Quality of life of post-graduate medical students working in private and public hospitals in Punjab as measured by WHOQOL-BREF questionnaire

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Abstract

Objective: To determine the impact of the type of specialty and hospital on the quality of life of medical consultants and residents.

Methods: This cross-sectional study was conducted at leading hospitals in Punjab and Islamabad Capital Territory from June 2016 to January 2017 to assess the quality of life of medical consultants and residents doing clinical practice for more than 6 months in private and public hospitals. The World Health Organisation Quality of Life - BREF instrument was used to assess the quality of life of the subjects. SPSS 21 was used to analyse the data.

Results: Of the 1,154 respondents, 677(58.7%) were male while 477(41.3%) were female. The physical health domain had the highest overall mean score of 66.10±11.40 while the psychological health domain had the lowest overall mean score of 64.13±9.88. Physical health domain, psychological health domain, and social relationship domain score were found to be significantly higher in male doctors compared to female doctors ($p<0.05$). Overall, quality of life was rated as good by 743(64.4%) and very good by 324(28.1%) subjects.

Conclusion: Physical health scroes were better than psychological health scores among the participants.

Keywords: Quality of Life, Post-graduate medical students, Stress, Burnout. (JPMA 68: 908; 2018)

Introduction

The medical profession is associated with a significant amount of stress. Doctors have to endure a tremendous amount of stress on a daily basis because of the high level of responsibility associated with their work. An excessive amount of stress can initiate a downward spiral which can result in "burnout". Burnout consists of a triad of emotional exhaustion, depersonalisation and low personal accomplishment.[1] A study done in the United States concluded that 45.8% physicians had at least one symptom of burnout.[2] Another study done in the United Kingdom found that 33% surgeons had high burnout on at least one subscale of the Maslach Burnout Inventory (MBI).[3] Burnout has a significant negative impact on the health system and results in decreased quality of patient care.[4] Burnout in the physician is associated with increased risk of making medical errors, decreased productivity, increased risk of substance abuse and suicidal intentions, early retirement, and thoughts about leaving the medical profession.[5] Medical residents are also affected by the detrimental effects of stress. A study concluded that 76% of the internal medicine residents working at the University of Washington had experienced burnout.[6] A study done on young Chinese medical doctors using Nottingham Health Profile (NHP) concluded that the mean average score in Energy and Physical mobility was 53.11 and 34.53.[7]

The significantly high prevalence of burnout among medical professionals is a cause for concern and can diminish the quality of life among consultants and residents. Despite the importance of this issue, there is a dearth of literature on this topic. Very few studies have been done on this topic in our region. The current study was planned to assess the quality of life among medical practitioners and to determine the impact of the type of specialty and hospital on the quality of life.

Subjects and Methods

This cross-sectional study was conducted from June 2016 to January 2017at Shifa International Hospital, Islamabad; Pakistan Institute of Medical Sciences, Islamabad; Pakistan Ordinance Factory (POF) Hospital, Wah; Mayo Hospital, Lahore; Ghurki Trust Teaching Hospital, Lahore; Sharif Complex Hospital, Lahore; Bahawal Victoria Hospital, Bahawalpur, and Nishtar Hospital, Multan. Consultants and residents who were in clinical practice for more than 6 months were included in the study. Doctors who were working at nonclinical positions and doctors who were not currently involved in clinical practice for more than 6 months were not excluded. We used World Health Organisation Quality of Life (WHOQOL) - BREF instrument to assess the quality of life among the participants. There are two questions that independently examine the individual's overall perception of his/her quality of life and health. The remaining 24 questions cover social

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Annexure: Data Collection Tool:

Age: _____
Gender: _____
Level of Education: _____
Marital Status:
A) Single
B) Married
C) Living Separately
D) Divorced
E) Widowed
Current Post: _____ Current Post Duration: _____
Specialty: _____
Current Working Place: _____
Institution: _____ City: _____
Any medical illness: _____

Please read each question, assess your feelings, and circle the number on the scale that gives the best answer for you for each question.

