COMPARISON OF JOB SATISFACTION AND STRESS AMONG MALE AND FEMALE DOCTORS IN TEACHING HOSPITALS OF KARACHI

Ali Khan Khuwaja, Riaz Qureshi*, Marie Andrades*, Zafar Fatmi,

Nadya Khan Khuwaja**

Department of Community Health Sciences, *Family Medicine, and **Diagnostic Center, The Aga Khan University, Karachi

Background: Job dissatisfaction and stress among doctors affect the quality of health care. We assessed the levels of satisfaction for workplace characteristics and job stress among doctors of three teaching hospitals in Karachi. **Methods:** A postal-survey was conducted between May to June 2002. Satisfaction for workplace characteristics and stress were inquired and graded by Likert scale (1=very low to 5= very high). Questions were also asked about its affect on their lives. In order to calculate the differences in means of job satisfaction and stress score by sex of doctors, chi-square and t-test with 95% confidence interval (CI) were used. Out of 270 doctors approached conveniently, 189 (70%) responded and 182 questionnaires were found complete for analysis. **Results:** Majority (68%) of the doctors was not satisfied with their jobs. Overall, the mean scores for satisfaction were low for workplace characteristics. Lowest scores were found for pay and benefits 2.12 (SE 0.8), safety and security 2.15 (SE 0.8) and workload 2.69 (SE 0.9). Female doctors had significantly lower satisfaction about workload (mean job satisfaction score difference = 0.60; 95%CI, 0.24-0.97), relation with colleagues (mean job satisfaction score difference = 0.49; 95%CI, 0.11-0.87) and autonomy (mean job satisfaction score difference = 0.45; 95%CI, 0.07-0.82) as compared to their male counterparts. Overall, 48% of doctors graded job stress from high to very high levels. **Conclusion:** Majority of doctors working at these teaching hospitals of Karachi had poor satisfaction level for workplace characteristics and higher levels of job stress. This suggests that immediate steps should be taken for their control and management. This study invites further research to explore, implement and evaluate intervention strategies for prevention of stress and improvement in job satisfaction.

Keywords: job satisfaction; stress; doctors;

INTRODUCTION

Stress is the psychological and physical state that results when the resources of the individual are not sufficient to cope with the demands and pressure of the situation.1 Level of job satisfaction and stress can affect both individuals and organization. At the individual level, low level of job satisfaction and high level of job stress are threat to mental and physical health, quality of life, goal achievement and personal development. Whereas, for the workplace these conditions lead to increased absenteeism, conflict and turnover, and reduced quality and quantity of work. Thus identification of factors responsible for stress and its management at its primary level has long term benefits both for employee and employer.

Job stress is a recognized problem in health care workers2 and doctors are considered to be at particular risk of stress and stress related psychosocial problems. Doctors have higher degree of

psychological morbidity,3-5 suicidal tendencies6 and alcohol dependence7 than controls of comparable social class. Caplan reported that about half of senior medical staff suffers from high level of stress and a similar proportion suffers from anxiety.8 Similarly, Firth-Cozens found that half of the junior doctors in their pre-registration year were suffering from emotional disturbance.9

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,10 patient's satisfaction with the doctor,11,12 patient's adherence to treatment13 and decreases doctor's turnover.14,15 Studies from West 2,16 deduce that long working hours and over-work are important factors for job dissatisfaction and stress among doctors.

To best of our knowledge, there is no study available to assess the level of job satisfaction and stress among doctors in Pakistan. Our investigation aimed to assess level of satisfaction for workplace characteristics and of job stress among doctors working in teaching hospitals of Karachi, Pakistan. We also aimed to compare these variables to identify the differences in various workplace characteristics by different sex of doctors.

MATERIAL AND MEHODS

This was a cross-sectional, postal survey. A pre-tested, structured questionnaire and a pre-paid return envelope were sent to 270 doctors on convenience basis during the months of May and June 2002. Respondents were given assurance of confidentiality through a covering letter with the questionnaire. A reminder was sent after one month to those who didn't respond. We selected three tertiary care teaching hospitals representing both public and private sector, providing secondary and tertiary care to a large number of populations from Karachi as well from other parts of the country. We received the responses from 189 (70%) doctors and among them 182 were found complete for analysis.

