Psychometric Properties of the Persian Version of Social Avoidance and Distress Scale (SADS)

Shima Razian[1], Ali Fathi-Ashtiani[2], Hamidreza Hassanabadi[3] Ali Bozorgmehr[4]

[1]PhD student in clinical psychology of University of Science and Culture, Tehran, Iran
[2]Behavioral Sciences Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran
[3] Department of Educational Psychology, Kharazmi University, Tehran, Iran
[4]PhD student in Neuroscience, Faculty of Advanced Technologies in Medicine, Iran University of Medical Sciences (IUMS), Tehran, Iran

Corresponding Author:
Shima Razian,
PhD student in clinical psychology of University of Science and Culture,
Tehran,
Iran
E-mail: s.razian@usc.ac.ir

Abstract

Introduction: The aim of this study was to investigate the validity, reliability and factor structure of the Persian version of Social Avoidance and Distress Scale (SADS).
Method: For this purpose, 276 students (141 males and 135 females) were selected by convenience sampling. Following by translation and back-translation of SADS, this scale was used along with Social Phobia Inventory (SPIN) and the Beck Scale for Suicidal Ideation (BSSI) to check the convergent and the divergent validities, respectively. Data were analyzed using Pearson's correlation coefficient.
Results: The factor analysis showed one factor. The reliability was calculated 0.83 using test-retest method, and the internal consistency was obtained equal to 0.83 using Kuder-Richardson approach. Furthermore, the correlations with SPIN and BSSI were measured to be 0.62 and 0.21, respectively.
Conclusion: It can be concluded that the reliability and validity of the Persian version of SADS among Iranian university students are acceptable.

Keywords: Social Avoidance and Distress Scale, SADS, Validity, Reliability, Factor Analysis

Introduction

Social anxiety resulting from assessment is defined as experiencing distress, discomfort, fear, anxiety in communal positions and deliberately avoidance of entering public situations and generally as a fear of negative evaluation by others (1). Lifetime prevalence of social anxiety disorder is reported 12 percent that has placed it among the most four prevalent psychiatric disorders (2). Studies also point to a higher prevalence of this disorder among females (3). A research conducted by Talepasand and Nokani in 2010 in Iran showed that the prevalence of the disorder in the Iranian society was 10.1 percent and in accordance with other studies, its prevalence among females was more than males (4). This chronic annoying condition usually starts with a gradual and early onset in adolescence (5) and its start after the age of 25 is uncommon (6). This disorder impairs the academic, social, familial, personal and economical performances significantly (7) and if untreated, it continues an average of 20 years, and spontaneous recovery is unlikely (8). So, for the clinical screening and identification of social phobia at early stages, instruments with appropriate validity and reliability are needed (9). Several tools are available to measure social anxieties that are either used by observers or by subjects as self-reporting scales. Leibowitz Social Anxiety Scale (LSAS) (10) and the Brief form of Social Phobia Scale (BSPS) (11) are two of the most important tools used by observers in this context, and the main goal of both instruments is to measure overall aspects of social anxiety. The original version of BSPS was prepared by Davidson and colleagues in 1997 in English and in addition to signs of fear and avoidance, it also measures physiological symptoms associated with social anxiety disorder. There are

also some self-reporting tools. For example, Social Phobia Inventory (SPIN) developed by Connor and colleagues (12), and due to the low number of items and its capability to rate three sub scales and ease in scoring, has many practical applications. Another self-reporting scale, Social Phobia Inventory (SPAI), which has been developed by Turner et al. in 1989 (13) and because of its large number of items, its completion takes a long time. Social Phobia Scale (SPS) and Social Interaction Anxiety Scale (SIAS) (14) were developed to fill the gaps in this field. These two scales are usually used simultaneously and are partially perfect, but evaluate the fear-related aspects regardless of the individual's social interactions. The scale that its psychometric properties have been investigated in this study is Social Avoidance and Distress Scale (SADS), which evaluates the symptoms of general social phobia (13). This instrument, as a self-report questionnaire has been used in a large number of studies related to social phobia and anxiety. The SADS was prepared by Watson and Friend in 1969 (1). They designed this questionnaire to measure social anxiety and mental distress and items related to physiological symptoms, and impaired performance has been almost completely removed from it. In this questionnaire, social avoidance is defined as to avoid being with others and also talking to others or escaping from them for any reason, and social distress is considered as reported experiencing a negative emotion such as sadness, anxiety (in interactions), or stress. Watson and Friend used SADS in three experimental and one correlational study on a homogeneous population of students. The results showed that people who got higher scores on the questionnaire had higher social anxiety and were less likely to participate in group activities. In contrast, people who got a lower score, had lower social anxiety and higher willingness to participate in the group activities (1). Although several studies have shown an appropriate sensitivity for SADS for evaluation of social anxiety, and despite the widespread use of this scale, its structure, validity, reliability and predictive power have not been studied in many cultures and countries, including Iran. So, the aim of this study is to evaluate the ability of SADS in distinguishing between social anxiety and other anxiety disorders among Iranians.

