https://doi.org/10.36570/jduhs.2023.1.1655

JDUHS

ORIGINAL ARTICLE

Relationship of Occupational Stress with Psychosomatic Symptoms and Mental Wellbeing in Medical Professionals: An Exploratory Study

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ABSTRACT

Objective To determine the relationship of occupational stress with psychosomatic complaints and mental wellbeing among medical professionals at private hospitals in Rawalpindi.

Methods: Hospital based exploratory study was conducted at Maryam Memorial hospital, Bilal Hospital and Al-Shafi Hospital from January 2022 to June 2022. The study included 150 registered medical practitioners of both genders with a valid Pakistan Medical Commission license and 2-3 years of clinical experience. Subjects were accessed via convenient nonprobability method. A semi structured Work stress questionnaire, as well as a somatic symptom and mental wellbeing scale, were used to collect data.

Results: Out of 150 medical professionals there were 75 (50.0%) females and 75 (50.0%) males in which 118 (78.7 %) were married. Majority of medical professionals were house officers 59 (39.3 %), 54 (36.0 %) were consultant specialist and were 37 (24.7%) emergency/ward assistants. A significantly positive correlation was found between occupational stress and psychosomatic symptoms score (p-value <0.001). Whereas a significantly negative correlation was observed between occupational stress and mental wellbeing score (p-value <0.001). Psychosomatic symptoms score was found to be a significant predictor of having occupational stress this association was confirmed even after adjusting for other variables (β=1.10, 95% CI = 0.91 to 1.28).

Conclusion: The study concluded that occupational stress is the cause of psychosomatic complaints which deteriorates the mental wellbeing of medical professionals resulting in poor patient care.

Keywords: Medical Professionals, Mental Wellbeing, Occupational Stress, Private.

INTRODUCTION

Medical practice is a demanding profession. This is due to the fact that medical workers must respond to the demands of patients and their families in a timely manner. Medical knowledge and techniques, on the other hand, frequently have restrictions and uncertainty. Any medical mistakes or errors can be expensive, dangerous to a patient's life, and sometimes irrevocable. In addition, night work, shift work, and lengthy work hours are all typical in the medical fieldand hence leads to occupational stress.[1]

Occupational stress is described by the National Institute of Occupational Safety and Health (NIOSH) as "harmful physical and emotional reactions that arise when the requirements of the job do not meet the talents, resources, and needs of the worker". [2] Occupational stress has been on the rise recently as a result of globalization and the global financial crisis, which has affected practically all countries, all professions, and all types of workers, as well as families and societies. As a result, it has become a critical issue in every workplace.[3] The workplace stress affects all workers or employees, but it is especially prevalent among health-care professionals, who are a particularly vulnerable group due to the nature of their work environment.[4] However, Healthcare professionals may experience occupational or work-related stress due to organizational issues, an imbalance of demands, their abilities, and social support networks, or any combination of these. Under certain circumstances, this might result in significant distress, burnout or psychosomatic illnesses, which can worsen quality of life and service delivery.[5]

Thus, Medical practitioners' jobs are well-known for being exceedingly stressful. As a result, it was essential to consider how workplace pressures are linked to somatic problems and poor mental health. We conducted this research study with the goal of assisting policymakers in better understanding the situation and implementing appropriate interventions for lowering occupational stress in health facilities in developing

countries such as Pakistan. Also, the results of this study would add to the existing body of knowledge in the field of occupational stress. Therefore, the present study reported the association of occupational stress and psychosomatic symptoms affecting mental wellbeing in medical professionals.

METHODS

This hospital based exploratory investigation was conducted at Maryam Memorial Hospital, Bilal Hospital and Al-Shafi Hospital from January 2022 through June 2022. The study comprised both male and female registered medical practitioners with a valid Pakistan medical commission license and two to three years of clinical experience. All procedures were carried out in accordance with the ethical guidelines (institutional and national) of the supervisory council on human experimentation, and no volunteers were mistreated or abused, both physically and psychologically, during the research.

Two or more work experiences were included so that medical practitioners could comprehend the working environment and recognize workplace pressures. Using the convenience sampling approach, data were collected using a semi-structured occupational stress questionnaire, a somatic symptom questionnaire, and a mental wellbeing questionnaire.

The study protocol was authorized by Air University's Institutional Review Board in Islamabad. In addition, the private hospitals gave their signed consent to the data collection. The study's goal was presented to all of the participants. Confidentiality and anonymity were ensured by obtaining written informed consent. The participants gave their consent to take part in the study. Medical professionals who refused to sign the consent form were prohibited from taking part in the study.

A semi-structured workplace stress scale[6], as well as a somatic symptom scale[7] and a mental wellbeing scale[8], were used to collect data from medical professionals.

