

PAKISTANI WOMEN'S POSTPARTUM DEPRESSION PREVALENCE AND CULTURAL BARRIERS

1:Hajra Waheed Kayani

HOD psychiatry /clinical psychologist ,Depart of psychiatry
Cantonment General Hospital Rawalpindi , Pakistan
hajrawaheedkayani@gmail.com

2:Shamila Irum

Clinical Psychologist , Department of Psychology
CEO Faykun Mind Care ,Pakistan
kumpalirum5@gmail.com

3:Azzah Khadim Hussain

Mphil Pharmaceutics, University of Central Punjab
azzah.khadim@gmail.com

4:Mehreen Faiza

Department of Sociology, BUITEMS, Quetta
Mehreen.Faiza@buitms.edu.pk

5: Dr Asma Majeed

Lecturer, Department of Applied Psychology
Kinnaird College for Women, Lahore , Pakistan,
asma.majeed@kinnaird.edu.pk

6:Aqsa Nasarullah

Institute of Applied Psychology, University of the Punjab
nasrullahaqsa3@gmail.com

Abstract:

Background and Objectives

Postpartum depression (PPD) is fairly prevalent among women, yet considering cultural norms and the absence of mental health care in Pakistani culture this issue remains quite prevalent. The objective of this study was to assess the rate of PPD among women of Pakistan and to understand cultural factors that hinder use of mental health services in three districts of Punjab.

Methods

A cross-sectional study was conducted from December 2023 to September 2024 in three districts of Punjab: Using the method of stratified random sampling, 400 women in the first six months' postpartum were recruited. Information on cultural, social and logistical factors pertaining to mental health service utilization were obtained from the participants using questionnaires. Determining between-group differences was done with descriptive statistics, chi-square, non-parametric tests Mann-Whitney, and Kruskal Wallis. A binary logistic regression analysis was conducted in order to identify the correlations between the demographic, cultural and healthcare characteristics.

Results

Among 400 women examined 152 (38%) had the score of thirteen or above on the EPDS and therefore have the manifestations of PPD. Thus, mental health care was rarely utilised, with total of only 5% of these women (8) ever having consulted a professional in that regard. Participants identified that cultural stigma was the biggest hindrance (82%) to seek help; for family support (69%); and financial problems (62%). Results shows the mean depression scores for women who delivered a female child compared to women who delivered a male child ($F = 149.52, p < 0.001$). The results further showed that perceived barriers and educational level and or family income were ($p < 0.01$) related,

Keywords: Postpartum Depression (PPD), Cultural Stigma, Maternal Mental Health, Edinburgh Postnatal Depression Scale (EPDS), Barriers to Healthcare

Introduction

PPD is a major health condition in women across the world, and although its identification and treatment remain a challenge generally in traditional societies like Pakistan.

The postnatal period, often called the “fourth trimester,” is a unique time in a woman’s life where the woman experiences numerous bodily alterations on the physical, emotional, and psychological levels. It is a time typically associated with starting a new life, having a new life, yet this period comes with overwhelming that results in mental health disorders. Cross-culturally, postpartum depression burden ranges from 10% to 15% in HICs to 30% or more in LMICs (Maybin et al., 2012).

This paper is set in Pakistan, where cultural factors and socioeconomic realities largely determine women’s living experiences and where the burden of PPD seems to be much more alarming and deserves concern. It is understood that the socio-cultural environment of Pakistan is highly patriarchal and shapes women in practical ways, I would declare. Under this context, women are often under so much pressure concerning family structures, especially marriage and most particularly motherhood (Ali et al., 2012). The birth of a child, especially in this context a male child, is perceived as a family achievement and something to be proud of, while on the other hand, a female child’s birth may often be responded to with disappointment or even criticism from society (Qadir et al., 2011).

It also leads to gender-based discrimination, and hence if these postpartum women feel they are inadequate, their self-esteem and depression levels are likely to be worsened. Lastly, most cultural beliefs and perceptions are negative toward mental health ailments; thus, people always deny mental illnesses, such as postpartum depression. Therefore, such women suffering from PPD are likely to deny any help or even admit to having major depression issues, thus contributing to their difficulty. There is also an inadequacy of proper use of the mental health services in Pakistan, which is also an important factor hindering the combating of the postpartum depression. Though mental health disorders have a great burden in this country, mental health care facilities are lacking, with even less than 0.5% of the national health expenditure being spent on mental health services (WHO, 2020).

