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Test Review:State-Trait Anger Expression Inventory-2 (STAXI-2)

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Publisher Contact and Ordering: PAR Psychological Assessment Resources, Inc.; 16204 North Florida Ave.; Lutz, FL 33549; tel: 1.800.331.8378; website: www.parinc.com

Date of publication: STAXI-2 Professional Manual: 1988, 1996, and 1999. STAXI-2 Item Booklet (Form HS) and STAXI-2 Profile Form: 1979, 1986, 1988, 1995, 1998, and 1999.

Cost: The STAXI-2 Introductory kit (includes STAXI-2 Professional Manual, 25 Reusable Item Booklets, 50 Rating Sheets, and 50 Profile Forms) is listed at $361.00. When purchased separately, the STAXI-2 Professional Manual or e-Manual is listed at $71.00, a pack of 25 Reusable Item booklets is $78.00, a package of 50 Rating Sheets (form HS) is $128.00, and a package of 50 Profile forms is priced at $107.00. The CD-ROM STAXI-2: IR and the STAXI-2 IR Download are listed separately for $642.00 each. The STAXI-2 i-Admin, the STAXI-2 Score Report, and the STAXI-2 Interpretive Report are now available on PARiConnect. The STAXI-2 i-Admin provides on-screen test administration and are $4.00 per use with a minimum order of 5. The STAXI-2 Score report provides scores and profiles based on the data collected from an i-Admin or a paper-and-pencil assessment is $3.00 per use with a minimum order of 5. A STAXI-2 Interpretive report can be purchased for $6.00 per use (minimum order of 5) and provides scores, profiles, and interpretive text based on data from and i-Admin or a paper-and-pencil assessment. These purchase parameters were retrieved from www.parinc.com on January 28, 2020. Please refer to website for updated pricing.

Examiner Qualifications: The STAXI-2 may be administered and scored by a paraprofessional who has experience with assessments and is familiar with the procedures presented in the STAXI-2 Professional Manual (Spielberger, 1999). The manual explicitly states; however, that an individual with professional training in

psychology, psychiatry, or educational testing must interpret the results of the scales and subscales assessed in the STAXI-2 (Spielberger, 1999).
Vendor purchase requires a qualification level of B for the STAXI-2 (PAR Inc., 2020, "Qualification Level", para. 1). Interpretive software, the STAXI-2:IR, by Peter R. Vagg and Charles D. Spielberger is available and provides interpretation of STAXI-2 scores based on hand-entry of item scores. This software generates an interpretive report by examining an individual's scale and subscale scores.
Training: The test vendor does not provide training for the STAXI-2 (Danielle Greer of PAR Inc., personal communication, March 7, 2016)

Purpose, Development, and Standardization

Purpose: The STAXI-2 is a self-report assessment instrument used to measure the experience, expression, frequency and control of anger. The STAXI-2 was also developed to assess the potential relationships between an individual's measures of anger (states of anger, anger as a personality trait, and types of anger expression) and medical conditions (PAR Inc., 2020).

Type: Emotional Functioning/Personality/mood assessment

Nature of Content: Measures experience, expression, quality and frequency of anger

Items: Items in the STAXI-2 are presented as scaled, multiple-choice questions. There are 57 items in the STAXI-2

Reading Level: The STAXI-2 Professional Manual (1999) recommends that a test taker be able to read at a six-grade reading level, which is based on the analyses of the STAXI-2 instructions and test items. The manual cautions examiners to remember that a test taker's completion of a grade level is not a reliable indicator of reading ability (Spielberger, 1999).

Language: The STAXI-2 was originally developed in English but has been translated into other languages including: Arabic, Chinese, Dutch, Farsi, French Canadian, Hebrew, Hindi, Hungarian, Korean, Norwegian, Polish, Romanian, Spanish, Urdu, and Vietnamese (PAR Inc., 2012). The European Spanish version of the STAXI-2 was designed particularly for Spanish-speaking clinicians and clients as all materials, including the professional manual, have been translated into European Spanish and normative data was collected in Spain and several countries in Latin America. Additionally, specific test items in the Spanish version have been altered from the English version to account for differences between Spanish and English cultural values and languages (PAR Inc., 2020).

Subtests and Separate Scores: The Revised STAXI-2 has six scales, five subscales, and an Anger Expression Index (Spielberger, 1999). The six scales included in the STAXI-2 are State Anger (*S-Ang*), Trait Anger (*T-Ang*), Anger Expression-Out (*AX-O*), Anger Expression-In (*AX-I*), Anger Control-Out (*AC-O*), and Anger Control-In (*ACI-I*). The State Anger Scale has three subscales: Feeling Angry (*S-Ang/F*), Feel Like

Expressing Anger Verbally (*S-Ang/V*), and Feel Like Expressing Anger Physically (*S-Ang/P*). Additionally, the Trait Anger Scale has two subscales: Angry Temperament (*T-Ang/T*) and Angry Reaction (*T-Ang/R).* The Anger Expression Index (*AX Index*) is provided in order to give a general index of anger expression, which is based on the test taker's responses to items within the following scales: AX-O, AX-I, AC-O, and AC-I (Spielberger, 1999.)

