

Original article

Assessment of Nurses' Knowledge, Attitudes, and Practices Regarding Postpartum Depression and Its Prevalence Among Postpartum Mothers

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Postpartum depression (PPD) is a significant public health concern that affects mothers' psychological well-being and can negatively influence infant development and family functioning. This study aimed to assess nurses' knowledge, attitudes, and practices regarding postpartum depression and to determine the prevalence and predictors of PPD among postpartum mothers. A descriptive cross-sectional study was conducted involving 300 participants, including 150 nurses working in maternal and postnatal units and 150 postpartum mothers within one year after childbirth. Participants were selected using a convenience sampling technique. Data were collected using two structured questionnaires: a nurses' questionnaire assessing socio-demographic characteristics and knowledge, attitudes, and practices related to PPD, and a mothers' questionnaire assessing socio-demographic and obstetric characteristics, depressive symptoms using the Edinburgh Postnatal Depression Scale (EPDS), and available social and professional support. Data were analyzed using Microsoft Excel and SPSS version 26. Descriptive statistics were used to summarize participant characteristics and study variables, while chi-square tests and logistic regression analyses were conducted to examine associations and identify predictors of postpartum depression. The findings provided insights into the level of nurses' preparedness to recognize and manage PPD and highlighted factors associated with depressive symptoms among postpartum mothers. The study emphasizes the importance of routine screening, early detection, adequate professional training, and strengthened social support systems to improve maternal mental health outcomes and reduce the burden of postpartum depression.

Introduction

Postpartum depression (PPD) is a common mental health disorder that affects women during the postpartum period and constitutes a major public health concern worldwide [1]. It is characterized by persistent sadness, loss of interest in daily activities, sleep disturbances, fatigue, feelings of guilt, and impaired maternal functioning following childbirth [1]. Although many women experience temporary emotional changes after delivery, postpartum depression is more severe and persistent than the transient postpartum blues and may require professional intervention [2,3].

The prevalence of postpartum depression varies across different populations and healthcare settings. Evidence from systematic reviews indicates that a substantial proportion of women experience depressive symptoms during the first year after childbirth, with higher prevalence reported in low- and middle-income countries [4,5]. Recent global estimates continue to highlight postpartum depression as a significant contributor to maternal morbidity and reduced quality of life among new mothers [6]. Despite growing awareness of maternal mental health, many cases remain undetected and untreated, particularly in settings where routine screening is not consistently implemented [7].

Postpartum depression has important consequences for mothers, infants, and families. Untreated depression may interfere with mother-infant bonding, negatively affect breastfeeding practices, impair infant cognitive and emotional development, and reduce overall family well-being [8]. In severe cases, postpartum depression may increase the risk of chronic psychiatric disorders and maternal disability, emphasizing the need for timely identification and management [9,10].

Several factors have been associated with the development of postpartum depression. Previous studies have identified psychiatric illness, obstetric complications, cesarean delivery, multiparity, socioeconomic difficulties, and lack of social support as important risk factors [11,12]. Social support from spouses, family members, friends, and healthcare professionals has been recognized as a protective factor that helps mothers cope with the physical and emotional demands of the postpartum period [13]. Therefore, early screening and identification of women at risk are essential components of comprehensive maternal healthcare services.

Nurses play a pivotal role in promoting maternal mental health because they are often the healthcare providers who maintain the closest contact with women during pregnancy, childbirth, and the postpartum period [14]. Through assessment, education, counseling, and referral, nurses contribute significantly to the early detection and management of postpartum depression. Standardized screening tools such as the Edinburgh Postnatal Depression Scale (EPDS) are widely

recommended for identifying women experiencing depressive symptoms [14]. However, studies have reported gaps in nurses' knowledge, training, and utilization of these screening tools, potentially limiting the effectiveness of postpartum depression detection and intervention [15].