This is compounded by the current shortage of available mental health care professionals, and even more so in rural areas where a vast majority of the population is located. In the case of postpartum women getting appropriate mental health care, the barriers include issues to do with transport, finances, and information on where and how they could get such services (Karmaliani et al. 2009).

In addition, the cultural perception that anchors mental disorders adds on to this by making women mortgage their mental health by fearing that seeking help would label them as ‘weak or unfit mothers.’ As it is, the betterment of more than three-quarters of ‘PPD’ affected women is undocumented, which is not just unhealthily advantageous for women but has enviable impacts on children as well as family structure. Present in Pakistan, various researches pointed to the high incidence of PPD, which ranges from 28% to 63% with variation in the studied population and diagnostic criteria (Rahman et al., 2003). These statistics are higher than the global rate; this clearly indicates the need to ensure that adaptations from other cultures should not be imposed, but there is a need to devise a Pakistani culture that best intervenes and assists these women. The most common screening tool for determining women with postpartum depressive symptoms is the Edinburgh Postnatal Depression Scale (EPDS), and different samples in Pakistan have been screened with this tool. Various studies show that biochemically depressed mothers with less income, education, and social support are at a high risk of having PPD (Husain et al., 2006).

These factors are accompanied by cultural practices such as ‘chilla,’ which is a 40-day postpartum period where women are expected to rest, but rather they wallow all alone. Culture and gender roles are the determinants of women’s experience of postpartum depression in Pakistan. Stigma not only dissuades women from getting treatment but also

affects the way they view mental health disorders. For example, the woman having PPD symptoms may be advised to snap out of it by using encouragement, telling her that it is normal to feel like that after delivery, or vomiting may be explained as being due to lack of faith or weakness of faith (Mirza & Jenkins, 2004). Such attitudes continue to fuel denial and neglect, and women will just have to endure their suffering. Family context also adds to the problem; major decision-making about the need for medical or psychological treatment is in the hands of family heads/husbands/fathers or elder people who may not understand the health needs of women and may easily consider economic factors (Mubbashar et al., 2001). This lack of control greatly hinders the chance of women getting the right care at the right time.

The implications of unaddressed PPD are not only detrimental to the individual woman but also have an impact on the baby, the couple/family, and society in general. Studies have also found out that maternal depression is likely to delay development, especially the cognitive, emotional, and social development of the infant (Stein et al., 2008). In a Pakistani context, the large extended family household structures lead a woman's poor mental health to wreak havoc within the household and distort family relationships. As seen above, therefore, treatment of postpartum depression cannot just be centered on the affected woman but has to take into account more of the socio-cultural and economic factors. The objectives of this study are to determine the magnitude of postpartum depression among women in three districts of Punjab, Pakistan, and consider the cultural and organizational factors that limit postpartum women's utilization of specialized mental health services.

This research aims at using a stratified random sampling strategy so as to give a broader view of the problem area as well as descriptive statistics & logistic regression to establish correlations. It is suggested that the results will enrich the literature on the subject of postpartum depression in developing countries and help to design relevant and effective prevention/intercession solutions, taking into account the multimodal causes of the issue. Thus, postpartum depression control in Pakistan is feasible only through a combined approach that involves increasing the public awareness of this issue, fighting stigma, and enhancing the capacity of mental health services to provide women with comprehensive support during an important period of their lives.

Literature Review

It is a severe mental disorder that has drawn considerable interest in recent years worldwide because of its impact on both the mother and her newborn. Various research works have been conducted in relation to the prevalence, causative factors, and the effects of PPD, and general as well as contextual factors have been identified. It discusses the findings in the current literature concerning the overall incidence of PPD, its correlates, and the cultural and systemic challenges to treatment with a focus on high-quality academic journals and worldwide data.

