OCCUPATIONAL STRESS AND ITS EFFECT ON JOB PERFORMANCE A CASE STUDY OF MEDICAL HOUSE OFFICERS OF DISTRICT ABBOTTABAD

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Background: Doctors especially house officers are under a great deal of stress related to a variety of occupational stressors. Occupational stressors contribute to organizational inefficiency, high staff turnover, absenteeism due to sickness, decreased quality, and quantity of practice, increased costs of health care, and decreased job satisfaction. One of the organizational outcomes that affected by occupational stress is job performance. The purpose of the present study was to investigate the effect of job stress on job performance. **Methods:** The universe of the study is District Abbottabad and the complete population of house officers was targeted which were present at that time were 55. The data obtained through questionnaire was analyzed using the statistical methods including descriptive statistics, Spearman's correlation and multiple regression. **Results:** The analysis showed strong support for the hypothesis that there is an inverse relationship between job stress and job performance indicating that there is high job stress in the house officers, resulting in low job performance. **Conclusion:** Correct stress management should start from improved health and good intrapersonal relationships. The prevention and management of workplace stress requires organizational level interventions, because it is the organization that creates the stress. Success in managing and preventing stress will depend on the culture in the organization. A culture of openness and understanding, rather than of criticism, is essential. Those house officers who had high level of job stress had low job performance. All the factors affected male house officers more than the female house officers.

Keywords: Occupational Stress, Job Stress

INTRODUCTION

The current turbulent environment in the health care field requires doctors and organizations to re-examine their practices. Medicine is an inherently stressful profession with long working hours, ethical dilemmas, difficult patients and conflicting demands. Professionally, in true sense the doctors are on 24-hour duty. Many physicians and surgeons work long, irregular hours; over one-third of full-time physicians worked 60 or more hours a week in 2004. The physical and psychological demands of the profession often make physicians more vulnerable to high levels of stress. The effects of stress on practice are evidenced as increased errors in prescribing, limited team working, more patients' complaints and sickness absence.[1]

Stress has been defined in different ways over the years. Originally, it was conceived as pressure from the environment, then as strain within the person. The generally accepted definition today is one of the interactions between the situation and the individual. It is the psychological and physical state that results when the resources of the individual are not sufficient to cope with the demands and pressures of the situation. Thus, stress is more likely in some situations than others and in some individuals than others.[2]

Stress is not always negative or harmful and indeed, the absence of stress is death.[3] Stress is the non-specific response of the body to any demand, positive or negative, made upon it. He indicated that health sector is one of the most stressful professions and pointed out the necessity of considering and investigating occupational stress, since performance declines under stressful situations. Nowadays, quality productivity is very essential for organizational survival.[4] Therefore, stress at workplace becomes a concern to organization administrators.

Several authors attributed the lack of progress in the area of stress research in organizations to the fact that stress seemed to be related to such a large number of conditions which prevented a systematic focus.[5] Beehr used a very general definition in which 'anything about an organizational role that produces adverse consequences for the individual' was called role stress. They proceeded to the conclusion that a condition termed role overload was viable and this correlated positively with job stress.[6] Stress indicators related to role ambiguity in the study indicated low motivation to work.[7]

Schuler identified stress in organizations as an increasingly important concern in both organizational research and practice.[8] An interesting finding by Beehr was that even if there was role

strain, people with situational characteristics, especially autonomy, did not suffer as greatly from it. This study was based on a sample of 651 persons, including 213 from service departments of a hospital.[6] The primary sources of stress cited by respondents included juggling multiple roles, having young children, time issues (too much work, too little time) changing practice patterns.[1]

Job performance is the result of three factors working together: skill, effort and the nature of work conditions. Skills include knowledge, abilities and competencies the employee brings to the job; effort is the degree of motivation the employee puts forth toward getting the job done; and the nature of work conditions is the degree of accommodation of these conditions in facilitating the employee's productivity.[10]

The documented consequences of stress on medical trainees include: alcohol and drug abuse, interpersonal relationship difficulties, depression, anxiety, and suicide.[10,11] Other studies have also shown stress can be detrimental to the medical trainees' or professional's academic achievement, effectiveness in delivering health services by decreasing attention span, concentration, decision-making skills, and ability to establish physician-patient relationships.[11,12] In addition to affecting psychological and emotional well being, stress can also result in a decrease in physical health, such as the development of hypertension, heart disease, and immune deficiency disorders.[13] Quality health care is an important goal of the health care system and practitioners performance has been shown to be closely related to the quality of health care patients receive.[14]

A study conducted by Abu Al-Rub indicated a curvilinear (U-shaped) relationship between job stress and job performance; nurses who reported moderate levels of job stress believed that they performed their jobs less well than did those who reported low or high levels of job stress.[15]

Jamal examined a relationship between job stress and job performance among managers and blue-collar workers. Job stress is defined as individuals' reactions to the characteristics of the work environment that appear threatening to them. Four types of relationships are proposed between job stress and performance:

1. curvilinear/U-shaped,
2. negative linear,
3. positive linear, and
4. no relationship between the stress and performance.

