

## INTERACTION ANXIOUSNESS SCALE (IAS)

### IDENTIFICATION

**Original name:** Interaction Anxiousness Scale (IAS)

**Name in Spanish:** *Escala de Ansiedad a la Interacción* (IAS)

**Author:** Mark R. Leary

**Year:** 1983

**Versions:** There are a Japanese adaptation (Okabayashi, & Seiwa, 1991), a Chinese adaptation (Chun-zi, Yao-xian, & Xiong-zhao, 2004; Wei, Ping-Ging, & Li-Ying, 2006), and two Spanish adaptations, one developed for Chileans (Pérez & Sepúlveda, 1991) and another one developed for Spaniards (Sanz, 1994).

### CHARACTERISTICS

**Type of instrument:** A self-report inventory with a paper-and-pencil format.

**Aim:** The IAS is aimed at assessing the general tendency for people to experience anxious feelings (the subjective or affective component of social anxiety) in situations involving contingent social interactions (“face-to-face interactions”), that is, situations wherein a person needs the feedback from the others.

**Population:** The IAS was developed with samples of university students and has been widely researched and validated in that kind of samples. Only a few studies have used the IAS in other kind of samples, for example, in patients with schizophrenia (Chien et al., 2003) and in police recruits (Wei et al., 2006).

**Number of items:** 15

**Description:** The IAS is composed of items describing subjective responses of anxiety (feeling tense, nervous, anxious, or uncomfortable) when confronting a variety of situations involving contingent social interactions, that is, situations in which an individual’s responses are contingent upon the responses of other persons with whom he or she interacts (e. g., a job interview, a conversation with a person of the opposite sex, talking to a teacher or a boss, talking on the telephone). To control acquiescence, the IAS is also composed of 4 reversed items, that is, items describing subjective responses of calmness (feeling relaxed, at ease) in social situations or items describing the absence of anxiety or shyness in those situations (items 3, 6, 10, and 15). The assessed person has to answer, on a 5-point Likert scale, the degree to which the item describes him or her. Thus, a higher score indicates a higher tendency to experience subjective anxiety in social situations. The IAS tries to separate “social anxiousness” (the proneness to

experience anxious feelings in social situations) from behavioral reactions of social anxiety (e. g., avoidance of social situations, reluctance to participate in social situations, inhibition in verbal behaviors, gestures or movements). The IAS supposes that, although both components (subjective and overt behavioral) of social anxiety are often associated, there is not necessarily a direct relationship between them. Therefore, the IAS is an instrument suitable for measuring the subjective components of social anxiety experienced in contingent interactions, but it is not an instrument appropriate for measuring the overt behaviors of social anxiety or other components of social anxiety (e.g., cognitive and physiological components), or for measuring social anxiety in noncontingent interactions (e.g., speaking in public) or in more specific anxiety-provoking social situations (e.g., intimate relationships).

**Psychometric properties:**

**Reliability:** Internal consistency reliability indices (Cronbach's *alpha* coefficients) ranging from .87 to .89 have been reported for the original version in a variety of samples of US university students (Leary & Kowalski, 1993). With that version and with that kind of sample, Leary (1983) obtained an 8-week test-retest reliability index of .83. Sanz (1994) reported that the internal consistency of the Spanish version of the IAS, as measured by the Cronbach's alpha coefficient, was .90 in a sample of Spanish university students.

**Validity:** A notable number of studies have found good *convergent validity* indices for the IAS in samples of university students. These studies have showed that the IAS is moderately correlated to other measures of social anxiety (see data reported by Leary & Kowalski, 1991, concerning the correlations of the IAS with 7 valid instruments of social anxiety). For example, taking Watson and Friend's Social Avoidance and Distress (SAD) scale as reference, Leary and Kowalski (1993) reported a correlation of .71 for the IAS, whereas, examining the Spanish version of the IAS, Sanz (1994) reported correlations of .75 and .71 with the subscales of distress and avoidance of the SAD, respectively. Several studies have also found good *discriminant validity* indices for the IAS concerning to instrument measuring constructs different to social anxiety (see data reported by Leary & Kowalski, 1991). For example, concerning to depression measures, Leary and Kowalski (1991) found a correlation of .34, whereas Sanz (1994) found correlations of .36 and .43. However, other data provided by Leary and Kowalski (1991) and Sanz (1994) also point out that the IAS, in spite of having appropriate discriminant validity indices, is significantly, although moderately, correlated to other instruments closely related to social anxiety (*nomological network validity*), such as extraversion and sociability ( $r = -.47$  and  $-.39$ , respectively; Leary & Kowalski, 1991) or negative and positive self-statements during social interactions ( $r = .61$  and  $-.45$ , respectively; Sanz, 1994). There are also data supporting IAS scores' *criterion validity*, since those scores allow one to predict the degree of anxiety that university students will experience when they participate in dyadic social situations, for example, after interacting with a person of the opposite sex ( $r = .48$ ) or during an interview with a researcher ( $r = .48$ ). Finally, data concerning *factorial validity* for the IAS are also good since they consistently indicate either the existence of only one factor that, supposedly, reflects the construct of subjective social anxiety in contingent social interactions, or the existence of two highly related factors: a large general social anxiousness factor on which most of the items would load, and a small factor on which items related to

interaction with authority figures (e. g., professor, boss). This small factor would reflect a more specific factor of subjective social anxiety in contingent social situations with authority figures, which are particularly problematic for people with social anxiety (Leary & Kowalski, 1987; Sanz, 1994).

## ADMINISTRATION

**Estimated administration time:** Less than 5 minutes.

**Norms for administration:** For each IAS item, the assessed person is asked to indicate the degree to which the item describes him or her on a 5-point Likert-type scale from 1 (“Not at all characteristic of me”) to 5 (“Extremely characteristic of me”).

**Scoring and interpretation:** Each item is scored between 1 and 5 points as a function of the answer of the person being examined. After reversing the score of items 3, 6, 10 and 15, all scores are summed and a total score is obtained. The range of this total score is between 15 and 75. With the original version and US university students, Leary and Kowalski (1991) obtained means ranging from 38.6 to 40.6, with standard deviations (SD) varying between 9 and 11.1. However, Sanz (1994), after assessing a sample of 338 Spanish university students (85% females; mean age = 22.6, SD = 2.7), obtained a similar SD of 10.7, but a mean of 44, slightly higher than that obtained by Leary and Kowalski (1991). If replicable, this difference would suggest an important cultural difference between US and Spanish university students. There are no established cutoff points that may guide the interpretation of IAS scores, but, since IAS scores are close to a normal distribution, a score higher than two standard deviations above the mean (e.g., equal to or greater than 65 according to normative data provided by Sanz, 1994, for Spanish university students) would indicate that the assessed person has a higher level of social anxiety than 98% of the appropriate population (that cutoff point is the 98<sup>th</sup> percentile and is the equivalent of a 70 T-score).

**Time of administration:** The IAS has received widespread use for research purposes in personality and social psychology areas. From a clinical viewpoint, it should be used mainly during initial assessment. It could be also administered during the course, ending and follow-up of a treatment for social anxiety, however there no published data on its sensitivity to therapeutic change.

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