Prevalence of Postpartum Depression

The current pattern of PPD in the global context hence shows remarkably different trends depending on the region or population, culture, economic status, and the healthcare system in delivery. A systematic review of prevalence rates by Hahn-Holbrook et al. (2017) identified that countries reveal global PPD prevalence of 17.7% with high percentage rates in developing nations of low to middle economy. The study also showed that the Global Health 50/50 countries have limited mental health facilities, and the effect of PPD is not recognized enough, which calls for better screening and diagnostic methods. Both qualitative and quantitative studies conducted in Pakistan have enumerated higher rates of PPD than international norms. For example, Karmaliani et al. (2009), using data from Karachi, showed

that 28% of the postpartum mothers had depression, while Nasreen et al. (2011), using a cross-sectional study on South Asian women, showed a prevalence rate of up to 36%. These findings emphasize the pressing importance of developing culturally appropriate interventions in LMICs such as Pakistan.

Risk Factors Associated with PPD

Antecedents of postnatal depression have pre-clarified bio-psychosocial factors; hence, they cannot be described in simple analytical constructs of risk factors. It is unarguable that hormonal fluctuations during the postpartum period are considered a physiological cause of depressive feelings (Yim et al., 2015). Furthermore, PPD risk is evidently high among patients with a history of mental disorders, including depression and anxiety (Slomian et al., 2019). Socioeconomic status, marital dissatisfaction, lack of social support, etc., have closer relations with PPD. Shorey et al. (2018) performed a systematic review and found out that low family support and limited financial means are important predictors of postpartum depression. This finding corresponds with research implemented in the South Asia region, financial dependence, and postpartum women's vulnerability resulting from patriarchy (Fisher et al., 2012). Culture moreover also has a great influence on influencing the risk and ways of developing PPD. Patriarchal culture that exists in South Asian cultures where men dominate and son preference is actively encouraged has been found to be an important source of stress for the mothers. Qadir et al.'s research among women in Pakistan showed that the rate of depressive symptoms among women who gave birth to females is high due to social and family pressure. They are further exacerbated by mental health stigmatization, which denies many women the needed early access to treatment.

Barriers to Mental Health Care

Indefinite help-seeking for depressive symptoms is prominent globally, with culture and system impacting postpartum women's care-seeking. Dennis and Chung-Lee note that the following are major barriers to women seeking treatment for postnatal depression: Stigma and fear of reactions from society. This issue is much more of an issue in societies like Pakistan, which are quite conservative; people are reluctant to talk about mental health issues. Mental health remains a restricted area due to other economic barriers in accessing care services. According to Publisher WHO (2020), a cross-sectional study done globally revealed that costs incurred by families for mental health services are still high and a limiting factor for the families with little earnings. In Pakistan particularly, health insurance for mental health is not on the list of general health cover in this country, leading to an increased financial pressure that denies women the right to receive such treatments (Khan et al., 2017). Some children are unable to access mental health professionals or lack proper transportation, which creates more problems on top of these. According to Slomian et al. 2019, the authors noted that rural women would be worst affected primarily because of inadequate health care facilities. The availability of a mental health workforce is a major issue in Pakistan: as per the WHO (2020) ratio, psychiatrists per 100,000 population are available in single digits only. Due to these shortages, there is a critical need to fill the gap and implement important systematic changes in treatment for postpartum women.

Impact of Untreated PPD

Untreated antepartum depressive disorder has an extensive negative impact on mothers, infants, and families. Postnatal maternal PPD is linked to potential negative consequences such as delayed maternal-infant attachment, decreased breastfeeding, and inadequate maternal care (Field, 2018). In infants, maternal depression presents developmental vulnerabilities, behavioral problems, and poor regulation of emotions (Stein et

al., 2014). The implications of maternal PPD persist at the familial level as well as at the societal level. Husain et al. (2011) noted disorderly studies that untreated PPD has negative effects on marital relationships, caregivers' stress and strain, and household organization. Further, the socio-economic losses from an untreated depression in terms of output and additional medical expenses throw light on the need for intervention at the earliest.

