Occupational stress, mental health and coping among information technology professionals

Abstract

Backround: Experience of occupational stress is inevitably involved in the execution of any type of work. Stress has an adaptive value. It motivates the individual to attend to the task and get rid of the tension or demand the unattended task produced. **Materials and Methods**: The study was planned to investigate the differences between executives and shop floor workers on occupational stress, mental health, job satisfaction and coping. A random sample of 200 executives and shop floor employees collected from Nuclear Fuel Complex of Hyderabad City. A well developed sub-scales of Occupational Stress indicator like Mental Health, and Coping behavior were used in the present study. **Results and Conclusion**: The shop floor workers experiencing more job stress and lower mental health. But these two groups did not differ in their coping behaviour. The executives are better with work home balance.

Key words: Stress, mental health, coping, executives shop floor employees

INTRODUCTION

"Workplace stress" is the harmful physical and emotional responses that can happen when there is a conflict between job demands on the employee and the amount of control an employee has over meeting these demands. In general, the combination of high demands in a job and a low amount of control over the situation can lead to stress. Stress in the workplace can have many origins or come from one single event. It can impact on both employees and employers alike[4] According to,[2] three broad perspectives can be chosen when studying stress: (a) the response-based perspective, (b) the stimulus-based perspective, and (c) the cognitive transactional process perspective Occupational stress, hence, is found to be a mental and physical condition that calls in a detrimental effect on the individual's productivity, effectiveness, personal health and quality of work (Comish and Swindle, 1994). Main components of this work-stress process are potential sources of stress (stressors), factors of individual differences moderators/mediators) and consequences of stress. Stressors (job-related and extra-organizational) are objective events; stress is the subjective aspect.[3] Thus the concept of stress can best

be understood by saying that some environmental variables (stressors) when interpreted by the individual (cognitive interpretation) may lead to stress (Dua, 1994). Stress in the workplace can have many origins or come from one single event. It can impact on both employees and employers alike. As stated by the Canadian Mental Health Association: Fear of job redundancy, layoffs due to an uncertain economy, increased demands for overtime due to staff cutbacks act as negative stressors. Employees who start to feel the "pressure to perform" can get caught in a downward spiral of increasing effort to meet rising expectations with no increase in job satisfaction. The relentless requirement to work at optimum performance takes its toll in job dissatisfaction, employee turnover, reduced efficiency, illness and even death. According to Cartwright *et al*[4] absenteeism, illness, alcoholism, "petty internal politics", bad or snap decisions, indifference and apathy, lack of motivation or creativity are all by-products of an over stressed workplace. Employees who start to feel the "pressure to perform" can get caught in a downward spiral of increasing effort to meet rising expectations with no increase in job satisfaction.[4] The relentless requirement to work at optimum performance takes its toll in job dissatisfaction, employee turnover, reduced efficiency, illness and even death. Absenteeism, illness, alcoholism, "petty internal politics", bad or snap decisions, indifference and apathy, lack of motivation or creativity are all by-products of an over stressed workplace. NHS Health Scotland describes good mental health

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as a "basic component of positive health and well-being. It is necessary to help us manage our lives successfully, and provide us with the emotional and spiritual resilience to allow us to enjoy life and deal with distress and disappointment." Mental health can be a very positive thing. It is something that we all aim to have. However we all go through times in our lives where we may experience mental illness. 'Mental illness' is a shorthand term for a variety of illnesses that affect our mental well-being. It covers a range of symptoms and experiences.

The present article is concerned with how the Information technology and the consequent change in job culture affect work stress, mental health IT professionals. This is particularly relevant because jobs in Information technology are the most coveted one in modern India, and the most brilliant section of the youth are going for it. Some indentified that the key factors at the workplace which generate stress among IT personnel in Singapore. It was suggested that factors which generate stress be grouped into 4 broad categories as Lack of career advancement related to the problem of high rate of employee turnover, Work overload resulting in spillover of workload at home and guilt and dissatisfaction for being less attentive to family, Risk taking and decision making consisting of fear of making mistakes and Employee morale and organizational culture related to a lack of participation in decisions affecting their work, undue blame for machine failure and difficulty in team work considering the fluid and noninvolved nature of work. In a study on Work Stress among Information Systems Professionals[5] it was found that employees reported the commonly experienced feelings such as frustration, pride in accomplishments, being overwhelmed, anxiety and common stress symptoms decrease in energy, anxiety, muscle tension, headache, stomach upset, negative thinking and insomnia thus both positive and negative effects were reported. It was discussed that employee's difficulties with stress within organization that continually introduce new technology and computer software into the work environment (http://faculty.lagcc.cuny.edu). Symptoms of stress are reviewed and employer and employee options to reduce stress are examined. The present study takes a holistic view of personhood and considers job stress as one imposed upon and interacting with other stressors. Therefore the study focuses on psychological distress, sense of wellness and organizational role stress of IT professionals as associated with stressful life events and coping resources. Very few studies have been obtained in this area. In India there is a virtual gap in study of this sector. Psychological distress in the present context has been defined as the overall feeling of anxiety, depression, and stress related somatization. It is the feeling of ill-being associated with various types and phases of mental illness. Wellness has been defined as a subjective feeling of being in a positive state of existence. Recent literature on mental health repeatedly emphasizes that absence of illness and presence of wellness are not synonymous: these have been found to be slightly and negatively correlated.[6] Nadeem[7] investigated Among different occupational stress variables role over load, role authority, role conflict and lack of senior level support contribute more to the occupational stress. He concluded that Bank employees cannot afford the time to relax and "wind down" when they are faced with work variety, discrimination, favoritism, delegation and conflicting tasks.

