PREVALENCE OF ANXIETY AND DEPRESSION IN NON-PRACTICING FEMALE DOCTORS OF PAKISTAN

Marium Mazhar[1], Natasha Billia[2], Asma Arman[2], Sohail Ahmed[2]

ABSTRACT

Objectives: To determine the prevalence of anxiety and depression in non-practicing female doctors of Pakistan and the factors associated with it.

Methodology: This is a cross-sectional study, conducted at Fazaia Ruth Pfau Medical College. A self-administered questionnaire with demographic details and questions related to the objectives of the study was used to collect data via online social media platforms, Patient Health Questionnaire-9 and The Generalized Anxiety Disorder scale were used for screening.

Results: 384 doctors included. Mean (±SD) age of participants was 33.6(7.8) years. Anxiety was more prominent among non-practicing female doctors (prevalence = 73.9%, p-value <0.01). 272 doctors had depression (70.8%, p-value: <0.04). Chi-square statistic applied for correlation analysis. Both married and lived single participants had high rates of depression. 94.01% completed their house job. A large number of participants (n=186, 48.44%) did not acquire any postgraduate qualification. A significant correlation between the prevalence of anxiety/depression and time lag from medical practice was found (p-value <0.005). The highest prevalence of depression was noted for women who had a break of 5 to 15 years from medical practice (74.22%).

Lack of childcare facilities in the hospital, moving abroad and the heavy working hours were the reported barriers to practice. Arranging childcare facilities in the hospital among other suggestions were proposed by the non-practicing female doctors to overcome this problem.

Conclusion: The alarming rates of anxiety and depression point to the urgent need for potential policy changes to prevent this catastrophe.

Keywords: Anxiety, Depression, Prevalence, female doctors

INTRODUCTION

Mental health is the basic right of every human being and the presence of stress, anxiety, and depression hampers performance ability[1]. Anxiety is an inappropriate fear, worry, or tension of danger or misfortune related to future situations, accompanied by somatic symptoms like sweating, trembling, and increased heart rate, resulting in the avoidance of such situations, hence hampering one's ability to function normally[2].

[1] American TelePhysicians, Jacksonville, United States
[2] Fazaia Ruth Pfau Medical College (FRPMC), Karachi, Pakistan

Address for Correspondence
Dr. Natasha Billia
Fazaia Ruth Pfau Medical College (FRPMC), Karachi, Pakistan
natasha_billia@yahoo.com
+92 300 2706133

Depression is a state of low mood with feelings of sadness, hopelessness, and/or a loss of interest in activities you once enjoyed resulting in multiple physical and emotional problems[3]. According to the World Health Organization, depression and anxiety affect around 280 million[4] and 301 million[5] people worldwide, respectively. Doctors are prone to develop depression and anxiety due to the demanding and lengthy training in their careers, requiring high motivation, hard work, commitment, and time management[6].

It is reported that after graduation, half of the women choose not to continue their careers in medicine. Family support is crucial for the continued growth of a female doctor's career, specifically of their spouse and in-laws after marriage and childbirth[7]. A local study identified societal pressure to conform to traditional gender roles and insufficient childcare options as contributing factors[8].

While extensive research has delved into the prevalence of depression and anxiety among healthcare professionals, the experiences of non-practicing female doctors remain largely unexplored. According to our hypothesis, having a strong desire to continue working but being unable to do so might result in unpleasant emotions of guilt and inefficiency, both of which could hasten the onset of mental health issues. In the light of this pressing issue, we conducted this study. Our primary endpoint was to establish anxiety and depression in non-practicing female doctors in Pakistan. At the same time, the secondary goal of our narrative was to understand the barriers responsible for the problem and formulate possible solutions.