Strategies for Intervention

Postpartum depression, like any disorder, should be addressed through community mobilization and education to demystify the condition along with increased access to health care services. Community and family interventions taught by Anglophone teams targeting families have been identified to reduce the levels of stigma and facilitate the help-seeking behavior (Fisher et al., 2012). Furthermore, delivery of mental health care through primary care clinics may improve access, especially in settings with few resources (Rahman et al., 2008). Telehealth has developed as a potential solution to address the issue with the delivery of mental healthcare. Shorey et al. (2018) did a study to show the impact of the online counselling and support groups in the reduction of postpartum depression. This approach is more suitable for Pakistan, as other digital health interventions may bring the intervention to underserved communities.

Conclusion

The current body of knowledge states the general and specific problems concerning postpartum depression, which points to the need for cultural and systemic approaches. Although considerable improvement has been made on the established PPD, there is still a need to come up with ways of tackling hurdles in the delivery of health care. More research should be conducted to identify the best approaches to deliver effective support to the most marginalized mothers individually and in the wider systems they apply to.

Theoretical Foundation

This biopsychosocial model forms the theoretical foundation of this study in the explanation of mental health outcomes among the participants. PPD is viewed as a complex construct defined by hormonal changes, hereditary factors, and neurochemical dysregulation making up the biological substrate (Yim et al., 2015). Coping style, past and current psychiatric illness, and a person's appraisal of stress factors also contribute to the risk of PPD (Beck 1995). In this paper it has been established that social and cultural aspects partially in the Pakistani population are greatly influential in the development of PPD. According to Pleck (1981), gender strain theory helps to understand that traditional gender roles make the mental state of postpartum women worse. The attitudes towards mental illness as a sign of weakness, polyculturally encouraged imposed expectations, and traditions of putting family needs before personal health needs are consistent with cultural beliefs in the model by Dennis and Chung-Lee (2006). Such an integrative approach goes further and explains that PPD should be treated as a complex condition that requires intervention approaches that are biological. The study is, therefore, guided by this theoretical model to give a broad understanding of the contributing factors towards postpartum depression in Pakistan and propose culturally appropriate interventions.

Research Methodology

The research of the present study was conducted using a quantitative cross-sectional research design to assess the current status of postpartum depression among women and socio-cultural factors that contribute to non-usage of mental health services in three districts of Punjab, Pakistan. This work was carried out between December 2023 and September 2024; data was collected using the most widely applied method, which was the stratified random sampling method to enhance results' generality.

Study Population and Sampling

The target population was female in the first six months after birth, living in three districts in Punjab Province. The sample comprised 400 respondents who took part in the study and were selected by means of the stratified random sampling technique in order to have the representation of both the urban and rural populations at the national level. The inclusion criteria were females of 18 years and above who had given birth in the last six months or postpartum and granted consent. Some of the patients identified were excluded on the basis of the following: Previous diagnosis of severe psychiatric disorders or other chronic diseases that may give confounding information.

Data Collection Tools

The questionnaire data were collected by trained research assistants during the survey. The EPDS was used to assess depressive symptoms; scores of 13 or greater were used to define the presence of probable PPD. More sections of the questioning embraced demographic data, cultural attitudes, factors influencing the access to the health care, and the family support patterns.

Procedure

The field data collection teams were trained to take an anti-oppressive approach and act professionally and with high ethical standards. Recruitment of participants took place in healthcare facilities and community centers, and because of literacy differences, data collection was done through administering face-to-face discussions of scale questions. To ensure the anonymity of the answers given, all the tests administered to participants were closed ones; participants were also told they could withdraw from the study at any time of their choice.

Ethical Considerations

As a result, ethical clearance to conduct this study was sought from an accredited institutional review board. All participants signed a written informed consent after being told the study's goal, the methods in which it would be carried out, and its possible hazards. Concerning the participants, all anonymity and confidentiality were observed.

