The Relative significance of Various Job Stressors in Predicting Mental Health of Teachers

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Stress has become the inevitable part of the psychosocial life of an individual and people of contemporary society report experiencing high stress in every walk of life. Among the various domains of psychosocial life the occupational life is one important contributor to the experience of stress. Stress may be experienced in any occupation as researchers suggest that it is not the occupation *per se* responsible for stress rather it is the transaction between the job environment and personal characteristics (Handy, 1988). However, it has been observed that certain occupations involving contact with the people in need such as, teaching (Borg, 1990; Travers & Cooper, 1993; Smith et al., 2000; Picthers&Roden, 1998), medical (Roeske, 1986; Graham et al., 2002), nursing (Clegg, 2001; McVicar, 2003), counselors (Sowa & Claudia, 1994), police services (Collins & Gibbs, 2003; Brown &Cambell, 1990) and social work (Gibson, et al., 1989 etc.) are perceived as more stressful and are associated with a greater risk for developing mental and behavioural problems.

Among professions at high risk for stress, teaching is one. There is a growing body of empirical evidences that suggest teaching as highly stressful occupation. For example, in a review Pithers (1995) concluded that teaching is a 'highly' or 'extremely highly' occupation and about one third of its professionals report high stress. In a recent survey of teachers of Canadian Universities Catanoa and associates (2010) found that 13 percent of teachers reported high level of distress and about 22 percent of them reported elevated physical health symptoms. The sources of stresses among teachers are quite varied and frequently differ from study to study. Some of the most common concerns include personal variables, working conditions, effects on student's achievement (Mishra et al., 1996), problem students (Dedrick, Hawkes, & Smith, 1981), time constraints (Olander&Farrel, 1970), relationships with administrators and other teachers (Moracco, Danford, &Arienzo, 1982), receiving physical and verbal threats from students (Cichon&Koff, 1980), and paperwork, meetings and additional work required to meet federal and state education mandates (Bensky, et al., 1980).

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Occupational stress has also been studied among Indian teachers (e.g. Sud & Malik, 1999; Upadhayay& Singh, 1999). Some researchers have investigated school teachers (e.g., Sud& Malik, 1999) while others have studied University or college teachers (e.g., Sahu& Mishra, 1995; Upadhayay& Singh, 1999) and found that teachers at each level are at risk of developing stress.

However, significant differences were reported among various subgroups of teachers differing in terms of level of teaching (e.g., primary, secondary, university etc.), teaching location, and medium of teaching etc. For example, Kirk (2003:Cited in Lath, 2010) observed that secondary schools teachers reported higher levels of stress as compared to the primary school teachers. Similarly, Duggal (2004) found that private school teachers were found to be more stressed as compared to Government school teachers. As far as the medium of teaching and location is concerned significant differences in terms of reported stress level has been observed. For example, Monica (2004) reported that Punjabi medium teachers experienced significantly higher levels of stress as compared to English medium teachers and teachers from Fatehgarh Sahib reported higher levels of stress as compared to the teachers of Chandigarh. In the light of the reported differences in the experienced stress among the subgroups of teachers the present study makes an attempt to examine the level of occupational stress among engineering college teachers in relation to their mental health. In Indian context the study occupational stress and related mental health consequences among engineering college teachers becomes important inasmuch as the teaching environment, mode of teaching and teaching demands on such teachers are likely to vary from that of the teachers of colleges providing education in humanities, social sciences etc.

Apart from the differences in the level of stress across various teaching subgroups, studies report that certain specific job stressors are more prevalent among teachers as compared to others. For example, Lath (2010) reports that less experienced teachers expressed higher levels of stress related to role insufficiency and role ambiguity. Similarly, Yang and associates (2010) also noted that role overload, role boundary and responsibility played important role in determining the level of strain among Chinese teachers.