Given the growing burden of postpartum depression and the importance of healthcare providers in its identification and management, assessing nurses' knowledge, attitudes, and practices regarding postpartum depression is crucial. In addition, evaluating the psychological status of postpartum mothers and identifying factors associated with depressive symptoms can support the development of targeted interventions aimed at improving maternal mental health outcomes. Therefore, the present study was conducted to assess nurses' knowledge, attitudes, and practices regarding postpartum depression and to evaluate the psychological status of delivered mothers in selected healthcare facilities.

Methods

Study design

A descriptive cross-sectional study was conducted to assess nurses' knowledge, attitudes, and practices regarding postpartum depression (PPD), and to evaluate the psychological status of delivered mothers. This design provides a snapshot of the current situation, enabling the identification of associations between variables without requiring longitudinal follow-up. The approach is particularly suitable for prevalence studies and exploratory research in maternal mental health.

Study setting

The study was conducted in selected government and private healthcare facilities, including maternity hospitals, postnatal wards, primary healthcare centers, and maternal and child health clinics. These settings were chosen because they provide direct postpartum care and employ nurses actively involved in maternal healthcare, facilitating access to both nurses and mothers.

Study population

The study population consisted of two groups: registered nurses and delivered mothers. Nurses were recruited from antenatal, postnatal, delivery room, and primary healthcare settings, while mothers were selected from women attending postnatal follow-up services or admitted to postnatal wards within one year after childbirth. The inclusion of both nurses and mothers was considered essential to provide a comprehensive assessment of the relationship between healthcare providers' knowledge and practices and maternal mental health outcomes, thereby supporting the achievement of the study objectives.

Sample size and sampling technique

The study sample consisted of 300 participants, equally distributed between 150 nurses and 150 postpartum mothers. This distribution was intended to obtain comprehensive data from both healthcare providers and service recipients, thereby facilitating a broader understanding of postpartum depression and its management within maternal healthcare settings. A convenience sampling technique was employed to recruit participants who met inclusion criteria and were available during the data collection period. This method ensured practical feasibility while capturing participants actively engaged in postpartum care.

Inclusion and exclusion criteria

The study included two groups of participants: nurses and postpartum mothers. Nurses were eligible to participate if they were registered nurses working in maternal or postnatal units, had at least one year of professional experience, and were willing to participate in the study. Mothers were included if they were within one year postpartum, aged 18 years or older, and able and willing to provide informed consent.

Participants were excluded from the study if they did not meet the inclusion criteria. Specifically, nurses who were not directly involved in maternal care were excluded. In addition, any eligible participant, whether a nurse or a mother, who declined to participate in the study was excluded from the sample.

Data collection tools

Data were collected using two structured questionnaires specifically designed to achieve the study objectives and ensure comprehensive assessment of both nurses' perspectives and mothers' experiences regarding postpartum depression (PPD).

Tool I: Nurses' Questionnaire

The first questionnaire was administered to nurses and comprised two sections. Section A gathered socio-demographic and professional characteristics, including age, gender, educational level, years of experience, and workplace setting.

Section B assessed nurses' knowledge, attitudes, and practices related to postpartum depression. This section explored participants' awareness of PPD symptoms, risk factors, management strategies, and screening methods, with particular emphasis on the use of recognized screening tools such as the Edinburgh Postnatal Depression Scale (EPDS).

Tool II: Mothers' Questionnaire

The second questionnaire was designed for postpartum mothers and consisted of three sections. Section A collected socio-demographic and obstetric information, including age, marital status, number of children, type of delivery, and postpartum period. Section B focused on the psychological assessment of mothers using a modified version of the Edinburgh Postnatal Depression Scale (EPDS) to identify symptoms indicative of postpartum depression. Section C explored the availability and adequacy of social and professional support received by mothers during the postpartum period.

Validity and reliability

Content validity was ensured by a panel of maternal health experts. Pilot testing was conducted on 10% of the sample to ensure clarity; pilot data were excluded from the main analysis.

