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Daily Stressors of University Teachers of Pakistan: Development and Validation of a Scale

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The study aimed at the development and validation of an indigenous Daily Stressor Scale (DSS) for university teachers of Pakistan. The purpose was development of teacher for the promotion of peace: Exploratory study. Data was collected from February to April 2010 from university teachers of Pakistan. Items for factor analysis were derived from literature review, focus groups discussions and unstructured interviews conducted with university teachers. The sample consisted of 264 university teachers from four provinces of Pakistan, federal area and AJ&K. Exploratory factor analysis was performed on 30 items. Factor analysis yielded four factors (environmental stressors, workplace stressors, family and personal stressors and professional stressors) that made four subscales of DSS. Daily Stressor Scale accounted for 43 % of variance. Norms were developed for full scale and four subscales of DSS. Separate norms for males and females were also derived. The psychometric properties of Daily Stressor Scale were established against other measures. Implications for counselors, administration and policy makers were discussed.

Keywords: d*aily stressors, workplace stressors, environmental stressors, family and personal stressors, professional stressors, convergent and discriminant validity.*

Introduction

This article describes the development and validation of an indigenous daily stressors scale for university teachers of Pakistan. Today's fast-paced and ever-changing environment has caused stressors to become part of our daily livings. Excessive level of stress is harmful to teachers affecting their personal lives, teaching and consequently the performance of their students. Stress has been found to be associated with a variety of negative changes in health and well-being. Stress is the rate of wear and tear on the body. Lazarus and Folkman (1984) defined stress as a state of anxiety produced when events and responsibilities exceed one's coping abilities.

The Health care utilization research has repeatedly demonstrated that from 30-60% of all physician office visits are for illness experiences that are non disease based with stress as the common contributor (Cummings & Vandenbos, 1981). Individuals who face stressful work situations experience poor psychological well-being and tend to suffer from health problems (De Lange, Taris, Kompier, Houtman, & Bongers, 2003; Sonnentag & Frese, 2003). Individuals exposed to job stressors have an increased likelihood for developing burnout and other symptoms of poor wellbeing (Demerouti, Bakker & Bulters, 2004; Garst, Frese & Molenaar, 2000). Stressful work situations negatively affect job performance (Jex, 1998).

Teaching has always presented stresses and strains, but there can be little doubt that today's teacher are high amongst over-stressed professionals (Travers and Cooper, 1996). Although a high level of stress has been observed in teachers generally, the higher education sector is a relatively new focus of

concern. Being a university teacher was traditionally regarded as a highly desirable occupation with low level of stress (Fisher, 1994). It was due to a number of unusual features of this profession such as flexibility in the hours and tasks they performed. However, over the past one or two decades many of the benefits of this profession have been decreased (Fisher, 1994). Recruitments on contract basis, increased work load and the motto "publish or perish" has made the university teachers under a great stress.

Theoretical Background

Researchers have examined stress in three ways (Baum, 1990). One approach focuses on physically and psychologically challenging events or circumstances called stressors. Another approach centers on the psychological and physiological responses to stressors which are called strains. The third approach treats stress as a process involving continuous interactions and adjustments, called transactions between the person and environment (Lazarus & Folkman, 1984). These theoretical orientations to explaining stress have been categorized into three types: response based, stimulus based, and transactional based.

Stress as a response. Selye found that stress is caused by physiological, psychological, and environmental demands. He defined stress as the "nonspecific response of the body to noxious stimuli" **(**Selye, 1956, p. 12). Selye's work focused on describing a physiological response pattern known as (1974) *general adaptation syndrome* (GAS). The following are basic ideas of Selye's response based theory of stress (a) the stress response (GAS) was a defensive response that did not depend on the nature of the stressors; (b) The GAS, as a defense reaction, progressed in three well defined stages (alarm, resistance, exhaustion); and (c) if the GAS was severe and prolonged, disease states could result the so called diseases of adaptation.

Stress as a stimulus. Holmes & Rahe (1967) proposed a stimulus-based theory of stress, which treats life changes as the 'stressors' to which a person responds. The central proposition of this theory is that too many changes increase one's vulnerability to illness. The theory was based on the premise that (a) life changes are normative and each life change results in the same readjustment demands for all persons, (b) change is stressful regardless of the desirability of the event to a person, and (c) there is a common threshold of readjustment demands beyond which illness results. Therefore unlike the response-based model, stress is the independent variable in research.

