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Original Research Article

Enhancing postpartum depression screening and management in tertiary care: a comprehensive approach

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ABSTRACT

Background: Postpartum depression (PPD) is a significant public health issue affecting a substantial number of new mothers. Despite its prevalence, PPD often goes undiagnosed and untreated due to inconsistent screening practices and lack of standardized management protocols. This research project aimed to enhance the screening and management of PPD in a tertiary care hospital through the implementation of a comprehensive and evidence-based approach.

Methods: The study was conducted in several phases: assessment of current practices, development and implementation of an enhanced screening protocol, systematic screening to assess prevalence, improvement of early detection and referral systems, evaluation of management strategies, awareness and education campaigns, and follow-up studies. Data collection involved surveys and interviews with healthcare providers, screening of 500 postpartum women using the Edinburgh Postnatal Depression Scale (EPDS), and patient satisfaction surveys. Statistical analyses were performed to determine PPD prevalence and evaluate the effectiveness of management strategies.

Results: The assessment of current practices revealed that only 35% of healthcare providers routinely screened for PPD, with no standardized protocol. The enhanced screening protocol, integrated into routine care, achieved a 100% screening rate among postpartum women. The prevalence of PPD was found to be 15%, with higher rates among women with low socio-economic status and lack of social support. The streamlined referral process ensured that all women who screened positive were referred to mental health services, with an 87% follow-up attendance rate. Management strategies, including cognitive-behavioral therapy (CBT) and pharmacotherapy, led to significant improvement in 85% of women receiving CBT and 92% receiving both CBT and medication. Patient satisfaction surveys indicated a 90% satisfaction rate with the screening and management process. Long-term follow-up studies showed sustained improvement in 85% of women at six months postpartum.

Conclusions: The comprehensive approach to PPD screening and management significantly improved detection, referral, and treatment outcomes in a tertiary care hospital. Standardized screening protocols, effective referral systems, and integrated care models are essential for addressing PPD. The project's success highlights the importance of early detection, targeted interventions, and continuous care to promote maternal mental health and well-being. Future efforts should focus on refining and expanding these protocols to ensure sustained improvements and support for postpartum women.

Keywords: Cognitive-behavioral therapy, Edinburgh postnatal depression scale, Maternal mental health, Postpartum depression, PPD screening

INTRODUCTION

Postpartum depression (PPD) is a pervasive and serious mental health condition that affects a significant proportion of women following childbirth. Characterized by persistent feelings of sadness, anxiety, and fatigue, PPD can severely impact a mother's ability to care for her newborn and herself.¹⁻³ The repercussions extend beyond the individual, potentially hindering the emotional and cognitive development of the infant and straining familial relationships.^{4,5} Research indicates that PPD affects approximately 10-15% of new mothers, although the prevalence can be higher depending on demographic and socio-economic factors.⁶

Despite its prevalence, PPD often remains undiagnosed and untreated, particularly in tertiary care settings where the focus tends to be on physical health outcomes related to childbirth.^{3,5} The gap in mental health care is partly due to the absence of standardized screening protocols and a lack of awareness among healthcare providers about the importance of mental health postpartum.⁴ Furthermore, stigma associated with mental health issues and limited resources for mental health support contribute to the under diagnosis and under treatment of PPD.⁶

Tertiary care hospitals, which serve as major healthcare providers and referral centers, are ideally positioned to implement comprehensive screening and management strategies for PPD.^{4,5} However, the current practices in these settings often fall short of addressing the psychological needs of postpartum women.⁵ This inadequacy highlights the necessity for a structured and integrated approach to PPD screening and management.^{5,6}

The primary aim of this research project is to enhance the screening and management of postpartum depression in a tertiary care hospital. This objective will be achieved through a series of specific goals: evaluating existing screening practices, implementing an enhanced screening protocol, assessing the prevalence of PPD, improving early detection and referral systems, evaluating the effectiveness of management strategies, raising awareness, and conducting follow-up studies to measure long-term impacts.

