CONSTRUCTION AND VALIDATION OF OCCUPATIONAL STRESS SCALE – (OSS)

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Abstract

Stress at work resulting from increasing complexities of work and its divergent demand, has become a prominent and pervading feature of the modern organizations. The researchers in the area of organizational psychology and management have used the term job stress to denote employees' mental state aroused by a job situation or a combination of job situations perceived as presenting excessive and divergent demands. Stress is an unavoidable phenomenon in human life. Though the type of stress may differ but almost any aspect of life can lead to stress, be it lack of friends, lack of money, unemployment or even employment. Rapid industrialization, increasing urbanization and receding support over the last few decades have contributed to rise in stress level. So the investigations have decided to construct and validate a scale to measure the Occupational stress. According to the standardization procedure the framed 30 statements were finalized to 21 statements constituting the Occupational stress scale.

Keywords: *Occupational stress, Higher secondary and School teachers.*

INRODUCTION

Occupational stress, in particular, is the inability to cope with the pressures in a job. ... Teacher stress is a specific type of occupational stress. It is experience by a teacher of unpleasant emotions such as tension, frustration, anger and depression resulting from aspects of his/her work as a teacher. In general Occupational stress can be defined as a lack of harmony between the individual and the work environment. The teaching profession is unique in many ways, and as such, it is concerned with certain stress related conditions.

NEED AND IMPORTANCE OF THE STUDY

Emotions make up and shape our mind as well as the entire personality structure. If an individual ever in his life felt that he was right at the edge of being overwhelmed by negative events in his life the response to events that disrupt, or threaten or disturb the physical or psychological functions. Stress is one of the most pervasive phenomena in the modern world and it affects people from all walks of life, right from the time to time of birth till the last

breath drawn, an individual is invariably exposed the various stressful situations. Stress is a common occurrence among people causing health, hazards, laziness, disinterest and lack of physical and mental vitality, Stress in elementary form may not be dangerous but its prolongation cause worry, loss of interest in life and tendency to do no work. The term 'professional stress' refers the difficulty experienced by the teachers working in primary schools in relation to their professional situations. Professional stress can be defined as the physiological and emotional responses that occur when worker perceive an imbalance between their work demands and their capability and resources to meet these demands. Importantly, stress responses occur when the imbalance is such that the worker perceives they are not coping in situation. Professional stress is often associated with overachievers. Hence the investigator in very much interested on constructing and validating the occupational stress scale.

OBJECTIVE

To construct and to validate a new scale namely, the occupational stress scale (OSS).

SAMPLE

Random sampling technique has been used in the process of data collection from the sample, the higher secondary school teachers.

METHOD OF THE STUDY

Normative survey method has been used in the present study.

TOOL

The tool namely, Occupational Stress Scale (OSS) was developed by the investigator in order to measure the occupational stress of the teachers. The Occupational Stress Scale was constructed based on the following three main phases.

a) Pre- pilot phase

b) Pilot phase and

c) Finalization phase

Pre- Pilot Phase

Pre-pilot phaseis concerned with it empooling. It consists of

a) Source of items

b) Laying down / criteria for item collection

a) Sources of Items

The preliminary it empool was made by drawing items from the following sources

- Review of the matic and research work

- Discussion with the school Headmasters

- Discussion with the experienced educational psychologists

- Discussion with the learners

- Discussion with educational experts

By careful analysis of the above sources, statements were collected and tabulated. Thus a total of 40statementswere gathered during this stage.

b) Criteria for selection of items

The collected statements were not directly administered, but they were subjected to screening. The following criteria were considered while screening and there by some statements were added or excluded.

1. The language of the statements should be simple, clear and unambiguous
2. Each and every statement should be short.
3. The statements that are likely to be enclosed by almost every one or no one should be avoided.
4. The compound and complex statements should be avoided.

Pilot Study Phase

Once the statements are collected, then extstep is pilot study. The pilot study is concerned with refining the items collected during the pre-pilot state. The refinement of the items has been conductedatt wolevels

a) Judgment analysis,

b) Item analysis

a) **Judgment Analysis**: Judgment analysis implies eliciting the opinion of the experts in the area of study regarding the suit ability and objectivity of the items pooled. Allthe40itemsgatheredduring thepre-pilot stage were sent to ajuryopinion regarding their suitability and clarity, in which the jury council consisting of three school Headmasters belonging to the higher secondary schools in Cuddalore district. On the basis of the jury council's judgment, some of the items were restructured and retained.

b) **Item Analysis**: Having refined and reworded the items, it was decided to put all the 40 items selected under analysis procedure. The main objective of the item analysis is to obtain objective information concerning the items pooled. This information is valuable to eliminate subjective judgment in selecting the items. Further, it enables the investigator to know how the respondents react to the items in the Occupational Stress Scale.