Stress as a transaction. Lazarus developed a transactional model of stress (Lazarus1966, Lazarus & Folkman, 1984). According to Lazarus, stress does not exist in the "event" but rather is a result of a transaction between a person and his environment. As such, stress encompasses a set of cognitive, affective, and coping variables. Lazarus (1967), Lazarus and Folkman asserted that primary mediator of a person's environment transaction was appraisal. Consistent with all three approaches, stress can be defined as the condition which results when transactions lead a person to appraise a discrepancy between the demands of a stressor and the resources of his or her biological, psychological and social systems.

Empirical Support

Workplace Stress. National Institute of Occupational Safety and Health (NIOSH) (1996) defined Work Stress as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the workers. Work-related stress is increasingly recognized as one of the most serious occupational health hazards, often resulting in employee dissatisfaction, lowered productivity,

absenteeism, and turnover (Cummins, 1990; Spielberger & Reheiser, 1995). Nationwide surveys indicate that 11 million workers report health-endangering levels of work stress (Sauter, Murphy & Hurrell, 1990, p. 1148). According to Spielberger & Rehieser, (1995) 25% people report multiple stress-related illnesses, 69% report reduced productivity, and 53% report work as their greatest source of stress (pp. 51–69). There are gender differences in work stress. Recent research clearly shows that both male and female managers consider their jobs challenging and stimulating, men are still in a more favorable position than women (Lundberg & Frankenhaeuser, 1999). Pelsma and Richard (1988) found job satisfaction and teacher stress to be strongly correlated. They also noted that the amount of stress and degree of job satisfaction experienced by teachers directly influenced the quality of teacher's work life. Occupational stress includes long working hours, considerable travel, corporate politics and competition at work and high risk of being fired for poor performance (Alveson & Billing, 1997). Job and non-work stressors are correlated with medical symptoms (Hogan, Carlson & Dua, 2002).

There are many studies which report psychological stress among university teachers. Blix, Cruise, Mitchell and Blix (1994) reported that 66% of a large sample of university lecturers perceived severe levels of stress at work at least 50% of the time. Sources of academic pressure identified in the literature include heavy workload, role ambiguity, conflicting job demands, frequent interruptions, and publication efforts (Goldenburg and Waddell, 1990). Other studies have concluded that a significant proportion of stress experienced by academics is likely to emanate from the competing demands of career and family life and long working hours (Sorcienelli & Gregory, 1987).

Gmelch, Lovrich and Wilke (1984) conducted a national survey of 80 universities in United States; the sample consisted of 1221 university teachers. Factor analysis of a 45-item scale, the Faculty Stress Index, created by Gmelch and his associates, yielded 5 factors that related to stress: 1) reward and recognition, 2) time constraints, 3) departmental influence, 4) Professional identity and 5) student interaction. Hind and Doyle (1996) also confirmed the same five factors report by Gmelch et al. (1984). Similarly Boyd and Wylie (1994) reported the level of one's workload and excessive demands as the top two sources of serious stress from a sample of 500 academic staff. Fisher reported a study which indicated that the professors ranked higher in anxiety, depression, and obsessionality scores than the general population. Some specific predictors of burnout in professors have been role conflict, role ambiguity and participation in decision making (Pretorius, 1994).

Burke, Greenglass & Schwarzer (1996) identified teachers' occupational stress related with as interpersonal demands, lack of professional recognition, discipline problems in the classroom, the diversity of tasks required, bureaucracy, lack of support, workload, time pressure, the amount of paperwork required and lack of resources provided. Travers and Cooper (1996) found that teachers' stress was also a result of lack of social recognition, large class size, isolation, fear of violence, lack of classroom control, role ambiguity and limited professional opportunities. Perceived professional competence has been found to be a source of stress for many teachers (Fimian & Santoro, 1983). Rapid changes in the world and technologies have caused teachers to feel incompetent and experience stress due to their inability to always remain current and up-to-date in their areas of expertise (Fimian & Santoro, 1983; Terry, 1997).

