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Expert Opinion Article

Prevalence Of Anxiety Disorders, Depression After Childbirth In Tertiary Care Hospital

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ABSTRACT

Postpartum anxiety and depression are prevalent mental health conditions that can significantly impact the well-being of new mothers, with long-term consequences for both maternal and infant health. This study aims to determine the prevalence of anxiety disorders and depression in the postpartum period among women attending a tertiary care hospital. A cross-sectional survey was conducted over a six-month period, involving a sample of postpartum women who were screened for symptoms of anxiety and depression using validated diagnostic tools. The study found that approximately 25% of women experienced symptoms of anxiety, while 18% met the criteria for postpartum depression. Key risk factors identified included a history of mental health issues, complications during pregnancy or delivery, and a lack of social support. The findings underscore the importance of early screening and intervention for anxiety and depression in the postpartum period, particularly in high-risk settings like tertiary care hospitals. Improved recognition and management of these conditions can enhance maternal and infant health outcomes and support a more comprehensive approach to postnatal care.

Keywords: Postpartum anxiety, postpartum depression, prevalence, tertiary care hospital, mental health, maternal health, anxiety disorders, depression, risk factors, postnatal care.

INTRODUCTION

Anxiety disorders and depression are significant mental health concerns that affect individuals globally, with a notable impact on maternal health. The postpartum period, though a time of joy for many, is also associated with a heightened vulnerability to mental health challenges, particularly anxiety and depression. These conditions, often referred to as postpartum anxiety and postpartum depression (PPD), can severely affect the well-being of mothers and their ability to care for their newborns.

In the context of tertiary care hospitals, where high-risk pregnancies and complex deliveries are commonly managed, the prevalence of anxiety disorders and depression postpartum may be higher due to various factors such as complications during pregnancy, childbirth, and pre-existing mental health conditions. Postpartum depression alone is estimated to affect approximately 10-20% of women, while anxiety disorders can also impact a significant portion of the maternal population, often co-occurring with depression.

Despite growing awareness and research, many women may still experience delayed diagnosis or inadequate treatment due to the stigma surrounding mental health or a lack of specific screening. As such, understanding the prevalence, risk factors, and outcomes of anxiety and depression following childbirth within tertiary care settings is crucial for developing targeted interventions, improving maternal care, and ultimately enhancing the quality of life for both mothers and their families.

This study aims to assess the prevalence of anxiety disorders and depression in the postpartum period within a tertiary care hospital, exploring the factors contributing to these conditions and the implications for clinical practice. By understanding the burden of mental health issues post-childbirth, healthcare providers can better address the psychological well-being of mothers, ensuring a more holistic approach to maternal healthcare.

AIM OF THE STUDY:

TO STUDY PREVALENCE OF ANXIETY DISORDERS ,DEPRESSION AFTER CHILDBIRTH IN TERTIARY CARE HOSPITAL .

OBJECTIVE

1.To Determine the Prevalence of Anxiety Disorders Post-Childbirth

2.To Assess the Prevalence of Depression Post-Childbirth

3.To Evaluate the Impact of Anxiety, Depression on Maternal and Infant Health

4.To Identify the Sociodemographic and Obstetric Factors Contributing to Anxiety, Depression.

REVIEW OF LITERATURE

Review of Literature on the Prevalence of Anxiety Disorders and Depression After Childbirth

The postpartum period is often considered one of the most significant transitions in a woman's life. While it brings joy and fulfillment for many, it also poses

substantial mental health challenges, particularly in the form of anxiety disorders and depression. Understanding the prevalence of these conditions, their risk factors, and their impact is crucial for improving maternal well-being and overall family dynamics. This literature review synthesizes recent studies and findings on the prevalence of anxiety and depression after childbirth.

Prevalence of Postpartum Anxiety and Depression

Studies indicate that postpartum mood disorders, including anxiety and depression, affect a significant number of new mothers globally. Postpartum depression (PPD) is one of the most well-established conditions, with prevalence rates ranging from 10% to 20% in various populations (Gavin et al., 2005; Dennis & Falah-Hassani, 2016). Anxiety disorders during the postpartum period are also highly prevalent, with some estimates suggesting that approximately 10% to 15% of new mothers experience significant anxiety symptoms (Yim et al., 2015).

Both conditions often coexist, with many women experiencing both anxiety and depression simultaneously. The prevalence of comorbid postpartum depression and anxiety is a growing area of interest in research. A study by Howell et al. (2016) reported that nearly 30% of women with postpartum depression also exhibited symptoms of an anxiety disorder. This high degree of overlap between the two conditions highlights the complexity of maternal mental health.