METHODOLOGY

This is a cross-sectional study design. The duration of the study was 1 year (from June 2022 to June 2023). A self-administered questionnaire was prepared at the Department of Psychiatry Fazaia Ruth Pfau Medical College (FRPMC) by the principal author after discussion with the co-authors of this study. The questionnaire was designed to get information related to the objectives of this study including demographic details. For information related to "reasons for not working" and "solutions" some closed options were provided to be marked along with open options. Patient Health Questionnaire-9 and The Generalized Anxiety Disorder Scale (GAD-7; score 0–21) were used to screen for depression and anxiety. The online Questionnaire and consent forms in the form of Google Forms were circulated through Facebook and WhatsApp groups.

Sample size: Openepi software was used for sample size calculation. The prevalence of anxiety and depression in non-practicing female doctors of Pakistan has not been established in any of the previous studies in Pakistan. Assuming this prevalence to be 50%, with a 5% probability of type 1 error and power of 80%, with an Odds ratio worth detecting of 2.0, the sample size was calculated as at least 384 participants.

Sample selection: Three eighty-four forms were selected by convenience sampling technique.

Inclusion Criteria

- All participants were female doctors
- Completed MBBS degree programs in Pakistan
- The age range was from 20 years to 50 years
- The participants were not engaged in any clinical or professional work for the last one year or more (at the time of study)

Exclusion Criteria

- All females who had a known depressive disorder, or were facing a major life stressor that could result in any psychological disturbance including depression and anxiety were excluded from the study.
- Those who refused to give consent were excluded

Tool: The Patient Health Questionnaire-9 (PHQ-9; score 1-27) was used for MDD (optimal cutoff score for a positive screen is ≥10, specificity 88%—sensitivity 88%) [9] The PHQ-9 is used for screening, diagnosing, monitoring and measuring the severity of depression. PHQ 9 is derived from PHQ which is part of the Primary Care Evaluation of Mental Disorders (PRIME-MD).

The GAD-7 is a tool with strong validity (0.83) and reliability (0.92) properties. It is an outstanding tool that is dependable, simple to use, and quick to identify signs of generalized anxiety in healthcare workers[10].

Data analysis: A total of 640 forms were sent to non-working female doctors fulfilling the inclusion criteria but 384 responses were obtained which comprises 60 % of the total forms sent. Google forms were received and converted on a Microsoft Excel sheet by a principal investigator. Data was analyzed on SPSS version 25. Frequency and percentages were calculated for age, marital status, time since graduation, completion of house job, advanced medical qualification including FCPS, and time since not under medical practice. The data were analyzed first and were found to be of normal distribution hence the results were presented as mean ± SD for quantitative variables. p-value < 0.05 was considered statistically significant. t test statics and chi-square statics were applied to determine the significance.

Ethical considerations: The consent form was designed with consideration of simplicity of language, disclosure of information, explanation of procedure of research, right to withdraw from the study, confidentiality

maintenance, and Contact of the researcher. The study was approved by the Institutional Research & Ethical Board of FRPMC. IRB approval number IRB /20 dated 20-04-22

RESULTS

A total of 384 responses were received. The mean (±SD) age of participants was 33.6 (7.8) years table. The prevalence of psychological disturbances, in the form of depression and anxiety, was 73.9% (p-value: <0.01). T-statistics were applied to assess the presence of depression and anxiety. Overall, anxiety was more prevalent among non-practicing female doctors. Out of 384, 284 doctors had anxiety (73.9%, p-value: <0.01). The majority of doctors with anxiety (n = 123, 32.03%) experienced mild anxiety, while 73 doctors (19.01%) had moderate anxiety and 88 doctors (22.92%) had severe anxiety. Additionally, 272 doctors had depression (70.8%, p-value: <0.04). Among those with depression, mild depression was most common (n = 100, 26.04%), followed by moderate depression (n = 73, 19%) and severe depression (n = 27, 7.03%). Regarding marital status, 334 women were married, while 50 were single, including 45 who had never married, 3 who were divorced, and 2 who had experienced relationship separation (table:1). A correlation analysis using the Chi-square statistic was performed between marital status and the frequency of depression. The key observation from this analysis was that both married and single participants had high rates of depression. However, single participants had a slightly higher prevalence of depression compared to married participants (68.6% among single women vs. 64.3% among married). This difference, however, was statistically non-significant (p-value: 0.663)

