

TRANSLATION AND ADAPTATION OF TEACHER STRESS INVENTORY[#]

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In this study, Teacher Stress Inventory (TSI) originally developed by Fimian (1984) was adapted and translated into Urdu language for the measurement of levels and sources of stress among school teachers in Pakistan. The inventory was translated by using "Back Translation" technique and was administered to 120 school teachers from Islamabad, Rawalpindi, and Chakwal. The reliability coefficient of the translated scale is .85 for the entire scale and for subscales it ranges from .63 to .80. Item-total correlation was also computed to find out the internal consistency of scale. The results indicate that Urdu translated TSI is a reliable and valid scale that can be used for measuring levels and sources of work stress in school teachers of Pakistan.

Teaching is a very important profession. All other professions in a society have their basis in the profession of teaching. Many researchers and psychologists have focused on the schools, like all other workplaces as industries, banks, hospitals and many others, and have found teaching as one of the stressful occupations (Hunter, 1977). Over the last decade, the problem of 'teacher stress' has received increasing recognition (Borg, 1990; Borg & Falzon, 1993; Fontana & Abouserie, 1993). Kyriacou and Sutcliffe (1978a, 1978b, 1979a, 1979b) also found that teachers perceive their job as very stressful or extremely stressful. The results of these four studies also showed that the level of self-reported stress was related to workplace and not to the biographical characteristics of teachers. Winkinson (1988) suggested that teaching is a profession where practitioners are subjected to a high incidence of potentially stressful situations. Several surveys have revealed that up to one third of teachers regard teaching as highly stressful (Solman & Feld, 1989; Spooner, 1994). Stress has been identified as a major problem in 9 out of 10 UK workplaces (Warren & Towel, 1995), leading to rising absenteeism

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and low morale among staff, and this is particularly true for teaching. According to Natrass (1991) stress is the number one health problem amongst teachers.

The wealth of researches published on teacher stress over the last 20 years, has indicated that most teachers experience some stress from time to time, and that some teachers (somewhere between fifth and quarter) experience a great deal of stress fairly frequently (Boyle, Borg, Falzon, & Balioni, 1995; Chan & Hui, 1995; Cockburn, 1996; Travers & Cooper, 1996). Numerous studies have been reported that have focused at a particular subgroup of teachers: Primary school teachers, secondary school teachers, teachers of vocational courses, experienced teachers, teachers of mathematics, group home staff, teachers of the mentally retarded and emotionally disturbed, and learning disabled students, head teachers, etc. (Capel, 1997; Fimian, 1984; Fimian, Pierson, & McHardy, 1986; Male & May, 1997; Morton, Vesco, Williams, & Awender, 1997; Tuck, Hawe, Manthei, Adair, & Moore, 1999). These studies have shown higher level of stress in teachers. Studies comparing teachers with other professional occupations using a variety of measures (attitudinal, physiological, behavioral, and medical) indicate that teaching is one of the high stress professions (Travers & Cooper, 1996).

All above mentioned studies show that teacher stress has undoubtedly become an area of major interest to educationists and researchers. Nevertheless, it is well recognized that teachers' job is difficult one and number of factors make it stressful.

Beehr and Newman (1978) proposed three perspectives for viewing occupational stress: Personal, environmental, and interactional. In line with Beehr and Newman's three perspectives of occupational stress, Dunham (1984) identified three major approaches to understanding the nature of stress in teaching. The first, based on the 'engineering' model of stress, looks at the pressures exerted on teachers in schools. The second, based on the 'physiological' model, focuses on the teacher's reactions and coping resources which teachers use in their attempts to cope with stress and the third, based on 'interactional model' focuses upon the interaction between the individual and environment.

Definition of Teacher Stress

Within the scope of workplace, stress is a part of and reflects a wider process of interaction between the person and work

environment. There is a growing consensus on the definitions of stress as a negative psychological state with cognitive and emotional components, and on its effects on the health. According to this view, teacher stress is an experience of unpleasant emotions by the teacher, resulting from aspects of the teacher's job which are perceived by him or her as threat to psychological and physical well being.