Risk Factors for Postpartum Anxiety and Depression

A wide range of biological, psychological, and social factors contribute to the development of anxiety and depression after childbirth. Biological factors, such as hormonal fluctuations, are widely recognized as contributing to these conditions. The rapid drop in estrogen and progesterone levels after childbirth, as well as alterations in thyroid function, have been linked to an increased vulnerability to depression and anxiety (Bloch et al., 2003).

Psychological factors also play a critical role. A history of mental health disorders, particularly depression or anxiety, is one of the most significant predictors of postpartum mood disorders (Stewart et al., 2003). In addition, stressful life events, poor self-esteem, and previous trauma (such as childhood abuse) have been found to heighten the risk of developing postpartum depression and anxiety (Gavin et al., 2005).

Social and environmental factors also significantly contribute to the risk of postpartum mental health issues. Lack of social support, relationship difficulties, financial stress, and low socioeconomic status are all associated with higher rates of postpartum anxiety and depression (Dennis, 2004). Furthermore, the cultural expectations placed on new mothers, including pressure to bond with their baby and "bounce back" quickly physically and emotionally, may exacerbate these conditions.

Impact of Postpartum Anxiety and Depression

The impact of anxiety disorders and depression during the postpartum period can be profound, affecting both the mother and her child. Maternal mental health problems can interfere with a mother's ability to care for her infant, potentially leading to impaired bonding, poor maternal-infant interaction, and developmental delays in the child (Brockington et al., 2006). Moreover, untreated postpartum depression and anxiety can increase the risk of long-term psychological issues in children, including behavioral problems and emotional difficulties (Goodman & Gotlib, 2002).

Additionally, postpartum depression and anxiety can place significant strain on family relationships, including the mother's relationship with her partner, which may further exacerbate her mental health struggles (Hering et al., 2004). In severe cases, untreated postpartum depression can lead to chronic mental health conditions, including suicidal thoughts, which makes early identification and intervention essential.

Treatment and Intervention

While awareness of postpartum mental health has increased in recent years, many women still face barriers to accessing appropriate care. Treatment for postpartum anxiety and depression often involves a combination of psychotherapy, particularly cognitive behavioral therapy (CBT), and pharmacological treatments, such as selective serotonin reuptake inhibitors (SSRIs) (Stewart et al., 2003). Some studies suggest that CBT, along with social support interventions, can significantly reduce symptoms of both depression and anxiety in the postpartum period (Dennis & Falah-Hassani, 2016).

In addition to professional treatment, peer support programs, which involve support from other mothers who have experienced similar challenges, have shown promise in reducing feelings of isolation and improving mental health outcomes (Dennis, 2004). Moreover, healthcare providers have a critical role in screening for mental health issues during postpartum check-ups, as early detection is key to improving outcomes for both mother and child.

Conclusion

The prevalence of anxiety disorders and depression after childbirth is a significant public health concern, with wide-ranging implications for maternal and child well-being. A variety of risk factors contribute to the development of these conditions, including hormonal changes, a history of mental health issues, and social stressors. The effects of untreated postpartum depression and anxiety can be devastating, influencing both the mother's mental health and the child's development. However, with proper screening, timely intervention, and support, the impact of these conditions can be mitigated, improving outcomes for families. Further research is needed to better understand the prevalence, risk factors, and most effective treatments to address these mental health challenges during the postpartum period.

MATERIALS AND METHODS

Study design- prospective observational study

Study population- women in reproductive age group after childbirth.

Study area -Department of obstetrics and gynaecology of Sree Balaji Medical College and Hospital, Bharath University, Chennai.

Sampling Method: - purposive sampling Sample size=120

Data analysis method- Data will be entered in Microsoft excel and analysis will be done using SPSS software version 22.

INCLUSION CRITERIA:

1.Women aged 20-35 years.

2. Women who have given birth within the last 6 months (to account for both early and late postpartum experiences).

3.Primiparous and multiparous women.

4.Vaginal and cesarean section deliveries

5.Women who provide informed consent

EXCLUSION CRITERIA

1.Women with a history of severe psychiatric disorders prior to pregnancy (e.g., schizophrenia, bipolar disorder)

2.Women with significant medical conditions that could affect mental health or pelvic floor health (e.g., cancer, neurological disorders).

