Prediction of anxiety disorders using the State–Trait Anxiety Inventory for multiethnic adolescents

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Abstract

The purpose of this study was to determine the validity of the State–Trait Anxiety Inventory (STAI) in predicting DSM-III-R anxiety disorders based on the Diagnostic Interview Schedule for Children (DISC, Version 2.3) and using Asian/Pacific Islander adolescents. An overall prevalence rate of 9.19% for generalized anxiety disorder, overanxious disorder, or social phobia was consistent with past studies. As hypothesized, STAI negatively worded (i.e., Factor 2) items were better predictors than positively stated (i.e., Factor 1) items. The STAI State mean was a better predictor of concurrent DISC anxiety disorders as compared to STAI State Factors 1 or 2. In contrast, the STAI Trait Factor 2 (negatively worded) composite was the best predictor for nonconcurrent DISC anxiety disorders as compared to STAI Trait Factor 1 or the overall STAI Trait subscale. Satisfactory predictive-validity values were obtained when using the STAI State mean and Trait Factor 2 composite. Implications of these findings

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are discussed, including using the STAI as a screening measure for ethnically diverse adolescents. © 2001 Elsevier Science Inc. All rights reserved.

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1. Introduction

Anxiety disorders are some of the most frequently occurring problems for school-aged children and adolescents (Bernstein & Borchardt, 1991; Kashani & Orvaschel, 1990). For example, based on a review of 16 international studies of children and adolescents (ages 6–17 years) conducted since 1986, Costello and Angold (1995) reported prevalences ranging from 5.7% to 17.7% with half of the investigations obtaining rates above 10%. Similar rates have been obtained in more recent studies (e.g., Shaffer et al., 1996).

These are very high rates suggesting that a very large proportion of children and adolescents with anxiety disorders are not being identified and provided appropriate services. For example, in the United States, not more than 1% of the kindergarten to 12th-grade population have been identified under the Individuals with Disabilities Education Act (IDEA) as having an "emotional disturbance" (U.S. Department of Education, 1998). The discrepancy between rates of anxiety disorders and the 1% who have been identified with an emotional disturbance under IDEA is further magnified by the fact that the category of emotional disturbance includes many other emotional–behavioral disorders, including externalizing problems (e.g., oppositional defiant disorder, conduct disorder).

This underestimation of anxiety disorders is likely due to several factors, including: (1) teachers—the primary source of referral for IDEA evaluations (Galagan, 1985; Lloyd, Kauffman, Landrum, & Roe, 1991; Ysseldyke, Vanderwood, & Shriner, 1997)—tend to make referrals due to externalizing behaviors (Algozzine & Ysseldyke, 1986; Pearcy, Clopton, & Pope, 1993) and (2) parents tend to report lower rates or levels of anxiety in their children as compared to self-reports by the children themselves (Bernstein & Borchardt, 1991; Kashani & Orvaschel, 1990; Orvaschel & Weissman, 1986).

These issues highlight the need for screening and treatment programs in school environments and community samples. One of the first steps in such a process is the development and use of effective self-report screening and assessment instruments that are reliable and valid for the population in question (Stallings & March, 1995). Although many anxiety inventories are currently available (Stallings & March, 1995), their application to specific populations remains questionable given that not all instruments have been validated for all children and adolescents.