Volume 3, Issue 1, 2025

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

PREVALENCE OF POSTPARTUM DEPRESSION AMONG PAKISTANI WOMEN AT PUBLIC SECTOR HOSPITALS: A CROSS- SECTIONAL STUDY

Saeeda Khan*[1], Yasir Ali[2], Mehr Ul Jamal[3], Aiman Zuha[4], Laiba Gul[5], Huma Shehzad[6], Kainat Fayyaz[7]

*[1]*MSN Scholar at Ziauddin University, Faculty of Nursing and Midwifery, Karachi, Pakistan*
[2]*MSN at Ziauddin University, Faculty of Nursing and Midwifery, Karachi, Pakistan*
[3,4,5,6,7]*GBSN Student, Qatar College of Nursing (Female), Karachi, Pakistan*

*[1]saeedakhattak09@gmail.com
*[1]https://orcid.org/0009-0006-7699-7806, [2]https://orcid.org/0009-0006-6284-9546

DOI: https://doi.org/10.5281/zenodo.15074527

Keywords
Prevalence, Postpartum Period, Postpartum Depression, Public Sector Hospital

Article History
Received on 17 February 2025
Accepted on 17 March 2025
Published on 24 March 2025

Corresponding Author: *

Abstract

Background: *Post-Partum Depression (PPD), is characterized by a number of symptoms that can cause clinically significant distress or impaired Psychological function, such as depression, psychomotor disturbance, feelings of guilt or worthlessness, and suicidal thoughts in mothers who give birth to the child, first appears within the first 4 weeks of birth (one month), and it often peaks in severity within the first six months.*

Objective: *The objective of this study was to determine the level of postpartum depression among Pakistani women.*

Material and Methods: *A cross sectional descriptive research study design was used to determine the level of postpartum depression among Pakistani women at two public sector hospitals from December, 2024 to February, 2025. Sample size was calculated by using PASS 2021 version 21.0.3 and the calculated sample size was 375. Convenient sampling technique was used to collect the data. Edinburgh Postnatal Depression Scale (EPDS), questionnaire with demographic portion was introduced to the patients after written informed consent and ethical institutional approvals. All the women included in the study who gave birth to alive child within 40 days periods and women were excluded who previous history of taking psychotic and endocrine medication and who gave birth to dead child.*

Results: *The current research findings indicate that a significant majority (77%), experienced postpartum depression, while only (23%) did not report symptoms of depression.*

Conclusion: *The study's findings concluded that higher level of postpartum depression found among women which affects their mental and physical health.*

INTRODUCTION

A depressed mood, a lack of drive, and a sensation that life has no purpose are the Hallmarks of depression, a psychological illness. In various contexts, it is accompanied by the sensation