Evaluating current screening practices will provide a baseline understanding of how PPD is currently identified and managed within the hospital. By identifying gaps and limitations in these practices, targeted improvements can be made.^{7,8} Implementing an enhanced screening protocol involves developing and piloting a comprehensive approach that incorporates evidence-based tools and training healthcare professionals to utilize these tools effectively.⁹

Assessing the prevalence of PPD through systematic screening will offer valuable insights into the extent of the issue within the hospital's patient population. This data is crucial for tailoring intervention strategies and allocating

resources appropriately. Improving early detection and referral systems aims to establish a streamlined process for referring women identified with PPD to appropriate mental health services, fostering better collaboration between obstetricians, pediatricians, psychiatrists, and mental health counselors.¹⁰

Evaluating the effectiveness of management strategies will involve implementing evidence-based treatment plans and monitoring patient outcomes and satisfaction. This will help in refining these strategies and ensuring they meet the needs of postpartum women. Additionally, raising awareness and educating patients and their families about PPD is essential for reducing stigma and encouraging more women to seek help. Awareness campaigns and educational materials will be developed to support this goal.

METHODS

This is a prospective cohort study designed to evaluate the implementation of an enhanced postpartum depression (PPD) screening and management protocol in a tertiary care hospital. This research project aims to enhance the screening and management of postpartum depression (PPD) in Vels Medical College and Hospital, Tamil Nadu. The methodology consists of several phases: assessment of current practices, development and implementation of an enhanced screening protocol, systematic screening to assess prevalence, improvement of early detection and referral systems, evaluation of management strategies, awareness and education campaigns, and follow-up studies. Each phase involves specific steps to ensure comprehensive and effective implementation.

Study duration

The study was conducted over a period of 18 months from January 2023 to June 2024. The study was divided into the three phases:

Phase 1: Preparation and training (three months) include, assessment of current practices and training healthcare providers on the enhanced screening protocol and referral systems.

Phase 2: Data collection and screening (nine months) includes screening of 500 postpartum women using the EPDS at various postpartum stages then, referral and follow-up of women testing positive for PPD.

Phase 3: Follow-up and long-term assessment (6 months) include follow-up studies to assess treatment outcomes at three and six months postpartum and collection of patient satisfaction data and long-term mental health outcomes.

Assessment of current practices

Current practice evaluation was done using structured surveys and semi-structured interviews to collect data

from healthcare providers (obstetricians, pediatricians, nurses, and mental health professionals) on current PPD screening methods and management practices. Review of medical records of postpartum women from the past three years to gather data on diagnosed PPD cases and the treatments provided. A gap analysis was performed to identify limitations in the current practices and areas needing improvement.

Development of enhanced screening protocol

Protocol design was developed to enhance screening protocol incorporating validated tools such as the Edinburgh Postnatal Depression Scale (EPDS) and the Patient Health Questionnaire (PHQ-9). The protocol include guidelines on the timing and frequency of screenings (e.g., during antenatal visits, at six weeks postpartum, and during routine pediatric check-ups). Also establish criteria for referral to mental health services based on screening outcomes.

Systematic screening to assess prevalence

Screening was implemented to integrate the enhanced screening protocol into the routine care provided in the maternity and pediatric departments. All postpartum women visiting the hospital during the study period are screened for PPD.

Data collection

Data collected from screening was noted and the screening results along with demographic information (age, parity, socio-economic status, etc.) were analyzed for the prevalence rates.

Ethics committee approval

The study was approved by institutional ethics committee. Written and an informed consent was obtained from all the study participants.

Data analysis

Data was analyzed using SPSS statistical software and determined the prevalence of PPD and identifying any demographic correlations associated with PPD. Descriptive statistics were used to summarize the data and inferential statistics to test hypotheses about risk factors.

RESULTS

The results of this research project on enhancing postpartum depression (PPD) screening and management in a tertiary care hospital are presented below. The data collected includes the evaluation of current practices, implementation of an enhanced screening protocol, assessment of PPD prevalence, effectiveness of early detection and referral systems, patient satisfaction, and

long-term outcomes. Demographic details of the study participants were given in Table 1.

Table 1: Demographic details of the study participants.

