International Journal of Endorsing Health Science Research
©Int. j. endorsing health sci. res.
Published by Advance Educational Institute and Research Centre

IJEHSR

Original Article

Level of occupational stress and its associated factors among house officers of Dow University of Health Sciences

Ambreen Shahzad, Saba Aijaz Ali, Urooj Fatima, Huda Erum & Rimsha Munawar

Institute of Physical Medicine and Rehabilitation (IPMR), Dow University of Health Sciences (DUHS)

DOI:10.29052/IJEHSR.v7.i1.2019.33-38

Corresponding Author Email:
amber.physio@gmail.com

Received 08/10/2018
Accepted 20/01/2019
Published 01/03/2019

OPEN ACCESS

Abstract

Background: Work-related stress has always been an important concern in medical practice. Occupational stress and pressure in the medical profession, social expectations, training schedule, hostile job environment, and time management issues are the specific stressors in medical practice. Definite steps must be taken to overcome the effects of occupational stress. The aim of this study is to measure the level of occupational stress and its associated factors among house officers of Dow University of Health Science Ojha Campus, Karachi.

Methodology: A cross-sectional study was conducted from April 2018 to July 2018, including 100 house officers from different departments including M.B.B.S., Doctor of Physiotherapy (DPT), Nursing, and Institute of Medical Technology (IMT). Informed consent was given to all those house officers who were working at the time of the study and fulfilled the inclusion criteria i.e., age 24-30 years, both male and females. Medical professionals, age >30 years, any infectious diseases were excluded. Self-designed questionnaire for demographics and workplace stress scale questionnaire based on 8 parts was used for stress evaluation and data recording. The collected data was then analyzed using SPSS 16.0 version and the ANOVA test was applied.

Results: Almost equal level of stress among house officers of different departments was observed. Results were compared among different departments as mean stress level i.e. DPT *19±5.679, IMT 21.08 ± 5.627, IoN as 19.08 ± 4.890 and MBBS as 19.40 ± 4.907. According to the study results, there was no significant difference in stress level between house officers of different departments.

Conclusion: Continuous or progressive stress is commonly seen among young medical professionals and is more challenging to prove their work and identity in an exhausting work environment. So, there is a need for awareness to reduce burn out and stress management strategies should be taken for improvement of mental health among young health professionals.

Keywords

Stress, Psychological, Occupational Stress, Burnout

Check for updates

Introduction

Occupational stress defined by the National Institute for Occupational Safety and Health as the set of harmful emotional, mental and physical responses that may happen when the job requirements are not meeting worker's skill or available resources[1]. Physicians and other medical health care providers face this phenomenon more often while dealing with patients. Nowadays, in the modern world, level of high stress became a chronic condition which could lead to psychological and chronic health problems like diabetes, hypertension, weak immune system, hallucinations, depression and anxiety[2]. Most of the physicians and health care workers could face burnout phenomenon more frequently during their job as compared with other occupation[1].

Excessive demands on the workload associated with occupational stress can cause low decision-making ability and can increase various health hazards like coronary diseases, headache, body aches, hypertension, musculoskeletal problems, anxiety, and restlessness[1]. Other types of chronic stressors include depression and low levels of social support, have also seen to increase cardiovascular risks[3]. The overall period of house job is crucial for any medical professional, a number of factors like long working hours, urgent responsibilities, fear of mistakes, lack of rest and sleep, patient's quality-care demands and dealing with the life and death scenarios of patients can affect house officers mental and physical health[4]. Psychiatric disorders prevalence such as stress, anxiety and depression among the nurses and physicians found respectively to be 25% and 35% among mental health professionals according to a study conducted in Singapore[5].

Recent occupational health studies suggested that 40 to 50 percent of the working population is being exposed to risky conditions within the workplace environment[6]. New cases of nearly about 68 to 157 million of workplace hazards have been reported because of a variety of job-related demands[6]. American Foundation for Suicide Prevention reported that suicide rates are as high as 70% in male physicians as compared to other medical professionals with stress and depression as major causes[7]. A study conducted to asses stress in junior medical practitioners and subsequently in senior physicians was published by The British Medical Association (BMA) documented that high-stress proportions were found and could cause hazardous effects to the physicians' health and wellbeing and delivery of services to patients[8].

