



## CONSTRUCTION AND STANDARDIZATION OF SOCIAL ANXIETY DISORDER SCALE

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### Abstract

The paper presents the details of the development and standardization of Social Anxiety Disorder Scale for adolescents. The test initially consisted of 77 items. After discussion with experts items were reduced to 52. After item analysis the final draft was reduced to 42 items. The test-retest reliability was found to be 0.79. To establish the validity of the present scale the concurrent validity index was worked out. For obtaining concurrent validity for the present scale it was correlated with already existing scale of social anxiety i.e. Liebowitz Social Anxiety Scale for Children and Adolescents revised by Warner, Storch, Pincus, Klein, Heimberg and Liebowitz (2003). Validity index comes out to be 0.59.

**Key Words:** Construction, Standardization, Social Anxiety Disorder.

### Introduction

Adolescence is a transitional period between childhood and adulthood during which a lot of physical, psychological and social changes occurs. It is a period in which teenagers are acutely aware and concerned about what the society thinks about them. But extreme and consistent fear of meeting new people may dramatically limit a person's ability to engage in ordinary social activities. When flooded with social anxiety adolescents may appear extremely shy and may avoid their usual activities or refuse to engage in new experiences. In the words of Reber (1995) social anxiety disorder is marked by a persistent fear of particular social situations in which the individual is subjected to possible scrutiny by others and fears that he or she will act in some way that will humiliate or embarrass. It is essential for the adolescents to be free of anxiety especially in social context as they are entering adult life where they have to interact with all kind of people in the society. So it becomes imperative to assess their level of social anxiety. For this social anxiety disorder scale was developed and standardised by using Likert's (1932) method. The process of scale construction was carried out in three phases:

1. Planning Phase
2. Construction Phase
3. Standardization Phase

**(1) Planning phase:** Planning phase involved the following points:

1. Identification of the categories of feared social situations causing social anxiety
2. Operational definition of social anxiety disorder
3. Methodology of scale construction

#### **i. Identification of the categories of feared social situations causing social anxiety**

Perusal of the literature including the catalogues, journals, books, official and web sources has helped the researcher to know that children and teens with social anxiety disorder have excessive and persistent fear of social situations. The two categories of these feared social situations are: performance based and interaction based.

Performance based situations are those in which a person feel that he is being observed by others, for example during public speaking, eating in front of others or participating in any activity. The interaction based situations include situations where a person wants to interact with others or want to develop close relationships like working in a group, talking to classmates or going to social events etc.

So the present scale on social anxiety disorder for adolescents was prepared on the above mentioned categories of feared situations contributing towards social anxiety disorder.

#### **ii. Operational definition**

Social anxiety disorder is a persistent and significant fear of being scrutinized or humiliated by others in social situations wherein the person may have to perform or meet a lot of unfamiliar persons. The person is aware that the anxiety is excessive and unreasonable, yet cannot help fearing the situation. When these fears become excessive they impede the person's functioning and routine.



### iii. Methodology for Scale Construction

The technique chosen to construct the present scale was Likert's (1932) technique of 'Summated Rating' for ascertaining the responses on the scale as it is the most widely used scale for the collection of data in the field of behavioural science studies particularly related with surveying and descriptive studies. Most popular form of Likert scale which is commonly used for research purposes is five point rating scale which includes a continuum of alternative responses, which may range from strongly agree to strongly disagree. Scoring is accomplished by assigning numerical weights of 1 through 5 to each category, such that 5 represent the most favourable response and 1 the least favourable.

(2) **Construction phase:** - This phase involved the following steps:

1. Preparation of item pool,
2. Editing of the items and Provisional Draft,
3. Directions for respondents,
4. Try Out of the scale,
5. Item Analysis,
6. Selection of Items and Preparation of the Final Draft and
7. Scoring System.

#### i Preparation of item pool

An important step in the development of a scale is the constitution of the item pool which is otherwise known as definition of the universe (Jackson, 1970). The investigator critically studied the literature available on social anxiety disorder from books and journals of psychology, sociology, education and medical as well as internet was also scanned for the purpose of selecting content for the tool. Help was also sought from experienced colleagues, psychologists and teachers.

