

INDIVIDUAL DIFFERENCES AND STRESS-PERFORMANCE RELATIONSHIP

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ABSTRACT

Background: In this paper relationship between stress, performance and personality Type is investigated. Medicine is a dangerous business. Infectious diseases, dealing with difficult patients, accidents on the job, and other hazards have shortened the careers of many physicians. Doctors have long been considered at risk of occupational stress. When doctors suffer, so do their patients. The issue of job stress among doctors is important because the extent to which they experience stress turns in to poor performance in terms of quality of patient care. Personality traits are often thought to affect the stress that a person perceives. Specific types of personalities seem to be more susceptible to the effects of stress than others. Similarly, job performance is associated with different levels of stress e.g. higher job stress leads to poor performance. The purpose of the present study was to investigate the effect of job stress on job performance and the effect of personality type on the stress-performance relationship. **Methods:** The universe of the study is District Abbottabad. In order to make the study more reliable the complete population of house officers was targeted. There are 55 doctors working in 7 different departments of AMC (Ayub Medical Complex). 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 designed in two parts. Part one was used to address Personality type and Part two gathered information about job stress and performance. Individual semi-structured interviews and 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 through questionnaires was analyzed using the statistical methods including descriptive statistics and Spearman's Correlation. **Results:** The results indicated that

Type A individuals tend to experience more stress than Type B, however no major differences were found. Similarly minor differences were found in the performance of Type A and Type B individuals. Type A individuals performed slightly better than Type B. **Recommendations and Conclusion:** Identification of house officer's personality traits will be helpful in assessing stress and designing different stress coping strategies to reduce their level of stress and improve their performance. According to the results, it has been found that the correlation between job stress and job performance among house officers with Type A personality characteristics is high.

INTRODUCTION

There is a growing awareness within medicine that physicians and other health care professionals are at risk for burnout, which threatens the sustainability of the health care enterprise. Recent changes in health care delivery have added new demands to already stressful work of medical staff.¹

Stress has been defined conceptually in several forms. It has been defined as a dynamic condition in which the individual is confronted with an opportunity, constraint, or demand related to what he or she desires and for which the outcome is perceived to be both uncertain and important.² The basic idea of the stimulus-based model is to identify the sources of stress. Stimulus-based definitions have their roots in physics and engineering where the focus is on the effect of external forces that result in a demand or reaction and then creates distortion.³ Stress has been defined as a response: the origins of the response-based definitions were led by the work of Hans Selye⁴ (1976). Both the stimulus and response definitions of stress fail to apprehend the individual differences and the cognitive process of the individual.⁵ Such shortcomings of the stimulus and response definitions of stress led to the third form of stress definition: the result of an interaction between a stimulus and a response that is described in terms of an imbalance between the person and the environment.⁶ This approach is one where a relationship, usually co-relational, is hypothesized between a stimulus and a response.³

It is considered that personality traits often affect the stress that a person perceives or manifests. It has been found that Type A personalities are more likely to get involved in more stressful situations. While personality features are important risk factors to predict stress.⁷

A survey conducted by the Department of Community Health Sciences, The Agha Khan University, concluded that Majority (68%) of the doctors were not satisfied with their jobs, females more than males (males 65% and females 72%). A vast majority of female doctors who participated in this survey perceived that their Physical health was good but level of stress was "high" or "moderate". Stress in female physicians led to more time-off

work and they started taking antidepressants while some also started smoking. These doctors who are working under stress are less likely to enjoy their practice. Characteristics, which lead to dissatisfaction, were pay and benefits, safety and security, workload, adequate resources and physical working conditions.⁸

Although, it is difficult to define accurately, stress appears to be an unavoidable and common aspect of a doctor's work. It may have positive aspects in that some individuals may feel challenged and may be able to raise productivity to meet increasing demands; however, in junior doctors, work related stress and anxiety have been shown to lead to low morale and poorer work performance and to adversely affect the quality of care provided.⁹ A number of studies have shown that stress experienced by junior doctors led to reduced job satisfaction, depression and anxiety, sickness absence, and intention to leave. However, the problem has been difficult to study because individual responses to stressful situations vary and certain people are more likely than others to perceive high levels of stress in their jobs.¹⁰

The increase demands of health care facilities and the sensitivity of the work at hospitals has increased job-stress on the individuals working in it. Especially, the amount of pressure on the doctors has increased enormously.¹¹ The delivery of high-quality medical care contributes to improved health outcomes. Doctor's job satisfaction affects quality of medical cares that he/she provides patient's satisfaction with the doctor, patient's adherence to treatment and decreases doctor's turnover.⁸