Doctors working as interns, part-time, employed in the hospital for less than six months and those not directly concerned with patient's care provision (pathology, microbiology, radiology, anesthesia and community medicine) were excluded from the study.

Data collected on demographic and professional characteristics were sex, age, marital status, years since graduation (MBBS), level of qualification, average number of patients seen per week and current working status.

Workplace characteristics for level of job satisfaction were identified through consensus building technique i,e., twenty doctors were invited to list down workplace characteristics that affect job satisfaction. The ten most frequently identified workplace characteristics that related to job satisfaction were included in the questionnaire (Table 1). These were physical working conditions, working relation with colleagues and fellows, recognition and motivation, safety and security, workload, rate of pay and benefits, opportunity to use skills and ability, professional growth and development, autonomy, and adequate resources. Respondents graded it on five-point Likert Scale (1 = very low to 5 = very high). Similarly, level of job stress was assessed by rating it on five point Likert Scale. In addition, doctors were asked to identify the affect of stress on their personal lives (family life, mental health and physical health).

Statistical Package for Social Sciences (SPSS) version 11 was used for data analysis. Percentages and mean scores with standard error (SE) were calculated for demographic and workplace characteristics. In order to calculate difference of categorical variables by sex of doctors, chi-square test was used and for continuos variables by assuming the equal interval between different scores of Likert Scale, t-test with 95% confidence interval (CI) for the differences of means was calculated.

RESULTS

Demographic and professional characteristics of respondents are shown in table 2. There were 58% male and 42% female doctors. Majority of them was 35 years or older (61%) and married (79%). Fifty three percent of the doctors were qualified since more than 10 years. Nearly half of the respondents had post-graduation diploma/degree and 46% were seeing more than 100 patients per week. Thirty-three percent respondents were trainee doctors, 29% Family/General practitioners and 38% Faculty/Consultants.

Majority (68%) of the doctors were not satisfied with their jobs, females more than males (males 65% and females 72%; p = > 0.05). Mean score for workplace characteristics for job satisfaction are given in table 3. Characteristics with least satisfaction were pay and benefits (2.12, SE 0.8), safety and security (2.15, SE 0.8), workload (2.69, SE 0.9), adequate resources (2.69, SE 0.9) and physical working conditions (2.79, SE 0.8). Significant differences for job characteristics by sex (table 4) were found for workload (mean job satisfaction score difference = 0.60; 95%CI, 0.24 to 0.97), relation with colleagues and fellows (mean job satisfaction score difference = 0.49; 95%CI, 0.11 to 0.87) and autonomy (mean job satisfaction score difference = 0.45; 95%CI, 0.07 to 0.82).

About half (48%) of the doctors graded job stress from high to very high levels. The mean stress score was 3.32 (SE 0.09). Females had higher level of stress (mean score = 3.39; SE 0.12) than males (mean score = 3.27; SE 0.14) but this was not statistically significant (mean difference = - 0.12; 95%CI, - 0.25 to – 0.49) (figure 1). Percentages of different affects of stress on doctor's personal lives are shown in figure 2. Affect on family life was reported by 66% of doctors (female 79% and male 57%) and this was statistically significant (p vale = 0.001). Forty-five percent of doctors reported that job stress affects on their physical health and 53% said that it affects their mental health; however these results were not significantly different in different sex.

DISCUSSION

It is highlighted in this study that majority of doctors were not satisfied with their jobs and overall had low level of satisfaction for work place characteristics. Characteristics where female doctors scored significantly lower than males were workload, relationships with colleagues and fellows and autonomy. In our culture, where males are in majority among any working group, interaction and relationship of females with them is not customary and males have more autonomy and freedom than their female counterparts.