Higher prevalence of stress among teachershas been linked with a number of negative outcomes including mental health problems (Cooper, Dewe & O'Driscoll, 2001; Lenug et al., 2009) and other adverse behavioural outcomes such as burnout(Guglielmi &Tatrow, 1998;Sahu& Mishra, 1995).For example,Yang and associates (2009) observed that the quality of life of the Chinese teachers was poorer than that of the general population and occupational stress was the important contributor to the observed poor quality of life. Kovess-Masféty and colleagues (2006) also reported mental health problems among a sample of teachers. However, many studies surprisingly failed to report any direct effect of

job stress on health related problems among teachers (e.g.,DeFranka &Stroupa, 1989). Such inconsistency in reported findings suggests a need to re-examine the role of job stress in predicting the mental health of the teachers.

In the light of the aforesaid inconsistencies in the findings related to occupational stress – mental health relationship and the observed variations in the level of stress and types of job stressors across various teaching subgroups, the present study makes an attempt to examine the relative significance of various types of job stressors in predicting the mental health of engineering college teachers. This becomes all the more important in the present context as our educational system has recently undergone considerable changes and with the reforms and innovations of the education system, teaching responsibilities have become much more time consuming and challenging. Further enhanced level of stress and strain among teachers not only impairs the teacher's mental and physical health but also diminishes their teaching efficiency and performance that may have highly detrimental effect for students. Thus, the findings of the present study would inform health professionals and policy makers to develop suitable mitigating strategies to combat with this problem of National importance.

Method:

Sample: A group of 56 teachers of M.M.M. Engineering College, Gorakhpur, in the age range of 22 to 59 years (mean age= 42.66 years) participated in the present study. Educational qualification of participants ranged from graduate to Ph.D. in engineering/ basic sciences.

Tools: The Occupational Stress Index (OSI; Srivastava& Singh, 1981) was used to assess the job stress of teachers. This scale consists of 46 items rated on a 5 point agreement scale ranging from 1 (strongly agree) to 5 (strongly disagree) and high score indicates high perceived stress. The OSI is a measure of OS applicable to employees of all status belonging either to production or non-production based organization. It assesses the perceived stress arising from twelve job related dimensions, namely, role overload, role conflict, role ambiguity, unreasonable group and political pressure, under participation, responsibilities for person, powerlessness, poor peer relations at work, intrinsic impoverishment, low status, strenuous working conditions and unprofitability.

The mental health status of the teachers was assessed using the 28 item version of the General Health Questionnaire (GHQ -28; Goldberg, 1978) that gauge the four dimensions of mental health viz., somatic complaints, anxiety & insomnia, depression and social dysfunction. Each item in this questionnaire is followed by four response alternatives with score credit ranging from 1-4. The response alternatives have been arranged in such a way that higher score on the scale indicate better health.

Procedure: All the participants of the present study were contacted individually and brief information regarding the purpose of the present study was given to them. The confidentially of the responses were assured. After getting the consent of the participants the aforesaid questionnaires were administered as per the standard instructions of each questionnaire. All participants were requested to ensure that they have responded to each items of every questionnaire/scale.

Results and Discussion:

To ascertain the relationship between Occupational stress and the various dimensions of mental health (i.e., somatic complaints, anxiety and insomnia, depression and social dysfunction) bi-variate correlation coefficients were computed. The obtained results have been presented in Table 1.

Table 1

Correlations between various dimensions of Occupational Stress withvarious of dimensions mental health