The investigator framed the items of the tool on tentative basis on the basis of the information gathered from experts and the study of the relevant literature from books, journals and web sources etc. The items were given the shape of statements. For the preliminary draft, 77 statements were tentatively framed on social anxiety disorder. The statements were then discussed threadbare with supervisors of the research work and necessary modifications were made.

#### ii. Editing of the items and provisional draft

The editing process is very important in the Likert technique of scale construction. The statements were reviewed and edited in accordance with the guidelines suggested by Wang (1932), Thurstone and Chave (1929), Likert (1932), Bird (1940), Edwards and Kilpatrick (1948).

Second preliminary draft of 77 items was shown to experts to examine the grammatical correctness, repetitiveness and ambiguity of the items. 12 experts with long standing experience in the field of psychology and education were approached for this purpose.

The experts were personally requested to go in for serious reflection over every statement and to indicate how the statements were relatively close to the connotation in question. A note was written conveying the meaning of social anxiety disorder. Further, several sittings were done with experts so that proper meaning is conveyed to experts. The experts were requested to respond to this task critically and objectively with their comments and observations. Every expert was asked whether each of the items was accepted, rejected or required modification. The investigator with her supervisor devoted several sittings, to consider the judgments of the said experts on the statements relating to different segments of social anxiety. In this way, a pool of all the 52 statements was finalized for the provisional draft of social anxiety disorder scale for adolescents.

#### iii. Directions for respondents

On the top of the booklet, the following directions were given for respondents-

1. Fill in the information regarding your name, class, age, gender, locale, name of school and city.
2. Read the instructions carefully.
3. On the back of this page list of 52 statements are given. You are requested to read each statement carefully and also see to what extent that statement is applicable in your case. For indicating the degree of applicability a five-point scale is given against each statement like below:-



Sr. No.	Statement	Response Alternative				
		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1.	I am afraid of talking to strangers.	└	└	└	└	└

After reading the statement, if you think that you strongly agree with the statement then put a mark of tick ( ) in the cell below Strongly Agree category. Please keep in mind that out of five alternatives against each statement you have to select only one of them best suitable to you.

1. You are requested to indicate your answers without hesitation and with utmost degree of honesty.
2. Do not leave any statement unanswered.
3. Information given by you will be kept confidential.

#### IV .Try out of the scale

The adequacy of a test depends upon the care with which the items of the test have been chosen. The purpose of the proper try out is to take decisions about the appropriateness of the test items using the technique of item analysis.

The try-out of the scale was carried out on a group of 100 students belonging to rural and urban area. For this purpose two schools were selected randomly from the target population. For the urban population, Government Model Senior Secondary School, Model Town, Ludhiana was chosen and from the rural area, Government Senior Secondary School, Dhandra, district Ludhiana was selected. The data obtained from one hundred students on provisional draft of social anxiety disorder scale was noted down for the purpose of item analysis.

#### V. Item analysis

It is a statistical technique which is used for selecting and rejecting the items of a test on the basis of their difficulty value and discriminative power. The objectives of item analysis includes

- Selecting the appropriate items for the final draft and rejecting the poor items which do not contribute in the functioning of the test.
- Item analysis obtains the difficulty values of all the items of preliminary draft of the test. The test items are classified as difficult, moderate and easy items.
- It provides the discriminative power to differentiate between capable and less capable examinees of all the items of the preliminary draft of the test. Three types of discriminative indexes are used under this strategy- positive, negative and zero discriminations. Only items with positive discrimination values are to be used for the final draft of the test.
- It also indicates the functioning of the distracters in the multiple –choice items. The powerful and poor distracters are changed.

As this test was in the form of rating scale which is used to secure an expression of opinion for the trait being measured so it can't be evaluated in terms of any right or wrong responses. Thus concept of item difficulty does not work here. So for the present tool construction only item discrimination index was worked out on the basis of obtained results.

#### Item discrimination index

The discrimination index of an item is determined by the extent to which the given items discriminate among high and low group. To obtain high and low group Kelly's dichotomy was used. Kelley (1939) showed that the product moment correlation between a test item score and the total score could be estimated by using only the tails of the distribution and he also showed that the most efficient division to use was the top and bottom 27% tails. This suggestion was followed for the present scale. First of all scores of 100 students which was obtained through final-tryout were arranged in descending order of their performance. Then 27% top and 27% bottom scores formed the higher and lower group respectively which comes out to be 27 students in each group. In order to find out the discriminative power of the various items, the mean of every item for the higher and lower group were compared. Following formula was used for calculating item discriminative power:

$$\text{Discriminative power} = \frac{H - L}{N/2}$$

Where,

H = sum of all scores of a particular item responded by higher group



L = sum of all scores of a particular item responded by lower group  
N = total no of students in higher and lower group.