A random sample of 283 blue-collar and 227 managerial workers in a large eastern Canadian firm are surveyed in questionnaires. Measurement is made of variables relating to job stress, job performance, and organizational commitment. Results show a primarily negative linear relationship between job stress and measures of job performance. Limited support is seen for curvilinear or no relationship. No support is found for the positive.[16]

Pakistan is a developing country with scarce resources. In Pakistan health status is characterized by a high rate of population growth and inadequate health facilities. The doctor population ratio is one doctor for 5,146 people in NWFP as compared to one doctor for 1,773 people in the rest of the country. One hospital bed for 1,514 persons is available in rest of the country and one bed for 1703 persons in NWFP. This causes work overload on the health sector individuals particularly in urban areas, implying a high level of patient-doctor ratio causing a lot of pressure on the doctors and the supporting staff.[17]

MATERIAL AND METHODS

The present study targeted the house officers of Ayub Teaching Hospital, Abbottabad. In order to make study more reliable the complete population of house officers was targeted (during that particular time period there were only 55 house officers). All house officers (55) working in 7 different departments participated in the study including 24 female and 31 male doctors. Out of the 55 participants, 14 (25%) were from surgical ward, 13 (24%) from gynaecology, 14 (25%) from medicine, 9 (16%) from dentistry, 2 (4%) from paediatrics, 2 (4%) from dermatology, and 1 (2%) from eye ward. As the target population was house officers so they had the same experience level and most of them were unmarried. Their mean age was 25 years.

Primary data was gathered through questionnaire. Individual semi-structured interviews & observations were also used to collect information about the job routine, in order to find out how the work patterns have been influenced by environmental factors.

The data obtained was analysed using SPSS 12.0. The statistical methods included descriptive statistics, Spearman's correlation and multiple regressions.

RESULTS

Analysis of Work Stress and Job Performance

The house officers experienced moderate level of job stress. No department experienced high level of stress. The overall job performance of house officers was high. About half of the population experienced upper moderate level of stress. Some house officers experienced moderate level of stress and few had lower level of stress. Half of the population had moderate performance and about half has high performance. Job performance was found to be higher moderate. According to the results, house officers working in surgical and medicine wards experienced more job stress than the house officers working in other wards. A possible explanation is

that house officers who work in Medical/Surgical units are exposed to more workload and deal with patients with a variety of diseases and problems than house officers who work in other units, which might contribute to increase their level of job stress.

There are different factors that cause stress in house officers. Different factors have different intensity level in male and female house officers.

Lack of resources, work overload and lack of communication and comfort with supervisor and colleagues have contributed to increase stress in the house officers more than the other factors. Stress factors affected the male house officers more than the female house officers. (Table-1)

Table-1: Means of Gender Specific Factor's Impact

Variable	Overall	Females	Males
Job Stress Job Pressure	52.73	53.75	55.48
Job Description conflict	51.15	48.05	53.54
Comm. & Comfort with supervisor and colleagues	55.42	48.33	60.90
Job Related Health Concerns	45.96	39.83	50.70
Work Overload	58.91	52.08	64.19
Lack of resources	77.45	71.66	81.93
Number of Observations	55	24	31

According to the matrix in Table-2, the columns of job description conflict, communication and comfort with supervisor and Job related health concerns presented strongly negative connections with all dimensions of job performance. From the table, it is clear that there is strong negative correlation between job description conflicts with all the dimensions of performance. It has been found that Job description conflict has strong negative correlation with knowledge (-0.637), skills (-0.485), Attitude (-0.511) and overall job performance (-0.631) and this correlation is significant at the significant level of 0.01 respectively using two tailed test. From the output, it has been found that the correlation coefficient between job related health concerns and all the dimensions of performance have strong negative values. Job-related health concern has strong negative correlation with Knowledge (-0.421), Skills (0.456), Attitude (-0.616), Effectiveness (-0.541) and Overall job Performance (-0.625) and this correlation is significant at 0.01 level. Similarly lack of communication and comfort with supervisor has strong negative correlation with Attitude (-0.581), Effectiveness (-0.669) and overall Performance (-0.532) and this correlation is significant at the significant level of 0.01 using two tailed test. This shows that all these values are highly correlated and significant.

The data demonstrate strong support for the hypothesis that there is an inverse relationship between job stress and job performance. This negative relationship between job stress and job performance (-0.718) indicates that when there is high job stress in the house officers, there is low job performance.

Table-3 shows model summary. The co-efficient of correlation is -R=0.739. The Co-efficient of Determination -R square=0.546 or 0.55 approx-this statistics gives the ratio of explained variation to total variation converting the 0.55 to a percentage, it is concluded that approximately 55% of the variability of performance is accounted for by the variables in this model.

