

Occupational Stress And Its Effect On Job Performance : A Case Study Of Medical House Officers



R.K. Tripathi¹



Dr. Puja Jain²

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 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 affect of job stress on job performance.

Methods:

The universe of the study is District Dehradun (Uttarakhand) and the complete population of house officers was targeted which were present at that time were 55. The data obtained through descriptive statistics, Spearman's Correlation and Multi 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 interpersonal relationships. The prevention and management of workplace stress requires organisational 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 rather than the female house officers.

Key Words : *Organizational inefficiency, Occupational Stress, Job Stress, stress management, house officers.*

Introduction

The current turbulent environment in the health care field requires doctors and 150 organisations 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 2018. The physical and; psychological demands of the profession often make physicians more vulnerable to high levels of stress. The effects of stress ob practice are evidenced as increased errors in prescribing, limited team working, more patients' complaints and sickness absence.

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 are not sufficient to cope with demands and pressures of the situation. Thus, stress is more likely in some situations than others and in some individuals than others.

Stress is not always negative or harmful and indeed, the absence of stress is death. Stress is the non-specific response of the body to any demand, 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. Now-a-days, quality productivity

¹ Research Scholar, SGRRU, Dehradun, rktripathi007@gmail.com

² Assistant Professor (Management) Guide-cum-Supervisor, SGRRU, Dehradun, dr.pujajain@gmail.com

survival. Therefore, stress at workplace becomes a concern to organization administrators.

Several authors attributed the lack of progress in the areas of stress research to 151 organisations to the fact that stress seemed to be related to such a large number of conditions which prevented a systematic focus. 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 conditions termed role overload was viable and this correlated positively with job stress. Stress indicators to role ambiguity in the study indicated low motivation to work.

Schuler identified stress in 151 organisations as an increasingly important concern in both organizational research and practice. An interesting finding by Beehr was that even if there was role, strain, people with situations 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. The primary source of source cited by respondents indicated juggling multiple roles, having young children, time issues (too much work, too little time) changing practices patterns.

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.

The documented consequences of stress on medical trainees include: alcohol and drug abuse, interpersonal relationship difficulties, depression, anxiety and suicide. 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. 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. 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.

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 low or high levels of job stress.

Jamal examined a relationship between job stress and job performance among house officers and nurses. 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 house officers and 227 nurses in a large hospital are surveyed in Questionnaires. Management is made of variables relating to job stress, job performance and organizational environment. 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.

India is a developing country with scarce resources. In India, health status is characterized by a high rate of population growth and inadequate health facilities. The doctor population ratio is one doctor for 1,773 people in the rest of the country and one bed for 1,703 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.

Literature Review:

In the early 1970s, Mason called attention to the potency of psychological stimuli in the stress response.

A large literature has emerged since Christian's original insights in the 1950s and 1960s that at high densities, mammals manifest enlarged adrenals indicative of increased reproduction. These "psychoendocrine" effects reinforced perceptions of stress in terms of Hans Selye's "General Adaptation Syndrome" (GAS).

Lee and McDonald (1985) reviewed this and related literature and appealed for additional research and more direct evidence for the effects of stress in natural populations. Axelrod and Reisine (1984) summarized the multiple regulatory mechanisms and interactions of stress hormones, identifying corticotrophin (ACTN) as a principal nexus; Goldstein (1987) provided a helpful collation of stress-induced actions of the sympathetic nervous system.

Johnson and colleagues (1992) reviewed mechanisms with an emphasis on the dynamic nature of endocrine and behavioural mechanisms. Neural pathways were recently reviewed by Va de Kar and Blair (1999) who pointed out that proactin, oxytocin and rennin have been neglected as stress-sensitive endocrine systems because they are coordinated by slightly different neural pathways.

Saavedra (1999) recently reviewed evidence of a widespread role for angiotensin in modulating stress and corticotrophic releasing hormone (CRH) which has significant stress response coordinating functions aside from its triggering a corticosteroid response.

A review of the diversity of glucocorticoid actions in the stress response by Sapolsky *et.al.*, (2000) provides a valuable synthesis of the seeming contradictory functions of glucocorticoids. The permissive actions of glucocorticoids that are based on tonic levels associated with homeostasis are seen to be distinct from the suppressive and stimulatory actions that result from stress-induced elevation for the ethological perspective in developing what they have termed the "preparative" functions of glucocorticoids and caution laboratory researchers to be sensitive to the organisms perspective of what constitutes a stressor.