	GHQ-Anxiety	GHQ-Somatic Complains	GHQ-Social Dysfunction	GHQ-Depression	GHQ Total
Role overload	-0.41*	-0.24*	-0.28*	-0.42*	-0.40*
Role ambiguity	-0.54*	-0.47*	-0.55*	-0.40*	-0.53*
Role conflict	-0.48*	-0.34*	-0.55*	-0.31*	-0.45*
Unreasonable Pressure	-0.34*	-0.26*	-0.40*	-0.48*	-0.41*
Responsibility for Person	-0.20	-0.14	-0.19	-0.21	-0.25
Under Participation	-0.21	-0.10	-0.33*	-0.18	-0.19
Powerlessness	-0.11	-0.13	-0.13	-0.09	-0.10
Poor peer relation	-0.38*	-0.31*	-0.49*	-0.35*	-0.41*
Intrinsic Impoverishment	-0.44*	-0.30*	-0.56*	-0.38*	-0.49*
Low Status	-0.39*	-0.18	-0.57*	-0.41*	-0.41*
Unprofitability	-0.39*	-0.29*	-0.52*	-0.34*	-0.43*
Strenuous working conditions	-0.57*	-0.36*	-0.50*	-0.58*	-0.59*
Total	-.077*	-0.56*	-0.41*	-0.63*	-0.53*

*significant at .01 level

It is evident from the Table- 1 that various dimensions of occupational stress correlated significantly and negatively with all dimensions of mental health except responsibility for person, under participation and powerlessness. The obtained pattern correlation suggest that teachers who reported higher levels of occupational stress also reported more symptoms of mental health problems, such as depression, anxiety & insomnia, social dysfunction and somatic complaints.However, stress arising from responsibility for person, under participation and powerlessness were not related to mental health problems.

The findings of the present study are consistent with the findings of earlier studies which demonstrated that prolonged exposure to stress may result in a number of negative consequences including day-to-day behavioral problems, psychosocial maladjustment as well as poor physical and mental health (Grant & Kyla, 1974; Carrere et al., 1991; Pestonjee, 1992; Jamal, 1990). Several earlier studies provide evidence of the association between job stressor and increased tension (Sager, 1994), psychological strain (O'Driscoll&Beehr, 1994) mental illness (Travers & Cooker, 1993) job satisfaction (Jamal, 1990), personal health habits (Bhandarkar& Singh, 1986), somatic pathologies (Srivastava, 1999).

This finding indicates that teachers who experience severe stress in their occupational life reported more health problems. They are at higher risk for developing symptoms of mental illnesses like anxiety, depression, insomnia, social dysfunction etc.

The aforesaid findings though, suggest that occupational stress among teachers is associated with poor mental health, it does not provide information regarding the relative significance and/or the joint contribution of various job stressors in predicting the mental health.Thus, in order to examine the relative significance and joint contribution of the various dimensions of occupational stress in predicting the mental health status of teachers, a series of step-wise multiple regression analyses as well as full model regression analyses were conducted using occupational stress as a predictor and various dimensions of mental health as a criterion. The obtained results are presented in Table 2.

Table 2

Results of Step wise multiple regression analysis using dimensions of Occupational Stress as predictor variables and various dimensions of mental health as criterion

Predictors	R	R^2	R^2 change	Unique % contribution to Explained variance	Beta	F
Dependent variable: Anxiety						
Strenuous Working Condition	.57	.32	.32	69.57	-.57	26.50
Role Ambiguity	.63	.39	.07	15.22	-.31	6.05
Full Model Regression	.67	.46	.07	15.21		.56
Dependent variable: Somatic Complains						
Role Ambiguity	.47	.22	.22	66.67	-0.47	15.20
Full Model regression	.57	.33	.11	33.33		.64
Dependent variable: Social Dysfunction						
Low Status	.57	.32	.32	61.54	-.57	25.87
Unprofitability	.65	.42	.10	19.23	-.34	9.14
Role Conflict	.69	.48	.06	11.54	-.29	6.00
Full Model Regression	.72	.52	.04	7.69		.40
Dependent Variable: Depression						
Strenuous Working Conditions	.58	.33	.33	75.00	-.58	26.94
Unreasonable Pressure	.63	.40	.07	15.91	-.28	6.18
Full Model Regression	.67	.44	.04	9.09		31
Dependent Variable : GHQ Total						
Strenuous Working Conditions	.59	.35	.35	72.92	-.59	29.00
Role Conflict	.63	.40	.05	10.42	-.28	4.42
Full Model Regression	.69	.48	.08	16.67		0.66