The STAXI-2 Professional Manual (1999) provides normative tables within Appendixes A and B that can be utilized to translate the raw scores of each scale to percentile ranks and the raw scores of each of the subscales to T scores. Within the STAXI-2 Manual (1999) norms are provided by gender for normal adults and psychiatric patients Appendix A and B. (The test publisher also provides a profile form for charting the percentile ranks and/or T scores to enable an overall graphical representation of an individual's response patterns in the scales that assess the expression, experience, and control of anger (Spielberger, 1999, p. 9).

Norms: The normative data provided in the STAXI-2 Professional Manual (1999) is based on responses from two different populations. One population consisted of a heterogeneous sample of 1,644 normal adults consisting of 977 females and 667 males (Spielberger, 1999). The mean age for the total normal adult population was approximately 27 years of age and the ages ranged from 16 to 63 years old. The manual explains that the normal adult population sampled included individuals from a variety of educational and vocational background, which the test developers believed was representative of the general population (Spielberger, 1999). Normative data for the STAXI-2 was also collected and based on responses from a second population of adults. The second population, termed the hospitalized psychiatric patients in the context of the manual, consisted of 276 individuals (105 females and 171 males) that were admitted to a dual diagnosis inpatient program for treating psychiatric concerns and addictions. This population was administered the STAXI-2 at the time of their admission to the dual diagnosis inpatient program at a hospital facility (Spielberger, 1999).

Reliability: The alpha coefficients for all the scales and subscales of the State Anger (*S-Ang*) and Trait Anger (*T-Ang*) in the STAXI-2 were significant, indicating a high level of internal reliability. Except for the 4-item *T-Ang/R* subscale for normal adults (.76 for a sample of 962 females and .73 for a sample of 659 males), the alpha coefficients were .84 or higher for each of these scales and subscales. Additionally, Spielberger (1999) reports statistically significant differences between the scores of the normal adult and the psychiatric patient populations in both the *S-Ang* and *T-Ang* scales. The alpha coefficients reported for the Anger Expression (*AX-O, AX-I*) scales, the Anger Control (*AC-O, AC-I*) scales, and the AX Index range from .73 to .93 (Spielberger, 1999). The consistent and significant alpha coefficients reported indicate an adequate level of internal consistency in these scales and the index, which does not appear to be influenced by gender or possible psychopathology (Spielberger, 1999).

The STAXI-2 also shows high levels of reliability in testing across cultural and ethnic groups. For example, Culhane and Morera (2010) compared the STAXI-2 results from a sample of non-Hispanic White participants (n = 246) and a sample of Hispanic

participants (n = 257) and the resulting coefficient alphas suggested high levels of internal consistency and strong subscale intercorrelations (the coefficient alphas for each group were above .70). No test-retest reliability was provided.

Standard Error of Measurement: The SEM is not provided in manual.

Validity: The validity provided in the STAXI-2 manual is derived from measures collected on the original STAXI (Spielberger, 1988). Over the years, the STAXI's structure and items have been continuously revised as a result of reliability and validity data collected from ongoing studies (Lievaart, Franken & Hovens, 2016). The development of the STAXI-2 incorporated much of this data and expanded the number of questions on different scales. Additionally, the Anger Control Scale was separated into two subscales: Anger control in and anger control out.

The Concurrent validity was measured, and significant correlations were found between the STAXI, the Buss-Durkee Hostility Inventory (BDHI; Buss & Durkee, 1957), and the Hostility and Overt Hostility scales of the Minnesota Multiphasic Personality Inventory measures (MMPI; Cook & Medley, 1954 Shultz, 1954; Hathaway & McKinley, 1967).

Practical Evaluation

Qualitative Features: The STAXI-2 test materials include: a reusable test booklet, a carbonless rating sheet (form HS), and a profile form for plotting T scores and percentiles on opposite sides of the form. Additionally, all testing materials are relatively attractive and easy to use. The STAXI-2 professional manual is a requisite for the scoring and interpretation of the assessment.

Administration: The STAXI-2 can be administered to a group or individually and test instructions are provided within each Item Booklet (form HS).

Start and Discontinue Rules: Start and discontinuation rules are not explicitly stated in the test manual, instead the manual highlights the importance of ensuring that test takers provide answers for each question for valid results (Spielberg, 1999).

Time: Administration: Five to 15 minutes; Scoring: Approximately five minutes.

Recording: Test-takers must use a sharp pencil or pen to mark the STAXI-2 rating sheet self-report (form HA).

Scoring: The scoring directions are straightforward and uncomplicated. Test users may want to double-check personal calculations in part 3, because simple calculation errors can occur. Additionally, the STAXI-2:IR is an available software for the hand-entry of item scores, which examines an individual test-taker's scale and subscale scores and provides a comprehensive interpretive report of the scores (PAR Inc., 2020).