Work related stress and burnout are particularly relevant to nurses and other health care workers. Throughout their education, training and practice, physicians develop unhealthy work styles, unbalanced life styles, psychological inhibitions and emotional unresponsiveness. Physicians share many occupational stressors with other service professionals, but they also have work environment factors that set them apart: proximity to suffering and death, the emotional and physical needs of patients, and pressures to perform consistently and optimally under changing conditions and expectations. Stress plays a major role in the genesis of professional dissatisfaction, poor work performance and burnout.¹²

Different people find quite different situations to be stressful. Circumstances which one person experiences as stimulating or positively challenging will cause acute distress in another person. According to a survey, stress, anxiety, job satisfaction and the influence of personality factors on a group of house officers in the north east of England, showed that 37.5% of women and 24% of men house officers suffered from possible psychological stress though they experienced the same job conditions.¹³

Personality factors have shown inclination towards stress, anxiety, and other occupational health outcomes in different areas of medicine, and these factors may contribute to feelings of job dissatisfaction and stress.¹⁰ While many studies have addressed these issues in many different groups of healthcare workers including those at junior, middle grade, and senior staff levels but much work is still impending.^{14,8}

Job performance can be evaluated by three factors: skills, effort and the nature of work conditions. Skills include knowledge, abilities and competencies of the employee; efforts of motivated employee; and the employees' flexible personality to work in different working environments.¹⁵ Doctors are no different to the wider population where performance relates to well-being as well as to skills and knowledge. Evidence about the relationship between personality and performance suggests that occupational psychology has a key role to play in understanding the patterns of behavior associated with underperformance.¹⁶

MATERIAL AND METHODS

The present study targeted the house officers of district Abbottabad. Ayub Medical Complex, Abbottabad has been chosen as the universe of study. The decision to choose it was based on the fact that the research is to be conducted on the medical house officers and Ayub Medical Complex is the only hospital providing such facilities in the district of Abbottabad in public sector. In order to make study more reliable the complete population of house officers was targeted. 55 doctors (whole population) working in 7 different departments participated in the study, including 24 females (44 percent) and 31 males (56 percent).

Out of the 55 participants, 14 (25 percent) were from surgical ward, 13 (24 percent) from gynecology, 14(25 percent) from medicine, 9 (16 percent) from dentistry, 2(4 percent) from paed, 2 (4 percent) from dermatology, and 1(2 percent) 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 designed in two parts. Part one was used to address Personality type and Part two gathered information about job stress and performance. Individual semi-structured interviews and 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 statistical method included descriptive statistics and Spearman's Correlation. Spearman's correlation was used to assess the magnitude of the relationship among the variables stress and performance. The data obtained were analyzed using the Statistical Package for the Social Sciences (SPSS) version 12.0.

RESULTS

Individual Differences and Stress-Performance Relationship

The house officers experienced moderate levels of stress. Only 7 percent of Type A individuals experienced high level of stress. Among Type A individuals: 20 percent had lower stress level, 20 percent had lower moderate level of stress, 53 percent had upper moderate level of stress and 7 percent had high level of stress. Similarly in case of Type B individuals 23 percent had lower stress level, 34 percent had lower moderate stress level, and 43 percent had upper moderate level of stress and no individual experienced high stress. So the individuals with Type A characteristics experienced more stress than Type B.

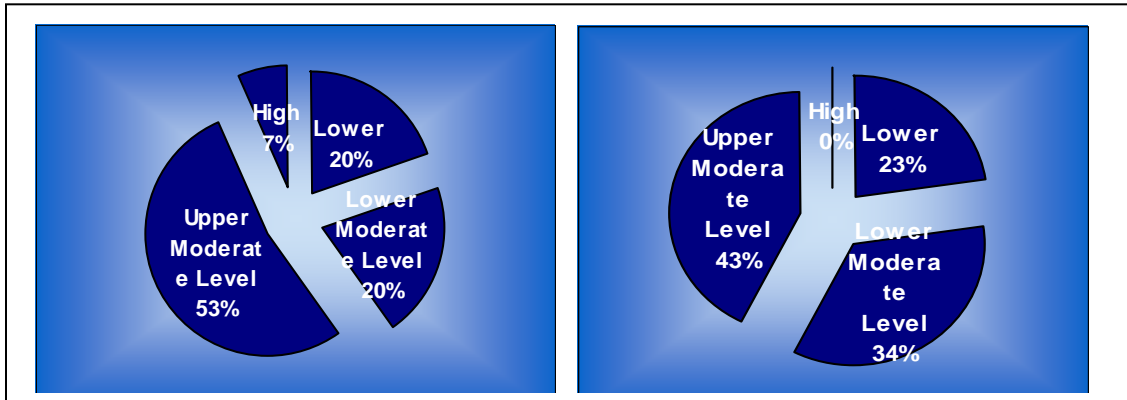


Fig1 Stress Level in Type A

Fig 2 Stress Level in Type B

Variable		Type A	Type B
<u>Job Stress</u>			
Job Pressure	Mean	66.66	51
Job Description conflict	Mean	46.22	52
Comm. & Comfort with supervisor	Mean	60.26	52
Job Related Health Concerns	Mean	48.26	45
Work Overload	Mean	63	58
Lack of resources	Mean	72	80

