



9-2023

Prevalence of Stress Among the Healthcare Providers in A Tertiary Care Hospital in Karachi

Saba Zaidi

Liaquat National Hospital, Karachi

Syeda Areeba Tabassum

Liaquat National Hospital, Karachi

Follow this and additional works at: <https://ecommons.aku.edu/pjns>



Part of the [Neurology Commons](#)

Recommended Citation

Zaidi, Saba and Tabassum, Syeda Areeba (2023) "Prevalence of Stress Among the Healthcare Providers in A Tertiary Care Hospital in Karachi," *Pakistan Journal of Neurological Sciences (PJNS)*: Vol. 18: Iss. 3, Article 1.

Available at: <https://ecommons.aku.edu/pjns/vol18/iss3/1>



PREVALENCE OF STRESS AMONG THE HEALTHCARE PROVIDERS IN A TERTIARY CARE HOSPITAL IN KARACHI

Saba Zaidi¹, Syeda Areeba Tabassum¹
¹Liaquat National Hospital, Karachi

Corresponding author: Saba Zaidi Liaquat National Hospital, Karachi Email: drsabazaidi@gmail.com

Date of submission: May 11, 2023 Date of revision: September 27, 2023 Date of acceptance: September 30, 2023

ABSTRACT

Background and Objective:

Healthcare workers are considered high risk for stress. This study aimed to study the prevalence of stress among the health care providers in a tertiary care hospital in Karachi.

Methods:

A cross-sectional study was conducted at Liaquat National Hospital from July to December 2021. All healthcare workers in the vicinity of the hospital including doctors, nurses, allied health specialists, and other healthcare professionals who provide hands-on patient care were included in the study. Data was collected through a pre-designed questionnaire GHQ-12; related to stress symptoms and their impact on daily routine activities. It was in a Google form and forwarded through e-mails. Data was saved and transferred to SPSS later for analysis.

Results:

In terms of stress, the study found that a significant number of health care providers experienced stress n=146 (74.5%). Among the subjects who reported experiencing stress, the distribution of stress levels shows that the majority experienced typical stress n=58 (29.6%), followed by severe stress with psychological distress n=56 (28.6%), and distress n=32 (16.3%). The majority of subjects fell within the age range of 20-30 years and were female.

Conclusion:

There is a high prevalence of stress among the healthcare providers in our hospital. Enhancing productivity and reducing stress at work should be a goal in health care.

KEYWORDS: Prevalence, Cross-sectional study, Health personnel, Psychological distress

INTRODUCTION

Healthcare providers around the world are known to experience high levels of stress due to the demanding nature of their work. In Pakistan, healthcare providers face additional challenges, such as limited resources, inadequate staffing, and security risks. These factors can contribute to increased stress levels and burnout among healthcare providers.

Stress has a significant impact on the mental and physical well-being of individuals, tardiness, absence, and chance of relocation at work. It may also lead to concerns about patient security and compromised care quality which at times leads to medical errors. The discrepancy between job requirements and available resources, overload at work, the working atmosphere, work experience, workplace disputes, racial prejudice,

marriage status, level of education, fulfilment in work, and not getting recognition are some of the factors strongly correlated with job-related stress among healthcare professionals.¹

Other pressures brought on by the coronavirus disease 2019 pandemic include worker redeployment and infection anxiety.² The WHO maintains that good primary healthcare is important for achieving universal health coverage without financial hardship.

Stress not only impacts a person's performance but also the effectiveness of an organization. Extensive research is needed to investigate the elements that contribute to stress among healthcare professionals in the country. Internationally and locally various researches on the assessment of stress levels among

doctors, nurses, and students of various healthcare professions have already been done but this topic needs reinforcement. The need of the hour is also to provide early therapies that are culturally and organizationally appropriate to prevent a health care worker from reaching an unmanageable and beyond their ability to cope stress level.

METHODS

This cross-sectional study was conducted at Liaquat National Hospital after ethical committee approval over six months from July to December 2021. Convenient sampling was used to select the study participants, who comprised healthcare workers in the vicinity of the hospital, including doctors, nurses, allied health specialists, and other healthcare professionals involved in hands-on patient care. The study aimed to examine the prevalence of stress among these healthcare workers and its association with demographic factors (such as age, gender, and education level). The dependent variable was measured using the General Health Questionnaire (GHQ-12), a scale designed to assess psychological distress and well-being.