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

of emotions such sadness, anger, self-guilt, and shame (Diagnostic and statistical manual of mental disorder 5th edition DSM-5) (1). People who have experienced abuse, significant loss, or other upsetting circumstances are more likely to develop depression, which results from the interaction of biological, psychological, and social factors (2). Depression manifests as a loss of interest and enjoyment in almost all activities, a low mood, changes in eating and sleep habits, a drop in energy, feelings of worthlessness and guilt, and difficulties focusing, thinking, and making decisions (3). Following the first year of childbirth, every 1 in 7 women experience postpartum depression (PPD), a common and possibly serious mood condition, Since of the stigma associated with mental disorder and PPD, patients reluctance to disclose symptoms, up to 50% of cases remain misdiagnosed despite the fact that the disorder is caused by multifactor including hormonal changes, hereditary susceptibility, and environmental factors. PPD first appears within the first 4 weeks of birth (one month), and it often peaks in severity within the first six months (4). PPD is characterized by a number of symptoms that can cause clinically significant distress or impaired function, such as depression, loss of interest, anhedonia, disturbed sleep and appetite pattern, fatigue, impaired concentration, psychomotor disturbance, feelings of guilt or worthlessness, and suicidal thoughts (5). Although the precise origin of PPD is unknown, hormonal fluctuations, genetic predispositions, and psychosocial stressors are among possible underlying etiologies that may contribute to the development of condition. The significant decrease in estrogen and progesterone levels after birth, in combination with the stress and sleep deprivation that usually accompany caring for a new-born, can trigger depressive episodes in individuals who are susceptible (6).An estimated 10–15% of pregnant women suffer from postpartum depression (PPD), a mental illness that is frequently ignored and mistreated. It is a serious public health issue that impacts the physical and psychological well-being of the mother as well as the child physical, mental, and emotional growth (7). Moreover, postpartum depression affects not only the mother but also the father and close relatives. Approximately 8–10% of fathers suffer from depression both during and after their wife's pregnancy and several physiological, biological, social, and economic factors contribute significantly to postpartum depression (8). In addition, women with PPD often experience challenges such as difficulty continuing to breastfeed regularly due to their depression symptoms. The mother-child bond is further strained by PPD, leading to emotional maladjustment, excessive crying, aggressive behavior, low cognitive performance, and sleep issues in both mothers and infants. Mothers with PPD may also experience adverse thoughts, substance misuse, postpartum psychosis, hallucinations, mood swings, paranoia, poor judgment, disorganized behavior, and a lack of appetite. This condition makes it difficult for them to socialize and engage with others, including their family members. Alarmingly, women with PPD are more prone to suicide and infanticide and are at higher risk of severe mental illnesses like bipolar disorder (9) Finally, the long-term effects of PPD on women's mental health cannot be overlooked. Due to their experiences of postpartum depression, some women might lose interest in becoming pregnant again, which underscores the lasting impact of this condition on their lives (10). PPD is linked to a higher risk of health issues in children, including asthma, diabetes, diarrhea, and a disturbed neonatal sleep cycle. Prolonged episodes of PPD may be linked to psychiatric disorders in children, including attention deficit hyperactivity disorder (ADHD) and anxiety disorder. If left untreated, PPD can have long-lasting effects on both the mother and the child. Mothers may also experience anxiety, anger, guilt, and a sense that they are not good mothers, or fear that others will think they are incapable of caring for their child (11).The children of untreated depressed mothers (compared to mothers without PPD) are at risk for issues like poor cognitive functioning, behavioral inhibition, emotional maladjustment and violent behavior. When mothers' PPD is left untreated, such as increased weight issues, alcohol and illicit drug use, social relationship issues, breastfeeding issues, or persistent depression as compared to women who have received treatment (12-14).Globally, around 10% of pregnant women and 13% of postpartum women experience mental health disorders, with depression being the most common. The prevalence of these conditions is

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

notably higher in developing countries, affecting approximately 15.6% of women during pregnancy and 19.8% after childbirth (15).PPD affects approximately 17.22% of women with significant variations in prevalence across different regions. Southern Africa reports the highest rate at 39.96%, while high-income countries generally show lower prevalence in western countries ranging between 10% and 15% within the first year postpartum. The prevalence of PPD in the United Kingdom is 21.5%, in New Zealand 10.58%, in Canada 8.46%, in Norway 10.1%, and in Sweden 12.5% (16).PPD rates are generally higher in low- and middle-income countries, Rates in developing countries include Nepal at 14.7%, India at 22%, Pakistan at 28.8%, Indonesia at 22.35%, Bangladesh at 22%, Argentina at 18.6%, Egypt at 22.99%, and Ghana at 3%. However, some low-income countries, such as Ghana, report unusually low prevalence rates despite similar socio-economic conditions to those with higher rates(17). Postpartum depression affects almost 20% of mothers annually around the world. Only about 50% of these women are diagnosed. The condition is seen to be much more prevalent in developing and underdeveloped countries. Throughout Asia postpartum depression was found to range between 3.5%(Malaysia) and 63.3%(Pakistan).Its prevalence was found to be about 11% in China, 22% in India 38.8% in Iran 39.4% in Bangladesh and 56.2% in Afghanistan. The prevalence of postpartum depression within Pakistan also varies from province to province and city to city with 19.3% in Sindh and 41% in Punjab. A study at two tertiary care hospitals in Peshawar estimated a frequency of postpartum depression to be 62.7% in RMI and 37.3% in HMC (18). This study aim was to investigate the level of postpartum depression in Pakistani women at a public sector hospitals.