The Marlin Company in North Haven, CT, and the American Institute of Stress in Yonkers, NY, developed the workplace stress scale (WSS) (2001). The WSS is made up of eight items that describe how frequently a respondent feels about his or her employment. "Workplace conditions are uncomfortable or even dangerous," and "I believe my employment is negatively harming my physical or mental well-being," are two examples of items on the scale. Item numbers 6, 7, and 8 are reverse-scored in terms of scoring. The scale is a five-point Likert scale that ranges from never (scoring 1) to very often (scored 5). High scores indicate that you are under a lot of pressure at work. Total scores of respondents are interpreted as follows: 15 and below: 16–20: moderate levels of job stress, 21–25: moderate levels of work stress, 26–30: severe levels of work stress, and 31–40: potentially deadly levels of work stress. For the complete scale WSS, Cronbach's alpha reliability coefficient was 0.80.

Furthermore, the Somatic Symptom Scale (SSS-8) is a short questionnaire developed from the full PHQ that is increasingly being used in adults to assess somatic symptom severity and screen for the existence of somatization and somatoform disorders (based on DSM-V criteria). The measure consists of eight items that ask whether or not somatic symptoms such as stomach discomfort or dizziness have been present in the last seven days, as well as their severity (response categories ranging from "not at all" to "very"). The SSS-8 cutoff criteria for low, medium, and high somatic symptom severity are 4-7, 8-11, and 12-15, respectively. The item qualities of the SSS-8 were outstanding, and the reliability (Cronbach's alpha = 0.81) was good.

However, the 14 items on the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) pertain to an individual's mental well-being (thoughts and feelings) in the past two weeks. On a 5-point scale, responses range from "none of the time" to "all of the time." Internal consistency is permissible in the WEMWBS (Cronbach coefficient alpha of .89).

A ten percent sample of the overall sample size was used in the pilot study. The subjects that took part in the pilot study were not included in the main study. Data entry and analysis were done using a Statistical Package for Social Sciences (SPSS) version 20.0. Frequency and percentages were computed for categorical variables like age, gender, and marital status, and designation, department in working, years of experience, work hours, and shift work. Inferential statistics were explored using Pearson correlation to see the relationship between occupational stress, psychosomatic symptoms and mental wellbeing. Moreover, univariate and multivariate regression analyses were used to estimate the association between occupational stress, psychosomatic symptoms and mental wellbeing after adjusting for all the variables found significant in univariate analysis. The p-value of ≤ 0.05 was considered statistically significant.

RESULTS

A total of 150 medical professionals participated in the study, with 35 (23.4%) of them being between the ages of 30 and 40 and other 115 (76.7%) were between the

ages 41-50 years. There were 75 (50.0%) females and 75 (50.0%) males in which 118 (78.7%) were married.

Majority of medical professionals were house officers 59 (39.3 %), some are consultant specialist 54 (36.0 %) and emergency/ward assistants 37 (24.7%).

Furthermore, 65 (43.3%) medical professionals are working in outpatient department while 85 (56.7%) are working in emergency departments. Doctors working for more than 10 hours were 70 (46.7 %) with 82 (54.7%) working in shift work. However, the majority medical professionals 68 (45.3%) had been working for more than 5 years at the time of the study.

Table 1 reveals the relationship of occupational stress with psychosomatic symptoms and mental wellbeing on the basis of demographic characteristics of study participants. Among older age group (41 – 50) years occupational stress was found positively correlated with psychosomatic symptoms score (r: 0.85, p-value <0.001) while negatively correlated with mental wellbeing score (r: -0.45, p-value <0.001) as compared to younger participants. Similarly, in married participants occupational stress was observed positively correlated with psychosomatic symptoms score (r: 0.88, p-value <0.001) while negatively correlated with mental wellbeing score (r: -0.44, p-value <0.001).

Table 2 describes the association of occupational stress with psychosomatic symptoms and mental wellbeing on the basis of occupational characteristics of study participants and results of most of the occupational characteristics showed a significantly positive correlation between occupational stress and psychosomatic symptoms score (p-value <0.001). Whereas a significantly negative correlation was observed between occupational stress and mental wellbeing score (p-value <0.001).

Furthermore, univariate regression analysis in Table 3 revealed that psychosomatic symptoms score was found to be a significant predictor of having occupational stress (β=1.17, 95% CI= 1.07 to 1.27). This association was confirmed in a multivariate regression model, adjusted for mental wellbeing score, designation, department in working, years of experience, work hours, and shift work (β=1.10, 95%CI = 0.91 to 1.28).

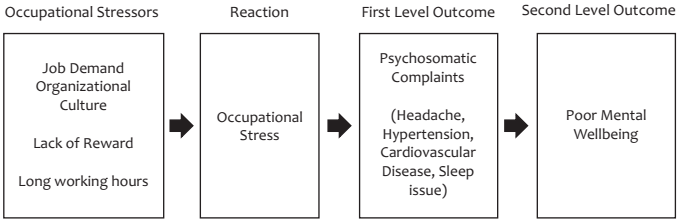

Figure 1: Conceptual Model of Occupational Stress

DISCUSSION

In our study, the association of occupational stress with psychosomatic symptoms and mental wellbeing were examined on the basis of demographic variables such as age and marital status. The result findings indicated that among

Table 1: Correlation of occupational stress with psychosomatic symptoms and mental wellbeing stratified on the basis of demographic characteristics of study participants (n=150)

	Total	Occupational Stress	
		Psychosomatic Symptoms Score r (p-value)	Mental Wellbeing Score r (p-value)
Age (Years)			
30-40	35	0.08 (0.662)	0.21 (0.221)
41-50	115	0.85 (< 0.001) *	-0.45 (< 0.001) *
Gender			
Male	75	0.05 (0.666)	0.40 (< 0.001) *
Female	75	0.07 (0.569)	-0.12 (0.317)
Marital Status			
Single	20	0.17 (0.472)	-0.04 (0.870)
Married	118	0.88 (< 0.001) *	-0.44 (< 0.001) *
Divorced	12	0.65 (0.022)	-0.15 (0.646)

Pearson correlation applied, *p-value ≤ 0.05

Table 2: Correlation of occupational stress with psychosomatic symptoms and mental wellbeing stratified on the basis of occupational characteristics of study participants (n=150)

	Total	Occupational Stress	
		Psychosomatic Symptoms Score r (p-value)	Mental Wellbeing Score r (p-value)
Designation			
Consultants/Specialists	54	0.89 (< 0.001)*	-0.81 (< 0.001)*
House officers	59	0.89 (< 0.001)*	-0.34 (0.009)*
Emergency/Ward Assistants	37	-0.08 (0.636)	0.61 (< 0.001)*
Department in working			
Outpatient Department	65	0.13 (0.407)	0.23 (0.150)
Emergency Department	85	0.86 (< 0.001)*	-0.38 (< 0.001)*
Years of experience			
≤ 2 years	22	0.71 (< 0.001)*	-0.45 (0.037)*
3-5 years	60	0.89 (< 0.001)*	-0.45 (< 0.001)*
More than 5 years	68	0.83 (< 0.001)*	-0.42 (< 0.001)*
Work hours			
8 hours	32	0.58 (< 0.001)*	-0.29 (0.096)
10 hours	70	0.87 (< 0.001)*	-0.47 (< 0.001)*
12 hours	48	0.21 (0.153)	0.35 (0.013)
Shift work			
No	68	0.87 (< 0.001)*	-0.61 (< 0.001)*
Yes	82	0.89 (< 0.001)*	-0.32 (0.003)*

Pearson correlation applied, *p-value ≤ 0.05

older age group occupational stress was found positively correlated with psychosomatic symptoms score (r: 0.85, p-value <0.001) while negatively correlated with mental wellbeing score (r: -0.45, p-value <0.001) as compared to younger participants. The findings are in line with the previous study which states that due to their dangers to their physical and functional health, older individuals are the group most vulnerable in health profession. Additionally, they are more vulnerable to physical and psychological issues such work stress due to age-related risks, ageism, and wellbeing.[9]

On the other hand, the results of the current study indicated that psychosomatic symptoms and mental wellbeing was found to be a significant predictor of having occupational stress (β=1.17, 95% CI= 1.07 to 1.27). According to earlier research, nurses who had more professional stress were more likely to experience poor sleep, cardiovascular illnesses, and undesirable psychosomatic wellness (such as anxiety, sadness, discomfort, lower back pain, headaches, and appetite loss). These stress-related psychosomatic issues are linked to a higher risk of illness and poor health.[10] However, according to previous study, Job stress also results in job loss, workplace conflict, health issues, job dissatisfaction, decreased creativity, decreased professional satisfaction, and decreased ability to make wise decisions on time, feelings of inadequacy and depression, disgust and fatigue from work, decreased energy and productivity, and decreased quality of nursing care[11] and these factors raise the risk of work-related injuries,[12] and research has demonstrated that workplace stress affects the availability of medical care either directly or indirectly.[13]

Furthermore, workplace stress and associated factors can lead to absenteeism, higher turnover, early retirement, reduced productivity, and lower service or product quality. Previous studies have reported that a variety of factors contribute to

Table 3: Associated factors of occupational stress with psychosomatic symptoms score and mental wellbeing score (n=150)

Variables	Univariate analysis		Multivariate analysis	
	β (95 % C.I)	p-value	β (95 % C.I)	p-value
Psychosomatic Symptoms Score	1.17 (1.07 to 1.27)	< 0.001 *	1.10 (0.91 to 1.28)	< 0.001 *
Mental Wellbeing Score	-0.69 (-0.91 to -0.47)	< 0.001 *	0.03 (-0.11 to 0.17)	0.654
Designation				
Consultants/Specialists	Ref		Ref	
House officers	-0.72 (-2.31 to 0.87)	0.377	-0.97 (-2.26 to 0.32)	0.143
Emergency/Ward Assistants	-6.37 -8.17 to -4.56)	< 0.001 *	-0.79 (-1.99 to 0.41)	0.197
Department in Working				
Outpatient	Ref		Ref	
Emergency	4.80 (3.12 to 6.49)	< 0.001 *	-0.19 (-1.45 to 1.06)	0.759
Years of Experience				
≤ 2 years	Ref		Ref	
3-5 years	-3.41 (-5.70 to -1.12)	< 0.001 *	-0.19 (-1.42 to 1.03)	0.759
More than 5 years	-5.42 (-7.68 to -3.17)	0.004 *	-1.14 (-2.56 to 0.27)	0.113
Work Hours				
8	Ref		Ref	
10	-3.34 (-4.96 to -1.73)	< 0.001 *	-0.62 (-1.70 to 0.46)	0.262
12	-8.69 (-10.4 to -6.96)	< 0.001 *	-0.79 (-2.30 to 0.72)	0.305
Shift work				
No	Ref		Ref	
Yes	-0.85 (-2.45 to 0.78)	< 0.001 *	-1.09 (-2.06 to -1.25)	0.027*

Multivariate analysis adjusted for variables found significant in univariate analysis, C.I = confidence interval, *p-value ≤ 0.05

occupational stress. Gender, work shift, illness, marital status, and work unit, for example, were all found to be strongly linked with workplace stress in a study done in Addis Ababa.[14] Work experience and the number of children were also found to be major risk variables for workplace stress in a study conducted in Kampala, Uganda. [15] Another study conducted in Melbourne, Australia found that social support, nurse empowerment, and self-determination were all drivers of occupational stress.[16] Similarly, a study in Jordan found that general practitioners, dentists, and pharmacists experienced the most workplace stress, while physician specialists experienced the least.[17] Furthermore, excessive paper work, health reforms, bureaucratic intervention, excessive hours, and on-call work were identified as in a research conducted in New Zealand.[18] important factors related with occupational stress Workplace stress was shown to be influenced by sex, age, religion, ethnicity, marital status, child raising, professional degree, monthly wage, job experiences, and department of work, according to a study conducted in Worabe, South West Ethiopia.[19]

All the associated factors of occupational stress leads to poor mental wellbeing in medical professionals. Naturally, occupational well-being is critical to physicians' everyday work, as it allows them to feel energized and happy while providing the best therapy for their patients.[20] But, the factors such as busy working hours, life commitments, night shifts, work load, burnout disturbs the wellbeing of physicians which leads to occupational stress and emergence of psychosomatic symptoms.[21] However, the prevalence of

psychosomatic disorders was higher among Indian hospital nurses who self-reported higher stress levels; exposure to stressors at home and at work was associated with stomachaches, back pain, and tight shoulders and neck.[22] Thus, all the above cited findings shows that there is an association of work stress with psychosomatic symptoms and mental wellbeing.

However, scarce literature is available on understanding the occupational stress and associated symptoms experienced by medical professionals in private hospitals of Pakistan. So the current study will help to fill the gap in the literature. Also, the study findings will support the development of proactive programs to lessen stress for medical professionals by clinicians, administrators, and policy makers. These initiatives will probably also boost the resilience and general health of healthcare workers as well as raise the standard of available mental health services. Furthermore, higher authorities of hospitals will be able to recognize their employees' occupational stress as a result of this study, which will lead to increased job satisfaction.

This research has several limitations. Since every piece of data was derived from self-reported surveys, bias brought about by common method variance cannot be prevented. Additionally, because healthcare professionals are a unique group, it is impossible to extrapolate the findings to other demographics in the absence of solid proof. More research should be done to assess the effects of stress on allied health workers' quality of life and the creation of organizational stress coping mechanisms.

CONCLUSION

The study concludes that occupational stress is the cause of psychosomatic complaints which deteriorates the mental wellbeing of medical professionals resulting in poor patient care. Also, in researcher's view social support and the psychosocial work environment in medical care organization should be enhanced.

ETHICAL APPROVAL: Ethical approval of this study was obtained from Department of Humanities, Education & Psychology, Air University Islamabad Ethical Review Committee prior to initiation of the research work.

AUTHORS' CONTRIBUTIONS: AM: Writing the original draft, data collection, and final approval of the version to be published.
SS: Design, writing, review and editing.
UM: Interpretation, critical revision, and final approval.

CONFLICT OF INTEREST: The authors declared no conflict of interest.

FUNDING: None

Received: May 05, 2022
Accepted: September 29, 2022

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