How distinct is anxiety sensitivity from trait anxiety?
A re-examination from a multidimensional perspective

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Abstract

Significant positive correlations between the Anxiety Sensitivity Index [ASI; Reiss, S., Peterson, R. A., Gursky, D. M. & McNally, R. J. (1986). Anxiety sensitivity, anxiety frequency and the prediction of fear-fulness. *Behaviour Research and Therapy*, 24, 1–8.] and the Trait subscale of the State-Trait Anxiety Inventory [STAI-T; Spielberger, C. D., Gorsuch, R. L., Lushene, R. E., Vagg, P. R. & Jacobs, G. A. (1983). *The state-trait anxiety inventory for adults manual*. Palo Alto, CA: Mind Garden.] have been characterized as "moderate" and have been taken to indicate that Anxiety Sensitivity (AS) and Trait Anxiety (TA) are related but distinct constructs [e.g. McNally, R. J. (1999). Theoretical approaches to the fear of anxiety. In S. Taylor *Anxiety sensitivity: theory, research, and treatment of the fear of anxiety* (pp. 3–16). Mahwah, NJ: Erlbaum.]. The present study was designed to provide a more accurate assessment of the distinction between AS and TA by taking into account the multidimensional nature and the differing symptom focus of the ASI and the STAI-T. University students ($n = 317$) completed both these measures and subscales representing the lower-order constructs of the STAI-T (i.e. Anxiety and Depression) and the ASI (i.e. Physical, Psychological, and Social Concerns) were created. Several comparisons were made regarding the correlations between these measures. Collectively, the results suggest that previous estimates regarding the distinction between AS and TA were reduced due to the use of a measure of TA that is best conceptualized as assessing cognitive symptoms associated with general negative affect and by the failure to consider the different content focus and multidimensional nature of the ASI. Additionally, disattenuated correlations, in which an adjustment is made for the reliability of the measures, were calculated to provide an assessment of the relationship between AS and TA rather than the measures used to operationalize them. These disattenuated correlations indicated the overlap between AS and TA is greater than previously thought. The implications of these findings are discussed. © 2001 Elsevier Science Ltd. All rights reserved.

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1. Introduction

There has been considerable debate regarding the degree to which anxiety sensitivity (AS; Reiss & McNally, 1985) is distinct from trait anxiety (TA). Although the term TA has been defined in several ways (Reiss, 1997), those involved in AS research use TA to denote a general tendency to respond fearfully or anxiously to stress, whereas AS is a more specific individual difference variable that refers to a tendency to respond fearfully to anxiety-related symptoms. The existent research has been used both to support the distinction between the two constructs (McNally, 1996) and to argue against such a distinction (Lilienfeld, 1996). The current and widely accepted conceptualization (Zinbarg, Mohlman & Hong, 1999), in which AS is viewed as being both a distinct construct and a lower-order factor of TA, integrates both of these perspectives.

Correlations between measures of AS and TA received early attention as a means of assessing the distinction between AS and TA. For example, Talyor, Koch and Crockett (1991) surveyed five correlations between measures of AS and TA and found them to range from 0.07 to 0.55 with a median correlation of 0.46. The *r*-squared value of the median correlation indicates that measures of AS and TA typically share 21% of common variance. These correlations have been characterized as "modest" (e.g. McNally, 1999, p. 10) and are viewed as evidence that AS and TA are related but distinct constructs.

The principal operationalizations of AS and TA used in the above noted correlational analyses have been the Anxiety Sensitivity Index (ASI; Reiss, Peterson, Gursky, & McNally, 1986) and State-Trait Anxiety Inventory (STAI-T; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983), respectively. To date, issues regarding these measures have not been considered with regard to the distinction between these two constructs. First, recent factor analytic studies (Zinbarg et al., 1999) indicate that ASI is composed of three lower-order components representing physical, psychological, and social concerns. In contrast, the item content of the STAI-T primarily refers to cognitive symptoms of anxiety. Given this discrepancy in terms of the symptoms focused on by the ASI (viz., a composite of physical, psychological and social concerns) and STAI-T (viz., cognitive symptoms), it is likely that the correlations and *r*-squared values discussed above artificially minimized the difference between these constructs. A more appropriate estimate of the association between AS and TA would be obtained from examining correlations between similar facets of these two constructs (e.g. the correlation between the tendency to experience physical symptoms of anxiety and the tendency to fear physical symptoms). Second, Reiss (1997) questioned the validity of current TA measures, such as the STAI-T, and noted that they assess a number of symptoms, such as depression and lack of confidence, which are not anxiety-specific. Consistent with Reiss's criticism, Bieling, Antony, and Swinson (1998) provided evidence that the STAI-T can best be conceptualized as assessing general negative affect rather than TA. They used a series of factor analytic procedures and correlation analyses to evaluate the STAI-T and found that it is comprised of both an anxiety factor and a depression factor. This weakness of the STAI-T would likely have compromised the accurate assessment of the variance shared between AS and TA as well. Finally, researchers have taken correlations between the ASI and STAI-T to reflect the association between the constructs of AS and TA without considering the possibility that limitations regarding the reliability of these measures may have resulted in an underestimate of the association between these two constructs.

Previous findings regarding the distinction between AS and TA were based on a limited understanding of the psychometric properties of the measures used to assess these constructs. The