Understanding the causes & consequences of stress in non-humans has taken on an urgency of its own as a result of a growing concern for animal welfare as well as a search for more robust and relevant animal models.

This interest in the role of stress in life history has proven a valuable counter-balance to well-intentioned perceptions by scientists and citizens who too frequently view stress in a stereotypical way as necessarily deleterious. Ignorance of the real needs of the animals (echoing Sapolsky's appeal for appreciation for the unique needs of the subject) is more obvious when well cared for animals fail to thrive or reproduce.

Further, freedom from stress attainable in the laboratory is as serious as inadvertently introduced stress compromising the external validity of findings. Attempts to bring perspective to this issue are proliferating e.g. some of which target non-mammalian vertebrates.

Other efforts try to deal with issues of definition and clarity. For example, Moberg (1999) has attempted to identify the boundary between stress and distress at a point where the cost of coping impairs functions critical to well-being.

Occupational Stress/Job Stress is stress involving work (Kahn *et.al.*, 1964), role conflict and role ambiguity are sources of Occupational Stress/Job Stress. It can occur

when there is a mismatch between the demands of the environment/ workplace and an individual's ability to carry-out and complete these demands.

Occupational Stress/Job Stress is the sum total of factors experienced in relation to work which affect the psychological and physiological homeostasis of the worker. The individual factor is termed a stressor and stress is the individual worker's reaction to stressors. Job or work, is an important part of life and also one of the major causes of stress. Various organizational related variables have been found to be the reason behind the workplace stress (Weiman, 1977).

Stress is a condition or feeling experienced, when a person perceives that the demands exceed the personal and social resources the individual is able to mobilize. In short, it is what we feel when we have lost control of events (Lazarus Richard S. (1966).

Occupational Stress/Job Stress is a condition arising from the interaction of people and their jobs and characterized by changes within people that force them to deviate from their normal functioning.

Work overload both quantitatively and qualitatively has been empirically linked to a variety of physiological, psychological and behaviour strain symptoms (Beehr & Newman, 1978).

Role stress is the stress experienced by the persons because of their role (job) in the organization. Role stress results from problems encountered in role performance. Role ambiguity and role conflict have been identified as a major source of stress and job tension. Things that make one feel stressed are called stressors. Typical causes of stressful working conditions may be cited as increased workloads, downsizing, overtime, shift-work, hostile work environments, etc. Occupational Stress/Job Stress thus may be defined 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 worker.

Role stressors are also responsible for creating negative impacts such as job tension, job dissatisfaction, employee turnover, employee burnout, low organizational commitment and performance. Therefore, managers need to identify these variables to manage role stress at workplace (Van Sell *et.al.*, Fisher & Gitelson, 1983 & Jackson & Schuler, 1985).

The sources of managerial stress can be categorized into six components - intrinsic to job, role in organization, career development, organizational structure and climate, relationship within organization and organizational interface and outside (Cooper & Marshall, 1978).

Occupational Stress/Job Stress is a discrepancy between demands of one's job and the ability to respond in an effective manner. Unhealthy (high stress ridden) organizations do not get the best from their workers and this may affect not only their performance in the increasingly competitive market, but eventually even their survival (Robin S., Feldman D. & Kaplan Z., 1999 & Michie, 2002).

Stress is defined in terms of its physical and physiological effects on a person, and can be a mental, physical or emotional strain. It can also be a tension or a situation or factor that can cause stress. "Occupational Stress/Job Stress can occur when there is discrepancy between the demands of the environment/workplace and an individual's ability to carry out and complete these demands" (NIOS, 1999 & Henry & Evans, 2008).

Often a stressor leads to the body to have a physiological reaction. It strains a person physically as well as mentally. A variety of factors contribute to workplace stress viz., negative workload, isolation, lack of autonomy, extensive hours worked, toxic work environments, difficult relationships among coworkers and management, management bullying, harassment and lack of opportunity or motivation to advancement in one's skill level (Colligan *et.al.*, 2006).