METHODOLOGY

A cross-sectional study design was used for this study. The purpose of this study was to determine the level of postpartum depression among Pakistani women. The study was conducted at two public sector hospitals, Karachi. This study was completed within 6 months after the approval from the Research Committee (RC) and Institutional Review Board (IRB) of the selected hospitals. The sample size was calculated by using pass Software 2021.21.03 version, the calculated sample size was 375, with a 95% confidence interval, and 5% margin of error. A convenient sampling technique was used on the basis of predefined eligibility criteria. All the women included in the study who delivered alive babies (within 40 days) periods by any mode of delivery, aged 20-45 years. All women excluded from the study who had a prior psychological illness history and taking any psychotic medication, endocrine disorders and sever medical conditions and those who delivered stillbirth and intra uterine death (IUD).The data was collected by using an open-excess, validated, and structured questionnaire named the Edinburg postnatal depression screening tool (EPDS). A convenient sampling technique was employed. The study duration of the study was from December 2024 to February 2025. Permission was granted form the medical superintendents of the respective hospitals before data collection (Ref: SGQH/573/74 dated 10/02/2025) while data was collected in three phases. In initial phase, patients at public sector hospital were identified. In second stage, written informed consent was introduced to the patients and oral information was also provided to the patients about study objectives as well as anonymity and confidentiality was well explained to the participants. In the third stage the questionnaire was introduced to the patients. Required sample size of the participants was gathered from the identified hospitals.

Tool Reliability

The Cronbach's alpha score of 0.92, taken from the study by Jamshaid et al. (2023), Rawalpindi, Pakistan, indicates high reliability. This score shows the easy applicability for researchers to assess the postpartum mental health of women. The EPDS allows for straightforward implementation in various settings to support women's mental health after childbirth (19).

Tool Validity

The Edinburgh Postnatal Depression Scale (EPDS) is a validated, open-access tool for measuring postpartum depression.

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

RESULTS

Table-1: Sociodemographic Characteristics of the Participants (n=375)

Characteristics	F	%
Age		
<20 Years	73	19.5
20-30 Years	216	57.6
> 30 Years	86	22.9
Qualification		
Primary	86	22.9
Middle	94	25.1
Matriculation	127	33.9
Others	68	18.1
Occupation		
House Wife	281	74.9
Working Women	94	25.1
Gravida		
1st	118	31.5
2nd	122	32.5
3rd	87	23.2
4th	48	12.8
Mode of Delivery		
SVD	136	36.3
Caesarean Section	169	45.1
Episiotomy	70	18.7

Table-1: Sociodemographic Characteristics of the Participants (n=375)

The majority of participants (57.6%) belonged to the 20-30 years age group, while (19.5%) were under 20 years of age. Regarding occupational status (74.9%), were housewives and (25.1%) were working women. In terms of the mode of delivery, cesarean section was the most frequently reported method (45.1%), (SVD) was (36.3%), while episiotomy was (18.7%). When considering gravida, 2nd was (32.5%), while the 4th was (12.8%). Educational qualifications revealed that the highest percentage of participants had a matriculation-level education (33.9%), although, the lowest percentage fell under the "Others" category (18.1%), which may include individuals with either higher education levels or those with no formal education at all.

Table-II: Association of demographic characteristics with depression

Characteristics	No Depression n (%)	Depression n (%)	p-value~
Age			0.489
<20 Years	13 (17.8%)	60 (82.2%)	
20-30 Years	53 (24.5%)	163 (75.5%)	
> 30 Years	19 (22.1%)	67 (77.9%)	
Qualification			0.243
Primary	20 (23.3)	66 (76.7)	
Middle	15 (16.0)	79 (84.0)	
Matriculation	35 (27.6)	92 (72.4)	

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

Others	15 (22.1)	53 (77.9)	
Occupation			**0.038**
House Wife	71 (25.3%)	210 (74.7%)	
Working Women	14 (14.9%)	80 (85.1%)	
Gravida			0.377
1st	33 (28.0%)	85 (72.0%)	
2nd	23 (18.9%)	99 (81.1%)	
3rd	18 (20.7%)	69 (79.3%)	
4th	11 (22.9%)	37 (77.1%)	
Mode of Delivery			0.069
SVD	31 (22.8%)	105 (77.2%)	
Caesarean Section	45 (26.6%)	124 (73.4%)	
Episiotomy	9 (12.9%)	61 (87.1%)	