Accommodations: The STAXI-2 professional manual (1999) states:

> For individuals who are unable to complete the STAXI-2 according to the standard administration format due to reading difficulties, the examiner may read the STAXI-2 items aloud, but the examinee should record his or her own responses on the answer sheet in the standard manner (Spielberg, 1999, p. 4).

Reviewer Comments

There is a substantial amount of research supporting the psychometric properties of the STAXI and the STAXI-2 as anger assessment tools and helpful instruments, which measure the experience, expression, frequency, and control of anger. In fact, the STAXI-2 is one of the most widely used anger measures in both clinical and research settings (Novaco & Taylor, 2004). The extensive bibliography of research alone, which is presented in the STAXI-2 professional manual, further supports the claim that the STAXI-2 is an accurate measurement of different forms of anger. However, the STAXI-2 may not be a good assessment instrument to use when working with individuals with low levels of anger. This is because the STAXI-2 is insensitive in adequately discriminating among individuals with lower level scores (Spielberger, 1999). The STAXI-2 professional manual (1999) indicates that the test is insensitive to differentiating between individuals with lower levels of anger, because the distributions of raw scores for several scales are positively skewed. However, the manual (1999) contends that, "from a clinical perspective it is generally more important to detect high levels of anger than to differentiate among persons with low anger scores" (p.55). The STAXI-2 presents with a strong degree of face validity as an anger assessment instrument due to nature of its questions and scales.

Spielberger (1999) notes in the manual that, "valid administration of the STAXI-2 also assumes that the examinee is physically and emotionally capable of meeting the normal demands of testing with self-report instruments" (p.3). The manual cautions test examiners to use their discretion when testing individuals with cognitive deficits or neurological conditions (Spielberger, 1999). Further, the manual highlights the importance of being alert to any variable that may interfere with the validity of administering the STAXI-2 to individuals with disabilities. Apparently, the assessment of individuals with disabilities needs to be considered by the administrator on a personalized, case-by-case basis.

Although there are not specific accommodations listed in the professional manual beyond the aforementioned accommodations, various studies have been conducted to investigate the implications of using the STAXI-2 with populations with varying types of disabilities. In one study Burns, Bird, Leach, & Higgins' (2003) utilized the STAXI-2 with forensic inpatients with learning disabilities. Due to the participants' levels of intellectual functioning during this study, items on the STAXI-2 were read aloud to participants in accordance with the recommended procedure found in the STAXI manual for assessing individuals with reading difficulties (Burns et al, 2003).

The STAXI-2 has been utilized in several settings to review relationships and risk factors between the anger measures quantified by the STAXI-2 and differing populations. Barbour and Eckhardt (1998) examined the relationship of the experience and expression of anger and violent behavior in different male populations. Additionally, the STAXI-2 has been used to assess the impact and efficacy of anger management

group-treatment for male veterans with PTSD displaying aggressive behaviors (Gerlock, 1994).

Furthermore, the use of the STAXI-2 has been further studied a variety of populations. A study investigating the psychometric properties and the use of the STAXI-2 in a sample of male inmates supported the use of the instrument as a diagnostic tool employed in correctional institutions (Etzler, Rohrmann, & Brandt, 2014). The use of the STAXI-2, in conjunction with collateral assessments and clinical impressions, has been shown to be a useful tool to inform case formulation and tracking changes in anger experiences in a sample of male forensic inpatient clients in the United Kingdom (Gilderthorp, Wilson, & Tapp, 2019).

The extensive use and research conducted on the use of STAXI-2 indicates a high validity and reliability across populations, cultures, and languages (Novaco & Taylor, 2004). The results of this test can prompt further investigation into an individual's states and traits. It is a simple test and can be scored fairly quickly and with ease.

Currently, there is a dearth of literature connecting the STAXI with careers or vocations though it may be a helpful instrument for use in vocational evaluation. The STAXI can be used as a screening tool for clients who may exhibit anger issues during the evaluation process. The results of the STAXI can potentially assist in identifying clients with anger issues and thus facilitate a recommendation for clients whose anger may need to be addressed clinically.

Summary Evaluation

This report is an update to Liao's (2014) thorough evaluation of the STAXI-2. The STAXI-2 is a self-report assessment developed to measure the experience, expression, frequency and control of anger in individuals. The STAXI-2 is based on a strong conceptual foundation and has shown strong psychometric properties consistently, with data from a wide array of differing normative populations. The STAXI-2 is easy to administer, score, and interpret, and can be utilized in a time effective manner in a variety of settings. The STAXI-2 assesses risk factors that may be linked to substance abuse issues, and can be used as a screening tool in treatment settings that may guide action plans. Additionally, the STAXI-2 can be used in practice to assess the impact and efficacy of anger related treatment programs. The STAXI-2 is a good screening instrument, which can be utilized in a variety of ways by licensed professional counselors and rehabilitation professionals.

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