Discussion has been brought up about somnolence and fatigue of doctors and other health care professionals in the context of the well-being of patients and junior doctors' and health services providers' work burden. This topic has currently become a subject of interest in a modern world[9]. Occupational stress can be harmful to an individual psychologically, physically and emotionally. House officers of various departments assumed to have a greater amount of stress in their early career and could have psychiatric disorders. Our aim is to evaluate the level of occupational stress and its associated factors among house officers of a tertiary-care hospital.

Methodology

A cross-sectional study was conducted between April 2018 to July 2018 among house officers of Dow University Hospital, Ojha Campus, Karachi to evaluate the level of occupational stress and its associated risk factors. A total of 100 house officers and internees were enrolled from Dow University Hospital Ojha. Priory a pilot study was conducted for sample size estimation was conducted during April 2018 on a sample of 20 house officers. The sample size was calculated through PASS software (version 11.0) with a 95% confidence interval

(80% power of test) effect size of 0.32 with 2 degrees of freedom.

Informed consent was given to all house officers from specific departments including Bachelor of Medicine and Surgery (MBBS), Institute of Medical Technology (IMT), Doctor of Physiotherapy (DPT) and Nursing who were working at the time of the study and fulfilled the inclusion criteria (age group 24-30 years), both male and female. While Undergraduates of any medical field, subjects with infectious and other diseases like Tuberculosis (TB) / Hepatitis / Human Immunodeficiency Virus (HIV)/Acquired Immunodeficiency Syndrome (AIDS), etc. or with age limit greater than 30 years and those with medical professionals other than house-officers were excluded from the study. After giving consent, participants were asked to fill the Workplace Stress Scale[9]. Workplace Stress Scale was based on eight parts from zero (never) to four (very often). A score of 15 or lower was considered "chilled out and relatively calm", 16 to 20 as "fairly low, 21 to 25 as "moderate stress". 26-30 as severe and 31 to 40 was considered as "stress level is potentially dangerous"

Data was analyzed using SPSS version 16.0. Descriptive statistics and ANOVA test was applied for evaluation of stress level among departments. A p-value < 0.05 was considered significant.

Results

Total of 100 house officers who were working for 5-15 hours from the Out Patient Department, In-Patient Department and Intensive Care Unit were enrolled in the study. Of which 25% were males and 75% were females with a mean age of 25.96 ± 3.741 years. According to the results, the mean number of night shifts was 4.26 ± 5.573. Results in Table I suggest that the Physiotherapy department showed mean stress as 19±5.679, IMT 21.08 ± 5.627, IoN 19.08 ±4.890 and 19.40±4.907 for MBBS. The study gives rise to p-value as 0.470 which is more than 0.05 henceforth study concluded as having no difference in stress level among different departments.

Table 1: Level of stress among house officers of different departments

Departments	Mean±SD	p-Value
Doctor of Physiotherapy (DPT)	19±5.67	0.470
Institute of Medical Technology (IMT)	21.08±5.627	
Institute of Nursing (IoN)	19.08±4.890	
Bachelor of Medicine and Surgery (MBBS)	19.40±4.907	

*ANOVA test is applied to evaluate p value
*SD= Standard Deviation

The results showed that there were 25 male and 75 female house officers out of which total of 79 house officers were stressed. Male house officers were more stressed i.e. 22 males (88%) as compared to female's i.e.57 (76%).

