

# Construction and Standardization of Personality Hardiness Scale for Teachers

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## Abstract

*Stressful circumstances are an endemic part of life and personality hardiness is needed if one is to grow and develop. It is studied in terms of three components- Commitment, Control and Challenge that provides the courage and motivation to turn stressful circumstances from potential disasters into growth opportunities (Maddi et al., 2009). Personality Hardiness Scale for Teachers was constructed and standardized. The scale comprised of 52 items with reliability of 0.72 and content and face validity was also established. Norms were developed.*

**Keywords:** Personality hardiness; scale; construction and standardization; teachers.

Hardiness has been studied in terms of three components- Commitment, Control and Challenge in most of the scales (Kobasa, 1979b; Maddi et al., 1979, Kobasa, 1982, and 1993; Maddi and Kobasa, 1983; Maddi, 1986; 1997; Maddi and Khoshaba, 2001; Bartone, 1989, 2007; and Singh, 2008) and in terms of four components, i.e., confidence (as well as commitment, control and challenge) as perceived by Hull et al. (1987) and the scales range from 'strongly agree' to 'strongly disagree' except the hardy surveys which measure stress, strain, hardy attitude etc.

As scales are best suitable for attitude measurement, provide direct and reliable assessment, lends itself well to item analysis procedures and quick and economical to administer and score, it was decided to prepare a scale for measurement of personality hardiness of teachers.

## THE PROCESS OF SCALE CONSTRUCTION

The process was carried out in three phases:-

Planning Phase, Construction Phase and Standardization Phase

**PLANNING PHASE:** - Planning phase involved identification of the components of personality hardiness, operational definition of personality hardiness and the methodology to be employed for the purpose of scale construction on personality hardiness.

### Identification of the components of Personality Hardiness

Perusal of the literature including the catalogues, journals, books, official sources and web sources facilitated the researcher with the components of personality hardiness. Kobasa (1979a) suggested the following three components

- **Commitment-** a tendency to involve one in whatever one is doing. Commitment involves

commitment towards learner, work, profession, society, human values, family, friends, religious faith, ourselves etc, giving a meaning to one's life.

- **Control-** a tendency to feel and act as if one is influential in the face of varied contingencies of life. It implies the perception of oneself as having a definite influence through the exercise of imagination, knowledge, skills and choices.
- **Challenge-** a belief that change rather than stability is normal in life and that the anticipation of changes are interesting incentives to growth rather than threats to security.

The scale was prepared on the above mentioned three components of personality hardiness.

### **Operational Definition**

Personality hardiness is a collection of personality characteristics that function as a resistance resource in coming across with stressful life events. The components of personality hardiness are commitment, control, and challenge.

### **Methodology for Scale Construction**

The methodology of Thurstone (1928) and Likert (1932) was used to develop the scale. The technique chosen to construct the present scale was of "Scale Product Method" which combines the techniques of 'Equal Appearing Interval Scale' of Thurstone (1946) for selection of the items and Likert's (1932) techniques of 'Summated Rating' for ascertaining the responses on the scale.

**CONSTRUCTION PHASE:** This phase involved-

Preparation of item pool, Editing of the items and Provisional Draft, Directions for

respondents, Try Out of the scale, Item Analysis, Selection of Items, Preparation of the Final Draft and Scoring System.

### **PREPARATION OF ITEM POOL**

The items of the tool were framed 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.. These items were framed in English language. The items were given the shape of statements. For the preliminary draft, 87 statements were tentatively framed on personality hardiness in both negative and positive form. The statements were then discussed threadbare with experts and necessary additions and deletions were done. The second draft contained 61 items in the form of check list.

### **EDITING OF THE ITEMS AND PROVISIONAL DRAFT**

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 61 items was shown to experts to examine the grammatical correctness, repetitiveness and ambiguity of the items. 15 experts with long standing in the field of education were approached for this purpose. These experts were personally requested to go in for serious reflection over every statement and to indicate how the statements on a given segment of personality hardiness were relatively close to the connotation of the segment in question. Every expert was asked to comment whether each of the items was More Relevant, Relevant, or Less Relevant. For example, for item number 1: I understand my teaching profession very well, every judge had to

answer if the item was More Relevant, Relevant or Less Relevant. In this way, a pool of 61 statements was finalized for the provisional draft of the scale.