The researcher has developed a five point scale, which consists of 40statements. This 40 statements intended for the pilot study was administered to the sample of as many as 100 school teachers working in the higher secondary schools situated in the Cuddalore district of Tamil nadu, India. The next step in the construction and validation of Occupational Stress Scale after pilot study is to find out't' value of each statement which forms the basis for item selection in order to build up the final scale.

The likert- type scale calls for graded response to each statement on a five-point scale ranging from "Strongly Agree" to "Strongly Disagree". The points are usually denoted by "Strongly Agree (SA)", "Agree (A)", "Undecided (UD)", "Disagree (DA)" and "Strongly Disagree (SDA)". The different points on the scale are assigned arbitrary weights. For example 5, 4, 3, 2 and 1 in the order of "Strongly Agree" response to "Strongly Disagree" response for all the statements. The total scores for an individual can be obtained by adding his scores for all the individual items.

The individual occupational stressscale scores for all the 100 teachers were found out. They were ranked from the highest to the lowest score.

Then 25% of the subjects (high) with the highest total scores and 25% of subjects (low) with the lowest total scores were sorted out for the purpose of item selection. The high and low groups thus selected formed the criterion groups and each group was made up of 25 school teachers.

It may be recalled that each statement is followed by five different response of "SA", "A", "UD", "DA" and "SDA", in the job satisfaction scale. As already indicated weight are given for the response category in respect of each statement was taken individually and the number of students who responded "SA", "A", "UD", "DA" and "SDA" was found out in both the high and low groups separately. This for all the 40 statements the number of response coming under each category was found out, separate work sheet was prepared for

the calculation of 't' values. A model work sheet is given in Table 1.1 and the 't' values for all 40 statements were calculated (vide: Table 1.1).

Table – 1.1 Calculation Of the 'T' Value For The occupational Stress scale Statements

Statement Number – 1

Response Categories	HIGH GROUP				LOW GROUP			
	x	F	fx	fx^2	x	f	fx	fx^2
Strongly Agree	5	16	80	400	5	23	115	575
Agree	4	8	32	128	4	2	8	32
Undecided	3	0	0	0	3	0	0	0
Disagree	2	1	2	4	2	0	0	0
Strongly disagree	1	0	0	0	1	0	0	0
Sums		25	114	532		25	123	607
		n_H	$\sum X_H$	$\sum X^2_H$		n_L	$\sum X_L$	$\sum X^2_L$

$$t = \frac{\overline{X}_H - \overline{X}_L}{\sqrt{\dfrac{\sum\left(X_H - \overline{X}_H\right)^2 + \sum\left(X_L - \overline{X}_L\right)^2}{n(n-1)}}} = 2.3567$$

The following formula was used (Edwards, 1957) to calculate 't' value of each statement.

$$t = \frac{\overline{X}_H - \overline{X}_L}{\sqrt{\dfrac{S_H^2}{n_H} + \dfrac{S_L^2}{n_L}}}$$

Where

$\overline{X}_H$ = the mean score on a given statement for the high group

$\overline{X}_L$ = the mean score on a given statement for the low group

S_H^2 = the variance of the distribution of response of the low group of the statement.

n_H = the number of subjects in the high group

n_L = the number of subjects in the low group

Note: if $n_H = n_L = n$, as will be the case if we select percentage of the total number of subjects for the high and low groups, then the above formula can be written as follows

$$t = \frac{\overline{X}_H - \overline{X}_L}{\sqrt{\dfrac{\sum\left(X_H - \overline{X}_H\right)^2 + \sum\left(X_L - \overline{X}_L\right)^2}{n(n-1)}}}$$

Where,

$$= \sum\left(X_H - \overline{X}_H\right)^2 = \sum X_H^2 - \frac{\left(\sum X_H\right)^2}{n}$$

$$= \sum\left(X_L - \overline{X}_L\right)^2 = \sum X_L^2 - \frac{\left(\sum X_L\right)^2}{n}$$

Table-1.2 Rank Order of Items in Occupational Stress Scale Based On 'T' Values

S.NO.	NATURE OF THE STATEMENT	't' VALUE	SELECTED/NOT SELECTED
1	Positive	2.3567	SELECTED
2	Negative	1.5652	NOT SELECTED
3	Positive	0.4990	NOT SELECTED
4	Positive	2.3389	SELECTED
5	Negative	2.2000	SELECTED
6	Positive	1.9710	SELECTED
7	Negative	0.6928	NOT SELECTED
8	Negative	0.4990	NOT SELECTED
9	Negative	5.9787	SELECTED
10	Positive	4.0263	SELECTED
11	Positive	4.3763	SELECTED
12	Negative	4.1340	SELECTED
13	Positive	2.4587	SELECTED
14	Positive	2.4344	SELECTED
15	Positive	0.6549	NOT SELECTED
16	Negative	5.9441	SELECTED
17	Negative	0.3375	NOT SELECTED
18	Negative	2.2525	SELECTED
19	Negative	5.2196	SELECTED