The inclusion criteria involved healthcare workers willing to participate in the study, either full-time or part-time, and working at the institution for at least six months. Exclusion criteria included healthcare professionals currently on medication for a mental health problem or with pre-existing conditions that could compromise their ability to cope with stress. The sample size was determined to be 196 participants, based on a prevalence rate of burnout. Data were collected through a pre-designed questionnaire in Google form, and distributed through email.

The collected data were saved and analyzed using SPSS version 25. Descriptive statistics, including mean, standard deviation, frequencies, and percentages, were calculated. Chi-square tests were performed to explore the relationships between independent and dependent variables. A significance level of $p < 0.05$ was considered statistically significant.

RESULTS

In terms of stress, the study found that a significant number of subjects experienced stress $n=146$ (74.5%) compared to those who did not $n=50$ (25.5%). Among the subjects who reported experiencing stress, the distribution of stress levels shows that the majority experienced typical stress $n=58$ (29.6%), followed by severe stress with psychological distress $n=56$ (28.6%), and distress $n=32$ (16.3%). The majority of subjects fell within the age range of 20-30 years and were female. Furthermore, a considerable number of subjects were unmarried $n=111$ (56.6%) and had their own houses $n=140$ (71.4%). The most common reason for pursuing this career was personal motivation and interest $n=148$ (65.3%). These demographic factors provided valuable insights into the characteristics of the patient population under study. A Chi-square test was conducted to assess the relationship between demographic factors and their association with stress. The analysis revealed that age, gender, marital status, and place of residence did not exhibit a statistically significant association with stress, as evidenced by their respective p -values of 0.344, 0.995, 0.466, and 0.285. However, the reason for pursuing this career displayed a statistically significant

connection with stress, with a p-value of 0.023. (Table 1 & 2)

Table: 01 Frequency distribution of subjects under study

	n(%)
Age	
10-20 years	4(20)
20-30 years	111(56.6)
30-40 years	52(26.5)
40-50 years	18(9.2)
50-60 years	11(5.6)
Gender	
Male	66(33.7)
Female	130(66.3)
Marital Status	
Married	76(38.8)
Unmarried	111(56.6)
Widow	6(3.1)
Divorced	3(1.5)
Resident	
Own house	140(71.4)
Rental	50(25.5)
Hostel	5(2.6)
Government House	1(0.5)
Reason to Pursue Career	
Own motivation and interest	128(65.3)
Parental Influence	40(20.4)
Random Choice	28(14.3)
Stress	
Yes	146(74.5)
No	50(25.5)
Levels of Stress	
Typical	58(29.6)
Distress	32(16.3)
Severe with psychological distress	56(28.6)

Table: 02 Association of demographic factors with the stress

	Stress		P-value
	Yes	No	
Age			
10-20 years	4(2.7)	0(0)	0.344
20-30 years	78 (53.4)	33(66)	
30-40 years	42(28.8)	10(20)	
40-50 years	15(10.3)	3(6)	
50-60 years	7(4.8)	4(8)	
Gender			
Male	49(33.6)	33(66)	0.955
Female	97 (66.4)	17(34)	
Marital Status			
Married	54(37)	22(44)	0.466
Unmarried	83 (56.8)	28(56)	
Widow	6(4.1)	0(0)	
Divorced	3(2.1)	0(0)	
Resident			
Own house	104 (71.2)	36(72)	0.285
Rental	37(25.3)	13(26)	
Hostel	5(3.4)	0(0)	
Government House	0(0)	1(2)	
Reason to Pursue Career			
Own motivation and interest	88 (60.3)	40(80)	0.023*
Parental Influence	36(24.7)	4(8)	
Random Choice	22(15.1)	6(12)	

Chi-square test is applied.

*P-value, significant at ≤ 0.05 .