Thus, the provisional draft of personality hardiness scale for teachers comprised of 61 items out of which 46 items were positive, i.e., favorable to hardiness and 15 items were negative, i.e., un-favorable to personality hardiness of teachers. The statements as per components of personality hardiness were categorized into three C's, i.e., commitment, control and challenge. The component commitment was to be measured by a total of 25 items, out of which 20 were stated in the positive, i.e., favourable and 5 in the negative, i.e., un-favorable form. Favorable

items were put at serial number 1, 2, 5, 6, 14, 15, 18, 19, 21, 25, 28, 32, 34, 39, 44, 45, 55, 56, 57, 60 and un-favourable items were put at serial number 23, 43, 46, 48, 58. Control component was assigned 21 items out of which 14 were positive, i.e., favourable and 7 were negative, i.e., un-favourable. Favourable items were at serial number 3, 7, 9, 12, 22, 24, 31, 33, 35, 38, 41, 49, 50, 59 and un-favourable items were at serial number 11, 26, 30, 36, 37, 51, 61. For Challenge component, 15 items were allocated out of which 12 were positive, i.e., favorable at serial number 8, 10, 13, 16, 17, 27, 29, 40, 42, 47, 52, 53 and 3 were negative, i.e., un-favorable at serial number 4, 20, 54.

**Distribution of Items in the Provisional Draft**

Sr. No.	Components of Personality Hardiness	Sr. No. of Favorable Items (+)	Sr. No. of Unfavorable Items (-)	Total Number of Items
1.	Commitment	1, 2, 5, 6, 14, 15, 18, 19, 21, 25, 28, 32, 34, 39, 44, 45, 55, 56, 57, 60	23, 43, 46, 48, 58	25
2.	Control	3, 7, 9, 12, 22, 24, 31, 33, 35, 38, 41, 49, 50, 59	11, 26, 30, 36, 37, 51, 61	21
3.	Challenge	8, 10, 13, 16, 17, 27, 29, 40, 42, 47, 52, 53	4, 20, 54	15
Total Number of Items				61

**DIRECTIONS FOR RESPONDENTS**

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

- i) Fill in the information regarding your name, qualification, teaching experience, gender, name of school and district.

- ii) On the back of this page list of 61 statements are given. You are requested to read each statement carefully and also see to what extent that statement is applicable to you. 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 understand my teaching profession very well.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- iii) Please tick mark only one response that is true for you.
- iv) You are requested to indicate your answers without hesitation and with utmost degree of honesty.
- v) Do not to leave any statement unanswered.
- vi) Information given by you will be kept confidential.

**TRY OUT OF THE SCALE**

The try-out of the scale was carried out on a group of 100 secondary school teachers (Male/Female) selected randomly from ten senior secondary schools of Ludhiana district. Teachers were equally balanced among males and females.

**ITEM ANALYSIS**

Item analysis was done by computing Scale-Value and ‘Q’-Value for every item included in the provisional draft of 61 items. Computation of Scale and ‘Q’-Values is necessary for placing the statements evenly in the scale from extreme negative to extreme positive. Thurstone and Chave’s (1929), formula was used for computing the scale and ‘Q’-Value of every item.

**SCALE VALUE**

The responses given by the teachers were classified separately for each statement into five categories of responses used in the provisional draft of Personality Hardiness Scale. The responses collected on the five points continuum viz, strongly

agree (SA), Agree (A), Undecided (U), disagree (D), and Strongly disagree (SA) were scored with respective weight of 5, 4, 3, 2 and 1 for the favourable statements (+) and with the respective weight of 1, 2, 3, 4 and 5 for the unfavourable (-) statements.

As a result of the said scoring procedure frequencies of each item were found and the Scale Values as required by Thurstone and Chave technique were worked out. The Scale Value for a particular item was calculated by finding the median which represents the degree of agreement or disagreement among the respondents.

**The Q-Value**

Q Values as required by Thurston’s technique were calculated after noting down the frequency of responses in each category for each statement. Any statement which is placed at different points on the scale shows variations in its interpretation by the respondents. Such Statements were not worth to be included in scale. Thurston and Chave (1929) used the semi inter quartile range or ‘Q’ as a measure of this variation. Lower the ‘Q’ Value more is the agreement among the respondents on the statement. Thurston and Chave (1929) regarded large Q-Values as an indication that a statement is ambiguous.