Environmental stress. According to Gupta (1981) there are three major types of stressors:

environmental, organizational and individual. Smith and Milstein (1984) found stressors to emerge from the environment and individuals. According to Goodall and Brown (1980) there are two distinct types of stressors, those without and within. Without stressors originate outside individuals and include such things as environmental or work-related demands. Within stressors are those from within individuals. These stressors tend to include individuals' personal values, attitudes and self-concepts.

Home stress. It is highly plausible that non-work stress can affect attitudes and behavior at work. House hold duties such as domestic work have been shown to produce exhaustion and insomnia and increase in blood pressure (Brisson, 1999). Frankenhaeuser (1988) showed that the characteristic elevation of catecholamine level as the stresses of the work day accumulate are sharply reduced at the end of workday for men, but for married employed women, the elevation persisted until the house hold responsibilities are also fulfilled.

Researchers have identified three major categories of possible responses to stress: physiological, psychological, and behavioral. There is evidence that stress effects heart disease (Rozanski, 1999), infectious illness (Biondiand & Zannion, 1997) and autoimmune disorders (Affleck et.al., 1997). Psychological responses to stress at work involve affective variables such as anger, frustration, hostility, irritation and depression. Behavioral responses to stress are absenteeism, theft, purposeful damage, turnover and drug abuse.

Objective of the Study

The specific objective of the study was to identify various sources of stress contributing to the daily life of university teachers in Pakistan and convey these stressors to the policy makers and administration for appropriate actions. University teachers are under heavy demands of Higher Education Commission (HEC) for further studies and professional growth. Along with occupational stressors university teachers are under environmental stressors. Our country is facing critical circumstances due to its geopolitical situation. There are collisions between modern and religious forces in the country. These forces are attacking the faculty of the universities. The attack on Professor Iftikhar Baloch of Punjab University at the hands of student's wing of a religious political party spread a wave of insecurity and frustration among the faculty and has been condemned by The Punjab University Academic Staff Association (PUASA). The association staged a protest rally in front of the Lahore Press Club "Violence on Campuses: Universities black day". Bomb blast at Islamic university killed six people and two blocks were damaged. This is the first time that militants have targeted women and a prestigious Islamic educational institution. ("Terrorists attack university in Islamabad").

The teacher's associations, Universities of Sindh, observed a black day on Monday April 12, 2010. They demanded effective measures to recover Professor Lutfullah Khan Kakakhel vice chancellor of Kohat University who was kidnapped six months back. The attacks of students on two teachers of the University of Sindh and Azad Jammu and Kashmir University were also condemned. ("University teachers observed countrywide black day" Retrieved on April 25, 2010 from http://www.onepakistan.com/news/ local/40258-University-teachers-observe-countrywide-black-day.html)

Assassination of teachers by the students at Baluchistan University spread a wave of fear and insecurity among the faculty. A woman assistant professor of Baluchistan university Nazima Talib was gunned down on 27th April by the terrorists (Shahid, 2010). Baluchistan Libration Army claimed responsibility for her killing. It led to a number of strikes and upheaval among the academic community.

Sexual harassment by the university teachers is a continuous source of tension for other faculty members ("Sexual harassment at Quaid-a Azam university").

All these workplace and environmental stressors are affecting the performance of university teachers consequently damaging the quality of their teaching. Keeping in view all these circumstances, need was felt to develop an indigenous scale for university teachers which could measure their stressors and convey it to policy makers and administration for appropriate actions.

Method

The study has been divided into three phases. Phase I includes item generation and item review. Phase II deals with validation of daily stressor scale. Phase III includes establishing convergent and discriminant validity of the scale.

Phase I. Item Generation and Item Review

The first step in constructing the daily stressor scale was to generate a pool of items aimed at assessing daily stressors of university teachers in Pakistan.

Researchers used qualitative and quantitative methods for the scale construction: a) Made focus groups of university teachers to discuss their daily stress, b) Used brain storming techniques to cover a broad range of experiences of university teachers that reflected their stressors, c) Generated items based on the stress literature, d) Identified the daily stressors faculty members of different universities by conducting interviews with them individually.
Initially 43 items were finalized for Daily Stressor Scale. In devising items, attempt was made to generate both positively and negatively worded items to control the response style. In addition, an attempt was made to word each item in such a way that it did not imply gender bias. The responses were presented on Likert scale as 5= strongly agree, 4= Agree, 3=Neutral, 2=Disagree, 1=strongly disagree. Scoring was reversed for positive items. High score showed high stress while low score indicated low stress level. It was pilot tested on 25 teachers of University of Education, Lahore to find out its clarity, relevance and comprehensibility. Some items were redundant, some were difficult for the participants to understand and some did not meet the criteria of stress according to the participants. These items were removed from the scale.