It is evident from the Table-2 that some form of role stressors emerged as significant predictor of various dimension of mental health except depression that was best predicted by non-role stressors. The role ambiguity was found to be significant predictor of anxiety and somatic complaints whereas the role conflict significantly predicted social dysfunction and overall mental health. This finding of the present study is consistent with those earlier studies that highlighted the relative

significance of role stressors in determining the mental health of teachers (Lath, 2010; Kovess-Masféty et al., 2006).

However, unlike the previous studies, the findings of the present study revealed that different dimensions of mental health are associated with a certain unique job stressors also. For example, it is evident from the Table-2 that anxiety was best predicted by strenuous working condition (contributing 32% to the total variance) followed by role ambiguity that contributed only 7% to the total variance in anxiety. On the other hand the role ambiguity was the single best predictor of somatic complaints contributing 22% to its total variance. Similarly, in predicting the social dysfunction none of the said predictors were found significant contributors. The social dysfunction was best predicted by the stress arising from perceived low status (explaining 32% of the total variance) followed by stress due to perceived unprofitability (10% contribution) and role conflict (6% contribution). Similarly, depression was best predicted by strenuous working conditions (contributing 33% to the total variance) and one unique predictor, namely, unreasonable group pressure that contributed 7% to the total variance in depression. As far as the total score on the GHQ-28 (an index of overall mental health) is concerned, it was best predicted by strenuous working condition followed by role conflict.

The contribution of other job stressors to the various dimensions of mental health was relatively very low as compared to the aforesaid job stressors. This fact becomes evident when one compares the joint contribution of all the job stressors (findings of simultaneous model regression) to the joint contribution of the best subset of predictors that emerged in step-wise regression analyses. For example, the two best predictors of anxiety contributed 39% of its total variance whereas all the job stressors taken together contributed 46% to the total variance of anxiety. Thus, after taking out the contribution of the said two best predictors of anxiety, the remaining 10 job stressors contributed only 7% to the total variance in anxiety and this contribution was also not found significant. Similarly, in predicting other dimensions of mental health the remaining dimensions of job stressors failed to contribute significantly (see column 3 of Table-2).

This finding suggest that people who work in strenuous condition or whose role on his/her job is ambiguous or conflicting are more likely to suffer from some mental health problems like anxiety, somatic complaints and depression.A considerably good number of studies report a positive relationship between role stressors on the one hand and various dimensions of mental health such as anxiety (Dunham, 1976; Hammen & deMayo, 1982; Mahan et al., 2010), psychological strain such as depression and tension (Boswell, Olson-Buchanan, & LePine, 2004; LePine, Podsakoff, &LePine, 2005). Role conflict has been found to be significantly inversely related to mental health (Jagdish & Srivastava, 1989).A considerable

number of studies also reports that (Kafetsios 2007; Kyriacou 1987;Kyriacou 2001; Papastylianou & Polychronopoulos 2007a,b; Pithers&Soden1998) various stressors such as work pressure,job conditions, the ambiguities and conflicts of the educational role resulting from itscomplexity and from the administration's conflicting demands, pressures exercised by educational leadership, professional growth, lack of resources, poor professional relations with colleagues, low pay, unacceptable student behavior, relations with the students' parents, teachers' expectations, lack of communication etc. lead to various mental health problems.

Overall, the findings of the present study provide ample support and evidence to the notion that high occupational stress increases the likelihood or risk for developing mental health problems among teachers. However the finding should be cautiously taken into consideration before generalization as it is based on a relatively small sample of teachers and that too limited to only one college of Gorakhpur. There is a need to replicate the study on a relatively larger sample taken from different engineering colleges and the beta weights must be cross-validated across samples to develop a generalized predictive (regression) model of occupational stress and mental health.

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