In order to make selection of items objectively and scientifically, item analysis was done by following the above statistics to obtain discriminative power for every item included in the provisional draft of 52 items of Social Anxiety Disorder Scale .

#### **VI. Selection of items and preparation of the final draft**

The final draft of the social anxiety disorder scale was prepared on the basis of item analysis used for obtaining discriminative power for each item. The items having discriminative power in the range of 0.25 - 0.95 were selected for the purpose of further administration. This leads to the elimination of 10 items out of 52 items used previously. In this way, in all 10 items were rejected number 2, 25, 34, 36, 38, 39, 40, 42, 49 and 52 of the provisional draft of the scale. Hence, social anxiety disorder scale for adolescents in its final form comprised of 42 items.

#### **VII scoring procedure**

Each item has a response option on Likert' 5 points continuum viz, Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree with respective weights of 5, 4, 3, 2 and 1

Social anxiety disorder score of the subject is the sum total of all item scores. The theoretical range of scores is from 42 to 210, high scores reflecting relatively higher level of social anxiety disorder of adolescents and vice- versa.

#### **(3) Standardization phase**

##### **A. Determination of the Reliability of the Scale**

Reliability refers to the consistency of scores or measurement which is reflected in the reproducibility of the scores. A test is said to be consistent over a given period of time when all the examinees retain their same relative ranks of two separate testing with the same test. In the words of Anastasi (1951), Reliability refers to the consistency of scores obtained by the same individuals when re-examined with the same test on different occasions or with different sets of equivalent items or under other variable examining conditions.” Ebel (1979) defines it as the consistency which a set of test scores measure whatever they do measure.

There are four procedures in common use for computing reliability. These are:-

- Alternative or Parallel Form Method
- Split-half Method
- Rational Equivalence Method
- Test-Retest Method

Test-retest method was found better option as assumptions of unifactor test and parallel items were not met so option of Kunder-Richardson formula was dropped. Then again as one form of the test was constructed, parallel form method was ignored. Lastly the Scale being heterogeneous and items having been arranged logically, the two halves could not have been identical so the split half method was discarded. Therefore, test- retest reliability criterion was found to be most suitable for determining the reliability of this Scale. For establishing the reliability of the social anxiety disorder Scale, the scale was administered to 100 students of Government Senior Secondary School, Cemetery Road, Ludhiana who were not included in the experimental sample of population. To the same students, the same scale was administered under the similar conditions after the gap of three weeks for the test- retest reliability. The product moment co-efficient of correlation between two sets of scores was computed. It was found to be 0.79. This was fairly high to testify the soundness of the scale.

##### **B. Establishing the Validity of the Scale**

Validity refers to the degree to which a test measures, what it proposes to measure. Test validity also refers to the extent to which conclusions and decisions made based on test scores are appropriate and meaningful. Validity can be best defined as the degree to which a test is capable of achieving certain aims. The validity of the test is determined by measuring the extent to which it matches with a given criterion. Validity of a test must be established prior to its use. According to Anastasi (1951) 'the question of test validity concerns what the test measures and how well it does so.' Cronbach (1960) says that validity may be determined by showing “That a test corresponds to the definition of the trait intended to be measured, or it may be established inductively by naming the traits represented in the items in hand.”

To establish the validity of the present scale the concurrent validity index was worked out. Under this type of validity the Pearson product moment correlation index between the present scale and the concurrent scale measuring the same construct



was calculated. For obtaining concurrent validity for the present scale it was correlated with already existing scale of social anxiety i.e. Liebowitz Social Anxiety Scale for Children and Adolescents revised by Warner et.al. (2003). Validity index comes out to be 0.59 which indicates that our scale has a very good concurrent validity and it can be used safely as a tool of measurement.

### C. Setting of the time limit for the test

The average time taken by 75 percent examinees to reach the last item was fixed as the duration of the test which comes out to be 20 minutes including, the time for reading instruction for responding to the test.

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