Short form of the Spanish adaptation of the State-Trait Anxiety Inventory

Gualberto Buela-Casal, Alejandro Guillén-Riquelme*

Mind, Brain and Behavior Research Center (CIMCYC), Universidad de Granada, Spain

Received 8 March 2017; accepted 17 July 2017
Available online 14 August 2017

KEYWORDS
STAI; State-Trait Anxiety Inventory; Short version; Instrumental study

Abstract  Background/Objective: The State-Trait Anxiety Inventory (STAI) is one of the assessment instruments that are most widely used by psychologists around the world and is the seventh most broadly used by clinical psychologists in Spain. Although several short forms of the STAI have been developed since its creation, none are available for the Spanish general population. The aim of the present study was to develop and validate a short form of the STAI. Method: To achieve this, we administered the full STAI to 1,157 healthy adults, and 30 patients with generalized anxiety disorder. We conducted a discriminant analysis using such groups. Results: We obtained a selection of four items for state anxiety and four items for trait anxiety and compared it to other short forms through a confirmatory factor analysis. The short form obtained with the discriminant analysis showed the best fit for Spanish samples. Conclusions: these eight items can be used to facilitate the state and trait anxiety assessment.

© 2017 Published by Elsevier España, S.L.U. on behalf of Asociación Española de Psicología Conductual. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Versión breve de la adaptación española del State-Trait Anxiety Inventory

Resumen  Antecedentes/objetivos: El State-Trait Anxiety Inventory (STAI) es uno de los instrumentos de evaluación más empleados por psicólogos en todo el mundo y el séptimo más utilizado por psicólogos clínicos en España. Desde su creación, se han llevado a cabo varias versiones breves del mismo; pese a ello, no existe ninguna para población general con muestra española. El objetivo del presente artículo es establecer y validar una versión breve. Método: Para ello, se aplicó el STAI completo a 1.157 adultos y 30 pacientes con trastorno de ansiedad generalizada. Mediante dichos grupos, se realizó un análisis discriminante.

* Corresponding author: Mind, Brain and Behavior Research Center (CIMCYC), Universidad de Granada, Campus Universitario de Cartuja s/n, 18011 Granada, Spain.
E-mail address: agr@ugr.es (A. Guillén-Riquelme).

http://dx.doi.org/10.1016/j.ijchp.2017.07.003
1697-2600/© 2017 Published by Elsevier España, S.L.U. on behalf of Asociación Española de Psicología Conductual. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
The *State-Trait Anxiety Inventory* (STAI; Spielberger, Gorsuch, & Lushene, 1970) is a questionnaire aimed at assessing the level of anxiety of individuals. More specifically, the STAI measures individuals’ predisposition to perceive diverse stimuli as threatening (i.e., trait anxiety). Thus, an individual with high trait anxiety is more likely to produce an anxiety response. The STAI also assesses the existence of threat-related stimuli in the environment of the respondent around the time of the assessment (i.e., state anxiety). This is equivalent to a measure of negative affect (Vera-Villaroel & Celis-Atenas, 2014) or a stress measure, considering the amount of stressful stimulus, related with several psychological disorders (Keeley et al., 2016). Trait anxiety and state anxiety are theoretically independent constructs (Spielberger et al., 1970). Its two subscales include items that refer to behavioral, cognitive, emotional and physiological aspects.

Since its creation, “the STAI has been adapted to sixty different languages and dialects and has been cited in over 14,000 studies” (Spielberger & Reheiser, 2009, p. 280), which makes it one of the questionnaires most widely used. The fact that various systematic reviews and meta-analyses report that this instrument is used in a large number of articles provides further evidence of its popularity. In a meta-analysis on the effect of relaxation on anxiety levels, for example, Manzoni, Pagnini, Castelnuovo and Molinari (2008) mentioned that the STAI was used in 60% of the articles reviewed. This makes it one of the measures most used in this context. The STAI has also been used to study the psychological health of workers (Marine, Ruotsalainen, & Verbeek, 2009), showing differences in the level of anxiety experienced by various groups. Reviews have revealed that the STAI is not only used in general population samples but also in clinical groups. For example, Rosa-Alcázar, Sánchez-Meca, Gómez-Conesa and Marin-Martínez (2008) conducted a meta-analysis of obsessive-compulsive disorder. They found that the STAI was the questionnaire used in the largest number of studies analyzed. Finally, the STAI has a high sensitivity to differences between health population and anxious samples (Guillén-Riquelme & Buela-Casal, 2014) or even in anxiety levels in teenagers with attention deficit hyperactivity disorder in their children version (González-Castro, Rodriguez, Cueli, Garcia, & Álvarez, 2015).

Nevertheless, the STAI has been criticized for various reasons. First, it was pointed out that the trait anxiety subscale had more items reporting the presence of anxiety than its absence. It was also argued that its factor structure was not totally stable (Spielberger, 1983). This led to a new revised version (i.e., form Y) in which these shortcomings were corrected. Yet, the main criticism of the STAI is that it does not assess pure anxiety, since it includes items related to depression or negative affect (Endler, Cox, Parker, & Bagby, 1992). This statement is based on the fact that the STAI shows a high correlation with several measures of depression (Spielberger & Reheiser, 2009). The study of the possible relationships between the scores of the STAI and other constructs, particularly depression, has led to alternative analyses that include new factors. For example, Caci, Baylé, Dossios, Robert and Boyer (2003) have proposed several factor models for the structure of the trait anxiety subscale. They argue that several items of the STAI in fact assess “restlessness”, “worrying”, “self-confidence”, “unsuccessfulness” and “anhedonia”. For this reason, they use 10 items that assess three of these factors (items 2, 20, 9, 11, 17, 18, 7, 12, 14 and 15), considering that trait anxiety is a second-order factor. Bieling, Antony and Swinson (1998) proposed a factor structure of the trait subscale of the STAI that includes a factor of depression or general negative affect and showed good fit in the confirmatory factor analysis. These authors concluded that items 2, 8, 9, 11, 17, 18 and 20 measure trait anxiety in its pure form. However, in other studies, factorial structures are not different from the factorial forms in healthy samples (Guillén-Riquelme & Buela-Casal, 2015) or in teenager samples (Silva, Hernández Medina, Jiménez Cruz, & Alvarado, 2016). However, in several samples high correlations between anxiety, stress and depression are observed using other questionnaires (e.g. Schönfeld, Brailovskaja, Bieda, Zhang, & Margraf, 2016).

Several authors have focused on developing a short form of the STAI or of one of its subscales. Although several short forms had already been produced, the first study to do so following certain methodological guidelines was that of Van Knippenberg, Duivendvoorden, Bonke and Passchier (1990). These authors shortened the Dutch version of both subscales to a form with six items for each subscale. More specifically, they obtained three different item selections (depending on the sample used) and verified which of such structures was the most appropriate. They concluded that they were all valid. Two years later, Marteau and Bekker (1992) shortened the English version of state anxiety and concluded that the form including items 1, 3, 6, 15, 16 and 17 was the most appropriate. However, only a sample of pregnant women was used in that study. This structure was later tested using other...
دریافت فوری
متن کامل مقاله

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