20	Positive	2.4987	SELECTED
21	Positive	2.4411	SELECTED
22	Positive	3.6273	SELECTED
23	Positive	3.4856	SELECTED
24	Positive	2.3567	SELECTED
25	Positive	7.1550	SELECTED
26	Negative	0.4304	NOT SELECTED
27	Negative	5.0622	SELECTED
28	Negative	1.9318	SELECTED
29	Positive	2.7447	SELECTED
30	Negative	2.0240	SELECTED
31	Positive	1.8979	SELECTED
32	Positive	5.1967	SELECTED
33	Positive	0.6012	NOT SELECTED
34	Negative	1.8461	SELECTED
35	Positive	2.7472	SELECTED
36	Negative	3.4362	SELECTED
37	Positive	2.5784	SELECTED
38	Positive	2.6014	SELECTED
39	Negative	1.4895	NOT SELECTED
40	Negative	1.4142	NOT SELECTED

Note :S-indicates the items selected and NS-indicates the items not selected.

The value of 't' is a measure of the extent to which a given statement differentiates between the high and low groups. If the 't' value is equal to or greater than 1.75 it indicates that the average response of the high and low groups to statement differs significantly, provided there are 21 (or) more subjects in the high group and also in the low group (Edwards,1957). In the present study, there are 25 subjects each in the high and low groups. The total number of subjects involved in the pilot study being 100. From the 40 statements, the statements having the highest 't' value has been chosen in order to form the final scale (vide: Table 1.2). Thus the final study tool has as many as 30 statements. The final form of the scale contains 30 statements in which the range of the score one can achieve from this tool was from 30 to 150 and needs 40 minutes for a person to answer. The maximum mark for the occupational stress scale is 150.

LEVELS FOR THE OCCUPATIONAL STRESS SCALE

LEVELS	SCORING RANGE
Low level of Occupational Stress	Upto58
Average level of Occupational Stress	Above 58 upto124
High level of Occupational Stress	Above 124

VALIDITY AND RELIABILITY OF OCCUPATIONAL STRESS SCALE

Occupational Stress Scale for the school teachers constructed by the investigator has content validity as the scale contains items from the content areas prescribed before and the same was ratified by a panel of experts it has construct validity as the items were selected following rigid item analysis procedure described above its intrinsic validity was found to be 0.8938.

The reliability of the test by split half technique (consistency followed by the use of Spearman- Brown prophecy formula) is found to be 0.7989.

NORMS FOR THEOCCUPATIONAL STRESS SCALE

Norms have been worked out for the occupational stress scale for school teachers.

The percentile norm in respect of the entire sample has been computed for the occupational stress scale. They are given in the Table -1.3.

Table – 1.3 Percentile Norms for Occupational Stress Scale

P_{90}	141
P_{80}	129
P_{70}	118
P_{60}	104
P_{50}	95
P_{40}	78
P_{30}	63
P_{20}	52
P_{10}	42

The 'z'- scores and the 'T'- scores of the occupational stress raw scores for the entire sample alone are given in the Table- 1.4.

Table – 1.4 'Z' Scores and 'T' Scores of the Occupational Stress Scores

RAW SCORES	Z SCORES	T SCORES
30	-1.68631	33.13695
32	-1.63142	33.68576
36	-1.52166	34.7834
38	-1.46678	35.33221
39	-1.43934	35.60662

40	-1.4119	35.88103
42	-1.35702	36.42984
43	-1.32957	36.70425
45	-1.27469	37.25307
47	-1.21981	37.80188
48	-1.19237	38.07629
51	-1.11005	38.89951
52	-1.08261	39.17392
55	-1.00029	39.99715
58	-0.91796	40.82037
59	-0.89052	41.09478
62	-0.8082	41.918
63	-0.78076	42.19241
65	-0.72588	42.74123
68	-0.64356	43.56445
69	-0.61611	43.83886
71	-0.56123	44.38767
75	-0.45147	45.4853
76	-0.42403	45.75971
78	-0.36915	46.30853
79	-0.34171	46.58294
82	-0.25938	47.40616
86	-0.14962	48.50379
88	-0.09474	49.05261
89	-0.0673	49.32701
91	-0.01242	49.87583
95	0.097346	50.97346
96	0.124787	51.24787
98	0.179669	51.79669
99	0.207109	52.07109
101	0.261991	52.61991
104	0.371754	53.71754
106	0.399195	53.99195
109	0.481517	54.81517
118	0.536399	55.36399
123	0.865688	58.65688
125	0.92057	59.2057
129	1.030333	60.30333
130	1.057774	60.57774
131	1.085215	60.85215
135	1.194978	61.94978

138	1.2773	62.773
141	1.359623	63.59623
145	1.469386	64.69386
147	1.524267	65.24267
150	1.60659	66.0659

CONCLUSION

The tool namely occupational stress scale was hence constructed and also validated.

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