Table 1: Descriptive statics

Age (Mean±SD) (years)	33.6(7.8)
Marital status (n)	
Married	344
Single	50
Never married	45
Divorced	2
Separated	3
House job (n)	
Completed	361 (94.01%)
Not completed	10 (2.60%)
Never did house job	13 (3.39%)
Time lap since graduation (Mean±SD) (years)	8.7(6.9)
Time Since Not In Practice (n)	
1 to 5 years	94(24%)
5 to 15 years	225(58%)
16 to 20 years	65(16%)
Post-graduate Qualification After MBBS (n)	
None	186(48.44%)
FCPS	78(20.31%)
Masters	30(7.81%
MCPS	25(6.51%)
Others	65(16.93%)
Future intention to work (n)	
Yes	341(88.80%)
No	10(2.60%)
Don’t know	33(8.59%

After obtaining their MBBS degree, the majority of participants (n = 361, 94.01%) chose to pursue their medical practice and completed their house job, while the remaining 6% either did not complete or did not undertake their house job. Unfortunately, after that, a large number of participants (n = 186, 48.44%) did not acquire any postgraduate qualification. Among the remaining participants, 78 (20.31%) female doctors had attained an FCPS degree but then discontinued their medical practice. table:1

Regarding the cutoff from medical practice, which was identified as the main factor contributing to psychological disorders among the participants, we found that most participants had not been in practice for the past 5 to 15 years. Chi-squared statistics were applied to analyze the correlation between the time away from medical practice and depression/anxiety, yielding statistically significant results (p-value: <0.005). The highest prevalence of depression was noted in women who had been away from medical practice for 5 to 15 years (74.22%), followed by women with less than 5 years away from practice (67%), and women with over 15 years away from practice (50%) (Table 2).

Table 2: Correlation analysis

Variable	Prevalence of anxiety/depression	P-value
Lived single	68.6%	0.663
Married	64.3%	
Not in practice		
since last 5 years	74.22%	<0.005
since 5 to 15 years	67%	
Since > 15 years	50%	

In terms of barriers to returning to medical practice, three main responses emerged. The most frequent response was the lack of childcare facilities, which made it difficult for women to manage childcare responsibilities (n = 197, 51.30%). Two other reasons, each accounting for 27.34% (n = 105), were the desire to move abroad and the hectic nature of the work schedule, which included night duties. Other reasons provided by participants included lack of support from in-laws, lack of support from spouses, workplace harassment, and an inability to secure a job in Pakistan (Fig. 1). In response to a question about their willingness to restart medical practice, 341 (88.08%) doctors expressed a strong desire to pursue their careers again.

