



FROM FATHERHOOD TO FATIGUE: EXPLORING THE EFFECTS OF PATERNAL POSTPARTUM DEPRESSION ON PARENTAL RESPONSIVENESS AND ROLE OVERLOAD AMONG FIRST-TIME FATHERS.

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Abstract:

Paternal mental health during the postpartum period is a growing area of interest, yet it remains less acknowledged compared to maternal experiences. First-time fathers often face emotional, psychological, and social adjustments that can lead to distress, including symptoms of postpartum depression. This study aims to examine the effects of paternal postpartum depression (PPD) on parental responsiveness and role overload among first-time fathers with infants aged 0 to 12 months. The research follows a quantitative design and includes 37 participants aged between 22 and 35 years, identified through purposive sampling. Data were collected using standardized tools: the Edinburgh Postnatal Depression Scale (EPDS), Parental Responsiveness Scale (PRS), and Paternal Adaptation Questionnaire (PAQ). Regression analysis was used to analyze the data. The findings suggest that higher levels of PPD are associated with reduced responsiveness to the infant's cues and increased perceptions of role overload. The study also highlights the influence of contextual factors such as social desirability, cultural expectations, joint family systems, and the availability of family support in shaping paternal roles and experiences. These findings underscore the importance of early identification and support for fathers facing postpartum challenges, especially within diverse cultural settings.

Keywords: *First-time fathers, Postpartum Depression, Parental Responsiveness, Role Overload*

INTRODUCTION

Fatherhood is a life-changing transition that comes with significant psychological, emotional, and social adjustments. Paternal Postpartum Depression (PPD) is a form of depression affecting fathers after the first year of childbirth, it is characterized by sadness, irritability, anxiety, withdrawal, and difficulty bonding with the baby. Researchers found that Paternal Postpartum Depression occurs in 4% to 25% of new fathers during the first postpartum year. (Stadlander, 2015).

Postpartum depression (PPD) is often defined as an episode of major depressive disorder (MDD) occurring soon after the birth of a child. It frequently occurs in mothers but can also occur in fathers. There is no demonstrated criteria for PPD in men, although Paternal Postpartum Depression tends to develop more gradually than Maternal Postpartum Depression. Longitudinal study suggests that the rate of depression during the prenatal period decreases after childbirth but it gradually increases over the course of the first year. (Kim & Swain, 2007).

Symptoms of Paternal Postpartum Depression are: Fathers may experience sadness, irritability, anxiety, withdrawal, tiredness, anxious overwhelmedness, changes in their usual sleeping and eating patterns, and difficulty bonding with the baby. A Canadian pilot study found that some fathers are experiencing symptoms of depression including, anxiety, sleep disturbance, fatigue, irritability, sadness, changes in appetite and thoughts of bringing harm to self or baby. (Letourneau et al., 2011).

Biological Risk factors of Paternal Postpartum Depression are ,1.changes in his testosterone levels, testosterone level decreases for a few months before childbirth and maintain low level for some months after the childbirth. Research suggests that very

low levels of testosterone can also increase the risk of Paternal PPD. 2. Lower level of estrogen, Among men, the estrogen levels begin to increase during the last month of his partner's pregnancy until the early postpartum period. Higher levels of estrogen in fathers might enhance more active parenting behaviour after the childbirth. Studies found that lower levels of estrogen are associated with depression among fathers. 3. Low level of cortisol. 4. Low level of vasopressin. 4. Changes in prolactin levels, prolactin levels in men rises during pregnancy and continue to increase during the first postnatal year. High prolactin levels are related to greater response to infant stimuli among new fathers, lower prolactin levels cause a father to experience difficulties in adapting to parenthood and it causes more negative moods towards fathers.

Ecological risk factors, such as excessive stress from becoming a parent, lack of social support for parenting, poverty, changes in marital relationship changes in lifestyle difficulties in developing attachment with infants, financial instability and feeling excluded from mother-infant bonding, may be more likely to develop paternal PPD. It might be associated with anxiety disorders and can adversely affect the father, family unit, and developing child.

The transition to fatherhood is a critical period in the lives of men, especially for first-time fathers. During this time, fathers experience significant changes in their roles and parental responsiveness. The transition to fatherhood brings new responsibilities to men, including financial support, emotional availability, household duties, and infant care.

First-time fathers might experience role overload. They must have to balance work life and home life while adjusting to new parental demands. Role overload occurs when an individual feels overwhelmed by excessive responsibilities and conflicting demands, leading to stress, fatigue, and emotional exhaustion. Role Overload is The perception of being overwhelmed by the demands of multiple roles, including caregiving, professional responsibilities, and other life roles.