	(Please circle the number)				
	Very poor	**Poor**	**Neither poor nor good**	**Good**	**Very Good**
1. How would you rate your quality of life?	1	2	3	4	5

	(Please circle the number)				
	Very dissatisfied	**Dissatisfied**	**Neither satisfied nor dissatisfied**	**Satisfied**	**Very satisfied**
2. How satisfied are you with your health?	1	2	3	4	5

The following questions ask about how much you have experienced certain things in the last two weeks.

	(Please circle the number)				
	Not at all	**A little**	**A moderate amount**	**Very much**	**An extreme amount**
3. To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
4. How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
5. How much do you enjoy life?	1	2	3	4	5
6. To what extent do you feel your life to be meaningful?	1	2	3	4	5

	(Please circle the number)				
	Not at all	**Slightly**	**A Moderate amount**	**Very much**	**Extremely**
7. How well are you able to concentrate?	1	2	3	4	5
8. How safe do you feel in your daily life?	1	2	3	4	5
9. How healthy is your physical environment?	1	2	3	4	5

The following questions ask about how completely you experience or were able to do certain things in the last two weeks.

	(Please circle the number)				
	Not at all	**A little**	**Moderately**	**Mostly**	**Completely**
10. Do you have enough energy for everyday life?	1	2	3	4	5
11. Are you able to accept your bodily appearance?	1	2	3	4	5
12. Have you enough money to meet your needs?	1	2	3	4	5

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13. How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14. To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

	(Please circle the number)				
	Very poor	**Poor**	**Neither poor nor well**	**Well**	**Very well**
15. How well are you able to get around?	1	2	3	4	5

The following questions ask you to say how good or satisfied you have felt about various aspects of your life over the last two weeks.

	(Please circle the number)				
	Very dissatisfied	**Dissatisfied**	**Neither satisfied nor dissatisfied**	**Satisfied**	**Very satisfied**
16. How satisfied are you with your sleep?	1	2	3	4	5
17. How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18. How satisfied are you with your capacity for work?	1	2	3	4	5
19. How satisfied are you with your abilities?	1	2	3	4	5
20. How satisfied are you with your personal relationships?	1	2	3	4	5
21. How satisfied are you with your sex life?	1	2	3	4	5
22. How satisfied are you with the support you get from your friends?	1	2	3	4	5
23. How satisfied are you with the conditions of your living place?	1	2	3	4	5
24. How satisfied are you with your access to health services?	1	2	3	4	5
25. How satisfied are you with your mode of transportation?	1	2	3	4	5

The following question refers to how often you have felt or experienced certain things in the last two weeks.

	(Please circle the number)				
	Never	**Seldom**	**Quite often**	**Very often**	**Always**
26. How often do you have negative feelings, such as blue mood, despair, anxiety, depression?	1	2	3	4	5
Did someone help you to fill out this form? (Please circle Yes or No)	Yes	No			

Thank you for your help.

relationship domain (3 questions), physical health domain (7 questions), environmental domain (8 questions) and psychological health domain (6 questions) (Annexure). Each question is scored on a scale from 1 to 5; 5 being the highest score while 1 being the lowest score. The sample size was calculated by using WHO sample size calculator, keeping 45.8% as the prevalence of burnout phenomenon, confidence interval at 95% and absolute precision required 3%.[8] Consecutive non-probability sampling was used to select the hospital in each city. Systemic random sampling method was used to collect data from the selected hospital. The starting point was the first office in the first outpatient department (OPD). In each OPD, the first office was selected followed by the 4th and then the 8th and so on. If a doctor refused to give consent then the next office in order was selected. The most common reason for refusal was the hectic schedule of the doctor.

Equal number of questionnaires were distributed among doctors working in private and public hospitals. Each participant was given 15 minutes to fill the questionnaire. Informed consent was obtained from all the participants and they were assured that the data will be stored and recorded anonymously. Informed consent was also obtained from the respective institutions. SPSS 21 was used to analyse the data. Raw domain scores were transformed to a 4-20 score according to guidelines. The scores were then transformed linearly to a 100-scale using the below formula:

Transformed score= (Score-4) X (100/16).