Demographic variable	Number of participants (n=500)	Percentage
Age group (years)		
18-24	80	16
25-30	220	44
31-35	150	30
36-40	50	10
Socioeconomic status		
Low	175	35
Middle	260	52
High	65	13
Education level		
No formal education	40	8
Primary education	80	16
Secondary education	190	38
Higher education	190	38
Employment status		
Unemployed	250	50
Employed (part-time)	120	24
Employed (full-time)	130	26
Parity		
Primiparous	150	30
Multiparous	350	70
Support system		
Strong family support	320	64
Limited/no family support	180	36
Mode of delivery		
Vaginal delivery	300	60
Cesarean section	200	40

Evaluation of current practices

The initial assessment of current practices involved a survey of 100 healthcare providers, including obstetricians, pediatricians, nurses, and mental health professionals. The findings revealed that only 35% of providers routinely screened for PPD, and there was no standardized protocol in place. The most commonly used tool was the Edinburgh Postnatal Depression Scale (EPDS), but its application was inconsistent (Table 2).

Table 2: Current PPD screening practices.

Screening tool	% Usage (n=100)
EPDS	35
PHQ-9	15
None	50

Implementation of enhanced screening protocol

Following the development and training on the enhanced screening protocol, all healthcare providers participated in a training program. Post-training, the screening protocol was integrated into routine care. Over six months, 500 postpartum women were screened using the EPDS at their first postpartum visit, six weeks postpartum, and during well-baby visits.

Assessment of PPD prevalence

Out of the 500 women screened, 75 (15%) tested positive for PPD (EPDS score ≥ 13). The prevalence was higher among women with certain demographic factors, such as low socio-economic status and lack of social support (Table 3).

Table 3: Prevalence of PPD and demographic factors.

Demographic factor	% Positive PPD (n=75)
Low socio-economic status	60
High socio-economic status	10
Lack of social support	70
Adequate social support	30

Early detection and referral systems

The implementation of a streamlined referral process ensured that all women who screened positive were referred to mental health services within one week. Out of the 75 women referred, 65 (87%) attended their follow-up appointments with a mental health professional (Table 4).

Table 4: Referral and follow-up attendance.

Outcome	% (n=75)
Referred to mental health	100
Attended follow-up	87
Did not attend follow-up	13

Evaluation of management strategies

Management strategies included cognitive-behavioral therapy (CBT) and pharmacotherapy, depending on the severity of symptoms. Of the 65 women who attended follow-up appointments, 40 received CBT, and 25 received both CBT and medication. Patient outcomes were assessed using follow-up EPDS scores at three months postpartum (Table 5).

Table 5: Patient outcomes post-treatment.

Treatment type	% Improvement (n=65)
CBT only	85
CBT + medication	92

Patient satisfaction

Patient satisfaction was assessed through surveys. 90% of women reported satisfaction with the screening and management process, highlighting the importance of early detection and support (Table 6).

Table 6: Patient satisfaction survey results.

Satisfaction level	% (n=65)
Very satisfied	60
Satisfied	30
Neutral	5
Dissatisfied	5

Long-term impact assessment

Follow-up studies at six months postpartum showed sustained improvement in 85% of women who initially tested positive for PPD. This indicates the long-term effectiveness of the enhanced screening and management protocols (Table 7).

Table 7: Long-term outcomes at six months.

Outcome	% (n=75)
Sustained improvement	85
Relapsed	10
No change	5

Continuous improvement

Feedback from follow-up studies led to several protocol refinements, including more frequent follow-up screenings and additional training sessions for healthcare providers.

In summary, the implementation of an enhanced PPD screening and management protocol in a tertiary care hospital significantly improved the detection, referral, and treatment of postpartum depression. The prevalence of PPD was identified at 15%, with successful referral and management strategies leading to high patient satisfaction and sustained improvement in the majority of cases. This comprehensive approach underscores the importance of integrating mental health care into postpartum care to ensure the well-being of mothers and their families.

DISCUSSION

The results of this research project demonstrate significant advancements in the screening and management of postpartum depression (PPD) within a tertiary care hospital. The project's objectives were to evaluate current practices, implement an enhanced screening protocol, assess the prevalence of PPD, improve early detection and referral systems, evaluate management strategies, raise awareness, and conduct follow-up studies. Each objective was met with notable success, indicating the effectiveness of a comprehensive approach to PPD care.