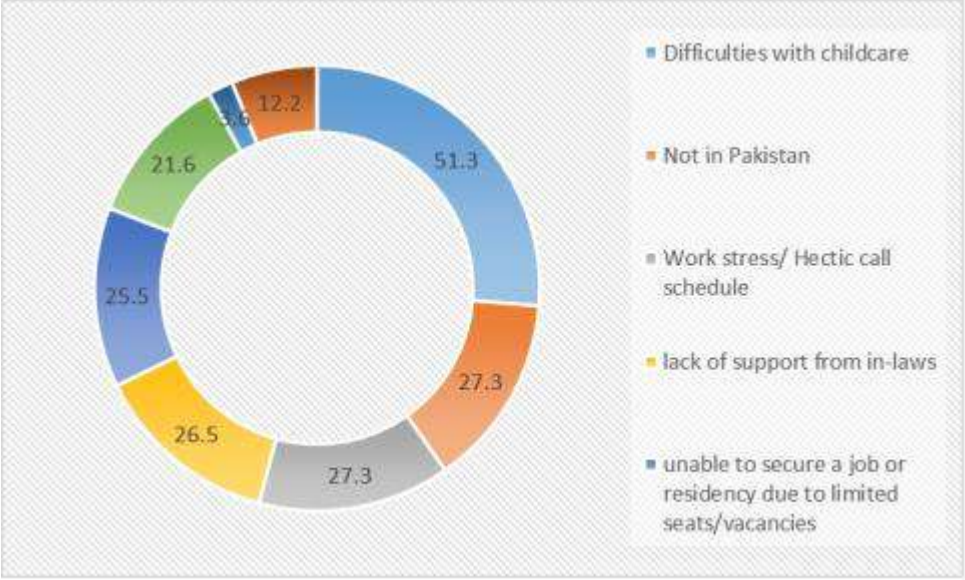

Figure 1: Barriers in pursuing practice among non-practicing female doctors

Non-practicing female doctors also suggested solutions to overcome barriers in their career pathways. The most commonly proposed solution (n = 271, 70.57%) was to make childcare facilities available at every hospital, followed by reducing working hours (n = 242, 63.02%). Other proposed suggestions included launching online degree programs (Masters) for female doctors and opening job opportunities in telemedicine.

DISCUSSION

This study explores the challenges faced by Pakistani female doctors who are unable to practice due to the lack of support from society and institutions, despite their strong desire to work. These women often feel undervalued and are frequently blamed for wasting government resources. Female doctors who are also mothers express regret when their parenting responsibilities clash with their professional obligations. This disdain is often rooted in the traditional standards of mothering set by society. Many of these women feel that they fall short of the ideal image of a wife and mother, even when attempting to adhere to traditional gender roles[11].

Our findings reveal a significant prevalence of anxiety and depression among female doctors who are not currently practicing. Married participants outnumbered unmarried participants sevenfold, highlighting that challenges often arise after marriage. However, we found that the prevalence of anxiety and depression was somewhat higher in women living as single (68.6%) compared to married, non-practicing female doctors (64.3%). A study in Pakistan addressing the issue of missing doctors attributed the problem to a combination of social, organizational, and individual factors influenced by cultural norms[12].

Cultural norms globally assign distinct gender roles, and in Pakistan, men are traditionally expected to be the family breadwinners, holding economically and socially superior positions, while women are primarily responsible for homemaking and nurturing the family[13]. Married Pakistani female doctors in training must balance family and domestic duties with hospital work and training goals, risking emotional exhaustion and burnout, which may ultimately lead to career termination[14]. Our study similarly identified motherhood and family-related barriers as the main reasons for discontinuing medical practice. For instance, childcare responsibility was cited by 51.3% of participants. A local study shows that only 13.4% of doctor-mothers had access to nearby childcare facilities, hindering their ability to practice medicine. More than half of these mothers considered changing careers[15]. Another research study conducted in Pakistan revealed that only 18.4% of women had support with childcare, and around 39% considered leaving their training due to the challenges of balancing pregnancy, childcare, and training[16].

The second most commonly cited reason for discontinuing practice was demanding on-call schedules. Doctors are often required to work continuously for over 24 hours, making critical decisions that affect patients' lives. Frequent night duties and inadequate rest result in both mental and physical exhaustion, culminating in emotional burnout. In our survey, 27.3% of participants cited the inhumane duty hours as a reason for ceasing their practice. Interestingly, we also found that immigration to a foreign country was a frequent cause of non-practice. This may be attributed to the male-dominated culture in which women are expected to move to their husband's place, leaving behind their aspirations and plans. Another possible reason for this trend could be the lack of employment opportunities in Pakistan, as 25% of participants indicated that limited job opportunities contributed to their decision to discontinue the practice.

Despite the various responsibilities, including household chores and child-rearing, many women still desire to pursue their careers[17]. Indeed, this determination is reflected in the fact that 341 doctors (88.08%) in our study expressed a desire to restart their medical practice.