Phase II. Validation of Daily Stressor Scale

Sample

The daily stressor scale having 30 items was validated on 264 university teachers from different public universities countrywide. Although random sampling was not done but to make the data representative university teachers from all the major universities of Pakistan were included in the sample. Researcher gathered 39.4 % (N=104) data from five major universities of Punjab, 25.8 % (N=68) from universities of NWFP, 21.2 % (N=56) from universities of Baluchistan, 4.2 % (N=11) from universities of Sindh, 4.2 % (N=11) from AJ&K and 5.3 % (N=14) from Federal area.

Researcher approached the faculty members in person at their workplace. Participants approached by mail also received a pre-stamped envelope addressed to the researchers. 200 questionnaires were sent by mail and 160 were received (response rate of 80 % due to frequent email reminders). From the participants directly contacted, 104 questionnaires were returned. A total of 264 questionnaires were returned, for an overall response rate of 75 %.

Most of the participants were male (53.8%). Participants' mean age was 35.23 years (SD=10.15), age range of 22-66 years and mean job tenure was 9.22 years (SD =9.68). Among all participants, 22 were professors, 11 associate

professors, 62 assistant professors, and 158 lecturers. Participants came from different universities with 84.8 % working under the university administration and 14 % working at universities under the Government Education Department.

Exploratory Factor Analysis (EFA)

In the present research Principal Component Analysis was performed on the 30 items measuring daily stressor as the factor analysis extraction technique. A correlation matrix was computed to determine the appropriateness of the factor analytic model. Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy were used to determine the factorability of the matrix as a whole. The Bartlett's test was large and significant (Chi sq= 2106.09, df= 435, $p < .0001$), showing that the data were adequately distributed to allow an evaluation of the potential factor structure. Kaiser-Meyer-Olkin's measure of sampling adequacy was calculated to examine that if the ratio of number of participants (264) to daily stressor scale items was sufficient. It yielded a value of .83 to assume factorability, indicating that the ratio of number of participants to DSS items was sufficient to run factor analysis.

Criteria for Determining Factors

First criterion for determining factors was that several factors loading should exceed .30. For present study researcher has chosen a value of .40 as the cut off. An examination of the factor matrix indicated that there were several factor loadings which were large, and thus the matrix was suitable for factoring. Second criterion, Kaiser's (1960) rules that Eigen value greater than one' and scree test were used to determine the number of factors to retain from the initial exploratory analysis. The four factor solution was obtained using Varimax rotation on 30 items of daily stress scale. Table 1 shows the Eigen values and percentage of variance explained by four factors.

The factor matrix showed that eight factors had Eigen values greater than one. Researcher, after conducting the Scree test, reran the factor analysis, constraining the number of factors to be rotated to the number indicated by the Scree test. Rotation was done which reduced the number of complex variables and enhanced interpretation. Four factors solution was yielded (see, table 2) which corresponded to the best simple structure. A notable characteristic of factor loading in table 5 was that an item can load on more than one factor. Pure variables had loading of .40 or greater on only one factor. Complex variables had loading on more than one factor and made the interpretation of output more difficult.

Table 1: Eigen values and Percentage of Variance of 30-items of DSS Explained by Four Factors Obtained through Principle Component Factor Analysis

Factors	Eigen values	Variance %	Cumulative %
1	6.61	22.06	22.06
2	2.133	7.10	29.17
3	1.729	5.76	34.93
4	1.567	5.22	40.15

Note: N= 264, %= percentage

Table 2: The Factor Loading of the 30 items of Daily Stress Scale (DSS) on Four Factors Obtained Through Varimax Rotation