Starting from 1946 the World health Organization has consistently highlighted the significance of wellness in defining mental health. Subjective Well-Being (SWB) as a multidimensional construct involving factors like happiness, positive affect, social sensitivity etc.[8-10] numerated the three primary components of SWB: satisfaction, pleasant affect, and low levels of unpleasant affect, each of which can in turn be broken into subdivisions. Global satisfaction can bedivided into satisfaction with the various domains of life such as recreation, love, marriage, friendship, and so forth. Pleasant affect can be split into specific emotions such as joy, affection, and pride. Finally, unpleasant or unpleasant affect can be separated into specific emotions and moods such as shame, guilt, sadness, anger, and anxiety. Thus it is a measure of quality of life.[11] Role stress refers to the conflict and tension due to the roles being enacted by a person at any given point in time.[12] If Enacted in the context of organizations, such role stresses are called organizational role stress. Any organization may be perceived as a system of roles. These roles are different from positions or offices in the organization. Office is concerned with the hierarchical positions and privileges, whereas role refers to the obligations attached to that office. Thus, office defines the power of the holder.[2,13] Role determines the obligation of the person holding that office. Pestonjee and Pareek (1997) explains role as the totality of formal tasks, informal tasks and Distress, Wellness and OR acts as organized by an individual. Each individual is a member of social systems and the expectation as well as demand of one may put pressure on the other. There are 2 role systems: Role Space and Role Set. Both have built in potential for conflict and stress (Pareek, 2003). It may be expected that organizational role stress will operate in interaction with the general ill-being and well-being. There is unexpected high relationship of organizational role stress with these two. There is ample literature to associate life stress and coping resources to feeling of ill being and well-being. The stress diathesis model essentially says that the effect of stressors on illness and wellness is not absolute, but a function of moderating factors like inner strength and coping techniques.[14,15] One significant study by[16] asserted that three lines of research provide strong evidence that environmental adversity is important in the occurrence not only of post-traumatic stress disorder (PTSD) but also of other types of psychopathology, including major depression, alcoholism, substance use disorders, antisocial personality disorder and nonspecific distress. Dohrenwend developed a basic proposition that the likelihood of onset of the above

types of disorder increases with two factors: (1) the proportion of the individual's usual activities in which uncontrollable negative changes take place following a major negative event; and (2) how central the uncontrollable changes are to the individual's important goals and values. (Robinson, 2000) studied how daily life events influence the affective and cognitive components of well-being. Results from cross-sectional and longitudinal studies of undergraduates showed that life events are closely related to mood states, mood states are closely related to cognitive wellness. And mood states appear to serve as the nexus through which changing life circumstances affect cognitive wellness. Though lot of studies on work stress and mental health were available in the literature but providing contradictory results. However, there are very limited number of studies if any in Indian context to understand the combination of variables affecting job level among managers. Therefore, the present study is planed to investigate whether job level will influence once occupational stress, job satisfaction, mental health and coping strategies of junior and senior managers of the IT industries.

Objective of the study

The major objectives of the present study are as follows:

To study the impact of job level (hierarchy) in the experience of occupational stress, mental health and coping strategies among It professionals

Hypotheses

1. There will be a significant difference between junior level and senior level IT professionals in the experience of work place stress and mental health
2. There will be a significant difference between junior level and senior level IT professionals with regard to their Mental health
3. There will be a significant difference between junior level and senior level IT professionals with regard to their coping behavior.

The present study was planned to investigate the influence of job level on occupational stress, mental health and coping behavior of IT professionals (managers) who have just joined into the organization and holding a junior level position and have less than 5 years of experience are called as juniors and the employees who have more than 5 years of experience i.e., up 10 yrs been considered as seniors.