~ Chi-square test, values presented as row (%)

Table-II: Association of demographic characteristics with depression

Table –II displays association of baseline characteristics of the participants with depression. No significance difference ($p \geq 0.05$) were observed among the study participants in relation to different demographic variable including age (p -0.489), gravida (p -0.377), qualification (p -0.243) and mode of delivery. Although significance difference (P-0.038) were found in the level of depression among study participants in relation to the occupational status. Women with status of hose wife reported (74.7%) while women with working status stated (85.1%) of postpartum depression.

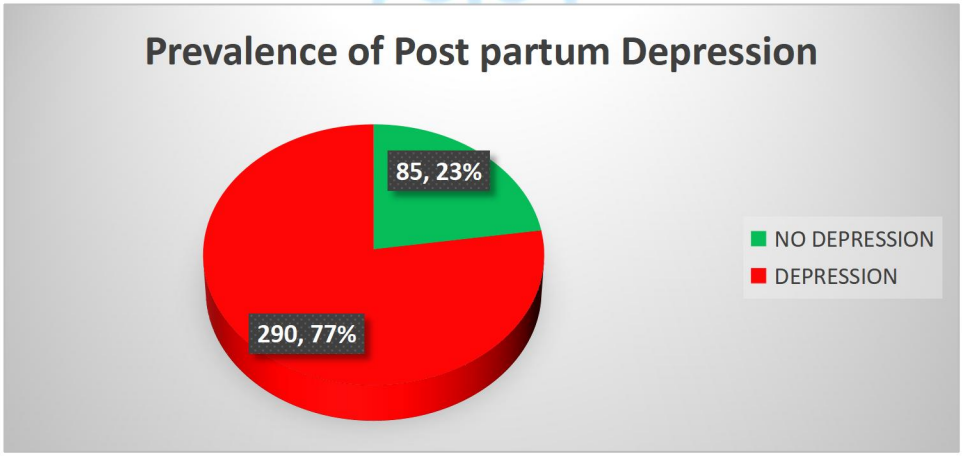

Figure-1: Prevalence of postpartum depression among participants

The pie chart illustrates the prevalence of postpartum depression among participants. The findings indicate that a significant majority (77%), experienced postpartum depression, while only (23%) did not report symptoms of depression. This highlights a high prevalence of postpartum depression within the study population, suggesting the need for increased awareness, early detection, and intervention strategies to support maternal mental health.

DISCUSSION

Post-partum depression level was assessed at a public sector hospital. The findings of this study revealed both consistencies and differences in demographic characteristics, association of demographic characteristics with level of depression among this particular population and overall level of depression as well. In this study, (57.6%) of participants aged between 20-30 Years, similarly, Alkubati et al in 2024 conducted a study, where the (63.5%) of participants were the same age (20). In contrast, Hanach et al., 2023, Yasir et al., 2025 reported (24.1%), (51 %)

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

aged between 25 to 45 years respectively, highlighting potential contextual differences (21) (22). In the current study, the educational status of participants was matriculation (33.9%), reflects comparable findings from Myo et al. (28.3%) in 2021 (23).But divergent significantly from Liu et al. (13.5%) in 2021, suggesting regional or sample-related factors (24). This distribution of education levels could have implications for maternal health awareness and decision-making during pregnancy and childbirth. In the present study, (74.7%) were house wives, aligned to the finding of Alzahrani et al., in 2022, reported (68.7%) (24). However,Ghafoor et al., in 2021, reported (22.5%) a much lower percentage, possibly due to differing recruitment criteria or employment rates(25). In this research (32.5%) participants had 2nd Gravida, results consistent with findings of Atuhaire et al., in 2021 (26.3%) (26).although dissimilar to the findings of Akurathi et al., in 2023 who reported (14.8%) of participants with 2nd Gravida (27). Lastly in the baseline characteristics, the caesarean section mode of delivery reputed to (45.1%) ,findings aligned with Liu et al., in 2021 who revealed (36.0%) (16).However in contrasts sharply with Dadhwal et al. , in 2023 study who had (13.9%) of participants with LSCS, suggesting variability in healthcare practices or maternal preferences (28).In the current research findings indicate that a significant majority (77%), experienced postpartum depression, while only (23%) did not report symptoms of depression, correspondingly Alba, B et al., 2021 reported (70%) level of post-partum depression (29). However Rico et al., in 2021 reported (39.4%) level of depression (30). These differences emphasize the importance of contextual factors, including regional and cultural influences, while underscoring the need for more standardized and inclusive research methodologies to ensure the generalizability of findings. It is crucial to keep in mind that the concept of lifestyle management might need to be expanded in order to be more in line with the whole person model of healthcare delivery (31).