Sr. No.	Item No.	Items	Factor Loading				
			F1	F2	F3	F4	h
1	1	Lack of empowerment at workplace is a source of tension for me.	.115	**.631**	.093	.117	.433
2	2	I am stressed when I can not find time for my further/higher studies.	.015	**.589**	.196	.070	.390
3	3	I remain anxious about my professional growth.	.071	**.508**	.075	.222	.318
4	4	Trying to meet HEC criteria is stressful.	.079	.190	.009	.608	**.412**
5	5	Technological advances in education are difficult for me to keep up with.	.211	.033	.038	**.664**	**.488**
6	6	Publication requirements by HEC for promotion create stress for me.	.056	.244	.153	**.492**	.328
7	8	Satisfying boss is difficult for me.	.089	**.555**	.028	.336	**.430**
8	9	It is not easy for me to meet the deadlines.	.068	.313	.141	**.551**	**.427**
9	10	I am not satisfied with my pay and benefits.	.357	.184	.065	.217	.213
10	11	My working conditions are not satisfying for me.	.346	.297	-.014	.303	.300
11	12	Over ambitious colleagues try to put me down.	.062	**.562**	.200	.141	.380
12	14	Inconsistent polices of my institution bother me.	.511	**.417**	-.039	.024	**.437**
13	15	Communication gap between admin and faculty is stressful.	**.580**	.372	.040	.074	**.481**
14	16	The Law and order situation in the country is a great stress.	**.646**	.054	-.033	.091	**.430**
15	13	There are more demands on my time than usual.	.256	**.564**	.007	.082	.390
16	17	Facing corruption in my daily life frustrates me.	**.511**	.160	.125	.034	.303
17	18	Traffic problems add stress in my daily life.	**.659**	-.044	.151	.032	.460
18	19	Pollution is adversely affecting my health.	**.490**	-.019	.470	.064	.466
19	20	I fear suicide attacks at public places.	**.546**	.002	.161	.203	.365
20	21	Geopolitical conditions in the country are stress for me.	**.603**	.101	.089	.036	..83
21	22	I get disturbed by in the injustices of society.	**.599**	.131	.136	.105	.406
22	23	Rapid cultural changes bring tension to my life.	.334	-.019	.210	**.458**	.366
23	24	It is difficult for me to deal with family issues.	.232	.060	**.500**	.228	.359
24	25	At work I remain anxious about family responsibilities.	.032	.072	**.745**	.230	.614
25	26	Disciplinary problems at home are unbearable for me.	.133	-.006	**.598**	.256	.441
26	27	I am not able to fulfill my moral responsibilities.	-.018	.200	**.595**	-.060	..398
27	28	I do not take care of my health.	.176	.308	**.478**	-.063	.358
28	29	Load shedding is not affecting my performance.	.194	.373	-.010	-.286	.258
29	7	My workload is more than I can handle.	.035	**.553**	.156	**.442**	**.527**
30	30	I become stressed when people misunderstand me.	.322	.389	**.460**	-.143	.487

Item No10, 11 and 29 had less than .40 loading so these items were removed from the scale. The remaining 27 items had loading from 40-.75. Principal component factor analysis was performed on 27 items again to get the final factor structure. These four factors accounted

for 43 % of variance. Four factors structure was emerged from the rotated factor matrix and corresponded to the best approximation of simple structure. There were seven items loaded on factor 1, eight items on factor 2, six items on factor 3 and six items on factor 4 with factor loading greater than .40. Four items had double loading and these items needed interpretation. These items were placed where they were conceptually related. The item number 14 had double loading on factor I and 2 and was placed in factor 2. The item No. 15 had double loading on factor 1 and 2, was conceptually related with factor 2 in spite of high loading on factor 1 so it was placed in factor 2. The item no. 19 had double loading on factor 1 and 3 but it was placed in factor1 where it was conceptually related. Items no. 7 had double loading on factor 2 and 4; it was placed in factor 4.

These 27 items had a range of factor loading from .40 to .75 on the four factors and formed the Daily Stressor Scale (DSS) for university teachers. Table 3 is showing factor loading and Cronback alpha for Daily Stressor Scale.

Interpretation of Factors

The final step in factor analysis involved assigning a label to these factors. Having decided which variable load on which factor, researchers decided the names underlying each factor. A total of 7 items loaded on first Factor and labeled "Environmental Stressors" as items were measuring stress related with environment and society. Eight items were loaded on second factor and appeared to represent workplace stressors of university teachers so it was named "Workplace Stressors". Six items were loaded on the third factor reflecting family related and personal Stressors of university teachers. It was named "Family and Personal Stressors". Factor four consisted of six items representing stressors related with professional growth. It was labeled as "professional stressors".