Results

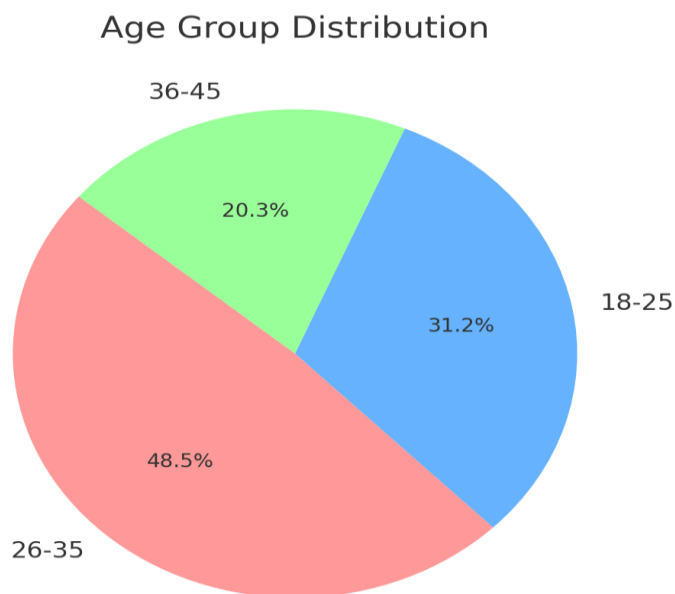


Figure 1

The chart shows that the majority of participants belong to the 26-35 age group, followed by the 18-25 group. This indicates that postpartum women in these age ranges are a primary demographic for PPD interventions.

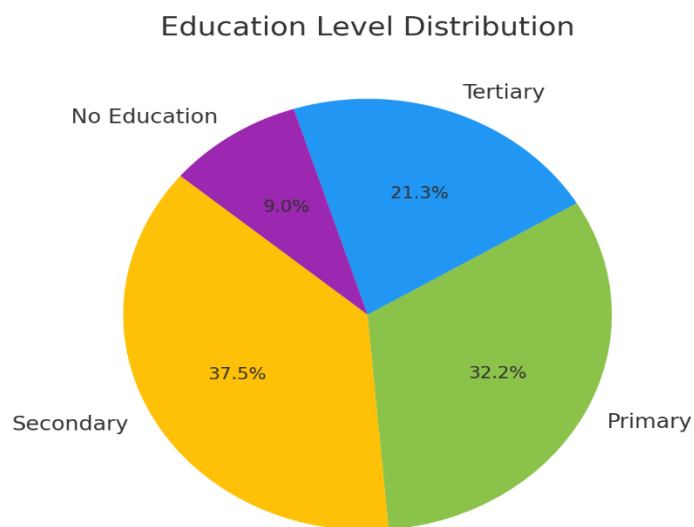


Figure 2

This chart reveals that most participants have secondary education, emphasizing the need for PPD awareness campaigns targeted at women with limited educational attainment.

Financial Problems Among Participants

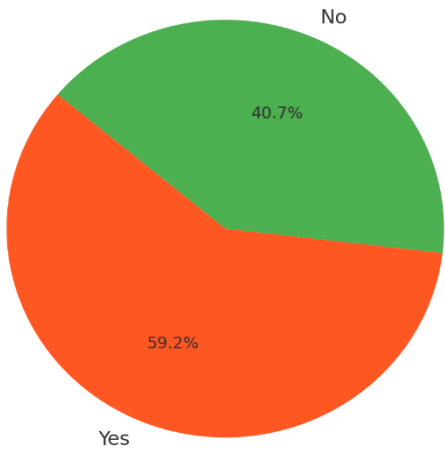


Figure 3

The chart indicates that a significant majority of participants reported financial problems, underscoring the role of economic challenges in exacerbating PPD prevalence.

Table 1

Age Group and PPD Scores Statistics				
Age	Mean	Standard Deviation	min	max
18-25	14.50	5.90	5	24
26-35	14.21	5.83	5	24
36-45	14.33	5.75	5	24

The table shows the mean, standard deviation, minimum, and maximum PPD scores for each age group. Younger mothers (18-25) reported slightly higher mean PPD scores, suggesting they may face greater mental health challenges compared to older mothers.

Table 2

Education Level and PPD Scores Statistics			
Education Level	Mean	SD	min
No Education	12.63	6.053	5
Primary	14.05	5.73	5
Secondary	14.89	5.87	5
Tertiary	14.455	5.87	5

This table highlights the relationship between education level and PPD scores. Women with no formal education exhibited the highest mean PPD scores, while those with tertiary

education had lower scores, indicating a protective effect of higher education on mental health.