Evaluation of current practices

The initial assessment revealed substantial gaps in the existing PPD screening practices, with only 35% of healthcare providers routinely screening for PPD and no standardized protocol in place.¹¹ This finding underscores the need for structured and consistent screening procedures. The variability in screening practices likely contributed to the under diagnosis and under treatment of PPD, aligning with previous research that highlights the challenges in identifying PPD without standardized tools.¹²

Implementation of enhanced screening protocol

The introduction of an enhanced screening protocol, which included training healthcare providers on the use of the Edinburgh Postnatal Depression Scale (EPDS) and the Patient Health Questionnaire (PHQ-9), led to a significant improvement in the systematic identification of PPD.^{9,13} The protocol's integration into routine care ensured that all postpartum women were screened at critical points, resulting in a 100% screening rate during the study period. This approach not only facilitated early detection but also standardization across the hospital, which is critical for reliable PPD management.¹⁴

Assessment of PPD prevalence

The prevalence of PPD was found to be 15% among the screened women, consistent with global prevalence rates reported in the literature.¹⁵⁻¹⁷ This prevalence was notably higher among women with low socio-economic status and those lacking social support, corroborating findings from previous studies that identify these as significant risk factors for PPD.¹⁸ The data underscores the importance of targeted interventions for at-risk populations to mitigate the incidence of PPD.

Improvement of early detection and referral systems

The development of a streamlined referral process ensured that 100% of women who screened positive for PPD were referred to mental health services, with 87% attending their follow-up appointments. This high follow-up rate highlights the effectiveness of the referral system and the critical role of coordinated care in managing PPD. The multidisciplinary approach involving obstetricians, pediatricians, psychiatrists, and mental health counselors facilitated comprehensive care, addressing both the psychological and physical health needs of postpartum women.^{16,19}

Evaluation of management strategies

Management strategies, including cognitive-behavioural therapy (CBT) and pharmacotherapy, were implemented based on the severity of symptoms. The results indicated that 85% of women who received CBT and 92% of those who received both CBT and medication showed

significant improvement in their EPDS scores. These findings align with existing research on the efficacy of these treatments for PPD and highlight the importance of personalized care plans tailored to individual needs.^{17,19,20}

Patient satisfaction and awareness campaigns

Patient satisfaction surveys revealed that 90% of women were satisfied or very satisfied with the screening and management process. This high satisfaction rate reflects the positive impact of the enhanced screening protocol and comprehensive care model on patient experiences. Additionally, awareness campaigns and educational materials were successful in reducing stigma and encouraging help-seeking behaviors among postpartum women and their families.²¹

Long-term impact assessment

Follow-up studies at six months postpartum showed sustained improvement in 85% of women who initially tested positive for PPD, indicating the long-term effectiveness of the enhanced protocols. This sustained improvement suggests that early detection and timely intervention can have lasting positive effects on maternal mental health, ultimately benefiting both mothers and their infants.²²

This study has few limitations. This study on postpartum depression (PPD) screening and management, conducted in a tertiary care hospital, utilizes a prospective cohort design over 18 months. The enhanced screening protocol improved detection rates, patient referral, and treatment outcomes. However, the study faces several limitations, including limited generalizability due to its single-center nature, self-report bias from screening tools, and potential attrition in long-term follow-up. Additionally, variability in treatment adherence and healthcare provider implementation, along with limited exploration of socio-cultural factors, may affect results. Despite these challenges, the study highlights the effectiveness of early detection and integrated care in improving maternal mental health outcomes, paving the way for broader applications.

CONCLUSION

The comprehensive approach to enhancing PPD screening and management in a tertiary care hospital has proven effective in achieving the project's objectives. By addressing the gaps in current practices, implementing standardized screening protocols, and ensuring coordinated care, the project has significantly improved the detection, referral, and treatment of PPD. The high prevalence of PPD among women with low socio-economic status and lack of social support underscores the need for targeted interventions. The success of the management strategies and high patient satisfaction further validate the importance of integrated care models. Sustained improvements in long-term outcomes highlight

the lasting impact of early detection and intervention. These findings advocate for the continued implementation and refinement of such comprehensive approaches to PPD care, ultimately promoting the well-being of postpartum women and their families.

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