Data collection procedure

Prior to data collection, official approval was obtained from the relevant institutional authorities. All participants were informed about the purpose, objectives, and significance of the study, and they were provided with adequate information regarding their involvement. Informed consent was obtained from all participants before their participation, ensuring that participation was voluntary and that confidentiality and anonymity were maintained throughout the study. The questionnaires were administered to eligible participants during the data collection period and were collected immediately after completion on the same day. This procedure helped ensure the completeness of responses, minimize missing data, and enhance the accuracy and reliability of the collected information.

Ethical considerations

Ethical approval for the study was obtained from the appropriate institutional and ethical review boards prior to data collection. Participation in the study was entirely voluntary, and all participants were informed of their right to withdraw from the study at any stage without any consequences. Informed consent was obtained from all participants before their inclusion in the research.

To protect participants' rights and privacy, confidentiality and anonymity were strictly maintained throughout the study. Personal identifiers were removed from all collected data, and the information gathered was used solely for research purposes. Access to the data was restricted to the research team, and all findings were reported in aggregate form to ensure that individual participants could not be identified.

Data analysis

The collected data were coded, entered, and analyzed using Microsoft Excel and Statistical Package for the Social Sciences (SPSS) version 26. Microsoft Excel was utilized for data organization and the generation of descriptive statistical summaries, whereas SPSS was employed to conduct inferential statistical analyses and hypothesis testing.

Descriptive statistics included frequencies, percentages, means, and standard deviations to summarize participants' demographic characteristics, nurses' knowledge and practice levels regarding postpartum depression, and the prevalence of postpartum depression among mothers.

To examine relationships between study variables, inferential statistical techniques were applied using SPSS. Cross-tabulation analyses were performed to explore associations between selected variables, such as type of delivery and postpartum depression, as well as social support and postpartum depression. The chi-square test was used to determine the statistical significance of relationships between categorical variables. Furthermore, logistic regression analysis was conducted to identify independent predictors of postpartum depression while controlling for potential confounding factors. For all statistical analyses, a p-value of less than 0.05 was considered indicative of statistical significance.

Results

Socio-demographic characteristics of nurses

A total of 150 nurses participated in the present study. The socio-demographic characteristics of the nurses are presented in Table (1).

Table 1. Socio-Demographic Characteristics of Nurses (N = 150).

Variable	Category	Frequency	Percentage
Gender	Female	132	88.0%
	Male	18	12.0%
Age (years)	< 25	24	16.0%

	25–35	46	30.7%
	36–45	58	38.7%
	> 45	22	14.6%
Education	Diploma	79	52.7%
	Bachelor	51	34.0%
	Postgraduate	20	13.3%
Experience	< 5 years	27	18.0%
	5–10 years	61	40.7%
	> 10 years	62	41.3%
Workplace	Maternity/Postnatal	72	48.0%
	Primary Health Care	44	29.3%
	Others	34	22.7%

Nurses' knowledge level regarding postpartum depression

Nurses' knowledge levels regarding postpartum depression were classified into three categories: good, moderate, and poor. As shown in Table 2, 41.3% of nurses demonstrated good knowledge, whereas 38.0% had a moderate level of knowledge. In contrast, 20.7% of nurses exhibited poor knowledge.

Table 2. Nurses' Knowledge Level about Postpartum Depression.

Knowledge Level	Frequency	Percentage
Good	62	41.3%
Moderate	57	38.0%
Poor	31	20.7%
Total	150	100%

Despite general awareness of postpartum depression, only 28% of nurses reported receiving formal training related to maternal mental health. Moreover, less than half of the nurses were familiar with standardized screening tools such as the Edinburgh Postnatal Depression Scale (EPDS).

Nurses' practice levels related to postpartum depression

The distribution of nurses according to their level of practice related to postpartum depression is illustrated in Figure 1. The results indicate that 40.7% of nurses demonstrated a moderate level of practice, while 36.0% showed adequate practice. However, nearly one-quarter of nurses (23.3%) exhibited inadequate practice, reflecting insufficient application of postpartum depression screening and management procedures.

