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Parameters for Identifying Stress among Doctors in Mardan Medical Complex: A Cross Sectional Study

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Abstract

Objective: To evaluate the common causes of stress among doctors of Mardan Medical Complex.
Materials and Methods: This study was conducted at the Mardan Medical Complex. Totally 95 doctors were enrolled. This was a questionnaire base study. The Questionnaire was filled by the doctors and data was analyzed by using SPSS Software Version 23.
Results: Out of total 95 enrolled doctors, 63 were male and 32 were female doctors with mean age of 41.45 ± 8.19 years. The most common age group was 31-40 years, followed by the age group of 42-50 years and the least number of age group was < 50 years. The most common parameters identified by doctors was sleep deprivation and Lengthy Working Hours followed by other causes such as High Patient Volume, External /Political Interference, Senior's Pressure/High Expectations/Work Targets, Night Duties and Phone calls during Night/Early Morning. Stratification on the basis of gender and age group were done.
Conclusion: It is concluded that stress is a hurdle that the doctors faces in different pattern. For better performance the doctors should take proper sleep and manage the time to overcome the stress. Also avoid Phone calls during Night/Early Morning.

Key words: Stress, Doctors, No Regular Sleep
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Introduction

Stress affects the quality of life and also lead to job dissatisfaction.[1] Stress is defined as a circumstance that upsets the normal physiological or psychological functioning of a person.[2-3] It is an unnecessary, unsuitable or exaggerated response to a situation.[4] It is the reaction of the mind or body of affected people to an event. The change or event can be internal or external. Globally, every person have experiences occupational stress.[5] Health care industry is very sensitive in this regard and there must be proper management of work related stress of doctors to attain the objective of service to society. To gain quality of work there should be no stressful environment. It has been stated in a literature that job stress is a known issue in clinical practitioner, and doctors are considered to be at particular risk of stress and stress related psychosocial problems.[6] As compared to other social class people the doctors have higher degree of mental morbidity, more tendencies toward suicide and alcohol dependence social class.[7] Caplan stated in his study that most of the senior medical staff have high level of stress and that about half of the senior medical staff suffers from anxiety.[8] Whereas anxiety about a situation could be positive, stress is always negative with attending adverse psychological and physiological changes.[9] These changes lead to low degree of productivity, disease and sometimes cause expiry of the person. Firth-Cozens in his study stated about the emotional disturbance of the doctors.[10] Stress is considered as an inevitable characteristic of life and as such is neither naturally bad nor necessarily damaging. So the present study was conducted inorder to point out or evaluate the parameters for identifying stress in doctors that will help the doctors to avoid such parameters to serve the community in a best way. Important.

Material and Methods

This research employed a cross-sectional study was conducted at Mardan Medical Complex, Khyber Pakhtunkhwa, Pakistan

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from January 2021 to July 2022.

The sample size of 95 doctors was determined using the WHO sample size calculator with the following parameters: Confidence level (1-α): 95%, Absolute precision (d): 10%, Anticipated population proportion (P): 9.5%.[11]

The study spanned a period of 6 months, Sampling Technique: The recruitment of participants was accomplished using a consecutive non-probability sampling technique.

Inclusion Criteria: Doctors from various departments at Mardan Medical Complex, Doctors aged between 30 and 60 years, Both genders.

Exclusion Criteria: Staff with less than 3 months of experience.

Totally 95 doctors were enrolled in this study. This was a questionnaire based study so after the approval from the ethical committee the questionnaires were explained. The questionnaires were filled by the enrolled doctors. To confirm the data and information, general discussion and unstructured interview method was also used. Ethical consideration& Informed Consent: The study was conducted after taking proper approval from the Institutional Ethics Committee. Informed consent, duly signed bythe enrolled doctors and researchers, was obtained after briefing them about the type of the research and assuring them regarding anonymity of the data obtained from them. The analysis of the gathered data was conducted using SPSS Version 23.0.

Results

In this investigation, a comprehensive enrollment of 95 doctors from various departments was undertaken. Among the total, 66.3% were male, and 33.7% were female, with a mean age of 41.45 ± 8.19 years (Table I). The predominant age bracket was 30-40 years, followed by 41-50 years, while the smallest proportion of doctors fell into the age group exceeding 50 years (Table II).

Table 1 Distribution of patients according to gender (n=95)				
Gender	Frequency	Percentage	Age in Years	
			Mean	SD
Male	63	66.3	41.45	± 8.19
Female	32	33.7		

Table II: Arrangement of patients categorized by age groups (n=95).		
Age Group (Years)	Frequency	Percentage
30-40	46	48.4
41-50	32	33.7
> 50	17	17.9
Total	95	100.0

Various types of stress parameters were noted and their frequencies and percentage values are given in table III. Categorization of stress parameters in relation to gender and stress parameters with respect to age group are mentioned in table IV and V

Table III: Arrangement of patients based on stress parameters (n=95)		
Variable	Yes N(%)	No N(%)
Lengthy Working Hours	62 (65.3)	33 (34.7)
No Regular Sleep	72 (75.8)	23 (24.2)
Emergency Calls	42 (44.2)	53 (55.8)
Dealing with Critical Patients	27 (28.4)	68 (71.6)
High Patient Volume	35 (36.8)	60 (63.2)
Senior's Pressure/ High Expectations/ Work Targets	17 (17.9)	78 (82.1)
External /Political Interference	06 (06.3)	06 (06.3)
Night Duties	59 (62.1)	36 (37.9)
Availability of Facilities	59 (62.1)	36 (37.9)
No Appreciation by Patients for the Work Done	41 (43.2)	54 (56.8)
24 Hours Responsibility of Patients	47 (49.5)	48 (50.5)
Phone calls during Night/ Early Morning	68 (71.6)	27 (28.4)