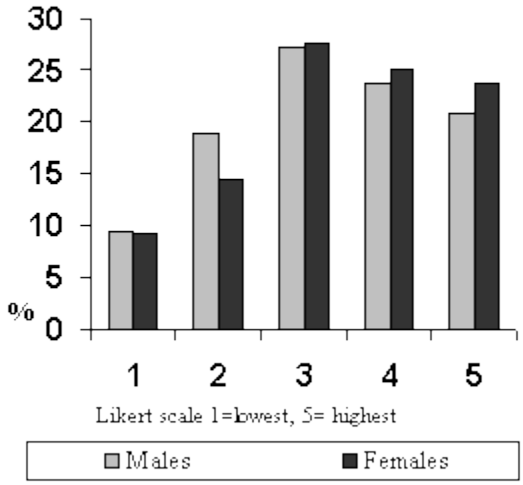
Job stress leads to poor performance at work and negatively affects the health of an individual. Stress is inherent in medical career,17 and leads to poor quality of care, affects career longevity, and causes personal distress. Jennifer and colleagues18 shows that dissatisfied physicians were much more likely to report difficulties in caring for patients, continuing good doctor-patient relationship, spending adequate time with patients, and providing quality care. This study showed that high level of stress prevails in both sexes among doctors in teaching hospitals of Karachi.

In England,19 the most significant factor of stress for female general practitioners was the stress of the job interfering with family life,

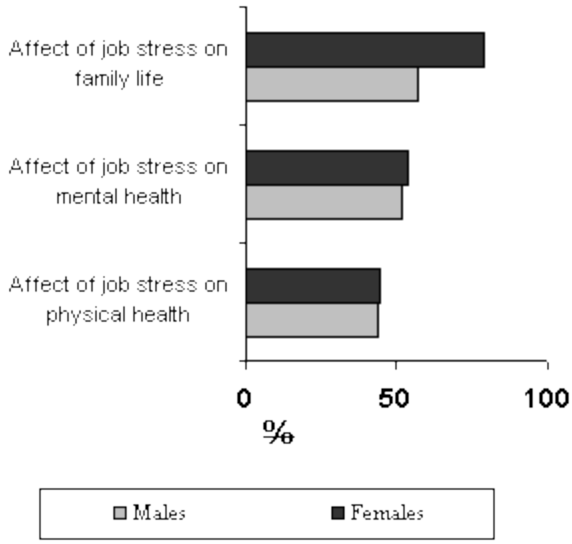
Figure-1: Level of job stress among doctors sex

Figure 2. Affects of job stress among doctors

whereas for male general practitioners, the work-home interface was the least important factor. In this study also, female doctors reported more about job stress and its affect on their family lives compared to male doctors. Female doctors have greater household responsibilities and are required to take care of the children and other family members as compared to their male counterparts. Majority of respondents from both sexes also identified the affects of stress on physical and mental health, which is again alarming.



The best way to deal with stress is to eliminate it at its origin i,e., the stress should be dealt in terms of preventive rather than as a curative strategy. Recognizing problems and dealing with them positively and pro-actively, is the cost-effective way forward in the management of stress. These results imply that the focus of change should be on prevention at the primary level. For example, providing security to doctors, appropriate pay and benefits, revising job plans, ensuring adequate hours of work and adequate number of doctors to share the workload and responsibilities and provision of adequate resources and physical working conditions.



In addition, the role of social support and relaxation techniques as stress coping strategies should not be overlooked as contributory factors for the well being of the doctors. Thus an integrated approach for successful occupational stress management should be advocated, which seeks to manage stress at the individual and organizational levels. Individual approaches include stress management training and one-to-one psychology service - clinical, occupational and health counseling while organizational interventions ranging from structural (for example work schedules, physical environment) to psychological (for example social support, control of over-work, participation). However, it is also necessary that doctors are encouraged to use these services.

Table 3. Mean and standard error scores of workplace characteristics for job satisfaction:

Characteristics (n = 182)	**Mean score***	**Std. Error**
Physical working conditions	2.79	0.08
Working relation with colleagues and fellows	2.82	0.09
Recognition and motivation	2.88	0.07
Safety and security	2.15	0.08
Workload	2.69	0.09
Rate of pay and benefits	2.12	0.08
Opportunity to use skills and ability	3.31	0.08
Professional growth	3.08	0.08
Autonomy	2.81	0.09
Adequate resources	2.69	0.09

* Five-point Likert Scale (1 = very low to 5 = very high).