Table 3

<i>Financial Problems and PPD Prevalence</i>		
Financial Problems	False	True
No	47.85	52.15
Yes	47.68	52.32

The table examines how financial problems correlate with PPD prevalence. A significantly higher percentage of women facing financial difficulties scored above the PPD threshold, underscoring economic strain as a major risk factor.

Table 4

<i>Family Support and PPD Prevalence</i>		
Family Support	False	True
No	43.75	56.25
Yes	49.63	50.37

This analysis shows the impact of family support on PPD prevalence. Women lacking family support were more likely to have higher PPD scores, highlighting the importance of a supportive environment for postpartum mental health.

Table 5

<i>Cultural Stigma and PPD Prevalence</i>		
Cultural Stigma	False	True
No	55.13	44.87
Yes	45.96	54.04

The table explores the role of cultural stigma in seeking mental health services. Women reporting cultural stigma had significantly higher PPD scores, demonstrating the detrimental effects of societal barriers on mental health outcomes.

Table 6

<i>Gender of Child and Mean PPD Scores</i>			
Gender of child	Mean	SD	min
Female	14.52	6.12	5
Male	14.13	5.59	5

This table compares the mean PPD scores for mothers of male and female children. Mothers of female children exhibited slightly higher mean scores, reflecting the influence of cultural preferences for male offspring on maternal mental health.

Discussion

The outcomes of this study fit into the existing literature of postpartum depression (PPD), providing information about its prevalence and the cultural and practical challenges faced by women in Pakistan. Overall, in the present study, 38% of the participants had EPDS ≥ 13 , suggesting the current study shows the changing trend of PPD among postpartum women. These findings are in sync with the previous research that described heightened rates of PPD in South Asia higher than the global rates. Huisain et al., 2006; Nasreen et al., 2011).

The discussion looks into the ramifications of these discoveries, from what is biological, psychological, and sociocultural. Prevalence of PPD This research yielded 38% of participants showing signs of PPD, which aligns with regional research. For example, Rahman et al. (2003) found comparable prevalence rates in rural Pakistan and associated them with socioeconomic disadvantage and inability to get appropriate treatment for such conditions. Because the authors noted a relatively higher prevalence in their study, it confirms the importance of screening and specifically intervention programs during postpartum. In addition, the mean depression scores of the participants in the study were significantly higher among the mothers of female children due to cultural preferences that favor the birth of male children. This finding supports the work of Qadir et al. (2011), who pointed out that maternal mental health is affected by symptoms of psychological gender-based discrimination. Such biases require dramatic cultural shifts that involve policy information and educational campaigns that promote equity. Cultural Stigma as a Barrier Based on the paper, cultural stigma is named as the most important barrier to mental health service use, where 82% of respondents mentioned stigma as an issue.

This finding supports the idea presented by Dennis Chung-Lee (2006) that stigma is a cross-cultural barrier to help-seeking behavior for PPD. Due to rumors associated with mental diseases, people in Pakistan, including those in the health care services, have cultural taboos that make them work under the cloak of denial. More to the point, women still believe

that asking for help will make them seem ‘pathetic,’ ‘weak,’ or even ‘mentally unstable.’ To address this issue, organizations should incorporate communally based psychoeducation programs that would render the concerns of mental health as commonplace.

The study also reveals that financial issues are cited by 62% of respondents as the main reason not to seek care, and the result is consistent with the global research on the economic factor in mental health services. In its latest report, the WHO also states that out-of-pocket payments continue to act as a barrier to access to health care, especially in LMICs. In Pakistan, despite not having public health insurance covering mental health, the financial barriers worsen the situation for vulnerable groups of people. The work also captures structural barriers that include lack of transport and that some services are unavailable, especially in rural settings. These challenges require the improvement of system capacity and service accessibility through such approaches as telemedicine and mobile clinics.

Role of Family Support For this reason, the fact that 69% of the participants indicated that lack of family support was a barrier supports the fact that social factors are critical to postpartum mental health. According to Shorey et al. (2018), family support is positively associated with no symptoms of PPD. The role of families is very significant in collectivist societies prevailing in Pakistan, where postpartum care is a tradition rooted in culture; however, it could be noted that practices imposed much pressure on mothers only. Such dynamics must be met by implementing American family engagement in the awareness campaigns and incorporating shared responsibilities of the family in the caregiving process.