Regardless of parental status, burnout symptoms, particularly emotional fatigue, increased significantly among female residents during postgraduate training compared to their male counterparts[18]. This may be due to the added pressure faced by women from their spouses or in-laws, who may not show support for their careers after marriage. Female doctors reported a variety of issues stemming from their challenging lifestyles, including child neglect, deteriorating marriages, and health problems. While there are many potential sources of stress in physicians' lives, such as challenges in balancing personal and work obligations, large workloads, and high patient volumes[19], we conducted this mental disturbance survey specifically on non-practicing female doctors who were not experiencing major life stressors or known mental health disorders. We found a direct relationship between the time since the discontinuation of medical practice and the occurrence of depression. One possible explanation for this finding could be the break from their professional dreams and the feeling of being professionally disregarded.

We also sought the opinions of participants on possible solutions. The most commonly chosen solution was the establishment of childcare facilities in every hospital, followed by the option of flexible working hours for female physicians to achieve a better work-life balance. Similar suggestions have been supported in the literature. One study proposed less-than-full-time training for female doctors who are struggling to balance work and family life[5]. Likewise, solutions proposed in an international study included reducing working hours, increasing salaries, and providing more opportunities for career development and training[20].

Many participants also suggested the establishment of government-level telemedicine services and affordable online degree programs, such as Master's programs, offered by Pakistani institutions. Telemedicine is cost-effective and time-saving, enabling healthcare services to reach bedridden or disabled individuals, as well as underserved regions such as rural areas facing health disparities[21].

Our study recommends implementing solutions aligned with the identified challenges. Making the necessary adjustments in the healthcare system, rather than simply reporting statistics, is crucial for preventing debilitating conditions in doctors and ensuring their ability to continue practicing.

CONCLUSION: The majority of the participants of the study (almost two-thirds) were found to be suffering from Anxiety & Depression. Common reasons found for not doing work were difficulties in children's care, inability to cope with a hectic professional work schedule along with domestic commitments, and lack of support from spouses and in-laws.

LIMITATIONS OF STUDY

One of the limitations of this study is the small sample size.

Another limitation is the reduced number of responders that we received.

Other psychiatric disorders like stress related disorders and other causes were not assessed in this study which was another limitation of study.

RECOMMENDATIONS

Career counseling should be done for female doctors, at the time of passing out from medical college emphasizing the importance of continuation of clinical practice.

CONFLICTS OF INTERESTS

None

FUNDING

None

ACKNOWLEDGMENTS

Muhammad Azher Uddin and Shaheen Bibi for statistical assistance.

CONTRIBUTIONS OF AUTHORS

Marium Mazhar	Study conception and designed the methodology with help from co-authors, drafted the original manuscript and final manuscript, supervised the study from the beginning
Natasha Billia	Material preparation, data collection, analysis and interpretation of results, drafting the final manuscript with a critical review
Asma Arman	Designed the methodology, data collection, analysis, and interpretation of results, drafting the final manuscript
Sohail Ahmed	Data collection and interpretation of results, drafting and proofreading the final manuscript along with critical review.

REFERENCES

1. Saleem F, Malik MI, Qureshi SS. Work stress hampering employee performance during COVID-19: is safety culture needed? Frontiers in psychology. 2021 Aug 26;12:655839.
2. Farhangi P, Khajehnasiri F. The prevalence of depression, anxiety, and stress among medical residents: A cross-sectional study

