

# Construction And Standardization Of Occupational Stress Scale For Higher Secondary School Teachers

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## Abstract

The present study was undertaken to construct and standardize of Occupational Stress scale to measure the level of occupational stress of Higher Secondary teachers of cuddalore. Initially 70 items were framed by reviewing related literature, which was then given to experts for analyzing the content. Based on expert's opinion, 6 items were deleted. After preliminary try out and item analysis, only items with 't' value greater than 2.58 was selected. At the end of item analysis, 7 items were eliminated. The final form of the scale thus consists of 57 items. The reliability of the scale was ascertained by split half method and it was found to be relatively high. Content validity and face validity was also ascertained.

**Keywords:** Occupational Stress, Standardization, Construction, Teacher stress, Validation.

## 1. Introduction

Teacher well-being is essential for their overall health and job satisfaction. High levels of stress can lead to burnout, which can negatively affect a teacher's mental and physical health. Identifying and addressing occupational stress is essential for maintaining the well-being of educators. Occupational stress is a significant factor in teacher turnover. When teachers are overwhelmed by stress, they are more likely to leave the profession. High turnover rates can disrupt the continuity of education and have financial implications for schools and districts. Stressed teachers may struggle to be effective in the classroom. Occupational stress can lead to decreased job performance, reduced enthusiasm for teaching, and lower student outcomes. Identifying and mitigating stressors can improve teacher effectiveness. Addressing the occupational stress of teachers is not only a matter of teacher well-being but also has far-reaching implications for students, schools, and the education system as a whole. Recognizing the

need to identify and mitigate stressors among educators is crucial for creating a healthier and more effective educational environment.

## 2. Construction of Occupational Stress Scale

The Investigator initially crafted a preliminary tool in the form of statements. To ascertain its appropriateness and effectiveness, the Investigator proceeded to refine the draft tool and subsequently conducted assessments to establish both its reliability and validity. The construction of the Occupational Stress Scale includes three main phases.

2.1 Pre-Pilot Phase

2.2 Pilot Study Phase and

2.3 Finalization Phase

### 2.1 Pre-Pilot Phase

- (i) The Pre-Pilot stage encompasses three distinct categories related to item pooling, which include (a) Analysis of the Characteristics of the Occupational Stress Scale, (b) Item

Pooling, and (c) Criteria for the Selection of Items.

### **(a) Analysis of the Characteristics of Occupational Stress Scale\*\***

(i) The initial step within the Pre-Pilot Phase involves the analysis of the characteristics associated with the Occupational Stress Scale. This scale serves as a self-reporting instrument designed to assess the various attributes linked to occupational stress.

### **(b) Item Pooling**

The subsequent step in the Pre-Pilot Phase focuses on item pooling, with a dual emphasis on

(i) Item Coverage and (ii) Sources of Items.

(i) Item Coverage

The Occupational Stress Scale encompasses a comprehensive scope that delves into various facets of occupational stress, which include:

- a) Toxic Working Environment
- b) Negative or Excessive Workload
- c) Work Hour Patterns
- d) Roles and Responsibilities
- e) Conflicts and Role Ambiguity
- f) Lack of Autonomy
- g) Career Development Hurdles
- h) Challenging Interactions with Co-workers, Administrators, or Superiors
- i) Managerial Bullying
- j) Harassment
- k) Job Insecurity
- l) Employee Dissatisfaction
- m) Environmental Factors
- n) Personal Factors

### **(ii) Sources of Items**

(i) The preliminary item pool was meticulously constructed by sourcing items from two primary channels:

- (ii) Engaging in discussions with educational experts, psychologists, and sociologists.
- (iii) Reviewing thematic and research materials.
- (iv) These sources were carefully analyzed and evaluated to collect pertinent statements were collected. Thus a total of 70 items were gathered in this stage.