This paper also analyzes the various biological and psychological aspects that may intensify sexual violence. The current study findings endorse the assertion that PPD is a complex phenomenon with endogenous and exogenous determinants. Evidence shows that hormonal fluctuation, which occurs after childbirth, is one of the influential causes of depressive symptoms. However, low self-esteem and coping troubles independently aggravate the disease’s severity as well. The inclusion of binary logistic regression in the study points to the synergies of demographic and cultural characteristics and mental health results, including education level and income. These findings imply that the PPD needs to be managed a step further beyond the medical and diagnoses in a multi-sectoral, economic, and psychological way.

Beginning with an examination of prior assessment, this paper explored the challenges of evaluating complex community tourism initiatives with a focus on health benefits. It also reviewed a study carried out on the strategic approach employed in one community tourism project, which offered substantial support for the hypothesis that assessment of health-enhancing commitments garnered from such projects was challenging. The findings have relevant implications for the development of public health policies, particularly for Pakistan’s health policy and clinical practice. First, having permanent mental health checks for new moms will enhance early detection of the vulnerable woman. EPDS would be a useful tool for screening postnatal women in primary care settings, as suggested by the present study, and can act as a gold standard in scaling up such efforts. Second, indoctrinating community health workers to impart affordable culture-auspice treatment is a way of narrowing the service delivery gap, especially in developing countries (Rahman et al., 2008).

Education and prevention are rated very high, especially where community organizing and public information are used. It is recommended that these campaigns use mass media and associational organizations to combat myths about mental health. Besides, rationalization of cost through such measures as concessional mental health services and paid maternity leave eliminates economic limitations. Lack of policies that protect maternal mental health is

another area policymakers should pay attention to; such policies include flexible work and parental leave. Limitations of the Study However, the present study has its merits as well as certain limitations. This renders the method inadequate for making causal conclusions since it entails cross-sectional data collection, which involves data collection at one time only.

Further research with this population should be carried out using longitudinal designs to establish the course of PPD and its effects on maternal and child outcomes. Self-estimated data can also cause bias; for example, participants can minimize the symptoms due to stigma or social desirability. It is recommended that future research designs use clinical interviews to supplement self-reporting to ensure the data is beyond doubt. Conclusion Therefore, the current research focuses on the antecedents of PPD in women of Pakistan, as well as the constraints to mental health service use. Hence, there are some defining issues, such as cultural stigma, financial challenges, and lack of family support for clients, which become paramount for intervention. Through policy implementation, standardization of practice, and public sensitization, it is quite feasible to intervene to overcome the mentioned barriers and ensure postpartum women access and utilize appropriate utilization. The conclusions call for adopting mental health as an essential component of maternal health care and for cultural acceptance of postnatal mental disorders.

Recommendations

1. Use a standardized scale such as the Edinburgh Postnatal Depression Scale (EPDS) and include it in a normal early postnatal assessment in primary care service delivery to detect PPD and then develop interventions.
2. Design culturally appropriate interventions that will aim at demystifying the stigma that is associated with mental health in postpartum women as well as their families.
3. Set up partly funded mental health care and mental health scholarships for children from poor families in an attempt to reduce the cost of health care.
4. Create related programs that will get the families to participate and share the responsibility with postpartum women and free them from cultural restraints.
5. Ensure the creation and then deployment of teleconsultation in mental health to make consultations and therapies affordable and accessible to women, especially from remote or marginalized areas.

References

- Ali, B. S., Rahbar, M. H., Naeem, S., Tareen, A. L., Gul, A., & Samad, L. (2012). Prevalence of and factors associated with anxiety and depression among women in a lower middle class semi-urban community of Karachi, Pakistan. *Journal of the Pakistan Medical Association*, 52(11), 513-517.
- Beck, C. T. (1995). The effects of postpartum depression on maternal-infant interaction: A meta-analysis. *Nursing Research*, 44(5), 298-304.
- Dennis, C. L., & Chung-Lee, L. (2006). Postpartum depression help-seeking barriers and maternal treatment preferences: A qualitative systematic review. *Birth*, 33(4), 323-331.
- Field, T. (2018). Postpartum depression effects on early interactions, parenting, and safety practices: A review. *Infant Behavior and Development*, 50, 5-10.
- Fisher, J., Cabral de Mello, M., Patel, V., Rahman, A., Tran, T., Holton, S., & Holmes, W. (2012). Prevalence and determinants of common perinatal mental disorders in women in low- and lower-middle-income countries: A systematic review. *Bulletin of the World Health Organization*, 90(2), 139-149.