Table 2: Gender based distribution of stressed house officers

		Frequency (n)	Frequency of stressed House Officers
Gender	Male	25	22
	Female	75	57

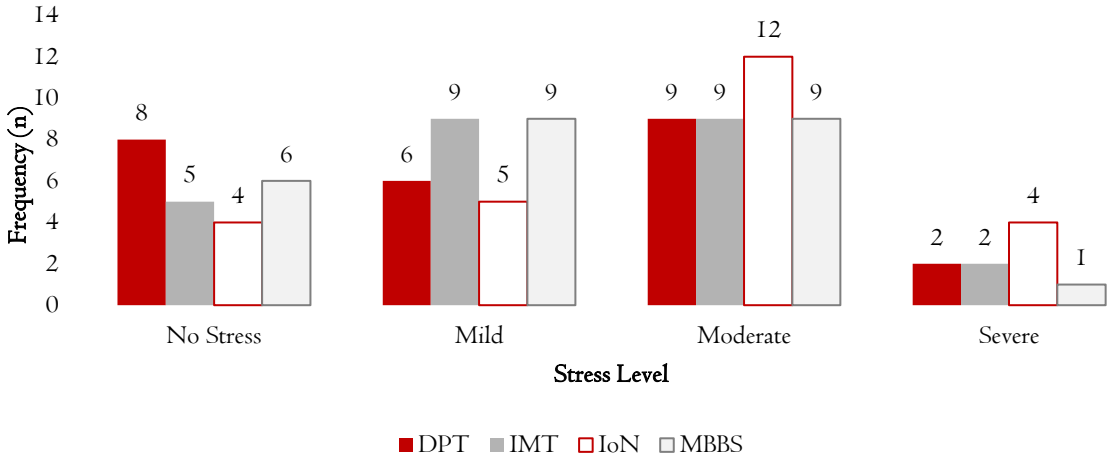

Figure 1: Prevalence of level of stress on departmental level

"Moderate stress" (n=12) was highest among nursing house officers (IoN), (n=4) participants responded for "chill out calm down" and (n=4) for "severe stress" level. MBBS house offices responded level of stress equally for "moderate" and "fairly low" stress, DPT (n=25) were also facing "moderate stress level". IMT (n=25) responded equally (n=9) high for both "moderate stress" and "fairly low stress" level.

Discussion

Our study demonstrated that around 40% of house officers were experiencing "moderate level of stress", then for "fairly low" level of stress while about 2% of them were in a state of "dangerous" level (Figure 1). An insignificant association of occupational stress among house officers was found on the departmental level (Table 1). The level of stress in healthcare workers is becoming a center of attention because of concern for the health of the individuals themselves and because of the possible impact on the quality of patient care. A systemic review was done in Malaysia to explore stress in Malaysian students. Review revealed that 56% of medical students were having stress documenting examinations and academic pressure as significant stressors[10], while the current study was focused on house officers as there was no pressure of examinations and academics. A study published in 2003 in Pakistan by Niaz U, Sehar H, Ali S. indicated that female house officers tend to have high-stress levels than their male counterparts due to reasons including work overburden, medical profession demands, working hours, gender and age[11]. In the current study 75% of respondents were females but did not show any significant difference in stress level.

Various studies across the globe have emphasized that students undertaking professional courses, such as medical and dental studies, are subjected to higher stress. An Indian Study enrolled 1,224 accused, out of which 299 (24.4%) practiced stress. Among them, 102 (34.1%), 115 (38.5%), and 82 (27.4%) were medical, dental and engineering students, correspondingly[12]. Statistically significant association amongst the field of education and stress was found. The introduction of stress management education into the curriculum could prove useful in combatting this problem[12]. However, results varying from the current study may be due to enrolment of house

officers rather than students and all belonging to different medical fields (Table 1).

Health care specialists encompass an important group of persons who are posh by emotional stress because of the inimitable work environment. Satisfaction and stress level with the job are prime factors that impact the individual productivity and quality of work. A multi-center cross-sectional analysis on 626 participants was conducted to find stress level and job satisfaction among health care specialist[13]. The overall occurrence of job stress was 66.2% and job satisfaction was 97.0%. Prevalence of job stress was concluded as moderately higher. In contrary to our study which resulted in insignificant stress level difference among departments (Table 1), which may be due to limited sample size, and being single-centered study[13].