GHQ-12 is a screening tool designed for the general population for the evaluation of psychological well-being. It is a self-administered questionnaire. It comprises questions which led to the diagnosis of three significant psychological domains. The questions related to "Anxiety and Depression" were lost sleep over worry, constantly under strain, unhappy or depressed, and could not overcome the difficulties. The second domain is "Social dysfunction" which was assessed by these questions; Able to concentrate, play a useful part

in things, be capable of making decisions, face up to problems, enjoy day-to-day activities, reasonably happy. The third domain is "loss of confidence" which is being judged by these losing confidence in self and thinking of self as worthless. We labelled the responses as 0,1,2,3 and added the total scores. This assessment categorizes the severity of stress levels. Score of 11 or 12 signifies "typical stress" >15, "distress" and >20 "psychological distress." We divided the stress levels according to severity that is

“Typical stress” “Distress” and “severe psychological distress” Typical stress includes a moderate level of stress that is within the range of what is considered usual or expected in response to various situations, Distress refers to a higher level of emotional strain or discomfort beyond the typical stress response. Severe psychological distress often indicates a level of emotional strain that might be associated with mental

health issues, such as anxiety disorders, depression, or other severe psychological conditions. It can manifest as intense and prolonged emotional suffering, affecting daily functioning and well-being. Majority of individuals in our study fell under the category of typical stress (n=58) followed by severe psychological distress (n=56) and distress (n=32).

Table 03: Responses of general health questionnaire (GHQ-12)

1. Been able to concentrate on what you're doing?	Better than usual	Same as usual	Less than usual	Much less than usual
	37(18.9)	77(39.3)	69(35.2)	13(6.6)
2. Lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
	37(18.9)	77(39.3)	50(25.5)	32(16.3)
3. Felt you were playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less useful
	36(18.4)	93(47.4)	51(26)	16(8.2)
4. Felt capable of making decisions about things?	More so than usual	Same as usual	Less useful than usual	Much less useful
	41(20.9)	102(52)	37(18.9)	16(8.2)
5. Felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
	27(13.8)	65(33.2)	63(32.1)	41(20.9)
6. Felt you couldn't overcome your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
	40(20.4)	69(35.2)	62(31.6)	25(12.8)
7. Been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less useful than usual	Much less useful
	26(13.2)	84(42.9)	61(31.1)	25(12.8)
8. Been able to face up to your problems?	More so than usual	Same as usual	Less useful than usual	Much less useful
	43(21.9)	84(42.9)	54(27.6)	15(7.7)
9. Been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
	42(21.4)	61(31.1)	58(29.6)	35(17.9)
10. Been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
	61(31.1)	62(31.6)	51(26)	22(11.2)
11. Been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
	87(44.4)	54(27.6)	29(14.8)	26(13.3)
12. Been feeling reasonably happy, all things considered	More so than usual	Same as usual	Less useful than usual	Much less useful
	27(13.8)	97(49.5)	56(28.6)	16(8.2)

DISCUSSION

The aim was to study the prevalence of stress among healthcare providers. The data revealed that stress was quite common and considerable in the female population. A health care professional's job can be quite demanding. Several international studies among healthcare personnel have found mild, moderate, and high levels of stress.³⁻⁷ The amount and severity of stress varies according to their working environment, relationship with co-workers and salary packages. One study done on community healthcare workers found a distress level of 26%.⁸ The stress leading to burnout in US professionals is between 40-50%.⁹ Burnout among primary healthcare workers is widespread in low- and middle-income nations, owing mostly to hard labor and resource limitations in these countries. Estimates for severe stress ranged from 2.5% among Chinese family physicians to 87.9% among Ugandan midwives.¹⁰ A further study conducted in a western region of Iran to measure the level of stress in PHC staff, and its predictive indicators found a prevalence of 52.9%.^{11,12} Another study on nurses found that the majority of them (79%) were in the intermediate stress level, but roughly 14% were in the high stress level. A comparable study was conducted in Iran, where the prevalence of stress among nurses was found to be 54%.¹³

The disparities in these researches could be attributed to racial and socioeconomic differences. It could also be related to differences in stress assessment methodologies, since some research utilized quantitative tools while others employed qualitative assessment to measure stress among health care employees.