Table IV: Categorization of stress parameters in relation to gender (n=95).				
Variable	Gender	Yes	No	P-Value
Lengthy Working Hours	Male	42	21	0.68
	Female	20	12	
No Regular Sleep	Male	49	14	0.52
	Female	23	09	
Emergency Calls	Male	32	31	0.07
	Female	10	22	
Dealing with Critical Patients	Male	19	44	0.59
	Female	08	24	
High Patient Volume	Male	18	45	0.01
	Female	17	15	
Senior's Pressure/ High Expectations/ Work Targets	Male	10	53	0.45
	Female	07	25	
External /Political Interference	Male	02	61	0.07
	Female	04	28	
Night Duties	Male	41	22	0.40
	Female	18	14	
Availability of Facilities	Male	38	25	0.33
	Female	16	16	
No Appreciation by Patients for the Work Done	Male	28	35	0.72
	Female	13	19	
24 Hours Responsibility of Patients	Male	15	28	0.09
	Female	12	20	
Phone calls during Night/ Early Morning	Male	47	16	0.35
	Female	21	11	

Discussion

Stress is a normal part and characteristics of our routine life.[12] Doctors are responsible for the lives of patients, so the doctors

can face stress from different aspects. In a study conducted by Waldman, et al. in Tamil Nadu, 39.5% prevalence of stress among doctors of different departments of the hospital was found.[13] In another study conducted by Sahasrabuddhe AG et al. the overall prevalence reported was 37.3%.[14] High degree of stress have been reported among medical students in different countries, including Pakistan (60%), Malaysia (42%), and the United States (57%). [15-17]

Table V: Stratification of stress parameters with respect to age group.

Variable	Age Group (Years)	Yes	No	P-Value
Lengthy Working Hours	30-40	29	17	0.59
	41-50	23	09	
	> 50	10	07	
No Regular Sleep	30-40	32	14	0.28
	41-50	25	07	
	> 50	15	02	
Emergency Calls	30-40	26	20	0.42
	41-50	12	20	
	> 50	04	13	
Dealing with Critical Patients	30-40	12	14	0.87
	41-50	10	22	
	> 50	05	12	
High Patient Volume	30-40	19	27	0.65
	41-50	10	22	
	> 50	06	11	
Senior's Pressure/ High Expectations/ Work Targets	30-40	16	30	0.00
	41-50	01	31	
	> 50	00	17	
External /Political Interference	30-40	06	40	0.03
	41-50	00	32	
	> 50	00	17	
Night Duties	30-40	11	15	0.53
	41-50	19	13	
	> 50	09	08	
Availability of Facilities	30-40	29	17	0.48
	41-50	16	16	
	> 50	09	08	
No Appreciation by Patients for the Work Done	30-40	22	24	0.63
	41-50	13	19	
	> 50	06	11	
24 Hours Responsibility of Patients	30-40	28	18	0.06
	41-50	14	18	
	> 50	05	12	
Phone calls during Night/ Early Morning	30-40	31	15	0.24
	41-50	22	10	
	> 50	15	02	

In this study we want to evaluate the parameters for identifying stress in doctors. According to our study most of the doctors have no regular sleep. Because of lengthy working hours and late night duties and phone calls, the sleep disturbance is the main issue to cause stress in doctors. Dr. Satyawan Baroda stated that longer working hours is the main cause of high stress feelings in doctors which results from high patient volume. But in our study most of the doctors deny this that high patient's volume can cause so much high stress. For good physical and mental health as well as for cognitive processes, the sleep is very important. For optimal patient care, it is crucial for physicians to maintain both good physical and mental well-being. Sleep deprivation adversely impacts the overall performance of doctors, as indicated by studies. There is a noteworthy association between stress levels and diminished sleep quality. Recent research at King Saud University and a medical school in Pakistan affirms that a high stress level is a substantial predictor of poor sleep quality.[15, 17] Presence of senior doctors while dealing with critical patients also play a significant role in minimizing the stress among junior doctors as stated in our study. Senior doctors should help their juniors and treat them with respect to minimize their stress.[6] Political interference is also one of the main parameters that cause stress among doctors. It is advisable that seniors can solve this interference issue that doctors do their job at priority bases. The work pattern especially the night duties can create stress among people and doctors are at high risk.[20] As in our study, a high proportion of doctors were prone to stress due to night duties. Mobile calls at late night and early morning can disturbs the sleep and one of the main cause of work-related stress.[21] Mobile is a usefull and routine life appliances but to overcome the stress one should avoid too much use. Male doctors can handle the stress easily as compared to female doctors. And the other reason is that female doctors have more female patients than male doctors [22] so the level of stress in female doctors is high as mention in our study. Graingeretal et al. stated that among house officers high rates of psychological illness, with female doctors reporting worse mental and physical health compared with male doctors.[23] Literature suggests that men achieve a superior balance between work and personal life compared to women.[24]

Conclusion

It is concluded that for better performance the doctors should take proper sleep and manage the time to overcome the stress. Also avoid Phone calls during Night/Early Morning.

Limitations: Limitations of the instant study may include, inter alia, some individual & subjective variations, smaller sample size and selection of only one set-up viz. Mardan Medical Complex.

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Conflicts of Interest: None.

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