



Original Article

Gender Differences in the Prevalence of Depression, Anxiety, and Stress in Khyber Pakhtunkhwa: A Cross-Sectional Study at Lady Reading Hospital MTI Peshawar

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Abstract

Objective: The aim of present study was to explore gender differences in the prevalence of depression, anxiety, and stress among patients at Lady Reading Hospital, Peshawar and to identify socio-economic and cultural factors contributing to these mental health conditions.

Methods: A cross-sectional study was conducted with 400 patients (200 males, 200 females) aged 18-65 years, enrolled from both outpatient department (OPD) and inpatient department (IPD) cases at Lady Reading Hospital. The Depression, Anxiety, Stress Scale (DASS-21) and a demographic questionnaire were used for data collection. Descriptive statistics, t-tests, and logistic regression analyses were employed.

Results: Female participants exhibited significantly higher rates of depression (65%), anxiety (70%), and stress (60%) compared to males (40%, 45%, and 35%, respectively). Key socio-economic predictors included low education levels, unemployment, domestic abuse, and financial insecurity, disproportionately impacting women. Males also faced stress and anxiety, albeit less frequently, influenced by poverty, inflation, and the need to support large families.

Conclusion: This study suggested significant gender differences in the prevalence of depression, stress, and anxiety among patients at Lady Reading Hospital, Peshawar. The higher prevalence highlights the need for targeted mental health services to address the unique cultural, social and economic factors. By increasing job opportunities and socioeconomic independence, removing gender related educational disparities and provision of gender sensitive mental health services are important steps in reducing mental health burden in KPK.

Keywords: Depression, Anxiety, Stress, Gender Differences, Khyber Pakhtunkhwa

How to cite this:

Mehmood Z, Zeb S, Khan AG. Gender Differences in the Prevalence of Depression, Anxiety, and Stress in Khyber Pakhtunkhwa: A Cross-Sectional Study at Lady Reading Hospital MTI Peshawar. J Pak Soc Intern Med. 2025;6(1): 22-25

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Received: 17-10-2024

Revised: 01-02-2025

Accepted: 22-02-2025

DOI: <https://doi.org/10.70302/jpsim.v6i1.2505>

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Introduction

Mental health disorders such as depression, anxiety, and stress are the most common public health problems in the world. According to World Health Organization (WHO) more than 264 million people worldwide experience depression, stress and anxiety globally¹. It has been noted that gender differences in depressive symptoms have been extensively documented, with women reporting a higher number of depressive symptoms than men. The impact of these conditions on global economy is huge, almost exceeding \$1 trillion yearly due to low productivity. Despite these mind boggling figures, mental health never remains a priority in many

resource limited countries including Pakistan. Mental health is deeply rooted in the social, cultural, religious, spiritual, historical and holistic aspects of human lives². The risk of developing mental disorders is high among the poor, homeless, the unemployed, people with low educational status, migrants and refugees, and indigenous populations. Evidence from Pakistan indicates that the risk factors for developing mental disorders are gender (women are at higher risk), domestic violence, adverse childhood experiences, and lack of social support, stressful life events and low educational status.

In Pakistan, the prevalence of these conditions is high and previous studies suggest that women face an increa-

sed burden of these disorders. The country's social and cultural dynamics, especially in the Khyber Pakhtunkhwa (KPK) province, poses significant challenges that increase the risk among women. Male dominance in this society, early age marriages with bigger families and kids, and an inferior role of women in families decision-making matters generally creates a background for women to experience psychological distress. Similarly domestic violence, harassment at their workplace, and financial instability further compound these issues, leading to a higher prevalence of mental health disorders among women in KPK³.

In Pakistan the situation is further complicated by the non-availability of adequate health rehabilitation services in order to address the growing burden of mental health disorders including shortage of trained health care professionals and lack of public awareness about mental health issues. Women in our society face challenges in accessing mental health care due to cultural stigmatization, restricted mobility and lack of financial resources. This combination of socio-economic and cultural factors places women in KPK at an increased risk of developing mental health disorders compared to men, although both genders suffer from these conditions in different ways.

In Pakistan, KPK is different from other provinces in terms of its social, cultural and environmental factors which can affect the psychological health of the people. Studies are required to generate data specific to local context in terms of associated risk factors in order to inform policy makers and implement preventive programs. Our research sought to ascertain how frequently female patients presented with depression, anxiety and stress to lady reading hospital Peshawar, KPK and its contributing factors⁵. The aim of present study was to explore gender differences in the prevalence of depression, anxiety, and stress among patients at Lady Reading Hospital, Peshawar and to identify socio-economic and cultural factors contributing to these mental health conditions.

Methods

This cross sectional study was conducted at Lady Reading Hospital, MTI Peshawar, over a period of six months from January 2024 to June 2024 after getting ethical approval from hospital ethical review board (IRB). 400 patients (200 males and 200 females), 18-45 years were included in this study. Patients who showed willingness and were able to provide required information were included in this study. Those who had a history of major psychiatric illness or cognitive impairments were excluded. Depression, Anxiety, Stress Scale (DASS-21) and a demographic questionnaire that covered socio-economic and psychosocial variables were used to collect the

data. Data were analyzed using SPSS. Descriptive statistics summarized demographic information. Independent t-tests compared depression, anxiety, and stress levels between genders.

Results

Demographic Characteristics: This study enrolled a total of 400 patients (200 males and 200 females) from the Medical and Neurology departments at Lady Reading Hospital, Peshawar, including both inpatient and outpatient cases. Participants' ages were from 18 to 65 years, with the majority falling within the 26-35 age (55%). Among the female patients, 60% were housewives, and 70% of the males were employed. 70% of the female patients were married compared to 60% of males.