In our study sample proportion of females was higher than males. The mean GHQ score was significantly higher in females than in males. One possible explanation is that our culture's conservative mindset prevented individuals from participating in extracurricular activities because of societal limitations. Here, we want to emphasize that the impact of one's personal life on their job can be stressful. The conflict between work and home, controlling male behavior, and men's lack of participation in household tasks were all associated with high levels of stress in the prior studies conducted on similar subjects.^{14,15} Studies also showed that perhaps this is due to the dual roles that women frequently take on as mothers and healthcare providers, which can lead to stress and a general decline in energy.¹⁶

Our data showed most of the participants fall in the age group of 20-30 this might be the collection bias or the distribution of forms to a younger literate population so they can understand and respond appropriately. Considering this factor literature showed that the prevalence of stress is high among the young population. According to Maslach, this illness has a greater impact on young professionals who work in vulnerable and client-focused sectors like health services and stress declines with age. One cause could be that young workers lack job security and have unclear careers. Additionally, older workers adapt and become resistant to fatigue over time by learning how to manage occupational stress.¹⁷

Similarly, in our study, the participants were mostly unmarried. Studies confirmed that single employees were nearly three times more likely to experience stress than those who were married. Being single is a significant risk factor for exhaustion in general. Single workers receive less help from friends and family for work-related concerns. According to earlier research, family and social support can help prevent emotional exhaustion.^{18,19}

Another aspect which is highlighted in our study is the selection of a career. We have observed that, in our survey, participants typically take responsibility for the choice of their career. In a study conducted on career influence on psychological well-being, this idea was expanded.²⁰ It was found that when individuals have a greater sense of ownership and personal investment in their chosen careers, they are more likely to experience higher levels of satisfaction and fulfillment. This can be attributed to the alignment between their personal values, aspirations, and the career path they have consciously chosen. But when they came in the practical experiences like internship, night shifts, at times on call duties they realized that the healthcare industry is one of the most demanding and often requires immense dedication and additional efforts. Later they felt that healthcare careers are not well-compensated compared to some other professions in our country. These factors led to extreme emotional exhaustion and later burn out.

Regarding GHQ-12 is a screening we did not perform any qualitative analysis as far as psychological domains are concerned. Future studies should be planned in a way to separate these questions according to psychological illnesses as described in the reference article.²¹ By segregating the questions

related to anxiety, depression, social dysfunction, and loss of confidence, researchers can gain a deeper understanding of the unique impacts of these domains on psychological well-being. This approach would provide valuable insights into the prevalence and severity of different psychological issues within the studied population.

There were some limitations to this research. Because of the study's cross-sectional design, strong causal links cannot be inferred. Longitudinal studies in the future can help us better grasp the correlations between factors. Furthermore, this study, like many others based on self-reported data, may have been influenced by a bias towards social desirability, and participants may have expressed their opinions in an imbalanced or unduly passionate manner. We noticed that, despite the fact that this questionnaire only took five minutes to complete, participants were given frequent reminders and, second, they may have answered the questions without consideration. We believe that data collection should be targeted and that all data should be collected by a qualified individual who has a basic grasp of science.

Addressing the psychosocial aspects of stress in the healthcare profession is crucial. Implementing

measures that promote work-life balance, such as flexible scheduling and supportive policies, can help alleviate stress and improve overall well-being. Furthermore, incorporating recreational amenities and stress management programs within healthcare facilities could provide healthcare professionals with the means to manage stress effectively. Such initiatives may include yoga classes, mindfulness workshops, or counseling services, which have shown promise in reducing stress and promoting psychological resilience. We believe that enhancing job satisfaction through incentives, rewards, career advancement, and educational opportunities can boost one's sense of accomplishment and help in the reduction of stress.

CONCLUSION

A significant proportion of healthcare workers experienced stress. Among those who reported stress, the majority experienced typical stress, followed by severe stress with psychological distress and distress. The study findings suggest that stress is a prevalent issue among healthcare providers in this tertiary care hospital. These findings emphasize the need for targeted interventions and support mechanisms to address stress among healthcare workers, promoting their well-being and ensuring the provision of quality care to subjects.