Methodology
Sample

The sample consisted of 180 executives, attached various Information Techonology Industries spread over different locations of Uttar Pradesh (Luknow and Allahabad) state of India were selected randomly for the present study. The sample includes only males mamagers (junior and senior

professionals) and functions includes systems, sales, marketing, and accountancy etc. The Head of Information Technology Industries were informed in advance that the name of the Industry will not be disclosed and the data will be used only for the purposes of academic research. The researchers have interviewed some of the junior as well as senior managers for collecting additional information relating to the present research. Then Questionnaires were distributed to sample of 250 executives at two levels i.e., junior working in different locations of the company. A total of 188 individuals responded the questionnaire of which only 180 were usable further, out of 180 there were 80 replies for the senior managers (professionals) and the rest were from the junior mangers.

MATERIALS AND METHODS

Job satisfaction was measured using a Job Satisfaction Scale of Occupational Stress Indicator.[9] It consists of 22 items measuring intrinsic and extrinsic satisfaction with the job and the organization rated on a 6 point scale with 6 indicating maximum satisfaction. The reliability coefficient was calculated using Crown Bach's Welch as 0.94. This scale has shown good validity correlation with Warr *et al*,[17] satisfaction with the Job Itself Scale.[18]

The physical and mental health of the Occupational Stress Indicator[9] was used to assess the health and well-being of the respondents. The Mental Health Scale consists of eighteen items of mental health symptoms, which were rated on a 6- point scale, some of which were reverse score. This scale has shown good validity correlation with sub-scale of Crown Crisp Experimental Index measuring free-floating anxiety, somatic anxiety and depression.[18] The Physical Health Scale consisted of 12 items relating to somatic symptoms, which the respondents were asked to rate on a six point Scale from 1 (never) to 6 (frequently). For both scales, the lower score indicated greater well-being.

The information on job level leaving full time employment was obtained on the questionnaire for inclusion in the analysis. Respondents provided the job profile and grade on the basis of which they were recognized as professionals for the purposes of the analysis.

The source of stress scale of the occupational stress indicators (OSI)[9] was used to measure the source of pressure at work. This consisted to six sub-scales viz., factors intrinsic to job, relationship with others, career and achievement, organizational structure and climate; home/work interface. The items were rated in terms of the degree of pressure. The respondents were asked to indicate if their job was very definitely a source of stress or very definitely not, on a scale of 1 to 6. The data collected is analyzed and presented in the tables

RESULTS

The Table 1 shows the mean scores of job satisfaction level of the IT professionals (both junior and senior managers). The scores obtained by these two groups were not significantly different (t= 0.208, 1.65 and 0.72 respectively). On factors like job itself and organizational satisfaction, the mean values for the total scores are also not found to be significant.

The Table 2 shows the scores on mental health scale. It reveals that the two groups differed significantly on state of mind (t=2.26 significant at 0.01 level). but these two groups did not differ on resilience and confidence level (t= 1.26 and 1.66 not significant at 0.05 level respectively). The senior managers are experiencing better mental health than the junior managers (mean values 18.77 and 17.28) respectively.

The results in Table 3 shows the source of pressure in their job. The junior professionals were found to be different significantly in the experience of occupational stress (t= 2.50). Further the scores obtained by these two groups were analyzed factor wise and presented in the same table. The results show that the junior managers experiencing more workload, pressure on personal responsibilities and managerial role ('t' values are 2.18, 2.31, and 3.52 respectively). However, these two groups did not differ statistically on the following factors viz. Relationship with others, recognition in their job, organizational climate, home work balance and daily hassles. ('t'= 0.62, 1.64, 1.35, 0.69, and 0.95 not significant at 0.05 level respectively).

The scores on coping stress was analyzed and presented in Table 4. The results reveal that the two groups are found to be significantly different on life/work balance. The mean values

indicate that the junior managers are experiencing more work pressure due to life/work balanced than the senior managers (mean values- 16.1, 14.28 respectively). However these two groups did not differ on problem focus and social support. ('t' value- 0.79, 0.24 not significant at 0.05 level).

Further the scores on Job satisfaction, Mental Health and Occupation stress and coping were obtained and analyzed by using product moment correlation method and the 'r' values were presented bellow [Table 5].

The result in the above indicates that Job satisfaction and mental health found are correlated but not significant. However, job satisfaction was positively and significantly correlated with coping behaviour. The mental health is negatively and significantly correlated with occupational stress. It can be explained that as job satisfaction and mental health increases coping behavior increases. And as stress increases mental health decreases.