CONCLUSION

The study's findings indicate that postpartum depression levels among women at public sector hospitals reported higher symptoms, which affects their mental and physical health. Larger-scale research is still needed, and future interventional studies must be conducted.

REFERENCES

Yuan Y, Wu D, Chen Z, Chen D, Zhou Q, Jeong J, et al. The relationship between self-consciousness and depression in college students: the chain mediating effect of meaning life and self-efficacy, with the moderating effect of social support. *BMC Public Health.* 2024;24(1):794.

Zhang H, Hashim SB, Huang D, Zhang B. The effect of physical exercise on depression among college students: a systematic review and meta-analysis. *PeerJ.* 2024;12:e18111.

Bresolin JZ, Dalmolin GdL, Vasconcellos SJL, Barlem ELD, Andolhe R, Magnago TSBdS. Depressive symptoms among healthcare undergraduate students. *Revista Latino-Americana de Enfermagem.* 2020;28:e3239.

Carlson K, Mughal S, Azhar Y, Siddiqui W. Postpartum depression. *StatPearls [Internet]: StatPearls Publishing;* 2024.

Wang X, Zhang L, Lin X, Nian S, Wang X, Lu Y. Prevalence and risk factors of postpartum depressive symptoms at 42 days among 2462 women in China. *Journal of Affective Disorders.* 2024;350:706-12.

Li Y, Cacciottolo TM, Yin N, He Y, Liu H, Liu H, et al. Loss of transient receptor potential channel 5 causes obesity and postpartum depression. *Cell.* 2024;187(16):4176-92. e17.

Cafiero PJ, Zabala PJ. Postpartum depression: Impact on pregnant women and the postnatal physical, emotional, and cognitive development of their children. An ecological perspective. *Arch Argent Pediatr.* 2024;122(3):e202310217.

Essel G, Maiyo B. The impact and management of postpartum depression on mothers. *2024.*

Abdollahi F, Zarghami M. Effect of postpartum depression on women's mental and physical health four years after childbirth. *East Mediterr Health J.* 2018;24(10):1002-9.

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

Masih J, Masih C. Effects of Postpartum Depression (PPD) in Working Women. *J Anxiety Depress.* 2022;5(2):148.

Mikšić Š, Uglešić B, Jakab J, Holik D, Milostić Srb A, Degmečić D. Positive effect of breastfeeding on child development, anxiety, and postpartum depression. *International Journal of Environmental Research and Public Health.* 2020;17(8):2725.

Slomian J, Honvo G, Emonts P, Reginster J-Y, Bruyère O. Consequences of maternal postpartum depression: A systematic review of maternal and infant outcomes. *Women's Health.* 2019;15:1745506519844044.

Agrawal I, Mehendale AM, Malhotra R. Risk factors of postpartum depression. *Cureus.* 2022;14(10).

Sajjad A, Shah S, Abbas G, Aslam A, Randhawa F, Khurram H, et al. Treatment gap and barriers to access mental healthcare among women with postpartum depression symptoms in Pakistan. *PeerJ.* 2024;12:e17711.

Bala J, Kumari R, Gupta RK, Langer B, Mahajan R, Zaffer I. Prevalence and Predictors of Postpartum Depression among Mothers Attending Tertiary Care Hospital, Jammu, India. *The National Journal of Community Medicine.* 2024;15(8):642-8.