Internal Consistency of the DSS

Cronbach alpha, coefficient of internal consistency was the next step to ensure the scale reliability. For 27 items the coefficient alpha was .87.

Correlation of DSS with Subscales

Significant positive correlations were found among the Daily Stressors Scale and its four subscales. The highest correlation was between DSS and Workplace Stressors ($r=.82$, $p<.01$). The correlation between DSS and Environmental Stressors ($r=.729$, $p<.01$), for DSS and Family and Personal Stressors ($r=.722$, $p<.01$), for DSS and Professional Stressors ($r=.757$, $p<.01$) were also high and significant.

Establishment of Norms for DSS and Subscales

In order to provide norms means and standard deviations were computed for the Daily Stressor Scale and for four subscales.

Phase III: Establishment of Convergent and Discriminant Validity of DSS

In an effort to begin to establish convergent and discriminant validity for the Daily Stressor Scale, researcher administered Daily Stressor Scale to 30 faculty members, randomly selected from University of Education Lahore, along with three different scales that seemed reasonable to evaluate daily stress against.

Table 3: Factor Loading of the 27 Items of Daily Stress Scale (DSS) on First Four Factors in the Factor Solution Obtained Through Varimax Rotation

Sr.	Item No	Description	1	2	3	4
1	16	The Law and order situation in the country is a great stress.	.655			
2	17	Facing corruption in my daily life frustrates me.	.524			
3	18	Traffic problems add stress in my daily life.	.659			
4	19	Pollution is adversely affecting my health.	.515			
5	20	I fear suicide attacks at public places.	.548			
6	21	Geopolitical conditions in the country are stressful for me.	.628			
7	22	I get disturbed by the injustices in the society.	.611			
8	1	Lack of empowerment at workplace is a source of tension.		.653		
9	2	I am stressed when I cannot find time for my further/higher education.		.573		
10	3	I remain anxious about my professional growth.		.482		
11	8	Satisfying boss is difficult for me.		.618		
12	12	Over ambitious colleagues try to put me down.		.565		
13	14	Inconsistent polices of my institution bother me.		.480		
14	15	Communication gap between admin and faculty of the university is a stress.		.420		
15	13	There are more demands on my time than usual.		.575		
16	24	It is difficult for me to deal with family issues.			.550	
17	25	Whenever I am at work, I remain anxious about my family responsibilities.			.753	
18	26	Disciplinary problems at home are unbearable for me.			.622	
19	27	I am not able to fulfill my moral responsibilities.			.594	
20	28	I do not take care of my health.			.439	
21	30	I become stressed when people misunderstand me.			.452	
22	4	Trying to meet HEC criteria is stressful.				.696
23	5	Technological advances in education are difficult for me to keep up with.				.654
24	6	Publication requirement by HEC creates stress.				.520
25	9	It is not easy for me to meet the deadlines.				.518
26	23	Rapid cultural changes bring tension to my life.				.405
27	7	My workload is more than I can handle.				.456

Note: Above loadings are based on a sample of 264 university teachers

Table 4: Means and Standard Deviations for Daily Stressor Scale (DSS) and Subscales

DSS and Subscales	No. of Items	M	SD
Daily Stress Scale	27	89.41	14.29
Environmental stressors	7	27.06	4.62
Workplace Stressors	8	27.00	5.58
Family & Personal Stressors	6	18.00	4.25
Professional Stressors	6	17.00	4.36

M= Mean, SD= Standard deviation, n= 264

Measures: Perceived Stress Scale (PSS)

To find out the convergent validity a measure of Perceived Stress Scale (Cohen, Kamarck, & Mermelstien, 1983), having ten items, was administered on the sample.

The first question that needed to be asked was whether perceived stress scale was correlated with Daily Stressor Scale in a conceptually meaningful direction. The university teachers who scored high on DSS also scored high on PSS. The correlation between the two scales was .457 which was significant at alpha .05 levels.

The second question that needed to be asked about the findings was related with discriminant validity. Discriminant validity evaluates the scale on any measure conceptually independent of the other. Researcher used two scales i.e., Life Satisfaction Scale by Dinner, Emmos, Larson and Griffin (1985) and Life Orientation Test-Revised (LOT-R) (Scheier, Carver & Brigades, 1994), which measured life satisfaction and optimism and were opposite to the stress construct.