Methods

Social Avoidance and Distress Scale (SADS): SADS consisted of 28 items to measure social distress and isolation. Participants must choose between true and false choices. The scale is not designed to determine the presence or absence of symptoms of the disease, but is designed to assess social anxiety as well as social avoidance. The respondents' scores in SADS will be accounted as one point for each of the subsequent sections if evaluated "true" (2, 5, 8, 10, 11, 13, 14, 18, 20, 21, 23, 24, 26) and one point for each of the successive sections if evaluated "false" (1, 3, 4, 6, 7, 9, 12, 15, 17, 19, 22, 25, 27, 28). Watson and Friend calculated the test-retest reliability for SADS equal to 0.68 (1).

Social Phobia Inventory (SPIN): SPIN prepared by Connor and colleagues is used to assess social phobia

(12). The scale has 17 items and scored on Likert degrees. The scale also measures three areas of clinical signs of fear, avoidance and the physiological signs. This questionnaire has high reliability and validity. Its test-retest reliability on people with social anxiety is 0.78-089 and its alpha coefficient has been reported 0.94 in a group of normal subjects (12). The structural validity of this scale was calculated through comparing the results between the two groups of subjects, one with social phobia and the other included normal subjects without psychiatric disorders. A significant difference between two groups demonstrated the high structural validity of this scale. SPIN's validity has also been evaluated in Iran. Hasanvand Amouzadeh and colleagues reported the Cronbach's alpha coefficient of the questionnaire equal to 0.94 and its retest coefficient 0.96. They also reported the convergent validity of this scale with SCL-90 equal to 0.7 (15). It should be noted that in this study, the overall score of this scale is used in assessments.

Beck Scale for Suicidal Ideation (BSSI): BSSI was prepared in 1961 by Aaron Beck with 19 items. The scale evaluates death willingness, active and passive suicidal tendencies, duration and frequency of suicidal thoughts, feeling of self-control, suicide barriers, and individual's readiness for suicide. In the English version of this scale, Cronbach's alpha for inpatients and outpatients have been reported 0.90 and 0.85 respectively, with high internal consistency. In Iran, Anisi and colleagues showed that concurrent validity of Beck Scale for Suicidal Ideation is 0.76 and its reliability using Cronbach's alpha is 0.95 (16).

In order to set the SADS, at first, this scale was translated into Persian with the help of a clinical psychologist and a specialist in English and then retranslated into English by another specialist and brief conflicts were resolved. And at the end, the final version was drafted again by a clinical psychologist. The statistical population included undergraduate students of Shahed University in 2016-2017. Two hundred and seventy six students participated in this study with the consent and completed SADS. In addition, participants were evaluated using SPIN (12) (to verify the convergent validity) and the Beck Scale for Suicidal Ideation (15) (to verify the divergent validity). Additionally, 47 participants were re-tested.

Data analysis was performed using SPSS version 20. The internal consistency was obtained using the Kuder - Richardson method. Independent t-test was used to compare the total scores of SADS, SPIN and BSSI between male and female students. For factor analysis, Bartlett's sphericity and the Kaiser-Mayer-Olkin (KMO) tests were performed. Also, exploratory factor analyses with one factor in default (based on literature) were conducted using principal component analysis.

Results

The average age of the participants in this study was 20.2, and its standard deviation was 1.56. The internal consistency was obtained equal to 0.83 using Kuder - Richardson method. Due to the same difficulty levels of all questions, the following formula was used:

$$r_2 = \frac{n}{n-1}\left(1 - \frac{\bar{x}(n-\bar{x})}{nS^2}\right)$$

Where n is the number of questions, S^2 is the total variance and $\bar{x}$ is the mean of scores. SADS mean score and standard deviation were equal to 8.75 and 5.51 respectively. Independent t-test showed no significant difference between male and female students on age and total scores of the SADS, SPIN and BSSI. T-scores along with demographic information obtained from participants in each scale are summarized in Table 1.

The test - retest validity within a week was calculated 0.83. The correlation between SADS and SPIN was 0.62

(P<0.01) and between SADS and BSSI was 0.21 (P<0.01). So, convergent and divergent validities were confirmed (Table 2).

For factor analysis, Bartlett's test of sphericity with df =378 was significant at P = 0.01. Moreover, Kaiser-Mayer-Olkin (KMO) score equivalent to 0.88, pointed out the suitability of data for factor analysis. Exploratory factor analyses with one factor in default (based on literature) using principal component analysis showed one factor for this scale for the Iranian studied population. In Table 3, each of the items of this scale is shown based on its factorial weight.

Table 1. T-scores along with demographic information obtained from participants.