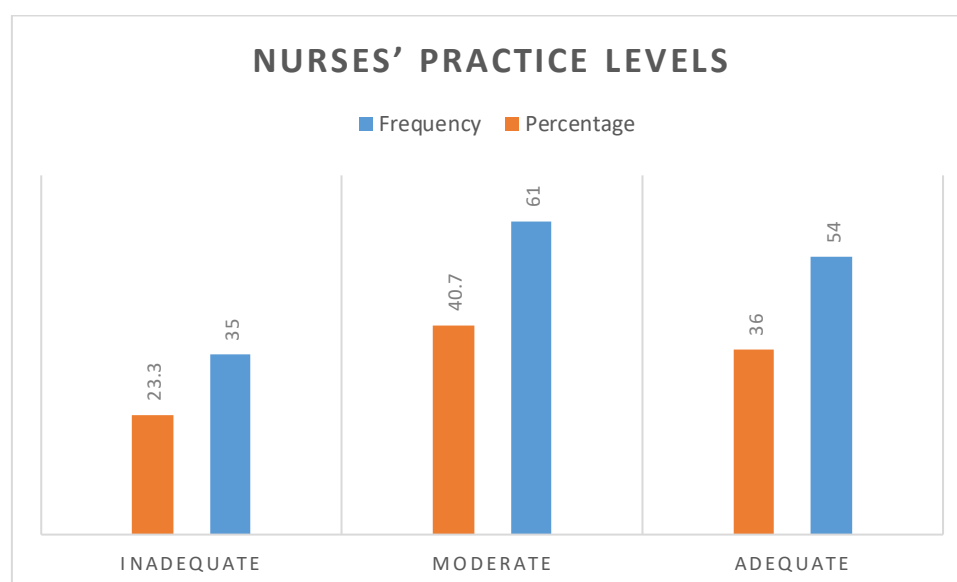


Figure 1. Nurses' Practice Levels Related to Postpartum Depression.

Socio-demographic and obstetric characteristics of delivered mothers

The socio-demographic and obstetric characteristics of delivered mothers are summarized in Table 3.

Table 3. Socio-Demographic and Obstetric Characteristics of Mothers (N = 150).

Variable	Category	Frequency	Percentage
Age	< 20 years	12	8.0%
	20–29 years	64	42.7%
	30–39 years	53	35.3%
	≥ 40 years	21	14.0%
Marital status	Married	123	82.0%
	Divorced	14	9.3%
	Widowed	13	8.7%
Type of delivery	Normal vaginal	59	39.3%
	Cesarean section	91	60.7%
Postpartum period	< 6 months	48	32.0%
	6–12 months	66	44.0%
	> 12 months	36	24.0%

Association between type of delivery and postpartum depression

The relationship between type of delivery and postpartum depression was examined using cross-tabulation and the Chi-square test. The results are presented in Table 4.

Table 4. Association between Type of Delivery and Postpartum Depression.

Type of Delivery	No Depression	Depression	Total
Normal vaginal	40	19	59
Cesarean section	32	59	91
Total	72	78	150

The Chi-square test revealed a statistically significant association between type of delivery and postpartum depression ($\chi^2 = 14.62$, $df = 1$, $p = 0.002$), indicating that mothers who underwent cesarean delivery were more likely to experience postpartum depression.

Association between social support and postpartum depression

The association between social support and postpartum depression is shown in Table 5.

Table 5. Association between Social Support and Postpartum Depression.

Social Support	No Depression	Depression	Total
Available	55	42	97
Not available	17	36	53
Total	72	78	150

A statistically significant association was found between social support and postpartum depression ($\chi^2 = 11.82$, $df = 1$, $p = 0.001$). Mothers who reported a lack of social support were more likely to experience depressive symptoms.

Logistic regression analysis of risk factors

Logistic regression analysis was conducted to identify independent predictors of postpartum depression among delivered mothers. The results are summarized in Table 6.