REFERENCES

1. Wright T, Mughal F, Babatunde O, Dikomitis L, Mallen CD, Helliwell T. Burnout among primary health-care professionals in low-and middle-income countries: systematic review and meta-analysis. *Bull World Health Organ.* 2022;100(6):385.
2. Irfan M, Naeem F, Afridi MI, Javed A. Prevention of occupational stress in health-care workers during COVID-19 pandemic. *Indian J Psychiatry.* 2020;62(Suppl 3):S495.
3. Ortmeier BG, Wolfgang AP, Martin BC. Career commitment, career plans, and perceived stress: a survey of pharmacy students. *Am J Pharm Educ.* 1991;55:138-42. 26.
4. Wolfgang AP. The health professions stress inventory. *Psychol Rep.* 1988; 62:220-2. 27.
5. Wolfgang AP, Perri Wolfgang CF. Job-related stress experienced by hospital pharmacists and nurses. *Am J Hosp Pharm.* 1988; 45:1342-5. 28.
6. Barnett CW, Hopkins WA, Jackson RA. Burnout experienced by recent pharmacy graduates of Mercer University. *Am J Hosp Pharm.* 1986; 43:2780-4. 29.
7. Lapane KL, Hughes CM. Job satisfaction and stress among pharmacists in the long-term care sector. *Consult Pharm.* 2006; 21:287-92
8. Haq Z, Iqbal Z, Rahman A. Job stress among community health workers: a multi-method study from Pakistan. *Int J Ment Health Syst.* 2008;2(1):1-6.)
9. Shanafelt TD, West CP, Sinsky C, Trockel M, Tutty M, Satele DV, et al. Changes in burnout and satisfaction with work-life integration in physicians and the general US working population between 2011 and 2017. *Mayo Clinic Proceedings.* 2019 Sep 1 (Vol. 94, No. 9, pp. 1681-1694). Elsevier.)
10. Muliira RS, Ssendikadiwa VB. Professional quality of life and associated factors among Ugandan midwives working in Mubende and Mityana rural districts. *Matern Child Health J.* 2016;20:567-76.
11. Zarei E, Ahmadi F, Sial MS, Hwang J, Thu PA, Usman SM. Prevalence of burnout among primary health care staff and its predictors: a study in Iran. *Int J Environ Res Public Health.* 2019;16(12):2249.
12. Aserri MM, Baddar FM, Aserri SM. Prevalence of Occupational Stress and Related Risk Factors among Nurses Working in ASEER Region. *Health.* 2021;13(2):110-22.
13. Khammar A, Dalvand S, Hashemian AH, Poursadeghiyan M, Yarmohammadi S, Babakhani J, et al. Data for the prevalence of nurses' burnout in Iran (a meta-analysis dataset). Data

- Brief. 2018; 20: 1779–1786
14. Houkes I, Winants Y, Twellaar M, Verdonk P. Development of burnout over time and the causal order of the three dimensions of burnout among male and female GPs: A three-wave panel study. *BMC Public Health*. 2011;11:240
 15. Lanballe EM, Innstrand ST, Aasland OG, Falkum E. The predictive value of individual factors, work-related factors, and work-home interaction on burnout in female and male physicians; a longitudinal study. *Stress Health*. 2011;27:73-8
 16. García-Izquierdo, M.; Ríos-Rísquez, M.I. The relationship between psychosocial job stress and burnout in emergency departments: An exploratory study. *Nurs Outlook*. 2012; 60: 322–329.
 17. Corrado B, Ciardi G, Fortunato L, Iammarrone CS. Burnout syndrome among Italian physiotherapists: A cross-sectional study. *Eur J Physiother*. 2018;21(4):1-6
 18. El-Ibiary SY, Yam L, Lee KC. Assessment of burnout and associated risk factors among pharmacy practice faculty in the United States. *Am J Pharm Educ*. 2017; 81: 75
 19. Molina-Praena J, Ramirez-Baena L, Gómez-Urquiza J, Cañadas G, De la Fuente E. Levels of burnout and risk factors in medical area nurses: A meta-analytic study. *Int J Environ Res Public Health*. 2018; 15:2800
 20. Kunnen ES. The effect of a career choice guidance on self-reported psychological problems. *Front Psychol*. 2014;5:547
 21. Gao F, Luo N, Thumboo J, Fones C, Li SC, Cheung YB. Does the 12-item General Health Questionnaire contain multiple factors and do we need them? *Health Qual Life Outcomes*. 2004;2:1-7.

Conflict of interest: Authors declare no conflict of interest.

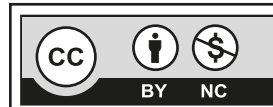
Funding disclosure: Nil

Authors' contribution:

Saba Zaidi; Concept, data analysis, manuscript writing, manuscript revision

Syeda Areeba Tabassum; data collection, data analysis, manuscript writing,

All the authors have approved the final version of the article, and agree to be accountable for all aspects of the work



This is an Open Access article distributed under the terms of the Creative Commons Attribution-Non Commercial 2.0 Generic License.