Table 1 Personality Specific Factor's Impact

Table 1 shows that, as overall, lack of resources, work overload, communication and comfort with supervisor and job pressure have affected the house officers more. Majority of the factors affected Type A individuals more than Type B individuals. Regardless of personality characteristics, males (Type A&B) experienced more stress than females (Type A&B).

Correlation between Occupational Stress & Job Performance in Personality Type A

Table 2 The Correlation between Work Stress and Job Performance in Personality type A
(Spearman's correlation)

	Job Pressure	Job Description Conflict	Communication & Comfort with Supervisor	Job Related Health Concerns	Work Overload	Lack of Resources	Overall Job Stress
Knowledge	-.818**	-.485	-.634*	-.597**	-.702**	0.364	-.700**
Skills	-.795**	-.510	-.767**	-.437	-.620*	0.169	-.749**
Attitude	-.898**	-.769**	-.890**	-.727**	-.772**	-.079	-.850**
Effectiveness	-.843**	-.554*	-.872**	-.717**	-.724**	.032	-.805**
Overall Job Performance	-.942**	-.718**	-.836**	-.658**	-.783**	.083	-.851**

*p<0.05 **p<0.01

According to the data presented in Table 2, all the dimensions of stress (job pressure, Job description conflict, communication and comfort with supervisor, job related health concerns, work overload except lack of resources) had strongly negative connections with all the dimensions of job performance. The correlation between overall job stress and overall job performance among Type A individuals was significantly negative ($r=-.851$, $p>0.01$). Job Pressure and overall job performance were highly correlated (-0.942^{**}). It has been found that Job Pressure has negative correlation with knowledge ($-.818^{**}$), attitude ($-.898^{**}$) and effectiveness ($-.843^{**}$). Similarly, communication and comfort with supervisor has strong negative correlation with attitude ($-.890^{**}$), effectiveness ($-.872^{**}$), and skills ($-.767^{**}$). According to the results it is clear that there is an inverse relationship between job stress and performance in personality Type A individuals.

Correlation between Occupational Stress & Job Performance in Personality Type B

Table 3 The Correlation between Work Stress and Job Performance in Personality type B
(Spearman's correlation)

	Job Pressure	Job Description Conflict	Communication & Comfort with Supervisor	Job Related Health Concerns	Work Overload	Lack of Resources	Overall Job Stress
Knowledge	-0.092	-0.684**	-0.285	-0.437**	-0.042	-0.498**	-0.587**
Skills	-0.049	-0.530**	-0.221	-0.516**	-0.179	-0.440**	-0.528**
Attitude	-0.214	-0.489**	-0.454**	-0.596**	-0.177	-0.323	-0.565**
Effectiveness	-0.281	-0.274	-0.618**	-0.459**	-0.233	-0.309	-0.510**
Overall Job Performance	-0.145	-0.673**	-0.411*	-0.632**	-0.164	-0.520**	-0.683**

*p<0.05 **p<0.01

According to the data presented in Table 3, Job description conflict, job related health concerns and lack of resources had strong negative relationship with all the dimensions of performance. From the data, 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 conflicts has strong negative correlation with knowledge (-0.684**), attitude (-0.530**), skills (-0.489**) and this correlation is significant at the significant level of 0.01 using two-tailed test. The correlation between over all job stress and job performance among Type B house officers was negative ($r = -0.683^{**}$, $p < 0.01$). The data demonstrate strong support that there is an inverse relationship between job stress and job performance among Type B house officers.

RECOMMENDATIONS

Identification of house officer's personality traits will be helpful in assessing stress and designing different stress coping strategies to reduce their level of stress and improve their performance. In order to reduce the job stress, organizations need to improve the working environment as a preventive measure and to enhance the performance of employees.

CONCLUSION

The basic purpose of the study was to investigate the Stress Performance relationship in different personality types. 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.

According to the results, it has been observed that the correlation between job stress and job performance among house officers with Type A personality characteristics is high. The results support the hypothesis that the Type A individuals experience more stress than Type B. Although Type As have been found to work longer hours, travel more, and be more confident about their own abilities than Type B individuals in occupational settings. Research does not conclusively support the proposition that Type As will consistently outperform their Type B counterparts.

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