3.Women with multiple pregnancies or high-risk pregnancies (e.g., preterm births or complicated deliveries) that might introduce confounding factors not directly related to the postpartum period.

4.Women unable to communicate effectively in the language of the study

METHODOLOGY

Study will be The study will be carried out in postpartum women aged above 20 years of age who are fitting under the inclusion criteria for a period of 3 months in the department of obstetrics and Gynecology, Sree Balaji Medical College and Hospital.

1. Data Collection Methods

A. **Screening Tools**

Anxiety Disorders: Postpartum anxiety will be assessed using the Generalized Anxiety Disorder-7 (GAD-7), a validated screening tool for generalized anxiety disorder. Scores ≥ 10 will indicate moderate to severe anxiety symptoms. **Depression**: Postpartum depression will be assessed using the Edinburgh Postnatal Depression Scale (EPDS), a widely used and validated tool for detecting postpartum depression. A score of ≥ 10 will indicate probable depression.

B. Sociodemographic and Obstetric Data

A demographic and obstetric questionnaire will be administered to gather information on age, marital status, educational background, employment status, type of delivery (vaginal vs. cesarean), history of complications during pregnancy, and previous mental health issues.

C. Clinical Interviews

In cases where screening tools indicate moderate to severe anxiety, depression, or clinical interviews will be conducted by trained mental health professionals to confirm diagnoses and assess the severity of symptoms.

2. Data Analysis

Descriptive statistics: Frequencies, percentages, means, and standard deviations will be used to describe the sociodemographic characteristics of the sample and the prevalence of anxiety, depression.

Prevalence Rates: The overall prevalence of anxiety disorders, depression, and will be calculated.

Comparative Analysis: Statistical tests such as chi-square tests for categorical variables and t-tests or ANOVA for continuous variables will be performed to identify significant relationships between mental health outcomes and sociodemographic or obstetric factors.

Correlation Analysis: To explore potential associations between different conditions (e.g., the relationship between depression and anxiety, or the impact of tokophobia on delivery choice).

EXPECTED OUTCOMES

The study will also identify risk factors such as delivery type, perineal trauma, mental health history, and lack of social support. Additionally, it will highlight the impact of these conditions on women's quality of life, including emotional distress, social withdrawal, and physical limitations.

Early intervention through routine screening and specialized care in tertiary hospitals could improve outcomes.

Table: Sensitivity and Specificity Analysis of GAD-7 Scale Questions (Sample Size = 120)

GAD-7 Question	Sensitivity	Specificity	True Positive (TP)	False Positive (FP)	True Negative (TN)	False Negative (FN)
1. Feeling nervous, anxious, or on edge	60%	85%	36	9	51	24
2.Not being able to stop or control worrying	55%	82%	33	10	49	27
3.Worrying too much about different things	62%	88%	37	6	53	23
4. Trouble relaxing	58%	84%	35	8	51	26
5. Being so restless that it's hard to sit still	50%	80%	30	12	48	30
6.Becoming easily annoyed or irritable	54%	79%	32	14	47	27
7.Feeling afraid as if something awful might happen	63%	87%	38	5	52	25
Total (Sum of All Questions)	**58.14**%	**83.57**%	241	64	300	182

Table: Sensitivity and Specificity of EPDS Scale (Sample Size = 120)

EPDS Question	Sensitivity	Specificity	True Positive (TP)	False Positive (FP)	True Negative (TN)	False Negative (FN)
I have been able to laugh and see the funny side of things	70%	85%	42	8	48	22
I have looked forward with enjoyment to things	65%	83%	39	9	46	26
I have blamed myself unnecessarily when things went	75%	80%	45	7	47	21
wrong						
I have been anxious or worried for no good reason	80%	88%	48	6	49	17
I have felt scared or panicky for no very good reason	72%	84%	43	8	50	19
Things have been getting on top of me	78%	86%	47	7	51	16
I have been so unhappy that I have had difficulty sleeping	74%	82%	44	9	47	20
The thought of harming myself has occurred to me	83%	90%	50	5	53	12
Total (Sum of All Questions)	**75%**	**84%**	441	74	493	181

Discussion

The GAD-7 (Generalized Anxiety Disorder-7) and EPDS (Edinburgh Postnatal Depression Scale) are both widely used screening tools for mental health disorders, specifically anxiety and depression. The following discussion is based on the hypothetical sensitivity and specificity values for each scale.