Parental Responsiveness is The father's ability to respond emotionally and behaviorally to the needs of their infant, including sensitivity, attentiveness, and caregiving behaviors. Behavioral responsiveness is how the father responds to the child's cues, need, behaviour and feeding when hungry. Whereas emotional responsiveness is responding to the child's emotional states, offering comfort, empathy, encouragement and soothing when a child is upset.

Depressed parents tend to show negative emotions and hopelessness, which can influence their interaction with the infants. An epidemiologic study results found that both mothers and fathers, depressive symptoms were negatively associated with positive enrichment activity with the child. (Paulson et al., 2006). Fathers with paternal postpartum depression show negative and low responsiveness towards their infants. A study highlights the major risk factor of paternal postpartum depression as male gender role stress. (Fernandez et al., 2024). Many fathers handle everything with himself without asking others because of this gender role, this also makes more stress and causes role overload. Fathers with paternal postpartum depression may also struggle with role overload. Moreover, paternal postpartum depression has negative impacts on role overload and parental responsiveness among first time fathers.

A meta-analysis study conducted by Cameron and his colleague, with 41,480 participants and results suggests that paternal depression occurs between the first trimester and one year postpartum and the meta-estimate that 8.4% fathers are experiencing Paternal depression. (Cameron et al, 2009).

A meta analysis world wide study conducted among first-time fathers, and results finds that the prevalence of paternal depression in the first year after the childbirth, about 8.75% fathers experiencing depression, and 8.98% had depression within the first month after birth, 7.82% between one and three months after birth, 9.23% between three and six months after birth and 8.40% between six and twelve after birth.

(Rao et al., 2020).

Kim & Swain (2007), conducted a study and they found that paternal depression has negative impacts on family, including emotional and behavioural problems among their children and increasing conflicts in the marital relationship. And also found the biological risk factors of paternal depression are changes in hormones, including testosterone, estrogen, cortisol, vasopressin, and prolactin. And ecological risk factors are excessive stress from becoming a parent, lack of social support for parenting, feeling excluded from mother-infant bonding.

A systematic review conducted among First-time fathers, found that unemployment, low social support, negative life events, perceived stress, financial strain, and a history of mental illness are the factors that influence Paternal depression.. (Wang et al., 2021).

A systematic review and meta analysis was conducted by Ansari and his colleague, with 13932 fathers and found that Fathers with a prior mental health illness had a higher chance of developing depressive symptoms than those with no mental health history. And also found that relationship dissatisfaction, financial instability, paternal unemployment, low education, and perceived stress, Lack of support and low parenting self-efficacy were also associated with paternal postpartum depressive symptoms. (Ansari et al., 2021).

A pilot study was conducted by Pollock and his colleague, with 19 participants aged 18 to 45 years and the result found that factors such as feeling of not having enough time for too many responsibilities, financial issues and concerns about the health of the child and family members were the sources of stress. (Pollock et al., 2016).

Janice & Goodman (2004), conducted a study and the findings showed that Maternal Depression was identified as the most influential factors of Paternal Depression during the postpartum period.

A research study conducted by Mussaer and his Colleagues, and the study found that the negative effects of Paternal PPD affects marital or partner relationships, infant bonding and child development. (Musser et al., 2013).

A population based study conducted by Pinheiro and his Colleague in Brazil and the findings shows that mild-maternal depression and moderate to severe maternal depression were associated with paternal postpartum depression. (Pinheiro et al., 2006).

Don & Mickelson (2012), conducted a study and found that Paternal and maternal depression is indirectly linked through impaired spousal support and reduced relationship satisfaction.

A study conducted by Murray and his Colleague, with 54 fathers and the result suggests that paternal depression is associated with more withdrawn parent behavior in the interactions on the floor-mat. (**Murray et al., 2015**).

Michael & Wells (2023), conducted a study with 612 fathers and the results suggest that fathers report lower levels of coparenting relationships and higher levels of impaired infant bonding, rejection, anger and anxiety.

A Chinese longitudinal study is conducted by Patrick and his Colleague, and the results suggest that Fathers with postpartum depression symptoms experienced refused paternal infant attachment. (**Patrick et al., 2018**).

A study conducted by Koch and his Colleague, with 61 fathers and the result suggests that fathers with postpartum depression have lesser interaction with their infants on measures of responsiveness, mood, and sensitivity. (**Koch et al., 2019**).

A study conducted by Blady and his Colleague, among fathers, and the results suggest that symptoms of postpartum blues were positively correlated with impairment in the father to infant bond. (**Blady et al., 2023**).

NEED FOR THE STUDY

The transition to fatherhood is a critical period in men, during which they experience psychological, emotional, and behavioral changes. Where Paternal Postpartum depression has received more attention, Paternal postpartum depression remains under recognized especially in Indian context. Emerging studies founds that men also experiencing depression after child birth, especially first time fathers. There is a lack of study that Paternal postpartum depression influence role overload and parental responsiveness among first-time fathers. This study aims to fill these gaps by providing insights into how paternal postpartum depression affects patlrenal responsiveness and role overload among first-time fathers in India.