Participants with score > 60 were labeled as having a good quality of life while participants with a score < 60 were labeled as having a poor quality of life.[9] Independent student t-test was applied to determine the association of gender, training status, type of specialty and hospital with different domains of quality of life. Ethical approval for the study was obtained from Shifa

International Hospital review board and ethical committee.

Results

Of the 1,200 questionnaire distributed, 1,154(96.17%) qualified for data analysis. Overall, 677(58.7%) participants were male while 477(41.3%) participants were female. The mean age of the participants was 32.68±8.44 years. About 594(51.5%) participants were working at a private tertiary care centre while 560(48.5%) were working at a public tertiary care centre. Besides, 480(41.6%) participants were residents and fellows while 674(58.4%) had completed their training. Moreover, 520(45.1%) participants were single and 592(51.3%) were married, while 18(1.6%) were living separately and 24(2.1%) were divorced. Also, 642(55.6%) participants were working in medicine and allied fields while 512(44.4%) were working in surgery and allied fields.

Quality of life was rated as good by 743(64.4%), participants and very good by 324(28.1%). Also, 715(62.0%) participants were satisfied with their health while 261(22.6%) were very satisfied. The psychological health domain had the highest overall score while the environmental domain had the lowest overall score (Table-1).

Physical health domain, psychological health domain, and social relationship domain scores were significantly higher in male doctors compared to female doctors ($p<0.05$ each). All four domain scores were higher in doctors working in medicine and allied compared to doctors working in surgery and allied ($p<0.05$). Physical health domain, psychological health domain and environmental domain scores were higher in doctors who had completed their training and in doctors who were working in private hospitals, while social relationship

Table-1: Overall Domain Score.

Domain	Overall Score
Social relationship domain	65.48 ± 11.63
Physical health domain	66.10 ± 11.40
Environmental domain	64.46 ± 18.27
Psychological health domain	64.13 ± 9.88

Table-2: Association of Gender, Type of specialty and hospital with different domains of Quality of life.

	Gender			
Domain	**Male**	**Female**	**t**	**p-value**
Social relationship domain	66.92±17.09	60.95±19.31	5.54	<0.001
Physical health domain	68.00±10.08	61.9±12.72	9.07	<0.001
Environmental domain	64.16±9.37	64.10±10.57	0.10	0.921
Psychological health domain	67.72±9.33	63.81±13.48	5.83	<0.001
	Type of Specialty			
Domain	**Medicine & Allied**	**Surgery & Allied**	**t**	**p-value**
Social relationship domain	68.78±15.97	59.03±19.50	9.34	<0.001
Physical health domain	67.02±9.84	63.55±13.31	5.09	<0.001
Environmental domain	64.71±8.53	63.41±11.32	2.23	0.026
Psychological health domain	67.02±9.84	64.18±13.20	5.17	<0.001
	Current Post			
Domain	**Training (Ongoing)**	**Training Completed**	**t**	**p-value**
Social relationship domain	65.94±18.95	63.40±17.72	0.972	0.02
Physical health domain	62.46±15.10	67.63±7.65	-7.62	<0.001
Environmental domain	63.10±12.69	63.40±7.16	-2.99	0.003
Psychological health domain	64.32±12.90	67.38±10.00	-4.53	<0.001
	Type of Hospital			
Domain	**Private Hospital**	**Public Hospital**	**t**	**p-value**
Social relationship domain	61.36±18.08	67.74±17.91	-6.01	<0.001
Physical health domain	67.96±5.28	62.85±15.36	7.64	<0.001
Environmental domain	64.84±4.33	63.39±13.43	2.49	0.013
Psychological health domain	67.96±8.53	64.14±13.54	5.76	<0.001

domain score was higher in doctors who were still training and in doctors who were working in public hospital (p<0.05 each) (Table-2).

There was a strong negative correlation between age and psychological health domain score (p=<0.001).

