Revising and Validating the Social Avoidance and Distress Scale

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Introduction

- The Social Avoidance and Distress Scale (SAD; Watson & Friend, 1969) and the Fear of Negative Evaluation Scale (FNE; Watson & Friend, 1969) were initially designed to measure social-evaluative anxiety.
- The SAD assesses two aspects of social-evaluative anxiety: social avoidance and social distress.
  - Social avoidance: Active avoidance of social situations or during social situations.
  - Social distress: The experience of negative emotions during or in anticipation of social situations.
- Leary (1983) developed a brief FNE scale (BFNE) wherein the original dichotomous true-false answer format was converted to a 5-point Likert scale. In contrast, the SAD continues to use a dichotomous response scale, which may be limiting its utility.
- Likert response formats can be more advantageous than dichotomous response formats because they increase the variance that can be accounted for by each question, improve reliability and validity, are often better accepted by respondents, and support a more robust dimensional structure of the measured construct (Velicer, DiClemente, & Corriveau, 1984).
- The purpose of the present study was to revise the item response format of the SAD from a dichotomous response format to a Likert response format and to evaluate the psychometric properties of this new 5-point Likert scale version.

Method

- Participants included 307 University of Regina students (77.5% women; ages 17-35; M_{age}=20.3, SD_{age}=3.3).
- Demographics were supplemented with:
  - Social Avoidance and Distress Scale, Likert Scale (SAD; Watson & Friend, 1969).
  - Social Phobia Inventory (SPIN; Connor et al., 2000).
  - The aggregate short form of the Social Interaction Anxiety Scale and Social Phobia Scale (SIPS; Carleton et al., in press).
  - Brief Fear of Negative Evaluation Scale-II (BFNE-II; Carleton et al., 2007).
  - Anxiety Sensitivity Index-3 (ASI-3; Taylor et al., 2007).
  - Intolerance of Uncertainty Scale–Short Form (IUS-12; Carleton et al., 2007).
  - Center for Epidemiologic Studies Depression Scale (CESD; Radloff, 1977).
- Exploratory Factor Analysis (EFA) was performed using the SAD item responses following the recommendations of Osborne, Costello, & Kellow (2008): Principle Axis Factoring and Promax rotation with Kaiser normalization. Parallel analysis and the scree test were used for factor extraction. Initially, items where communalities were <.4 were removed. Thereafter, items with crossloadings >.32 were removed.
- Correlations between the original, revised, and associated measures assessed construct fidelity.

Results

- There were no significant differences between men and women on the SAD, SPIN, SIPS, BFNE-II, ASI-3, IUS-12, and CESD (all *ps*>.10).
- The iterative EFA process resulted in a 20-item, 2-factor solution, accounting for 59.70% of the variance. The first factor comprised the reverse-worded items (49.46% of the variance) and the second factor comprised the straightforwardly worded items (10.24% of the variance) (Table 1).
- A correlation analysis revealed a strong positive relationship between the two factors (*r*=.68).
- The 20-item SAD was highly correlated, *r*(307)=.99, with the original 28-item SAD.
- The factor comprising the straightforwardly worded items demonstrated consistently stronger relationships with the associated measures than the factor comprising the reverse-worded items (Table 2).
- An additional EFA was performed using only the straightforwardly worded items to evaluate whether avoidance and distress items would then comprise distinct factors. This secondary EFA resulted in a unitary factor solution, comprising both social avoidance and social distress items.

Discussion

- The current factor structure differs from the original structure proposed by Watson and Friend (1969), which suggested two subscales assessing social avoidance and social distress.
- Accordingly, the method factor may be obscuring the dimensionality of the measure or the measure itself may actually represent a unidimensional construct.
  - Preliminary analyses using only the straightforwardly worded items support the notion that the construct may be unidimensional.
- The high correlation between the reduced measure and the original measure provides initial support for validity and utility of fewer items.
- The correlations between each of the measures of social anxiety (i.e., SPIN and SIPS to the revised SAD factors) were high, suggesting substantial overlap that may be unnecessary. The relatively lower correlations with the BFNE suggest there may nonetheless be important distinctions between those constructs (Kline, 2005). Correlations with associated measures (i.e., ASI, CESD, IUS-12) were mostly moderate, as expected (Safren et al., 1998).
- This is the first study to have evaluated the factor structure of the 28 items suggested by Watson and Friend (1969). Additional research examining the psychometric properties of the SAD scale is warranted – particularly investigations of the utility of the method factor items. This may include replication of these findings in clinical and nonclinical samples and rewording of the reverse-worded SAD items.

Table 1. Scale Items and Loadings

Factor 1: Reverse-worded items	Loadings†	Factor 2: Straightforwardly-worded items	Loadings†
1. I feel relaxed even in unfamiliar social situations.	.86 (-.02)	2. I try to avoid situations which force me to be very sociable.	.62 (.19)
3. It is easy for me to relax when I am with strangers.	.75 (-.00)	5. I often find social occasions upsetting.	.65 (.06)
4. I have no particular desire to avoid people.	.68 (-.02)	8. I try to avoid talking to people unless I know them well.	.70 (.01)
6. I usually feel calm and comfortable at social occasions.	.78 (.11)	11. I am usually nervous with people unless I know them well.	.68 (.08)
9. If the chance comes to meet new people, I often take it.	.74 (.07)	13. I often want to get away from people.	.86 (-.13)
12. I usually feel relaxed when I am with a group of people.	.79 (-.02)	14. I usually feel uncomfortable when I am in a group of people I don't know.	.67 (-.02)
15. I usually feel relaxed when I meet someone for the first time.	.83 (-.11)	16. Being introduced to people makes me tense and nervous.	.76 (.02)
17. Even though a room is full of strangers, I may enter it anyway.	.66 (.02)	18. I would avoid walking up and joining a large group of people.	.59 (.08)
22. I don't mind talking to people at parties or social gatherings.	.68 (.09)	20. I often feel on edge when I am with a group of people.	.80 (-.02)
28. I find it easy to relax with other people.	.73 (.13)	23. I am seldom at ease in a large group of people.	.61 (.04)

†Alternate factor loadings in parentheses

Table 2. Pearson Correlations

	Factor 1	Factor 2	Total
Factor 2	.66	-	
Total	.92	.90	-
SPIN	.67	.80	.79
SIPS	.69	.75	.79
BFNE-II	.36	.47	.45
ASI-3	.28	.50	.42
IUS-12	.41	.59	.54
CESD	.28	.42	.37

*all correlations were statistically significant (*p*<.01).