Similar results in our study demonstrated that the stress level was higher among male (88%) as compared to female house officers (76%) (Table 2). House officers of the physiotherapy department were facing "moderate stress" (Figure 1) that's after stress level of house officers were "chill out and calm down". IMT house officers responded equally high for "moderate and fairly low" stress level (Figure 1) than for chill out and calm down level. "Moderate stress" was highest among nursing house officers (Figure 1), least likely participants responded for "chill out and calm down" and "severe stress" level. On the other hand, MBBS house officers responded to the level of stress as "moderate and fairly low" stress. Senior's support, job pressure, personal life issues, high expectations, increase working hours and little or no appreciation at the workplace were the main stress causing sources among house officers. While any such departmental differences were not observed in former studies[13].

This study has some limitations. All the data were based on self-reported questionnaires; therefore, bias introduced by the common method variance cannot be avoided. Moreover, healthcare workers belong to a special group, and we cannot extend the results to other populations without clear evidence. More study should be conducted to evaluate the impact of stress on quality of life among allied health professionals and the development of coping stress strategies on an organizational level.

Conclusion

There was a moderate level of prevalence of stress among house officers. Occupational stress at the initial stage of practice among allied health professionals is a major part of concern because it can impact on job performance and mental health of junior professionals in a challenging and tough environment. Therefore, proper measures should be taken to overcome stress among house officers during their training and there must be a stress management strategy to improve the quality of life of young professionals.

Conflicts of Interest

None.

Acknowledgement

We would like to thank our project supervisor for assisting and guiding us throughout in the project and we are immensely grateful to ethical board and committee for approving our study to continue the work and we would highly appreciate the house officers of Dow University Hospital, Ojha who contributed in our study.

Funding

None.

References

1. Kim K,Lee S,Choi YH. Relationship between occupational stress and depressive mood among interns and residents in a tertiary hospital, Seoul, Korea.Clin exp emerg med. 2015; 2(2): 117–122.
2. Shrivastava R, Bhimte B. A cross sectional study to assess physical and mental health status due to occupational stress of nursing staff at tertairy care centre of Central India. GJRA.2018; 6(3).
3. Krantz DS, McCeney MK. "Effect of psychological and social factors on chronic diseases a critical assessment of research on coronary heart disease". Annu Rev Psychol. 2002; 53: 341-369.
4. Sakata Y, Wada K, Tsutsumi A, Ishikawa H, Aratake Y, Watanabe M. "Effort-Reward Imbalance and Depression in Japanese Medical Residents". J Occup H. 2008; 50(6):498-504.
5. Yang S, Meredith P, Khan A. "Stress and burnout among healthcare professionals working in a mental health setting in Singapore". Asian J Psychiatr.2015; 15:15-20.
6. Oluoch I, Njogu P, Ndeda JOH. "Effects of Occupational Safety and Health Hazards' Exposure onWork Environment in the Water Service Industry within Kisumu County - Kenya". IOSR-JESTFT. 2017; 11(5):46-51.
7. Familoni, OB. "An Overview of Stress in Medical Practice." Afr Health Sci. 2008; 8(1):6-7.
8. Antoniou AS, Davidson MJ, Cooper CL. Occupational stress, job satisfaction and health state in male and female junior hospital doctors in Greece. J Manage Psychol. 2003; 18(6):592-621.
9. Laraqui O, Manar N, Laraqui S, Boukili M, Ghailan T, Deschamps F, El Houssine Laraqui C. Job perception and well-being among healthcare workers in Morocco. Sante Publiquw. 2017; 29(6):887-895
10. De Bruin GP. The dimensionality of the general work stress scale: A hierarchical exploratory factor analysis. SA J Ind Psychology. 2006; 32(4):68-75.
11. Salam A, Yousuf R, Abu Bakar SM,Haque M.Stress among medical students in Malaysi: A systemic review of literatures. Int Med J.2013; 20(6):649-655.
12. Niaz U, Hassan S. The perception of professional women about their job and its effects on psychological well-being. JPPS. 2006;3(2): 83-85.
13. Abu-Helalah ASM, Jorissen SL, Niaz K, Al Qarni AMA. Job stress and job satisfaction among health care professionals. ESJ. 2014; 10(32).