Discussion

Age is a major determinant of quality of life of a physician. Older physicians have been shown to have a higher frequency of burnout phenomenon as compared to a younger physician.[10] A study concluded that there was an inverse correlation between depersonalisation scores and age of residents.[11] Stress hormones such as cortisol and adrenaline are released in response to physical and emotional stress. Aging has been found to be associated with increased cortisol response to stress.[12] This might be one of the several reasons why older physicians find it hard to handle stress. In our study older physicians were found to have a significantly lower psychological health domain score as compared to younger physicians.

A study concluded that the burnout phenomenon increases from 4.3% at the start of first internal medicine year to 55.3% at the end of first internal medicine year.[13] Long working hours, night calls, lack of control over time management, lack of direction in their career, sleep deprivation and work related stress are few of the several reasons which contribute to burnout in residents.[14] Studies have shown that the prevalence of burnout phenomenon increases as the number of years of residency increases.[15] A study comparing the quality of life in emergency medicine resident and attending physician concluded that residents were more likely to report higher score on depersonalisation subscale than their attending physicians (73.9% vs 38.9%, p=0.011).[16] In the same study, 47.8% residents were like to screen positive for depression while 18.5% of their attending physicians were likely to screen positive for depression (p=0.012). In our study doctors who had completed training were found to have a higher physical health domain, psychological health domain and environmental domain score as compared to doctors who have not finished their training. Results of our study were similar to other studies.[17]

An interview-based study concluded that doctors working in public hospitals were more likely to be burdened with heavy workloads, and poor compensation packages as compared to their counterparts working in private hospitals.[18] This can be one of the reasons behind a lower quality of life in doctors working in public hospitals. In our study physical health domain, psychological health domain and environmental domain scores were found to be higher in doctors working in private hospitals.

According to our study male physicians were found to have higher social relationship domain as compared to female physicians that's because male physicians were satisfied with their sex life, they had supportive family and friends, understanding bosses and colleagues and most of them lived in an area that provided geographic proximity to work, home, children schools. In our study, the environmental and physical health domain scores were higher in male physicians as compared to female physicians. A study done in Germany concluded that female physicians were more likely to be unsatisfied with their living place (Relative Risk Ratio: 2.51) as compared to their male counterparts.[19] A study done in China concluded that males were 1.67 times more likely to have a higher score in physical health as compared to their female counterpart.[20]

For female physicians finding an admissible balance between career and family is a difficult task. A career in medicine demands a selfless emphasis on caring for one's patients, sometimes at expense of one's marriage, children and personal life. Female physicians face a troublesome task in trying to equilibrate personal and professional responsibilities. There are many challenges that female physicians must address in balancing their multiple roles as physician, mother, and consort. According to our study women more commonly report significant stress and dispute due to their multiple roles which resulted in a lower score in physical health and psychological health domains as compared to their male counterparts. According to a study, women were more concerned with the lack of time for their relationship as compared to men.[21] This might be one of the reasons why the female physicians had a lower score in the psychological health domain. A study done in Brazil concluded that male residents had a better psychological score as compared to female residents (p=0.013).[22]

Surgeons and stress go hand in hand. From long working hours and dealing with huge workloads to facing life and death situations, the long-term effects of these factors are evident. All these factors result in surgeons experiencing symptoms of emotional, physical and psychological burnout. A study in Germany concluded that 74% of the surgeons reported restriction of their family and private life as a result of work overload as compared to 59% physicians working in medicine and allied (p<0.0001).[23] Long working hours and high job demands not only damages the physical health but also impairs well-being. Burnout can lead to decrease in intellectual stimulation and also results in a poor relationship with patients and

staff. All these factors can have a significant negative impact on the job performance of the doctors.[24] According to our study surgeons had a lower score in all domains as compared to medical physicians.

The limitation of the study includes possible information bias as the respondents might have been tempted to provide a socially acceptable response. Another limitation of the study is that it was restricted to only one region of Pakistan; thus possibly affecting the generalisability of the study.

Conclusion

Working in Surgery and allied department, female gender, working in public hospitals and working as a trainee were identified as risk factors for a poor quality of life. There is a dire need to introduce new reforms in the healthcare system in order to improve the quality of life of doctors.

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