Teacher stress may be defined as a response syndrome of negative effects (such as increased heart rate, etc.) resulting from various aspects of the teacher's job and mediated by the perception that the demands made upon the teacher constitute a threat to his or her self-esteem or well being and by coping mechanisms activated to reduce the perceived threat (Kyriacou & Sutcliff, 1978a). This definition, therefore, conceptualizes teacher stress as a negative state that potentially damages the teacher's health. The key element in the definition is that the teacher's perception of threat is based on teacher's perception that demands are being made upon him or her; the teacher is unable to meet these demands; and that failure to these demands would threaten his or her mental or physical well being.

Kyriacou (1997) defined teacher stress as the experience by a teacher of unpleasant emotions such as tension, frustration, anxiety, anger, and depression, resulting from aspects of his or her work as a teacher. It conceive teacher stress as a reaction to excessive or difficult demands that need to be dealt with.

In this era when the problem of teacher stress has been recognized, it is the need of time to identify dimensions of this serious problem, especially in a country like Pakistan, where teachers are considered extremely deprived community. To identify the problem of teacher stress we should have a scale for the measurement. There are some scales, especially designed for teachers stress, but there is no scale available in Urdu. Present study was designed for this purpose. It was found through literature review that Teacher Stress Inventory (TSI) developed by Fimian (1984), is a well researched and valid scale. The Teacher Stress Inventory model is operationally defined in terms of ten factors, five factors represent sources of stress, whereas another five represent manifestations of stress. The sources and manifestations of teachers' stress described in TSI are common to every school system or education system. So it was decided to adapt and translate this scale into Urdu language.

The objectives of the present study are:

1. To translate Teacher Stress Inventory (Fimian, 1984) into Urdu language.
2. To find out the reliability and validity of Urdu translation of Teacher Stress Inventory.

METHOD

The present study consists of two stages.

Stage I: Translation and Back Translation of TSI

Translation of Teacher Stress Inventory (TSI, Fimian, 1984) into Urdu language was the focus of this stage. It was carried out in three phases.

Phase 1: Translation of TSI

In the first phase of this study, translation of TSI was done. For more authentic results bilinguals were requested to provide as much accurate translation as possible. A sample of 10 bilinguals (5 men & 5 women) was selected. Among them 5 had Masters' degree in English with good understanding of Urdu language and other had Masters' degree in Urdu with good command on English. The sample was approached individually. They were requested to translate the scale into Urdu independently. The objective of this translation was to convey the meaning of the items of the original version of TSI in the best possible way keeping the contextual meanings intact.

On the basis of the responses, the most closest translations with highest frequency were selected. These translations was then evaluated by three judges, consisting of the researcher herself, one Ph.D. psychologist and one M.Phil. psychologist. On the basis of their evaluation the best possible translation, that could convey the meaning closest to the original was retained.

Phase 2: Back Translation of TSI

To check the authenticity of Urdu translation it was back translated into English. The respondents were asked to translate the

Urdu version of TSI into English. A sample of 10 bilinguals comprised of 5 men and 5 women were selected. Their educational qualification was Masters in English, having good command on their subject. This sample was not familiar with the original version of TSI. The scale translated into Urdu was given to them. They were requested to translate Urdu version of the scale into English language. They were asked to write as accurate translation as possible.

Two psychologists evaluated the Translation and Back Translation of TSI, and the original version of TSI. Almost all the items conveyed similar meanings in both the versions. So the translation was accepted and finalized.

Phase 3: Evaluation of TSI

In this phase, TSI-Urdu was given to experts to evaluate the face validity of items. The objective was to see whether these items are relevant to the work environment of teachers in Pakistan or not. For this purpose, the scale was given to 7 educationists. On the basis of their responses all items were retained except only one item, "I respond to stress by using alcohol". Use of alcohol is prohibited in Islam and Pakistani culture. Therefore it was changed to, "I respond to stress by using drugs".