Researchers administered above mentioned two measures to a sample of 30 university teachers randomly selected from university of education, Lahore. Result showed that Daily Stressors Scale was negatively correlated (r= -0.40) with Life Orientation Test Revised (LOT-R) and satisfaction with life scale (r=-.36). Table 11 shows correlation of Daily Stressor Scale with PSS, LOT-R and SWLS.

A Significant correlation was found between the Daily Stressors Scale (DSS) and the perceived stress scale ($r = .457$, $p < .05$) indicating convergent validity of DSS. A negative correlation was found between the DSS and Life Orientation Test (r=-.40, p .05), DSS and Satisfaction with Life Scale, showing discriminant validity of the Daily Stressor Scale.

Conclusion

This study was designed to develop an indigenous measure of Pakistani university teachers' stressors.

People are living under enormous stressful circumstances in Pakistan. Political instability, injustice, terrorism, overpopulation, unemployment and environmental pollution have increased the stressors of people. University teachers face occupational stressor along with social and environmental stressors. Environmental stressors such as bomb blasts and assassination of teachers at the hands of students are creating frustrations and insecurity among the teachers. This situation mostly leads

Table 5: Convergent and Discriminant Validity of Daily Stressor Scale (DSS)

	Perceived Stress Scale	Life Orientation Test	SWLS
Daily Stress Scale	.436* (30) p<.05	-.40* (30) p<.05	-.39* (30) p<.05

Note: Both tests of significance are two tailed. Numbers in parenthesis refer to sample size. SWLS= Satisfaction with life scale.

to different psychological, physical and health problems.

The objective of this study was to make an indigenous scale of daily stressors which could measure the above mentioned stressors of university teachers of Pakistan. University teachers play a dynamic role of educating the young generation in any society. Keeping in view their social role, their well being is of major concern in any society. The present scale measures not only the workplace and professional stressors but all the other relevant sources of stress that might affect the performance of university teachers in their cultural context.

The development and validation of DSS has implications for measuring daily stressors among the faculty of any university. Researchers hope that the Daily Stressor Scale will help university administrations, whenever there are strikes and upheavals, to rethink upon their policies and norms that contribute to the stressors in their faculty; basic requirement for maintaining equity, imparting prompt education, providing knowledge, information and clarity about basic rules and regulations and all factors that enhance productivity and reduce stress. Keeping in mind the stressors of faculty, universities should initiate programs which will be preventive (equal work load, equal access to the administration) and remedial (work shops, seminars, training programs related with technology, pay, increments, incentives, equal participation in progressive activities) to lessen their stressors and enhance their productivity.

This national level study will help to monitor future changes in stress among the faculty of different universities. By administering Daily Stressor Scale to the faculty the inter-university and interdisciplinary comparisons can be made for stress measurement. It will help the policy makers and management of universities to continuously assess faculty's performance whether it varies with stress or not. To reduce the work place stressors of females' administration can introduce special facilities at the universities. Esping, Gallie, Hemerijck and Myles (2002) reported a friendly employment system in the Nordic countries, which has been extremely successful in attracting mothers in employments by providing high facilities in child care and mother friendly job opportunities in public sector. Universities having higher level of stress can establish counseling centers where faculty might discuss their problems with the counselors. Introducing counseling interventions will make the faculty to utilize their own internal strengths and potentials (Naseem & Khalid, 2010) that induce the ability to handle environmental and workplace stressors in an effective way.

Researchers believe that the validation of DSS will contribute conceptually and methodologically to the development of a larger body of research in the areas such as gender differences in stress, health outcomes of stress, stress and personality traits, stress and motivational level of the employee and other work related variables. To enhance the generalization of these findings across persons, settings and times, we encourage the adaptation and validation of the DSS items across cultures. The development of DSS, with demonstrated reliability and validity, could ultimately contribute to the construction of a generic scale of daily stressors across newly established private universities.

This scale would also be a valuable addition to indigenous psychometric tests. It would be a diagnostic tool whenever there is need to measure stressors of universities teachers. The evident findings of the present study provide a solid basis for launching future researches on workplace, professional, environmental, family and personal stressors.

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