Table-4 presents results of regression analysis. The regression results show that we could expect a decrease of 0.217 in the performance score for every unit increase in JHC (Job-related Health Concerns), assuming that all other variables in the model are held constant. Similarly decrease of 0.232 in the performance score for every unit increase in JDC (Job description conflict), assuming that all other variables in the model are held constant. And decrease of 0.101 in the performance score for every unit increase in CCS (Lack of Communication & comfort with supervisor).

In this study, relations were found to exist between work stress and job performance. These included job pressure, job description conflict, lack of communication and comfort with supervisor, job related health concerns, work overload and lack of resources and overall job performance, which all has negative relations. The work stress of house officers can impact strongly and adversely on overall job performance.

Table-2: The correlation between Work Stress and Job Performance (Spearman's correlation)

	Job Pressure	Job Description Conflict	Lack of Communication & Comfort with Supervisor	Job related Health Concerns	Work Overload	Lack of Resources	Overall Job Stress
Knowledge	-0.184	-0.637**	-0.346**	-0.421**	-0.162	-0.370**	-0.567**
Skills	-0.177	-0.485**	-0.353**	-0.456**	-0.254	-0.328**	-0.553**
Attitude/Job Enthusiasm	-0.283*	-0.511**	-0.581**	-0.616**	-0.315*	-0.218	-0.651**
Effectiveness/Job Quality	-0.460**	-0.271*	-0.669**	-0.541**	-0.392**	-0.165	-0.639**
Overall Job Performance	-0.267*	-0.631**	-0.532**	-0.625**	-0.317*	-0.351**	-0.718**

*p<0.05, **p<0.01

Table-3: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.739	0.546	0.519	6.61150

Predictors: (Constant), CCS, JDC, JHC

Table-4: Coefficients

	[illegible]		[illegible]	t	*p*-[illegible]
	B	Std. Error	Beta		
(Constant)	98.878	3.656		27.044	0
Job related health concerns	-0.217	0.082	-0.308	-2.665	0.010
Job description conflict	-0.234	0.065	-0.402	-3.629	0.001
Lack of Communication & comfort with supervisor	-0.101	0.057	-0.199	-1.750	0.046

Dependent Variable: Performance

DISCUSSION

The principle purpose of the study was to investigate the Stress Performance relationship. The literature reinforced the need for the present study by indicating that medicine is one of the highest stressful professions and by showing the lack of consistency of findings regarding the impact of job stress on job performance. The data demonstrates strong support for the hypothesis that there is an inverse relationship between job stress and job performance. Our results agree with those of the studies conducted by Jamal and Hsiow-Ling showing the inverse stress performance relationship.[16–18]

Lack of resources, work overload and lack of communication and comfort with supervisor and colleagues have contributed to increase stress in the house officers more than the other factors. All the factors affected male house officers more than the female house officers. Reason being this that Surgical and Medicine units are more stressful than the rest of the units, and most of the male house officers are working in those departments. The major stress factors in male house officers were lack of resources, work overload and lack of communication and comfort with supervisors and colleagues. Lack of resources was the factor observed in all the departments. Female house officers do not experience much stress compare to males as they have support from their supervisors and colleagues. So the support from supervisor and colleagues is the major factor to reduce the stress level and make an individual to perform at his/her best. A possible explanation is that employees usually look up to their supervisors and if they do receive their support, they might feel that their work is appreciated and become more secure in regard to their job which might decrease their stress level.

CONCLUSION

The results of the study indicate that there is a negative relationship between job stress and job performance. Those house officers who had high level of job stress had low job performance. All the factors affected male house officers more than the female house officers.

RECOMMENDATIONS

Based on the major findings, the following recommendations are provided. Since the stress from lack of communication and comfort with supervisor, job description conflict and job related health concerns is highest for house officers, hospital administration should pay attention to solve these issues. Lack of resources includes inadequate staff, lack of equipment/machinery and medicines. So it must be advocated by the head of the unit, not only for the benefit of house officers but their patients as well.

Performance is hindered by job description conflict because with it the individual faces either a lack of knowledge about the most effective behaviours to engage in or an almost impossible situation for doing everything expected. Therefore, increasing formal organizational communication with employees reduces the uncertainty by lessening the role ambiguity and role conflict. Open Communication has an advantage of resolving conflicts between supervisors and sub ordinates. Lack of effective communication could cause unresolved conflicts that will increase the stress level.

Support from the supervisor and colleagues are the major factor. The supervisors need to recognize the good work and outstanding contributions of house officers to keep them motivated to do their best. Promoting a culture of support will set the example and it will make them realize that co-worker support is very important.

Correct stress management should start from improved health and good intrapersonal relationships. An individual needs to maintain good level of personal health. The prevention and management of workplace stress requires organizational level interventions, because it is the organization that creates the stress. A culture of openness and understanding, rather than of criticism, is essential.

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