Material and Methods:

The present study target the house officers of Synergy Institute of Medical Sciences & Hospital, Dehradun. In order to make study more reliable the complete population of house officers was target (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 & 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 stress. Half of the population had moderate performance and about half had 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 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 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 : Means of Gender Specific Factors : IMPACT

Variable	Overall	Females	Males
Job Stress			
Job Pressure	52.73	53.75	55.48
Job Description Conflict	51.15	48.08	53.54
Communication & 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 correlation with

knowledge (-0.421), skills (-0.456), attitude (-0.616), effectiveness (-0.541) and overall job performance (-0.625) and 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 coefficient of correlation is $-R=0.739$. The coefficient of Determination $-R^2$ is 0.546 or 55% approximately. 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 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 performance score for every Unit increase in JDC (Job Description Conflict) assuming that all other variables 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 & 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 Variability	-0.460**	-0.271*	-0.669**	-0.541**	-0.392**	-0.165	-0.640**
Overall Job Performance	-0.267*	-0.631**	-0.532**	-0.625**	-0.317*	-0.351**	-0.718**

Table-3 : Model Summary

R	R square	Adjusted R Square	Standard Error of the Estimate
0.739	0.546	0.519	6.611

Table 4 : Coefficient

	B	Standard 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
Communication & Comfort with Supervisor	0.101	0.057	-0.199	-1.750	0.046

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 Hsiao-Ling showing the inverse stress performance relationship.

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 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 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 compared to males as they have 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 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 conflict between supervisors and subordinates. 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 increases the stress. A culture of openness and understanding, rather than of criticism, is essential.

References:

- Work Stress, job satisfaction and organizational commitment among public employees before privatization. *European Journal of Social Sciences*, Bytyqi, F., V., & Hasani, V., (2010) 18(1), 156 - 162.
- Sources of Job Stress, work engagement and career orientations of employees in a South African Financial Institution. *South African Business Review*, Coetzee, M., & Devillier, M. 2010. 14(1) : 27 - 57.
- The relationships among employees, job stress, job satisfaction, and the organizational performance of Hamadan Urban Health Centre. *International Business Research Paper*, 963. Conway, *et.al.*, (2008).
- Impact of Job Stress on Manager's performance. *European Journal of Sciences*, D. Salami (2010) 45(2) : 249 - 260.
- Impact of Job Stress on employees job performance in business sector of Pakistan. *International Research Journal*. Global Journal Incorporation, USA, Dar, L. et.al. (2011) 11(6): 1 - 4.
- Job Stress, coping process and intentions to leave. *Delhi Business Review.*, 91) : 41 - 54. Dhar, R.L. & Bhagat, M. (2008).

-
-
- Factors causing stress and impact on job performance: A case study of Banks of Bahawalpur, Pakistan. *European Journal of Business and Management*, 3(12): 9 – 17, Badar, M.R. (2011).
 - Influences of culture and social class on perception of Job Stress in emerging economies. *International Review Business Research Papers*, 6(2) : 52 – 67. Banking Services personal of Taiwan as an example. *Journal of Money, Investment and Banking*. *European Journal of Publishing Incorporation*, 16 – 26. Bahrami, S. (2010).
 - Empirical analysis of Job Stress on job satisfaction among university teachers in Pakistan. *International Business Journal*, 4(3) : 264 – 270. Bhatti, N. et al. (2011).
 - Stress in the work place: A general overview of the causes, the effects and the solutions., 1 – 44. Bick Ford, M. (2005).
 - Work Stress among Nurses in Ontario. D. Paper. *Industrial Relations Centres*, 1 – 30.
 - Managing employee's stress: Understanding organizations – what else do managers do. Ventus Publications, APS-ISBN 978-87-7681-562-2., 41 – 51.
 - Psychiatric causes of workplace problems. In A.M. Langlieb & J.P. Kahn (Eds.), *Mental Health and Productivity in the workplace: A handbook for organizations and clinicians*. San Francisco: Jossey-Bass.
 - Performance Productivity and Quality of frontline employees in service organizations. *Journal of Marketing*, 64, 15 – 35. Singh, J (2000).
 - Behavioural and Psychological consequences of boundary spanning burnout for customer service representatives. *Journal of Marketing Research*, 31, 558 – 569. Singh, J., Goolsby, J.R., & Rhoads, G.K. (1994). Occupational Stress, job satisfaction and mental health among employees of an acquired TV Company in Hong Kong. *Stress Medicine*, 13, 99 – 107. Siu, O.L., Cooper, C.L., Donald, I. (1997).