Stage 2: Determination of the reliability and validity of TSI- Urdu

Sample

The 49-items of Urdu Translated TSI were administered on a sample of 120 women school teachers from Islamabad, Rawalpindi, and Chakwal. The sample consisted of 60 teachers from government schools and 60 from private schools. The mean age and job experience of the sample was 37 and 11 years, respectively.

Procedure

For the determination of reliability and validity of TSI-Urdu, the data was collected from the sample. They were asked to response Urdu translated items on five point scale having categories "Never",

“Sometimes”, “Often”, “Mostly”, “Always”. The scores assigned to these categories were ranged from 1 to 5. For empirical results statistical analyses were carried out.

RESULTS

Cronbach's Alpha Coefficients

Initial psychometrics analysis, using Cronbach Alpha Coefficient yielded an internal consistency coefficient of .85 for the entire scale. For the subscales the alpha ranged from .63 to .80 (see Table 1).

Table 1

Alpha Reliability Coefficients of total and subscales of TSI- Urdu (N = 120)

	Subscales	No. of Items	Alpha Coefficients
I.	Time Management	8	.69
II.	Work-Related Stressors	6	.72
III.	Professional Distress	5	.68
IV.	Discipline and Motivation	6	.63
V.	Professional Investment	4	.64
VI.	Emotional Manifestations	5	.75
VII.	Fatigue Manifestations	5	.66
VIII.	Cardiovascular Manifestations	3	.80
IX.	Gastronomical Manifestations	3	.73
X.	Behavioral Manifestations	4	.17
	Total	49	.85

Table 1 shows that all the subscales are internally consistent measures as shown through their alpha values except the subscale “Behavioral Manifestations”.

Interscale Correlations

The internal consistency was further determined by intercorrelation of the subscales as well as with that of the total score on TSI- Urdu (see the Table 2).

Table 2

Interscale Correlations of TSI-Urdu (N = 120)

Subscales	I	II	III	IV	V	VI	VII	VIII	IX	X
I Time Management										
II. Work-Related Stressors	.47**									
III. Professional Distress	.19*	.12								
IV. Discipline and Motivation	.24**	.19*	.28**							
V. Professional Investment	.18*	.00	.47**	.37**						
VI. Emotional Manifestations	.08	.09	.29**	.38**	.49**					
VII. Fatigue Manifestations	.14	.04	.22*	.28**	.38**	.56**				
VIII. Cardiovascular Manifestations	.12	.09	.09	.32**	.13	.18*	.29**			
IX. Gastronomical Manifestations	-.13	-.18*	-.05	.20*	.12	.16	.18*	.29**		
X. Behavioral Manifestations	.03	.02	.04	.14	.21*	.29**	.36**	.36**	.32**	
Total	.57**	.42**	.51**	.68**	.62**	.61**	.64**	.45**	.24**	.42**

* $p < .05$ ** $p < .01$

The total interscale correlations show work related stressors are correlated with two subscales, gastronomical manifestations and discipline and motivation. Professional distress have non significant results with cardiovascular, gastronomical and behavioral manifestations. Gastronomical manifestations have negative and non significant correlation with time management and professional distress and significant negative correlation with work related stressors.

All the subscales have significant correlations with total score of TSI-Urdu. It shows the internal consistency of scale. There are some non-significant correlation within subscales but they have positive direction. Gastronomical manifestations have non significant negative correlation with time management and professional distress, and significant negative correlation with work-related stressors.

Split Half Reliability

For calculating the split-half reliability coefficient, TSI- Urdu was divided into two parts with 25 items in the first part and 24 items in the second part. The correlation coefficient between these parts were found .50 and Alpha Coefficient of 25-items part was .79 and 24-items part was .83.

Item-total correlation

To determine the internal consistency of TSI- Urdu, item-total correlation was calculated (N = 120). It also shows the content validity of scale.

Table 3 indicates that few items are non significantly correlated. They were items no. 8, 11, 14, 47, and 48. All other items are significantly correlated with the total score. A committee approach was followed for these items and their translations were rephrased according to the Pakistani school teachers' work environment.