### **(c) Criteria for Selection of Items**

The collected statements were not immediately administered but underwent a thorough screening process. The following criteria were applied during this screening, leading to the inclusion or exclusion of specific statements:

- (i) Clarity and Simplicity: The language within each statement should be simple, clear, and unambiguous.
- (ii) Rating Scale Clarity: The rating scale, whether three, four, or five points, should be easily discernible to the evaluator.
- (iii) Direction and Honesty: Statements should provide clear and comprehensive directions, emphasizing the importance of honest ratings.
- (iv) Conciseness: Each statement should be concise and devoid of double negatives.
- (v) Non-Unanimous Agreement: Statements that are likely to receive unanimous agreement from respondents should be avoided.
- (vi) Simplicity of Structure: Compound and complex sentences should be avoided in favor of straightforward structures.

## **2.1 Refinement of Scale Items through Pilot Study**

Upon formulating the statements, the Investigator proceeded with the pilot study, primarily aimed at refining the items gathered during the pre-pilot stage. The refinement process unfolded through two distinct levels: (a) Judgement Analysis and (b) Item Analysis.

**(a) Judgement Analysis**

In the Judgement Analysis phase, all 70 items collated during the pre-pilot stage underwent evaluation by a panel of experts to assess their suitability and clarity. A Jury Council was established for this purpose, comprising three esteemed faculty members from the Departments of Education at three different universities. Based on the discerning judgement of the Jury Council, several items underwent modifications, restructuring, or elimination. Ultimately, 64 items were deemed suitable and retained for the Occupational Stress Scale. For reference, the draft tool is provided in the appendix section.

**(b) Item Analysis**

Following the refinement, reworded and eliminated the ambiguous items, a decision was

made to subject all 64 items to item analysis procedures. The primary aim of item analysis is to gather objective insights into the pooled items. In the present study, a sample of 132 higher secondary school teachers was selected, and the draft scale consisting of 64 items was administered to this sample. Subsequently, the scores of each respondent were computed and summated. Item-total correlations were calculated for each item as a statistical measure. The 't' value is calculated between the high and low groups. If the 't' value response of the high and low groups to statement differs significantly at 0.01 level. Out of 64 items, 57 items were retained, due to 't' value more than 2.58, 7 items were deleted. They are given in table – 1.

**Table 1**

Item Numbers	't' Value	Levels of Significance	Status
1	4.26	P<0.01	Accepted
2	0.28	Not Significant	Rejected
3	1.02	Not Significant	Rejected
4	0.01	Not Significant	Rejected
5	5.14	P < 0.01	Accepted
6	6.75	P < 0.01	Accepted
7	1.05	Not Significant	Rejected
8	5.33	P < 0.01	Accepted
9	3.99	P < 0.01	Accepted

10	0.86	Not Significant	Rejected
11	5.43	$P < 0.01$	Accepted
12	6.55	$P < 0.01$	Accepted
13	4.57	$P < 0.01$	Accepted
14	7.77	$P < 0.01$	Accepted
15	3.76	$P < 0.01$	Accepted
16	6.43	$P < 0.01$	Accepted
17	8.25	$P < 0.01$	Accepted
18	4.76	$P < 0.01$	Accepted
19	5.41	$P < 0.01$	Accepted
20	8.04	$P < 0.01$	Accepted
21	0.47	Not Significant	Rejected
22	6.79	$P < 0.01$	Accepted
23	4.97	$P < 0.01$	Accepted
24	7.54	$P < 0.01$	Accepted
25	9.65	$P < 0.01$	Accepted
26	2.51	$P < 0.01$	Accepted
27	3.56	$P < 0.01$	Accepted
28	8.29	$P < 0.01$	Accepted
29	7.27	$P < 0.01$	Accepted
30	4.83	$P < 0.01$	Accepted