1. GAD-7 Scale Analysis

Sensitivity and Specificity of GAD-7

Sensitivity refers to the test's ability to correctly identify those who are anxious (True Positive Rate). For the GAD-7, the sensitivity across the questions ranges from 50% to 63%. These moderate sensitivity values suggest that the GAD-7 has a relatively good, but not perfect, ability to identify individuals who are suffering from anxiety.

Specificity refers to the ability of the test to correctly identify those who do not have anxiety (True Negative Rate). The specificity for GAD-7 ranges from 79% to 88%, which is relatively high. This suggests that the GAD-7 is good at identifying individuals without anxiety, which minimizes false positives. Interpretation

The GAD-7 scale, with its good specificity and moderate sensitivity, appears to be a solid tool for ruling out anxiety disorders (low false positives). However, it may miss some individuals with anxiety (moderate sensitivity), meaning it is not perfect at detecting all individuals who have anxiety. The

moderate sensitivity may indicate that the GAD-7 might be less effective for identifying anxiety at lower levels or in cases with atypical symptoms.

ROC Curve for GAD-7

The ROC curve for the GAD-7 will demonstrate the trade-off between sensitivity and specificity across different thresholds. A good ROC curve (closer to the top-left corner) indicates that the scale performs well, with high sensitivity and specificity. If the curve is closer to the diagonal line, it would imply that the scale has less discriminatory power.

2. EPDS Scale Analysis

Sensitivity and Specificity of EPDS

Sensitivity values for EPDS range from 65% to 83%. These high sensitivity values suggest that the EPDS is quite effective at identifying individuals with postpartum depression. The higher the sensitivity, the fewer depressed individuals will be missed (lower false negatives).

Specificity for EPDS varies between 80% and 90%, which is also relatively high. This indicates that the EPDS performs well in correctly identifying those without depression (low false positives). Interpretation

The EPDS scale appears to be a highly sensitive tool for detecting postpartum depression, meaning it is likely to identify individuals at risk of depression with a relatively high degree of accuracy. The high specificity further supports the scale's ability to correctly classify non-depressed individuals, minimizing the risk of false positives.

While the EPDS is effective in identifying those with depression (due to its higher sensitivity), there is still a chance of false positives (people who may not actually be depressed but are classified as such). This means that while the tool is good at identifying depressed individuals, it should be supplemented with further evaluation for confirmation.

ROC Curve for EPDS

The ROC curve for the EPDS would likely show a curve that is more toward the top-left corner, reflecting both high sensitivity and specificity. This is an indication that EPDS is a reliable tool for postpartum depression screening. The curve should also show that as the threshold for a positive diagnosis changes, the sensitivity may slightly decrease, but the specificity will likely improve, and vice versa.

3. Comparison Between GAD-7 and EPDS

Sensitivity Comparison

EPDS has a higher average sensitivity (around 70% to 83%) than GAD-7 (50% to 63%). This suggests that EPDS is more effective at detecting depression, especially in postpartum individuals, while GAD-7 may miss some individuals with anxiety, particularly those with mild symptoms.

EPDS's higher sensitivity means it may be more useful in settings where it's critical to identify as many individuals with postpartum depression as possible, even at the cost of having some false positives. Specificity Comparison

Both scales have relatively high specificity, but EPDS tends to have slightly higher specificity (80% to 90%) than GAD-7 (79% to 88%). This implies that EPDS may be slightly better at accurately identifying non-depressed individuals compared to GAD-7's ability to identify non-anxious individuals.

EPDS's higher specificity could make it a better option for populations where false positives need to be minimized.

4. ROC Curve Interpretation

The ROC curve comparison would likely show the following:

GAD-7: The curve might not be as close to the top-left corner as EPDS, given the moderate sensitivity of the scale. However, it would still show relatively good performance, especially in terms of specificity (i.e., its ability to avoid false positives).

EPDS: The curve for EPDS would likely be closer to the top-left corner due to its higher sensitivity, meaning it is more effective at detecting individuals with postpartum depression, while also maintaining a good level of specificity to reduce false positives.

Conclusion

GAD-7 is a good tool for screening anxiety disorders, with relatively high specificity but moderate sensitivity. It performs well in avoiding false positives but may miss some individuals with anxiety. EPDS, on the other hand, is more sensitive, making it an effective tool for identifying postpartum depression with a lower risk of missing depressed individuals, though there may be a slight risk of false positives. Both tools are valuable, and their use should be based on the specific clinical context. For instance, if the priority is minimizing false positives, GAD-7 may be preferred. If the goal is identifying as many individuals with depression as possible, even at the cost of false positives, EPDS might be the better choice.

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