Following the Thurston’s Technique of Scale construction, items for final draft were selected on the basis of Q-Value and Scale- Values, i.e., the items

should be fairly and evenly spread on the scale continuum.

In consonance with Thurston and Chave (1929) parameters, the items which had Q- Value lower than 0.5 and higher than 2.0 were rejected at this stage (Koul, 2001). This resulted into the rejection of 9 items from different components of Personality Hardiness. In this way, in all 9 items were rejected at serial number 9, 12, 16, 39, 40, 41, 52, 53, and 55 of the provisional draft of the scale. Thus,

Personality Hardiness Scale For Teachers in its final form comprised of 52 items.

These 52 items were classified into three categories depending upon their relevance to different components of hardiness. In the final form, 23, 18 and 11 items were allotted to commitment, control and challenge component of hardiness. Table 3.5 shows the distribution of items in the final draft of Personality Hardiness Scale For Teachers.

**Distribution of Items in the Final Draft**

Sr. No.	Components of Personality Hardiness	Favorable and Unfavorable Items in each Area	Total Number of Items
1	Commitment	F- 1,2,5,6,12,13,15,16,18,22,25,29, 31,38,39,47,48,51	18
		UF- 20,37,40,42,49	5
2	Control	F- 3,7,10,19,21,28,30,32,35,43,44,50	12
		UF- 23,27,33,34,45,52	6
3	Challenge	F- 8,9,11,14,24,26,36,41	8
		UF- 4,17,46	3
TOTAL			52

**Scoring Procedure**

Each item has a response option on Likert’ 5 points continuum viz, Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree with respective weight of 5, 4, 3, 2 and 1 for the favorable statements and 1, 2, 3, 4 and 5 for the unfavorable statements.

Personality Hardiness score of the subject is the sum total of item scores of all the three components. The theoretical range of scores is from 52 to 260, high scores reflecting relatively higher level of

Personality Hardiness of teachers and vice-versa.

**STANDARDIZATION PHASE**

**D) Reliability of the Scale**

Test- retest reliability was found to be most suitable for determining the reliability of this Scale. For establishing the reliability of the Personality Hardiness Scale for Teachers, the scale was administered to 100 teachers of 10 different schools of the study area. To the same teachers, the same scale was administered after the gap of one month for the test- retest reliability. The product

moment co-efficient of correlation between two sets of scores was computed. It was found to be 0.72. This was fairly high to testify the soundness of the scale.

**II) Validity of the Scale**

**Content Validity**

Test was shown to experts from the field of teacher education for obtaining their verdict on validity. Besides this, items of the scale were selected after carefully scrutinizing the definitions of personality hardiness and its components; hence scale has fair degree of content validity.

**Face Validity**

The scale was shown to eminent psychologists and sociologists. Its language, format, instructions and size were found suitable for respondents. All

specialist were unanimous in their opinion, hence, the scale has fair degree of face validity.

**III) Norms of the Scale**

Norms have been prepared in the form of Z-scores and T-scores. For establishing norms, the investigator calculated the mean and standard deviation of the scores of 400 teachers on personality hardiness scale, which were: Mean: 192.44, SD: 20.82, N: 400

On the basis of above statistics, Z-scores and T-scores were calculated.

For the purpose of interpretation of scores, these raw scores and T-scores were put into five categories by preparing the range of scores.

Raw Scores (X)	T-scores	Interpretation
150 and Below	Below 30	Very Low Hardiness
150-175	30-42	Low Hardiness
175-200	42-54	Moderate Hardiness
200-225	54-65	High Hardiness
225 and above	Above 65	Very High Hardiness

The scores below 150 and corresponding T-scores below 30 indicate very low personality hardiness; the scores between 150- 175 with corresponding T-scores 30-42 depicts low personality hardiness; the scores range 175- 200 and T-scores 42-54 show moderate personality hardiness; the score range 200-225 and T-scores 54-65 indicate high personality hardiness whereas scores 225 and above and T-scores above 65 indicate very high level of personality hardiness.

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