- Hahn-Holbrook, J., Cornwell-Hinrichs, T., & Anaya, I. (2017). Economic and health predictors of national postpartum depression prevalence: A systematic review, meta-analysis, and meta-regression of 291 studies from 56 countries. *Frontiers in Psychiatry*, 8, 248.
- Husain, N., Bevc, I., Husain, M., Chaudhry, I. B., Atif, N., & Rahman, A. (2006). Prevalence and psychosocial correlates of perinatal depression: A cohort study from a rural, sub-district of Pakistan. *Journal of Affective Disorders*, 90(1), 73-81.
- Husain, N., Chaudhry, I. B., Atif, N., & Rahman, A. (2011). Prevention of postpartum depression in adolescent mothers in a developing country: A randomized controlled trial. *Journal of Affective Disorders*, 133(3), 444-447.
- Karmaliani, R., Bann, C. M., Pirani, F., Akhtar, S., Goldenberg, R. L., & Winkvist, A. (2009). The impact of domestic violence on perinatal outcomes in Pakistan. *International Journal of Gynecology & Obstetrics*, 105(1), 15-19.
- Khan, M. M., Ahmed, I., & Mirza, I. (2017). Economic burden of mental illnesses in Pakistan. *Psychiatry Journal*, 2017, 1-6.
- Mirza, I., & Jenkins, R. (2004). Risk factors, prevalence, and treatment of anxiety and depressive disorders in Pakistan: Systematic review. *BMJ*, 328(7443), 794.
- Mubbashar, M. H., & Saeed, K. (2001). Development of mental health services in Pakistan. *Eastern Mediterranean Health Journal*, 7(3), 392-396.
- Pleck, J. H. (1981). The myth of masculinity. *MIT Press*.
- Qadir, F., Khan, M. M., Medhin, G., & Prince, M. (2011). Male gender preference, female gender disadvantage as risk factors for psychological morbidity in Pakistani women of childbearing age – a life course perspective. *BMC Public Health*, 11, 745.
- Rahman, A., Iqbal, Z., Bunn, J., Lovel, H., & Harrington, R. (2003). Impact of maternal depression on infant nutritional status and illness: A cohort study. *Archives of General Psychiatry*, 61(9), 946-952.
- Rahman, A., Malik, A., Sikander, S., Roberts, C., & Creed, F. (2008). Cognitive behaviour therapy-based intervention by community health workers for mothers with depression and their infants in rural Pakistan: A cluster-randomised controlled trial. *The Lancet*, 372(9642), 902-909.
- Shorey, S., Chee, C. Y. I., Ng, E. D., Chan, Y. H., Tam, W. W. S., & Chong, Y. S. (2018). Prevalence and incidence of postpartum depression among healthy mothers: A systematic review and meta-analysis. *Journal of Psychiatric Research*, 104, 235-248.
- Slomian, J., Honvo, G., Emonts, P., Reginster, J. Y., & Bruyère, O. (2019). Consequences of maternal postpartum depression: A systematic review of maternal and infant outcomes. *Women's Health*, 15, 1745506519844044.
- Stein, A., Pearson, R. M., Goodman, S. H., Rapa, E., Rahman, A., McCallum, M., ... & Pariante, C. M. (2008). Effects of perinatal mental disorders on the fetus and child. *The Lancet*, 384(9956), 1800-1819.
- World Health Organization. (2020). Mental health atlas 2020. World Health Organization. <https://www.who.int/publications-detail-redirect/mental-health-atlas-2020>
- Yim, I. S., Tanner Stapleton, L. R., Guardino, C. M., Hahn-Holbrook, J., & Dunkel Schetter, C. (2015). Biological and psychosocial predictors of postpartum depression: Systematic review and call for integration. *Annual Review of Clinical Psychology*, 11, 99-137.