ) after controlling for history of panic attacks and trait anxiety. This finding replicated their earlier study (Schmidt et al., 1997) and also extended it by showing that facets of anxiety sensitivity as measured by the ASI differentially predicted panic (e.g., mental incapacitation concerns were the best predictor of panic).

Because of the accumulating evidence for a role of anxiety sensitivity in panic and other anxiety problems, research has begun to explore the developmental phenomenology of anxiety sensitivity. Research on anxiety sensitivity in youth has demonstrated that the construct can be reliably and validly measured in both child and adolescent samples (Calamari et al., 2001; Rabian, Embry, & MacIntyre, 1999; Silverman, Fleisig, Rabian, & Peterson, 1991; Weems, Hammond-Laurence, Silverman, & Ginsburg, 1998). Moreover, the research on anxiety sensitivity in youth suggests that similar associations found in adulthood may begin earlier in life. For example, anxiety sensitivity in youth is related to panic, fears, depression, and negative cognitive errors (e.g., Calamari et al., 2001; Weems, Berman, Silverman, & Saavedra, 2001; Weems, Hammond-Laurence, Silverman, & Ferguson, 1997), predicts responses to behavioral-stress challenge tasks (Rabian et al., 1999) and prospectively predicts panic in adolescent samples (Ginsburg & Drake, 2002; Hayward, Killen, Kraemer, & Taylor, 2000). Overall, research conducted with samples of youth have produced very similar findings to those with adults suggesting a high level of measurement similarity in both youth and adult samples. However, no studies have systematically examined the developmental factor invariance of anxiety sensitivity across adolescents and young adults.

Horn and McArdle (1992) have elegantly argued for the importance of examining factor invariance as part of establishing measurement invariance in construct validation. These authors have argued that differences among individuals and groups of individuals cannot be unambiguously interpreted if there is no evidence that measurement of the construct is invariable across individuals and groups of individuals. The argument is that differences in mean scores pertaining to the construct may be actual differences or due to the fact that the measurement instrument is measuring different construct(s) across different groups of people (e.g., across age groups and gender). For example, differences in mean anxiety sensitivity levels or differential associations in youth and adults may be due to developmental differences or because the instrument is measuring a different construct in different ages. Examining factor invariance establishes that a linear combination of components (e.g., items, factors) works in the same way to produce the same kind of measurement under different conditions (e.g., different samples, different age groups).

Research in adult and youth samples is converging to suggest that anxiety sensitivity is best understood as a hierarchical construct with several lower-order factors (Zinbarg, Mohlman, & Hong, 1999; Silverman, Ginsburg, & Goedhart, 1999). Previous research, for example, on the ASI in adult samples suggests that three lower-order factors (labeled physical concerns, social concerns

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات