

Assessment of psychosocial work environment of doctors

Original Article

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ABSTRACT

Introduction: Psychosocial work environments pertain to interpersonal and social interactions and it can influence behavior and development in the workplace. Objective: To test a comprehensive and theory-based psychosocial work environment questionnaire, and analyze associations with mental health in a sample of doctors in a tertiary care hospital in Lahore, Pakistan.

Methodology: It was a cross-sectional study, conducted at Shaikh Zayed Hospital (SZH) Lahore, from March 2017 to June 2017. A sample size of 100 working doctors was selected. The technique was non-probability. After informed consent, each doctor was given the NRCWE's Copenhagen short questionnaire consisting of 39 questions. The analysis of data was entered in SPSS 21. The frequency of obtained data was calculated and demographic variables were elaborated. Independent t-test sampling was applied, and tables and pie chart were drawn.

Results: This study included worse working conditions in terms of stress, burnout, work-family conflict, and social support from superiors. High levels of stress and burnout were found. Doctors were almost satisfied with their jobs (scores near to average but less than average). Male doctors were found to be more satisfied with their jobs than female doctors.

Keywords: work environment, burnout, stress.

INTRODUCTION

Psychosocial work environment assessment informs us about the psychological and social issues faced by the employees. When one works at a place, a safe environment and occupational health are the foremost challenges faced by an individual. The reason for the demand for a safe and healthy environment at the workplace is continuously evolving due to the nature of work and the impact on the people doing it. The well-being of a human is influenced by the environment and type of work. The International Labor Association defines psychosocial

risk in terms of the interaction between work content, work organization and management, working conditions, and the skills and needs of the workers.[1] It has been proven that the employees face different risks to their health. The existing literature suggests the need for identifying psychosocial risk factors such as labor demands, workplace ethics, equality, values, physical fitness, and offensive behaviors.[1]

These psychosocial risk factors related to the workplace are associated with mental health problems. Levels of stress at the workplace, the extent of concentration, time demanded by each job, and effort-yield imbalance have a great role in predicting mental health problems. [2] According to a study done in six dental institutions of Rawalpindi and Islamabad, a significant percentage of dentists in Islamabad were struggling with moderate to severe depression.[2]

According to "Karasek's Job Strain model", high strain jobs result in anxiety, depression, and physical illness. In Japan, the incidence of mental health problems is on the rise in the professional population and thus, the primary prevention of mental health problems and maintenance of emotional well-being are the most important priorities of authorities and the workers themselves.[3] Out of all mental health problems, depression is the most common one mental health among employees that is characterized by persistently low mood, decreased interest, feeling of poor self-worth, suicidal behaviors, and vegetative symptoms.[2, 3] It can be highly associated with the environment; a person is living or working in. A study



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conducted (2016) among post-graduate residents in German hospitals reported depression among 9% of the participants. The distress level varied significantly among specialties with the most significant stress among Surgeons and Anesthesiologists.[4]

Besides depression among doctors, other mental health issues were burnout, emotional exhaustion, and stress. In another study among Japanese psychiatrists in 2013, emotional exhaustion was found to have an association with the workplace environment too. Emotional exhaustion has been shown to have an inverse relationship with an appreciation of the magnitude of personal achievement.[5] Moreover, another study conducted to assess the magnitude of mental disorders in European countries showed that organizational justice and workplace social conditions particularly bullying were significantly associated with stress levels.[6]

The time duration of job/service was another factor affecting health in various aspects. Physicians employed for a lesser time were in a healthier state as compared to doctors who had been working for a long time.[7, 8]

RATIONALE

There is a lack of regional & local data with regards to the psychosocial work environment of doctors, highlighting the need to conduct this study. It focused on the qualitative assessment of six variables which included stress levels, satisfaction from the job they are doing, self-rated health, burnout, work-family conflict, and social support from the superiors at work. We hope that our study will add to existing national and international literature and in the long run, will help in the improving psychosocial work environment of doctors.

METHODOLOGY

Ethical Consideration:

We got approval from the institutional review board vide letter number SKZMDC/DPHCM/399/19.

Study population:

A cross-sectional study was conducted among the doctors of Shaikh Zayed Hospital (SZH), Lahore from March 2017 to June 2017, to evaluate the psychosocial determinants affecting the work environment. A consecutive (convenient) sampling method was used. A sample size of 100 working doctors (n=100) was selected, belonging to any age group, irrespective of marital status and designation in the hospital.

Data Collection:

We used the National Research Centre for the Working Environment (NRCWE), Denmark's short

questionnaire, which consisted of thirty-nine questions. The psychosocial work environment was evaluated with fourteen parameters from the NRCWE questionnaire (version 1) which focused on three main areas viz a viz;

- i. Demands at work
- ii. Inter-personal working relationship with colleagues
- iii. Workforce organization

Data Analysis

We analyzed the socio-demographic and self-rated emotional well-being and job attributes of the respondents. We analyzed data using the analyses of covariance, partial correlations, Cronbach's alphas, linear regression models and one-sample t-tests were utilized for data analysis. The variables that determine the psychosocial work environment and the quality of life were categorized into four domains.

1. Physical Health was determined by

- a. activities of daily life,
- b. energy and fatigue,
- c. burnout,
- d. pain and discomfort,
- e. depression,
- f. sleep and rest
- g. work capacity.

2. Psychological health was determined by

- a. bodily image and appearance,
- b. negative feelings,
- c. positive vibes,
- d. thinking,
- e. learning,
- f. concentration,
- g. self-esteem,
- h. beliefs
 - i. spiritual,
 - ii. religious,
 - iii. personal.

3. Social relationships were described based on

- a. personal relationship,
- b. social support,
- c. sexual activity

4. Environment was determined

- a. financial resources,
- b. freedom,
- c. physical safety and security,
- d. health and social care accessibility and quality,
- e. home environment,
- f. opportunities for acquiring new information and skills,
- g. participation in and opportunities for recreational

and leisure activities,

h. physical environment (pollution, noise, traffic, climate)

We used version 21 of SPSS software for data entry and analysis.

RESULTS

This study included a total of 100 participants. In the present study, males accounted for 44% of the subjects while females accounted for 56% of the subjects. The unmarried category comprised 27% males and 20% females while 17% of males and 36% of females came under the married category. Applying t-test sampling showed worse working conditions regarding stress, burnout, work-family conflict, social support from superiors, job satisfaction, and self-rated health. Not even a single variable reported better working conditions; which highlights psychosocial factors faced by doctors at work are pretty concerning. Thus, these psychosocial factors resulted in high stress and burnout scores (4.44 and 4.67 respectively). Male and female doctors had the same scores nearly as shown in table 1. The p-value of 0.7 and 0.91 between men and women respectively also showed no difference. The job satisfaction among doctors compared to all other professions score is pretty much near to average score i.e. the standard scores which were taken as a reference which reported less bad condition so doctors are nearly satisfied with their jobs work-family conflict was found to be present in both men and women but men showed greater mean score (3.47 > 2.91) than women which meant that men were found to have

	Men 44%	Women 56%
Married	17%	36%
Unmarried	27%	20%
Designation: House Officer	13%	18%
Training Resident	17%	22%
Consultant	6%	1%
Demonstrator	2%	6%
Assistant Professor	1%	5%
Associate Professor	1%	1%
Medical Officer	4%	3%
Age: <30	27%	40%
30-50	15%	16%
>50	2%	1%
Working hours per week:	17%	31%
36-48		
48-72	14%	10%
>72	13%	15%
Part time Job:	8%	3%
Yes		
No	36%	53%

Table 1: Demographic Data

more conflicts with their family than women. Both sexes were found to be deprived of social support from senior doctors in our statistical analysis [Table 02].

Doctors reported poor health, both men and women. Stats showed no difference but mean scores reported better health in men than in women [Table 02-4].

Self-rated health and job satisfaction in men are better than women.

DISCUSSION

Variables	Average Scores(Ref)	Mean Scores(Both Men and Women)	Men	Women
Stress	2.3	4.44	4.45	4.42
Satisfaction	2.1	1.91	2.06(close to average)	1.71
Self-rated Health	2.6	2.11	2.27	1.98
Burnout	2.5	4.67	4.61	4.60
Social Support from superiors	5.6	5.33	5.34	5.32
Work family conflict	2.1	3.14	3.47	2.91

Table 2: Comparison between men and women

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Stress	Men	44	4.5000	1.88630	.28437	3.9265	5.0735	.00	8.00
	Women	56	4.3929	2.05982	.27525	3.8412	4.9445	.00	8.00
	Total	100	4.4400	1.97622	.19762	4.0479	4.8321	.00	8.00
Job Satisfaction	Men	44	2.0006	.79207	.11941	1.7365	2.2181	.00	3.00
	Women	56	1.8571	.74903	.10009	1.6566	2.0577	.00	3.00
	Total	100	1.9100	.76667	.07667	1.7579	2.0621	.00	3.00
Self-rated Health	Men	44	2.2727	1.14858	.17316	1.9235	2.6219	.00	4.00
	Women	56	1.9821	.94371	.12611	1.7294	2.2349	.00	4.00
	Total	100	2.1100	1.04345	.10434	1.9030	2.3170	.00	4.00
Burnout	Men	44	4.6591	1.81650	.27385	4.1068	5.2114	1.00	8.00
	Women	56	4.6964	1.74689	.23344	4.2286	5.1642	.00	8.00
	Total	100	4.6800	1.76887	.17689	4.3290	5.0310	.00	8.00
Work Family Conflict	Men	44	3.4091	1.82130	.27457	2.8554	3.9628	.00	6.00
	Women	56	2.9107	1.92851	.25771	2.3943	3.4272	.00	6.00
	Total	100	3.1300	1.88912	.18891	2.7552	3.5048	.00	6.00
Social Support From Superiors	Men	44	5.3636	2.20033	.33171	4.6947	6.0326	.00	8.00
	Women	56	5.2679	1.95858	.26173	4.7433	5.7924	1.00	8.00
	Total	100	5.3100	2.05822	.20582	4.9016	5.7184	.00	8.00

Table 3: T Test Sampling result
When a doctor works in a hospital, he/she is exposed to various physical as well as mental risk factors. The environment was found to be one of the major risk factors in a study as well.[1]

Our study was based on NRCWE Copenhagen Psychosocial questionnaire comprising of 39 questions. These questions tend to check the reliability of this questionnaire. Various studies at different institutions have been carried out at different times to check the validity and reliability of this questionnaire and its

scales.[9, 10] The study conducted by us aimed to determine the levels of various factors in the work environment of doctors. Among many of these variables, one measured by us was stress. Job stress has become one of the main factors reducing efficiency that may, in turn, cause physical and physiological adverse effects on workers. As per research conducted in Iran, the mean job stress was found to be above average i.e 100.34 ± 12.78 in a doctor, compared to 4.44 in our study.[11]

In our study, male and female doctors had nearly the

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Stress	Between Groups	.283	1	.283	.072	.789
	Within Groups	386.357	98	3.942		
	Total	386.640	99			
Job Satisfaction	Between Groups	.356	1	.356	.603	.439
	Within Groups	57.834	98	.580		
	Total	58.190	99			
Self-rated Health	Between Groups	2.081	1	2.081	1.929	.168
	Within Groups	105.709	98	1.079		
	Total	107.790	99			
Burnout	Between Groups	.034	1	.034	.011	.917
	Within Groups	309.726	98	3.160		
	Total	309.760	99			
Work Family Conflict	Between Groups	6.120	1	6.120	1.727	.192
	Within Groups	347.190	98	3.543		
	Total	353.310	99			
Social Support From Superiors	Between Groups	.226	1	.226	.053	.819
	Within Groups	419.164	98	4.277		
	Total	419.390	99			

Table 4: To compare multiple means, simple ANOVA test done from SPSS

same scores, though the results were equally concerning, depicting poor work environment conditions. Levels of stress and burnout were almost equal in both genders. A p-value of 0.7 and 0.9 in males and females respectively showed no significant difference in our study. But female workers reported significantly more symptoms of anxiety, depression, post-traumatic stress disorder (PTSD), and emotional exhaustion than males as per other studies carried out in northern Uganda and Scandinavia.[\[12, 13\]](#) Moreover, in another study carried out in Malaysia job stress was reported higher among male medical residents.[\[14\]](#) Burnout values in our studies showed almost uniformity among male(4.61) and female (4.60) doctors. As compared to a study where 11% of subjects met criteria for low burn out, 83% for moderate

burnout, and 6% for high burnout.[\[15\]](#) Burnout and stress at the workplace also has to be found in a connection with musculoskeletal disorders.[\[16, 17\]](#) Doctors consider stress as a part of their lives. Job stress is a result of low payment, maltreatment, bullying, and harassment. There is a big interlink between the working environment and stress. Burnout is highly prevalent among clinicians in Surgery according to CBI (Copenhagen Burnout Inventory).[\[18, 19\]](#)

The mean of each variable was found and compared with the average values taken from the original Danish employees' study and the results of this survey are used as a reference in the present study.[\[20, 21\]](#) An increase in workload and clinical demands has found to have destructive effects on the clinicians too.[\[22\]](#)

Work/Role overload, lack of support, and overwhelming nature of the disease you are treating are also found to predict variance in stress.[23]

Various studies worldwide have proved this as well that stress in the medical community is found to be much raised as compared to people belonging to other professions. And if appropriate self-care, team-care and health-promoting measures are taken, reduced stress levels and burn out was found. Resultant, human performance is optimized to create healthy workplaces.[24, 25]

LIMITATIONS

The sample size of the study was small i.e 100. The study population comprised of doctors of all age groups from 23 years and onward therefore, could not be restricted to any particular age group. The data was self-reported, hence, there were potential sources of biases (selective memory, attribution, exaggeration).

CONCLUSION

The NCRWE psychosocial survey is an appropriate instrument to quantify the psychosocial dynamics in the workplace of healthcare providers. This complete appraisal of the psychosocial working environment aids in tailoring interventions for the precise requirements of various professional groups.

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AUTHOR CONTRIBUTIONS

ZBK & AP conceptualize, did data collections, article writing & manuscript submission.

AM did data collection & data entry on SPSS.

AT did statistical analysis & gave final approval for submission.

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CONFLICT OF INTEREST

The author declared no conflict of interest

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