This study has some limitations. We could not contact a representative sample of all medical doctors of Karachi because it was proved challenging and study sample was on convenience basis thus selection bias remains a possibility and generalizability of the results is in question. Nevertheless, we were able to collect information from three major hospitals of the city that represent private as well as public sector. The data of this study was 'self-reported' and therefore, there may be a reporting bias. We had about 70% response rate, Keeping in mind the poor registration and postal system in our local scenario, this response rate is reasonably good and comparable with other postal surveys conducted in other parts of the world.2,16

Table 4. Mean scores and standard errors of workplace characteristics for job satisfaction by sex

Characteristics	Mean (SE) Male (n = 106)	Mean (SE) Female (n = 76)	P value Job satisfaction score (95%CI)	Difference in mean
Physical working conditions	2.89 (0.11)	2.64 (0.12)	.129	0.24 (- 0.08, 0.56)
Relation with colleagues and fellows	3.03 (0.13)	2.54 (0.14)	.011	0.49 (0.11, 0.87)
Recognition and motivation	2.96 (0.11)	2.78 (0.09)	.209	0.19 (- 0.12, 0.49)
Safety and security	2.16 (0.12)	2.14 (0.12)	.927	0.02 (- 0.32, 0.35)
Workload	2.94 (0.13)	2.34 (0.13)	.001	0.60 (0.24, 0.97)
Rate of pay and benefits	2.16 (0.12)	2.05 (0.12)	.530	0.11 (- 0.24, 0.45)
Opportunity to use skills and ability	3.25 (0.12)	3.39 (0.10)	.339	- 0.15 (- 0.47, 0.17)
Professional growth	3.08 (0.13)	3.09 (0.11)	.922	- 0.02 (- 0.37, 0.33)
Autonomy	3.00 (0.12)	2.55 (0.14)	.019	0.45 (0.07, 0.82)
Adequate resources	2.79 (0.14)	2.54 (0.12)	.183	0.25 (- 0.14, 0.64)

Despite these limitations, however, in conclusion, this work provides some insight about the satisfaction levels of workplace characteristics, stress and its affect among doctors. It contributes to the acknowledged need for further research to explore sources of stress among doctors, their possible solutions and preventive measures and also to determine the effects of any change secondary to implementation of preventive strategies at different levels.

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Address for Correspondence

Dr. Ali Khan Khuwaja, Department of Community Health Sciences, The Aga Khan University, Stadium Road, P.O.Box-3500, Karachi, Pakistan.

Email: ali.khuwaja@aku.edu

Table 1. Definitions of workplace characteristics that effects on job satisfaction

Characteristic	Definition
Physical working conditions	degree to which the physical working conditions are appropriate (lighting, ventilation, cooling, water supply, furniture, etc)
Working relation with colleagues and fellows	degree to which co-workers and fellows are supportive in work-related matters
Recognition and motivation	degree to which rewards and punishments are related to performance
Safety and security	danger of physical violation at job place by patients, their relatives and others
Workload	amount of work and responsibility given to accomplish within time limits
Rate of pay and benefits	amount of pay and benefits like medical coverage, insurance, facilities of loans, etc provided by administration
Opportunity to use skills and ability	degree to which working conditions offers varied work that allows doctors to use their clinical skills and abilities
Professional growth and development	extent to which a doctor is able to gain skills and knowledge through his/her work and acquire promotion
Autonomy	the extent to which the job provides substantial freedom and discretion in scheduling work and in determining how the job will be completed
Adequate resources	availability of resources for completing work-related tasks like provision of diagnostic facilities for patients, library, Internet and other information sources that helps to diagnose and manage the diseased person

Table 2. Demographic and professional characteristics of responding doctors

Variable	Number (n = 182)	Percentage
Sex		
Male	106	58
Female	76	42
Age (years)		
< 35	71	39
35 – 49	88	48
≥ 50	23	13
Marital status		
Single	38	21
Married	144	79
Years since qualification (MBBS)		
< 10	85	47
≥ 10	97	53
Medical qualification		
MBBS only	99	54
Post-graduate diploma/degree	83	46
Current working status		
Trainee	60	33
Family/General Practitioner	52	29
Consultant/Faculty	70	38
Average number of patients seen per week		
< 50	45	25
50 – 100	52	29
> 100	85	46