Table 6. Logistic Regression Analysis of Postpartum Depression.

Variable	p-value	OR (Exp(B))
Cesarean delivery	0.003	3.06
Lack of social support	0.001	4.35
Working mother	0.030	1.88
More than 3 children	0.033	1.79
Previous psychological history	0.001	5.05

OR (Exp(B)) = Odds Ratio

The logistic regression analysis identified cesarean delivery, lack of social support, employment status, having more than three children, and previous psychological history as statistically significant predictors of postpartum depression ($p < 0.05$). Previous psychological history showed the strongest association with postpartum depression (OR = 5.05), followed by lack of social support (OR = 4.35).

Relationship between nurses' knowledge level and detection of postpartum depression

The association between nurses' knowledge level and the detection of postpartum depression is presented in Table 7.

Table 7. Nurses' Knowledge Level and Detection of Postpartum Depression.

Knowledge Level	Detect Depression	Not Detect	Total
Good	41	21	62
Moderate	28	29	57
Poor	9	22	31
Total	78	72	150

The association was statistically significant ($\chi^2 = 9.54$, $df = 2$, $p = 0.008$), indicating that nurses with higher knowledge levels were more likely to detect postpartum depression.

Discussion

The present study examined nurses' knowledge and practices regarding postpartum depression (PPD) and assessed the psychological status of postpartum mothers. The findings highlight the continuing burden of postpartum depression and emphasize the critical role of nurses in the early identification and management of maternal mental health conditions. Recent evidence indicates that perinatal mental health disorders remain among the most significant complications affecting women during pregnancy and the first year after childbirth, with substantial consequences for maternal, infant, and family well-being [16,17]. Worldwide, approximately 10-20% of women experience postpartum depression, although prevalence rates may be considerably higher in low- and middle-income countries due to socioeconomic and healthcare disparities [18,19].

The socio-demographic characteristics of nurses in the current study revealed a predominance of female participants and a relatively experienced workforce. This finding reflects the gender distribution commonly reported in maternal and child healthcare services. Professional experience is generally expected to enhance clinical competency and patient assessment skills. However, evidence suggests that experience alone does not guarantee adequate competence in maternal mental health unless accompanied by continuing professional education and specialized training [20,21]. Therefore, healthcare institutions should not rely solely on years of service but should ensure ongoing competency-based training in perinatal mental health care.

The present study found that approximately two-fifths of nurses demonstrated good knowledge regarding postpartum depression, whereas one-fifth exhibited poor knowledge. Although the overall level of knowledge may be considered acceptable, the presence of substantial knowledge deficits remains concerning. Similar findings have been reported in recent studies indicating that nurses and midwives frequently possess limited knowledge regarding the recognition of depressive symptoms, risk assessment, and referral pathways for women experiencing postpartum depression [20,22]. Furthermore, current recommendations from professional organizations emphasize that healthcare providers involved in maternal care should be adequately trained to identify psychological symptoms and utilize validated mental health screening tools throughout the perinatal period [23].

An important finding of the present study was that only a minority of nurses reported receiving formal training related to maternal mental health and postpartum depression. This observation may explain the gaps observed in knowledge and practice levels. Recent clinical guidelines emphasize the necessity of integrating mental health education into both undergraduate nursing curricula and continuing professional development programs [23,24]. Evidence suggests that educational interventions improve healthcare providers' confidence, screening rates, referral practices, and overall quality of maternal mental healthcare services [24]. Therefore, improving nurses' educational preparation may significantly enhance the detection and management of postpartum depression.

Regarding nurses' practice, the results demonstrated that many participants exhibited only moderate levels of practice, while a considerable proportion reported inadequate practice related to postpartum depression screening and management. This discrepancy between knowledge and practice has been documented in previous studies and may result from institutional barriers, workload pressures, limited resources, insufficient mental health integration, and lack of standardized screening protocols [20,23]. Recent international recommendations advocate routine

mental health screening during prenatal and postnatal care using validated instruments such as the Edinburgh Postnatal Depression Scale (EPDS), supported by clear referral and follow-up pathways [23,24]. Without such supportive systems, nurses may be unable to translate theoretical knowledge into effective practice.