Table 3: Means, SDs and 't' values for the score on Job stress factor wise

Factors	Junior managers		Senior managers		't' value	P value
	Mean	SD	Mean	SD		
Work load	23.282	4.217	20.19	5.688	3.01	***
Relationship,	24.487	6.468	23.429	6.225	0.71	@
Recognition,	14.487	3.402	13.19	2.639	1.96	@
Organisational climate	14.641	3.24	13.38	3.879	1.49	@
Personal responsibility	14.49	2.425	12.286	4.204	3.49	***
Managerial role	16.667	3.709	12.905	4.073	4.15	***
Home work balance	20.462	4.34	19.524	5.382	0.75	@
PD Daily hassles	14.949	3.26	14.143	3.054	0.25	@
Total	143.546	75.583	129.047	23.955	2.64	***

@: Not significant at 0.05 level, ***: Significant at 0.05 level

Table 1: Means, SD and 't' value for the scores on Job Satisfaction

Factors	Junior managers		Senior managers		't' value	P value
	Mean	SD	Mean	SD		
Job Satisfaction	22.718	4.11	22.852	4.177	0.15	@
Satisfaction towards Organization	21.692	4.354	20.952	4.811	1.75	@
Total	46.487	8.019	44.804	8.3	0.61	@

@: Not significant at 0.05 level

Table 4: Means, SDs and 't' values for the score on coping strategies

Factors	Junior managers			Seniors managers			't' value	P value
	Mean	SD	SE	Mean	SD	SE		
Problem focus	21.743	4.247	0.68	22.476	2.876	0.627	0.925	@
Work balannce	15.026	2.211	0.34	13.288	2.348	0.512	2.311	***
Social spport	12.692	2.26	0.356	12.857	2.689	0.599	0.403	@
Total	49.974	6.706	1.074	48.619	5.394	1.177	0.504	@

@: Non significant at 0.05 level, significant at 0.01 level

Table 2: Means, SD and 't' value for the scores on Mental Health

Factors	Seniors managers		Junior manager		't' value	P Value
	Mean	SD	Mean	SD		
State of mind	17.77	3.54	16.28	4.32	2.36	***
Resilience	17.13	2.19	16.38	2.31	1.46	@
Confidence level	12.26	2.78	11.05	2.56	1.60	@
Total	47.15	6.33	43.71	6.22	3.02	***

***: *P* value significant at 0.01 level, @: Not significant at 0.05 level

Table 5: Correlation coefficient among variables

Factors	Mental health	Occupation stress	Coping
Job Satisfaction	0.098	0.072	0.57*
Mental Health		-0.396*	0.57*
Occupation stress			0.14@

*significant at 0.01 level @ not significant at 0.05 level

DISCUSSION

It has been observed from the above tables that the junior and senior mangers working in an information technology company experiencing similar level of occupational stress but they differ significantly, its sources and effects for comparable groups i.e., Job satisfaction or dissatisfaction was not a problem in this in this industries. It may be because the industries are taking care for satisfying both hygiene and motivating factors of the employees. The experience of occupational stress due to pressure from overload, personal responsibilities and managerial role, by the junior employees may be due to their position in the industry and have to work upto the expectation of their senior. It was well expected by the junior managers as they are to show their ability to reach higher position in the organization and consequently experience more work stress. This emphasizes the way in which the organization/industry widening problems may bridge the junior managers and senior managers.

Further it is also clear that there is an apparent source of similar level of job satisfaction in both the groups. However the levels of pressure from being overloaded, personal responsibilities, managerial role, mental health and pressure from life/work balance were present. The junior professionals and senior professionals were found to be experiencing more pressure which is an intrinsic to the job as the primary predictor of mental health.[19]

In view of the above discussion the IT industries may plan Stress management programmes, both individual focused and organizational focused may be conducted. The individual focused strategies like relaxation techniques, biofeedback, meditation, exercise can be undertaken. The organizational focused strategies like adapting organization structure, selection and placement, training, altering physical and environmental job characteristics, job rotation and emphasizing health concerns can done to minimize stress. Each individual is a member of social systems and the expectation as well as demand of one may put pressure on the other. There are 2 role systems: Role Space and Role Set. Both havea built in potential for conflict and stress (Pareek, 2003). It may be expected that organizational role stress will operate in interaction with the general ill-being and well-being. There is unexpected high relationship of organizational role stress with these two. There is ample literature to associate life stress and coping resources to feeling of ill-being and well-being. The stress diathesis model essentially says that the effect of stressors on illness and wellness is not absolute, but a function of moderating factors like inner strength and coping techniques.[14,15]

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