Wang Z, Liu J, Shuai H, Cai Z, Fu X, Liu Y, et al. Mapping global prevalence of depression among postpartum women. *Translational Psychiatry.* 2021;11(1):543.

Pradhananga P, Mali P, Poudel L, Gurung M. Prevalence of postpartum depression in a tertiary health care. *JNMA: Journal of the Nepal Medical Association.* 2020;58(223):137.

Naeem F, Khan A, Noman M, Mahmood Z, Naeem F. Frequency of postpartum depression and its effects on quality of life amongst mothers attending EPI Center, PIMS Islamabad: Frequency of postpartum depression and its effects. *Foundation University Medical Journal.* 2024;6(2, Jan-Jun):15-20.

Jamshaid S, Malik NI, Ullah I, Saboor S, Arain F, De Berardis D. Postpartum depression and health: role of perceived social support among Pakistani women. *Diseases.* 2023;11(2):53.

Alkubati SA, Al-Sayaghi KM, Salameh B, Halboup AM, Ahmed WA, Alkuwaisi MJ, et al. Prevalence of depression and its associated factors among hemodialysis patients in Hodeida City, Yemen. *Journal of Multidisciplinary Healthcare.* 2024:689-99.

Hanach N, Radwan H, Fakhry R, Dennis C-L, Issa WB, Faris ME, et al. Prevalence and risk factors of postpartum depression among women living in the United Arab Emirates. *Social Psychiatry and Psychiatric Epidemiology.* 2023;58(3):395-407.

Ali Y, Khan S, Mustafa G, Hussain K, Akhter A. Mentoring Student Nurses–Are Nurses Prepared, Recognized, and Supported to Teach Nursing Students in Clinical Settings? *Indus Journal of Bioscience Research.* 2025;3(2):111-5.

Myo T, Hong SA, Thepthien B-O, Hongkrailert N. Prevalence and factors associated with postpartum depression in primary healthcare centres in Yangon, Myanmar. *The Malaysian Journal of Medical Sciences: MJMS.* 2021;28(4):71.

Alzahrani J, Al-Ghamdi S, Aldossari K, Al-Ajmi M, Al-Ajmi D, Alanazi F, et al. Postpartum depression prevalence and associated factors: an observational study in Saudi Arabia. *Medicina.* 2022;58(11):1595.

Ghafoor S, Aftab S, Baloch ZH, Rashid S, Waheed A, Ali N. Postpartum depression & body image dissatisfaction in housewives and working women. *Age (Years).* 2021;28(4.935):18-29.

Atuhaire C, Rukundo GZ, Nambozi G, Ngonzi J, Atwine D, Cumber SN, et al. Prevalence of postpartum depression and associated factors among women in Mbarara and Rwampara districts of south-western Uganda. *BMC Pregnancy and Childbirth.* 2021;21:1-12.

Akurathi P, Aligina KK, Rao RN, Rao UP, Poliyana GD, Thanuja P. Emotional wellness and postpartum depression in the post-partum women within 48 hours of childbirth, in a tertiary care hospital of a South Indian state. *Int J Acad Med Pharm.* 2023;5(3):1030-5.

Frontier in Medical & Health Research

ISSN: (e) 3007-1607 (p) 3007-1593

Dadhwal V, Sagar R, Bhattacharya D, Kant S, Misra P, Choudhary V, et al. Prevalence of postpartum depression & anxiety among women in rural India: Risk factors & psychosocial correlates. *Indian Journal of Medical Research*. 2023;158(4):407-16.

Alba BM. CE: Postpartum Depression: A Nurse's Guide. *AJN The American Journal of Nursing*. 2021;121(7):32-43.

Suárez-Rico BV, Estrada-Gutierrez G, Sánchez-Martínez M, Perichart-Perera O, Rodríguez-Hernández C, González-Leyva C, et al. Prevalence of depression, anxiety, and perceived stress in postpartum Mexican women during the COVID-19 lockdown. *International Journal of Environmental Research and Public Health*. 2021;18(9):4627.

Khan S, Punjwani SK. Reconsidering the mental health of women. A scoping review of polycystic ovary syndrome and meditation therapies. *Indus Journal of Bioscience Research*. 2025;3(1):600-7.