	Gender	N	Mean	Std. Deviation	t	Sig. (2-tailed)	Mean Difference
Age	Female	135	20.03	1.39			
	Male	141	20.39	1.75	-1.670	.096	
	Total	276	20.21	1.58			-٠.35
SADS	Female	135	8.57	5.79			
	Male	141	8.94	5.41	-.494	.622	
	Total	276	8.75	5.51			-٠.37
SPIN	Female	135	12.45	11.08			
	Male	141	13.46	9.80	-.721	.472	
	Total	276	12.96	10.22			-1.01
BSS	Female	135	2.59	5.64			
	Male	141	3.86	7.98	-1.368	.173	
	Total	276	3.23	6.36			-1.27

Table 2. The correlation between SADS, SPIN and BSSI.

Pearson's Correlation	SPIN	SADS	BSS
SPIN	1	0.62	0.17
SADS		1	0.21
BSS			1

Table 3. Each of the items of SADS based on its factorial weight.

Number of items	Items	Component
22	I don't mind talking to people at parties or social gatherings.	٠.644
24	I often think up excuses in order to avoid social engagements.	٠.628
28	I find it easy to relax with other people.	٠.623
5	I often find social occasions upsetting.	٠.623
6	I usually feel calm and comfortable at social occasions.	٠.612
26	I try to avoid formal social occasions.	٠.609
4	I have no particular desire to avoid people.	٠.605
2	I try to avoid situations which force me to be very sociable.	٠.594
13	I often want to get away from people.	٠.579
21	I tend to withdraw from people.	٠.574
18	I would avoid walking up and joining a large group of people.	٠.566
14	I usually feel uncomfortable when I am in a group of people I don't know.	٠.564
20	I often feel on edge when I am with a group of people.	٠.546
23	I am seldom at ease in a large group of people.	٠.540
9	If the chance comes to meet new people, I often take it.	٠.506
11	I am usually nervous with people unless I know them well.	٠.481
12	I usually feel relaxed when I am with a group of people.	٠.472
17	Even though a room is full of strangers, I may enter it anyway.	٠.471
8	I try to avoid talking to people unless I know them well.	٠.462
25	I sometimes take the responsibility for introducing people to each other.	٠.419
3	It is easy for me to relax when I am with strangers.	٠.416
16	Being introduced to people makes me tense and nervous.	٠.398
15	I usually feel relaxed when I meet someone for the first time.	٠.389
1	I feel relaxed even in unfamiliar social situations.	٠.377
19	When my superiors want to talk with me, I talk willingly.	٠.347
10	I often feel nervous or tense in casual get-togethers in which both sexes are present.	٠.337
27	I usually go to whatever social engagement I have.	٠.303
7	I am usually at ease when talking to someone of the opposite sex.	٠.282

Discussion

The present study aimed to evaluate the validity, reliability and factorial structure of SADS in the Iranian population. The findings of this study showed that the SADS has appropriate internal validity. The results are consistent with other findings. Watson et al., in a study on normal students, compared to people with depression, reported a proper internal consistency of SADS and calculated its internal validity 0.94 (1). In 1987, Turner, Mc mana and Biddle evaluated 206 patients with anxiety disorders, including agoraphobia with or without panic attacks, social anxiety, simple phobias, panic disorder, generalized anxiety disorder and obsessive-compulsive disorder using the SADS, the State-Trait Anxiety Inventory (STAI) and Beck depression Inventory (BDI) (13). They showed that people with simple phobias get lower scores than those with other types of anxiety disorders. However, the scores of people with social anxiety were not higher than those with agoraphobia, panic disorder, generalized anxiety disorder and obsessive-compulsive disorder as well. In addition, the SADS scores were significantly correlated with the scores of the related scales (rs = 0.42 - 0.63, Ps <0.000). However, these results are not repeated in other studies, as Heimberg and his colleagues in a study in 1988 showed that SADS can be used as an appropriate tool to assess social anxiety (17). In 2013, in a study by Sobanski and his colleagues, the validity and reliability of SADS were evaluated in Poland (18). In this study, 453 women and 172 men who were diagnosed with neurotic or behavioral problems between 2008 and 2010, were evaluated by SADS. In addition, 512 cases completed the symptom checklist "O" (KO "O"), 505 cases completed neurotic personality questionnaire KON-2006, and 46 cases completed NEO-PI-R personality questionnaire and were compared with the control group. They calculated Guttman split-half reliability 0.94 and Cronbach's alpha coefficient 0.93. In addition, a significant correlation was seen between the results of the SADS and other used scales. The patient group score was significantly higher than the control group and in total, acceptable reliability and validity were obtained for Polish version of SADS. The results of the factor analysis of our study shows that social avoidance and distress scale the in Iranian population has also one factor which should be more than 0.3..

Conclusion

Overall, based on the results of this study, it can be said that the Persian version of SADS has a good reliability and validity among the non-clinical Iranian population. Limited sample is the major shortcoming of this study. Therefore, it is suggested to investigate psychometric characteristics of SADS on clinical samples, especially in patients with social phobia, agoraphobia and panic disorder to estimate its diagnostic validity and cut-off point for Persian version of the SADS. The sensitivity and specificity of the SADS can also be studied in future researchers.

Acknowledgement

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