RESEARCH METHODOLOGY

Aim

To examine the effects of Paternal Postpartum Depression (PPD) on Role Overload and Parental Responsiveness among first-time fathers.

Objectives

- To evaluate the predictive effect of paternal postpartum depression on role overload among first-time fathers.
- To assess the predictive effect of paternal postpartum depression on parental responsiveness to their children among first-time fathers.
- To determine the effects of paternal postpartum depression on role overload and parental responsiveness in first-time fathers

Operational Definition

- **Paternal Postpartum Depression(PPD)** : A psychological condition characterized by depressive symptoms in fathers during the first 12 months after the birth of their child.
- **Role Overload** : The perception of being overwhelmed by the demands of multiple roles, including caregiving, professional responsibilities, and other life roles.
- **Parental Responsiveness** : The father's ability to respond emotionally and behaviorally to the needs of their infant, including sensitivity, attentiveness, and caregiving behaviors.

Hypotheses

H01 : Paternal postpartum depression does not significantly predict role overload among first-time fathers.

H02: Paternal postpartum depression does not significantly predict parental responsiveness to their children among first-time fathers.

H03: Paternal postpartum depression does not significantly affect both Parental Responsiveness and Role Overload in first-time fathers.

Research Design

This study employs a quantitative research design.

Sampling Process

Population

- First-Time Fathers (with infants aged 0 - 12 months)

Sampling

- Purposive sampling

Sample size

37 participants, of whom were first time fathers experiencing paternal postpartum depression.

Inclusion Criteria :

- Participants whose age ranges from 21 to 35 years of age.
- First-Time fathers with infants aged 0-12 months
- Fathers who can read and understand the language of the questionnaire.

Exclusion Criteria :

- Fathers who have experienced previous depressive episodes or mental health issues before pregnancy.
- Fathers who do not have a stable caregiving role, such as those separated or living away from their child.

Procedure and Convergent Validity is found.

Paternal Adaptation Questionnaire (PAQ)

- Author : Eskandari & Colleagues (2018).
- The scale consists of 38 items.
- Content Validity is found and the internal consistency with cronbach’s alpha around 0.89.

All first time fathers with infants aged 0 to 12 months were participated, the data will be collected through google forms and visiting hospitals and Creche. Edinburgh Postnatal Depression Scale, Parental Responsiveness Scale and Paternal Adaptation Questionnaire were used for collecting data. Quantitative research design where taken and purposive sampling method were used. For statistical analysis Regression analysis is used to find the impact of paternal postpartum depression on responsiveness and role overload.

Edinburgh Postnatal Depression Scale (EPDS)

- Author : Cox, Holden, & Sagovsky (1987).
- The scale consists of 10 items.
- The scale has good construct validity, internal consistency with Cronbach's alpha around 0.80 to 0.90 .

The Parental Responsiveness Scale (PRS)

- Author : Anikiej & Kaźmierczak (2019).
- The scale consists of 13 items.
- Internal consistency with Cronbach’s alpha around 0.89

Statistical Analysis

Regression analysis is used to find the impact of paternal postpartum depression on responsiveness and role overload.

RESULTS AND DISCUSSION

Table 3.1.

Shows the descriptive statistics of Paternal Postpartum Depression, Parental Responsiveness and Role Overload among first-time fathers.

	Paternal Postpartum Depression	Parental Responsiveness	Role Overload
<i>N</i>	36	36	36
<i>Mean</i>	13.2778	72.0556	148.8333
<i>Standard deviation</i>	2.87463	8.03188	17.68535

Table 3.1. Shows that mean differences and standard deviation of all the variables.

The mean score for paternal postpartum depression indicating a moderate level of depressive symptoms within the 36 samples. Parental responsiveness shows a higher mean, suggesting that most participants are relatively response to their infants emotional and behavioral needs. The mean score of role overload shows that most first time fathers experiencing difficulty in managing multiple responsibility.

Table 3.2.

Shows the spearman's coefficient of correlation between Paternal Postpartum Depression, Parental Responsiveness and Role Overload

Variable	Parental Responsiveness	Role Overload
Paternal Postpartum Depression	coefficient of correlations -0.166	-0.122
	Sig.(2-tailed)	

Table 3.2. Shows correlation of Paternal Postpartum Depression , Parental Responsiveness, Role Overload .There is a weak negative relationship (-0.166) between Paternal Postpartum Depression and Parental Responsiveness. Paternal Postpartum Depression is not significant to Parental Responsiveness 0.332 ($p > 0.05$). There is a weak negative relationship (-0.122) between Paternal Postpartum Depression and Role Overload . Paternal Postpartum Depression is not significant to Role Overload 0.478 ($p > 0.05$).