The findings further revealed a high prevalence of postpartum depressive symptoms among delivered mothers. This result supports growing evidence indicating that postpartum depression remains a major public health concern worldwide. Recent reviews have reported global prevalence estimates ranging from 10% to 20%, with substantially higher rates observed in vulnerable populations and resource-limited settings [18,19]. Variations in prevalence may be attributable to differences in screening tools, diagnostic criteria, sociocultural factors, and healthcare accessibility. Nevertheless, the high proportion of mothers experiencing depressive symptoms in the present study underscores the need for routine psychosocial assessment within postpartum services.

A statistically significant association was found between cesarean delivery and postpartum depression. Mothers who underwent cesarean section were more likely to experience depressive symptoms than those who had normal vaginal delivery. This finding is consistent with emerging evidence suggesting that operative delivery may increase psychological vulnerability through mechanisms such as postoperative pain, delayed recovery, reduced mobility, breastfeeding difficulties, and perceived loss of control during childbirth [18,25]. Although cesarean delivery may be medically necessary, healthcare providers should recognize these mothers as a potentially high-risk group requiring closer psychological monitoring and support.

The present study also identified a significant association between social support and postpartum depression. Mothers who lacked social support were considerably more likely to experience depressive symptoms. This finding is strongly supported by the literature, which consistently identifies social support as one of the most important protective factors against postpartum depression [25,26]. Emotional support from spouses, family members, friends, and healthcare professionals can reduce stress, improve coping capacity, and promote maternal adaptation to new parenting responsibilities. Conversely, inadequate social support increases emotional isolation and susceptibility to depression. These findings highlight the importance of family-centered and community-based interventions in postpartum care.

Logistic regression analysis demonstrated that previous psychological history was the strongest predictor of postpartum depression, followed by lack of social support, cesarean delivery, employment status, and having more than three children. These findings are consistent with contemporary evidence showing that women with prior psychiatric disorders are at substantially increased risk of experiencing postpartum depressive symptoms [18,19]. Previous mental illness has been repeatedly identified as one of the most powerful predictors of postpartum depression because underlying psychological vulnerability may be reactivated by the physical, hormonal, and emotional changes associated with childbirth. Consequently, screening strategies should specifically target mothers with known mental health histories.

Finally, the study identified a significant relationship between nurses' knowledge and their ability to detect postpartum depression. Nurses with higher knowledge levels were significantly more likely to identify depressive symptoms among mothers. This finding supports current recommendations advocating enhanced professional training and competency development in maternal mental health care [23,24]. As nurses constitute the largest group of healthcare professionals involved in postpartum care, improving their knowledge and screening skills may lead to earlier identification, timely referral, and more effective intervention. Ultimately, strengthening nurses' capacity in maternal mental healthcare may contribute to improved maternal outcomes and reduced burden of postpartum depression within healthcare systems.

Conclusion

This study investigated postpartum depression (PPD) among delivered mothers and assessed nurses' knowledge, attitudes, and practices regarding this condition. The findings revealed that postpartum depression is a prevalent mental health concern, affecting more than half of the study population. Cesarean delivery, lack of social support, and previous psychological history were identified as significant risk factors contributing to depressive symptoms among postpartum mothers. The study also highlighted noticeable gaps in nurses' knowledge and clinical practices related to postpartum depression, particularly in relation to formal training and the use of standardized screening tools such as the Edinburgh Postnatal Depression Scale (EPDS). Nurses with higher levels of knowledge were more effective in detecting depressive symptoms, emphasizing the crucial role of nurses in the early identification, prevention, and management of postpartum depression. Overall, the findings underscore the importance of enhancing nurses' educational preparation and strengthening psychosocial support systems for mothers to improve maternal mental health outcomes and the quality of postnatal care services.

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