Table 3*Item-total Correlation (N = 120)*

Items	r	Items	r
1	.32*	26	.50**
2	.26**	27	.50**
3	.36**	28	.37**
4	.38**	29	.32**
5	.43**	30	.38**
6	.27**	31	.34**
7	.55**	32	.41**
8	.17	33	.46**
9	.54**	34	.55**
10	.46**	35	.27**
11	-.05	36	.52**
12	.24**	37	.43**
13	.41**	38	.47**
14	.02	39	.38**
15	.39**	40	.34**
16	.35**	41	.42**
17	.31**	42	.41**
18	.34**	43	.24*
19	.32**	44	.31*
20	.41**	45	.31**
21	.47**	46	.39**
22	.44**	47	.06
23	.41**	48	.15
24	.35**	49	.28**
25	.35**		

** $p < .01$

These rephrased items were empirically analysed on a sample of 10 school teachers and significant item total correlation was found on these items (Table 4). In this way TSI-Urdu was finalized with 49 items.

Table 4*Item total correlation (n = 10)*

Items	r	items	r
8	.24*	47	.21*
11	.29*	48	.21*
14	.31*		

* $p < .05$ *Cross- Language Validity*

The next step was to cross validate the TSI-Urdu and original TSI English version. To assess the quality and empirical equivalence of TSI-Urdu, a sample of two independent groups of school teachers were selected. Each group consisting of 10 teachers. They were selected from secondary Schools. Their qualification was masters and they all had good understanding of both English and Urdu languages. The first group was given English version of TSI on the first day and TSI-Urdu on the second day. The second group was given TSI-Urdu on the first day and English version on the second day.

Table 5*Correlations of TSI-Urdu and TSI-English*

Groups	N	TSI - Versions	r
Group I	10	English - Urdu	.90**
Group II	10	Urdu - English	.79**

** $p < .01$

Table 5 shows that two independent groups have highly significant positive correlation between Urdu translated and original version of TSI. It indicates to some extent the cross language validity

of TSI-Urdu, although there was not enough time span between the administration of Urdu and English versions of TSI.

DISCUSSION

Very few studies have been conducted on teacher stress in Pakistan. These studies have used the occupational stress inventories (Najam & Yusuf, 1993; Ilyas, 2001). These inventories are used for all the work organizations, e.g., industries, banks, etc. Schools have somehow a different type of work environment. Teachers are just not employees who do their duties for salaries. They are the builders of nations. They have direct impacts on youngsters and indirect impact on society. Keeping this consideration in view, the present study is an attempt to develop an indigenous self-report measure of teachers stress, which can be used in educational, clinical, and research settings. The study attempted to adapt and translate a scale in to Urdu that can measure levels and sources of work stress in school teachers. The "Teacher Stress Inventory" (TSI) is a reliable and valid measure for measuring teachers' work stress. Fimian (1984) has used it successfully for primary, elementary, and secondary school teachers. The stressful events measured by the TSI are different from those in other scales measuring occupational stress. They address general stress or burnout and the TSI assesses numerous stressful teaching events experienced on the job and in the schools.

The present study was conducted to prepare an Urdu version of equivalent status of original English version of TSI. The scale was translated by using back to back translation method. The face validity was obtained by the opinion of judges and teachers themselves. Item 48 was changed into "I respond to stress by using drugs" because alcohol is culturally and religiously prohibited to our society and drugs are quite acceptable and people use some relaxant type drugs. They consider it as medicines. The empirical reliability and validity is also computed. On item-total correlation five items were not significantly correlated. For these items, committee approach was adopted and translation of these items were rephrased. These rephrased items were analysed on a small sample and significant correlation was found. In this way all the items were retained in TSI-Urdu with 49 items. The results indicate that TSI-Urdu is a reliable and valid scale for measuring work stress in school teachers of

Pakistan. It can be used for measuring sources and levels of stress among teachers of primary, elementary or secondary schools.

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