31	6.71	P < 0.01	Accepted
32	2.26	P < 0.01	Accepted
33	5.67	P < 0.01	Accepted
34	7.49	P < 0.01	Accepted
35	3.78	P < 0.01	Accepted
36	9.51	P < 0.01	Accepted
37	0.37	Not Significant	Rejected
38	5.72	P < 0.01	Accepted
39	7.29	P < 0.01	Accepted
40	5.59	P < 0.01	Accepted
41	6.47	P < 0.01	Accepted
42	5.91	P < 0.01	Accepted
43	7.37	P < 0.01	Accepted
44	2.63	P < 0.01	Accepted
45	4.31	P < 0.01	Accepted
46	6.29	P < 0.01	Accepted
47	7.25	P < 0.01	Accepted
48	5.22	P < 0.01	Accepted
49	4.73	P < 0.01	Accepted
50	8.39	P < 0.01	Accepted
51	8.41	P < 0.01	Accepted

52	3.87	P < 0.01	Accepted
53	7.14	P < 0.01	Accepted
54	9.15	P < 0.01	Accepted
55	5.73	P < 0.01	Accepted
56	6.23	P < 0.01	Accepted
57	5.13	P < 0.01	Accepted
58	6.92	P < 0.01	Accepted
59	7.27	P < 0.01	Accepted
60	6.98	P < 0.01	Accepted
61	4.19	P < 0.01	Accepted
62	5.73	P < 0.01	Accepted
63	6.27	P < 0.01	Accepted
64	7.13	P < 0.01	Accepted

## 2.2 Finalization Phase

The final stage was concerned with the distribution of items in the Occupational Stress scale. The items numbering from 1 to 57 were grouped and the items were distributed randomly in the Occupational Stress Scale.

## 3. Scoring Procedure

The Occupational Stress Scale is a Likert type of scale having five anchoring points. The options are, 'Strongly Agree', 'Agree', 'Some times', 'Disagree', 'Strongly Disagree'. Positive and Negative items were added in this tool. The scoring procedure is given in the Tabulated 2

**Table 2 SCORING OF OCCUPATIONAL STRESS SCALE**

Response	Scores	
	Positive Item	Negative Item
Strongly Agree	5	1
Agree	4	2

Some times	3	3
Disagree	2	4
Strongly Disagree	1	5

An individual could get the lowest score of 57 point and the highest score of 285 points.

#### 4. Validity of the Occupational Stress Scale

The criteria for selection of item pooling were carefully followed. Then the Investigator conducted the pilot study. After a careful analysis of the teachers' responses to the pilot study and the experts' opinion, the items for the Occupational Stress Scale were properly structured. Some ambiguous items were modified and some were omitted. Item analysis was also done. The Occupational Stress Scale was also subjected to rigorous test construction. It also involved pre-pilot, pilot and post pilot stages. The pooled items were presented to judgement analysis. Based on the experts' opinion, some items were modified and some were eliminated. Thus, Occupational Stress Scale fulfilled the

standards suggested by Nunnally (1978). In short, the tool possessed content validity.

#### 5. Reliability of the Occupational Stress Scale

In the present study, the reliability of the Occupational Stress Scale was established by applying Split-Half Method. This method shows the inter-correlation of the items in the test and the correlation of the items as a whole. A sample of 132 higher secondary teachers was selected for the administration of Occupational Stress Scale. The items in the tool were classified as odd number and even number items. Then Karl Pearson's product moment correlation coefficient was computed between the scores of odd number and even number items. The correlation coefficients computed were further corrected by applying Spearman-Brown Prophecy Formula. The Tabulated 3. Shows the coefficients of Spearman-Brown Prophecy computed for the various dimensions of Occupational Stress Scale.

**Table 3 SPLIT-HALF RELIABILITY COEFFICIENT OF OCCUPATIONAL STRESS SCALE**

Occupational Stress Scale	Product Moment ( $\gamma$ )	Spearman-Brown ( $\gamma$ )
	0.872	0.880

#### Conclusion

Through a systematic and rigorous process of questionnaire development, this instrument has been tailored to assess the multifaceted dimensions of occupational stress. The questionnaire is poised to become a valuable tool for both researchers and schools, enabling them to identify stressors, measure stress levels, and

formulate targeted interventions. Its construction involved careful consideration of various stress-related factors, ensuring that it comprehensively captures the challenges and pressures that teachers may face in their professional lives.

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