Prevalence of Depression, Anxiety, and Stress: The overall prevalence of mental health disorders was significantly higher in women compared to men. Specifically, 65% of the female participants exhibited moderate to severe depression, whereas 40% of the males fell within this range. Anxiety was even more pronounced, with 70% of the women reporting symptoms of moderate to severe anxiety, as opposed to 45% of the men. Stress levels followed a similar pattern, with 60% of females affected, compared to 35% of males. Table 1 below summarizes the gender-wise distribution of mental health disorders.

Table 1: Prevalence of Depression, Anxiety, and Stress

Mental Health Condition	Total (%)	Male (%)	Female (%)
Depression	52%	40%	65%
Mild	20%	15%	25%
Moderate	22%	18%	26%
Severe	10%	7%	14%
Anxiety	58%	45%	70%
Mild	25%	20%	30%
Moderate	23%	18%	28%
Severe	10%	7%	12%
Stress	48%	35%	60%
Mild	18%	12%	24%
Moderate	20%	15%	25%
Severe	10%	8%	11%

Gender Differences in Mental Health Disorders: Independent t-tests revealed statistically significant differences in the mean scores for depression, anxiety, and stress between genders. Female patients were found to have a higher score ($p < 0.001$) which suggested that

women experience higher levels of mental disorders compared to men due to their poor socioeconomic and cultural factors negatively affecting their mental health.

Predictors of Mental Health Disorders: Logistic regression analysis identified significant predictors of mental health issues among females. Poor literacy rate, unemployment, and a joint family system were found to be strongly associated with a higher incidence of depression, anxiety, and stress. These factors significantly affected women mental health in this region. Results suggested that women with lower education were 2.5 times more vulnerable to develop depression compared to those with higher education. Similarly, unemployment also increased development of anxiety by 3.2 times in female participants. Table 2 shows the logistic regression analysis results for predictors of mental health conditions.

Table 2: Logistic Regression Analysis of Predictors of Depression, Anxiety, and Stress

Predictor Variable	Odds Ratio (OR)	95% Confidence Interval (CI)	p-value
Education (Low)	2.5	1.8–3.5	<0.001
Unemployment	3.2	2.4–4.3	<0.001
Joint Family System	1.7	1.3–2.4	0.002
Female Gender	2.8	2.0–3.9	<0.001
Marital Status (Married)	1.3	0.9–1.8	0.089

Discussion

Our study reinforces the findings of previous studies suggesting a higher prevalence of depression, anxiety, and stress among women when compared to men⁶. Our results align with a study by Kuehner (2017) and Albert (2015), who reinforced the global trend of greater psychological disorders in women. However in Khyber Pakhtunkhwa, the social and cultural environment is responsible for these gender disparities. Women in this region often face a lot of restrictions to get their education and jobs to become financially independent which leads to increasing vulnerability to mental health issues.

Another study by Mirza and Jenkins (2004) studied the lower educational level and mental health disorders and it was concluded that poor educational level increases the risk of development of depression and anxiety in Pakistani women. In our study, the odds of developing depression were 2.5 times higher for women with poor educational status. Therefore it is suggested that improving female education is important to mitigate the burden of mental disorders in KPK population.

Another important concern is association between unemployment and anxiety especially among women.

Females in this region predominantly depend on male family members due to low educational level but even in the educated class there is limited job opportunities for women in KPK, likely contributing to this finding. A study by Husain et al. (2007), has noted similar trends in rural areas of Pakistan, where unemployment was found to be a significant predictor of psychological disorders in women just like our study findings. Our results highlight the need for policy makers to increase job opportunities for women in KPK in order to reduce the economic and psychological pressures which women in our society face⁷.

Men in this study were also reported to suffer from notable levels of stress due to their main role of leading their families as a single bread earner in the current status of country economic instability and inflation. This is consistent with a study by Iqbal and Khalily (2015), who reported that financial constraints is a key contributor to mental health issues among men in Pakistan⁸. Additionally, the rising trend of substance abuse among men, as a coping mechanism for stress and anxiety, presents as a growing public health challenge⁸. A recent increase in the use of substances such as ice (methamphetamine), cocaine, and cannabis is common among men in KPK, reflecting broader issues of peer pressure and inadequate mental health services and rehabilitation programmes.^{9,10,11}

Conclusion

This study suggests significant gender differences in the prevalence of depression, stress, and anxiety among patients at Lady Reading Hospital, Peshawar. The higher prevalence of these conditions in women highlights the need for targeted mental health services to address the unique cultural, social and economic factors affecting women in KPK. Increasing job opportunities and socioeconomic independence, as well as removing gender related educational disparities and provision of gender sensitive mental health services are important steps in reducing mental health burden in KPK.

Recommendations

Policy Interventions: Develop gender-sensitive mental health policies which can address the specific needs of women in KPK.

Education: Remove gender related educational disparities.^{12,13}

Support Systems: Community based public awareness programmes to strengthen social support systems, particularly for women in joint family settings to reduce stress and anxiety¹⁴.

Acknowledgments: We acknowledge the support of the staff at Lady Reading Hospital for their assistance in data collection and express our gratitude to all the

participants who contributed to this study

Ethical Approval: The IRB/EC approved this study via letter no.1068/LRH/MTI dated 29-12-2023.

Conflict of Interest: None

Funding Source: None

Authors' Contribution:

ZM: Conception

SZ: Design of the work

AGK: Data acquisition, analysis, or interpretation

SZ: Draft the work

ZM, AGK: Review critically for important intellectual content

ZM, SZ, AGK: Approve the version to be published

ZM, SZ, AGK: Agree to be accountable for all aspects of the work

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