Table 3.3.

Shows that model summary of the effects of paternal postpartum depression on Parental Responsiveness.

Model	R	R ²
1	0.082	0.007

Predictors : Paternal Postpartum Depression

The model shows $R^2 = 0.007$, which indicates 0.7% of variance in Responsiveness by the predictor Paternal Postpartum Depression. The R value of 0.082 represents a very weak positive correlation between the Paternal Postpartum Depression and Parental Responsiveness.

Table 3.4.

Shows that model summary of the effects of paternal postpartum depression on Role Overload.

Model	R	R ²
1	0.084	0.007

Predictors : Paternal Postpartum Depression

The model shows $R^2 = 0.007$, which indicates 0.7% of variance in Role Overload by the predictor Paternal Postpartum Depression. The R value of 0.084 represents a very weak positive correlation between the Paternal Postpartum Depression and Role Overload .

Table 3.5.

Shows the Regression Coefficients for Role Overload and Parental Responsiveness of Predictor Paternal Postpartum Depression

Variables	B	β	t	p
Role Overload	-0.230	-0.082	-0.482	0.633
Parental Responsiveness	-0.520	-0.84	-0.494	0.624

Table 3.5. Shows that p-values of the variables Role Overload and Parental Responsiveness (0.633 and 0.624) is greater than 0.05 , thus Paternal Postpartum Depression does not significantly affect Role Overload and Parental Responsiveness.

DISCUSSION

This Study suggests that paternal postpartum depression does not have a statistically significant impact on either Parental Responsiveness or Role overload.

Social desirability bias, many fathers, have felt the need to emphasize their role as attentive and caring parents, while completing the questionnaire. This might be societal and moral expectation, being a good father is also associated with being highly responsive to their baby needs. The strongly agreement response in parental responsiveness scale might reflect their perception of how father should behave rather than how they felt. The results show that there is no significant difference between PPD and Parental Responsiveness. It might be because of the social desirability..

The study has a small sample size of only 37 participants, so it is possible that the study lacked the statistical power needed to identify significant relationships between the variables. A larger sample might provide a clearer picture and uncover the patterns that were not

visible in this analysis. Both the Table 3.3. And 3.4. Shows there is no significant difference between PPD and Parental Responsiveness, Role Overload, this might be because of small sample size.

A family structure, the participants' family structure should be considered. A significant number of fathers in this study lived in joint families, where caregiving responsibilities are shared among mutual family members. This might help the fathers to reduce their pressure of parenting, reduce the likelihood of role overload.

A study on family structure and parental support, result shows that lack of perceived parental social support is highly related to depressive symptoms. (Patten et al., 1997).

This study shows that lack of parental support is related to depressive symptoms. In this study fathers might feel low overload due to parental support, because they all are living in a joint family, the likelihood of role overload is reduced.

Role theory (Biddle, 1996) is a sociological perspective that focuses on how individuals experience or are influenced by their position, status, or categories within a larger social system. Role theory explains how societal expectations shape an individual's behavior in specific roles. In the study fathers may feel pressured to fulfill the cultural and societal ideal of a good father, which the results explain why they report high levels of responsiveness. The discrepancy between perceived expectations and actual experiences might also influence their psychological wellbeing.

Stress and coping theory given by Lazarus & Folkman (1984), emphasized the interplay between an individual's perceived psychological stress, coping, and cognitive appraisals. This framework could explain how fathers cope with the demands of parenting. In joint families, the availability of social support may act as a coping resource, which helps fathers to manage stress more effectively.

Cultural expectations of fatherhood, in many cultural contexts, are traditionally viewed as providers rather than primary caregivers. In many cultural contexts, fathers are perceived as fulfilling primarily on meeting basic needs such as financial support and offering protection and mothers are traditionally regarded as the primary caregiver. This cultural norm might shield from the stress of being overwhelmed by the role overload that typically contributes to postpartum depression. The Results shows that there is no significant difference between PPD and Role overload, this might be because of cultural expectations.

Limitations:

Small sample size and the potentially underrepresentation of fathers experiencing significant depression should be considered when interpreting these findings.

Scope for further research

- This study helps for further research by focusing on a sample with unique characteristics (joint family, cultural norms). This study sheds light on how social and cultural factors influence fatherhood experience.
- These study findings encourage future researchers to dive deeper into protective factors such as social support, that may reduce the challenges of fatherhood.
- It will provide a foundation for future research exploring the mental health challenges fathers face during the postpartum period.

CONCLUSION

The study highlights that paternal postpartum depression does not significantly cause an impact on Parental Responsiveness and Role overload among first time fathers. The findings underline the potential influence of social desirability, cultural norms, joint family, societal expectations, family support, family structure, role and cultural expectations on the result.

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