in Iran. Acta Medica Iranica. 2020 Nov 19:452-5.
3. Villarroel MA, Terlizzi EP. Symptoms of depression among adults: United States, 2019.
4. Liu J, Ning W, Zhang N, Zhu B, Mao Y. Estimation of the Global Disease Burden of Depression and Anxiety between 1990 and 2044: An Analysis of the Global Burden of Disease Study 2019. InHealthcare 2024 Aug 29 (Vol. 12, No. 17, p. 1721). MDPI.
5. Öztürk EN, Çöl M. Community mental health from public health perspective. Dental and Medical Journal-Review. 2024 Jun 6;6(2):109-19.
6. Outhoff K. Depression in doctors: A bitter pill to swallow. South African Family Practice. 2019;61(1):13-6.
7. Qazi A, Schofield S, Kennedy C. The Attrition of Female Doctors in Pakistan: The way forward. Journal of Women Medical and Dental College. 2022 Nov 14;1(3):1-3.
8. Tahir S, Bashir A, Rafique A, Khan JS. The barriers which prevent female dentists from pursuing their career in Pakistani culture. Pakistan Oral & Dental Journal. 2017 Sep 30;37(3):477-82.
9. Wang L, Kroenke K, Stump TE, Monahan PO. Screening for perinatal depression with the Patient Health Questionnaire depression scale (PHQ-9): A systematic review and meta-analysis. General hospital psychiatry. 2021 Jan 1;68:74-82.
10. Camargo L, Herrera-Pino J, Shelach S, Soto-Añari M, Porto MF, Alonso M, González M, Contreras O, Caldichoury N, Ramos-Henderson M, Gargiulo P. GAD-7 generalised anxiety disorder scale in Colombian medical professionals during the COVID-19 pandemic: construct validity and reliability. Revista Colombiana de psiquiatria (English ed.). 2023 Jul 1;52(3):245-50.
11. Tariq I, Asad MS, Majeed MA, Fahim U. Work-family conflict, psychological empowerment, and turnover intentions among married female doctors. Bangladesh Journal of Medical Science. 2021 Jun 18;20(4):855-63.
12. Mohsin M, Syed J. The missing doctors—an analysis of educated women and female domesticity in Pakistan. Gender Work Organ. 2020 Nov;27(6):1077-102.
13. Chaudhary N, Dutt A. Women as agents of change: Exploring women leaders' resistance and shaping of gender ideologies in Pakistan. Frontiers in Psychology. 2022 Apr 6;13:800334.
14. bin Zafar Mahmood S, Zahid A, Nasir N, Tahir M, Ghouri U, Almas A. Triggering and protective factors of burnout in medical resident physicians in a lower-middle-income country: A cross-sectional study. Annals of Medicine and Surgery. 2021 Jul 1;67:102500.
15. Salam A, Shahid S, Bint-e-Khalid T, Qureshi SW, Rana M, Ahmed M. Pregnancy and Motherhood Challenges during Postgraduate Training in Pakistan. Internal medicine. 2022 Nov 1;61:19-.
16. Rangel EL, Smink DS, Castillo-Angeles M, Kwakye G, Changala M, Haider AH, Doherty GM. Pregnancy and motherhood during surgical training. JAMA surgery. 2018 Jul 1;153(7):644-52.
17. Dousin O, Collins N, Kler BK. The experience of work-life balance for women doctors and nurses in Malaysia. Asia Pacific Journal of Human Resources. 2022 Apr;60(2):362-80.
18. Kocalevent R, Pinnschmidt H, Selch S, Nehls S, Meyer J, Boczor S, Scherer M, Van Den Bussche H. Burnout is associated with work-family conflict and gratification crisis among German resident physicians. BMC Medical Education. 2020 Dec;20:1-8.
19. Lu Y, Hu XM, Huang XL, Zhuang XD, Guo P, Feng LF, Hu W, Chen L, Zou H, Hao YT. The relationship between job satisfaction, work stress, work–family conflict, and turnover intention among physicians in Guangdong, China: a cross-sectional study. BMJ open. 2017 May 1;7(5):e014894.
20. Flumignan CD, Rocha AP, Pinto AC, Milby KM, Batista MR, Atallah ÁN, Saconato H. What do Cochrane systematic reviews say about telemedicine for healthcare?. Sao Paulo Medical Journal. 2019 Jul 15;137:184-92.
21. Raza A, Jauhar J, Abdul Rahim NF, Memon U, Matloob S. Unveiling the obstacles encountered by women doctors in the Pakistani healthcare system: A qualitative investigation. Plos one. 2023 Oct 5;18(10):e0288527.