



# Socio-Demographic Determinants of Maternal Confidence and Postnatal Depression among Postpartum Primiparous Mothers: A Descriptive Study from Western India

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## KEYWORDS:

Maternal confidence, postnatal depression, primipara mothers, newborn care, sociodemographic factors

## ABSTRACT:

**Background:** Maternal confidence is a critical component of effective newborn care and maternal psychological well-being during the postpartum period. Primiparous mothers are particularly vulnerable to reduced confidence and postnatal depression due to limited prior caregiving experience and psychosocial stressors.

**Methods:** A descriptive cross-sectional study was conducted among 200 postpartum primiparous mothers admitted to postnatal wards of a tertiary care hospital in Gujarat, India, between December 2023 and September 2024. Data were collected using a structured socio-demographic questionnaire, the Karitane Parenting Confidence Scale (KPCS), the Edinburgh Postnatal Depression Scale (EPDS), and the Breastfeeding Self-Efficacy Scale–Short Form (BSES-SF). Inferential statistics including ANOVA and Kruskal–Wallis tests were applied.

**Results:** Maternal confidence differed significantly across income categories ( $p = 0.001$ ). Postnatal depression showed statistically significant associations with family type ( $p = 0.039$ ) and maternal occupation ( $p = 0.026$ ). Mothers from lower-income groups, nuclear or single-parent families, and physically demanding occupations demonstrated poorer psychological outcomes.

**Conclusion:** Socio-economic and family-related factors significantly influence maternal confidence and postnatal depression among primiparous mothers. Integrating targeted psychosocial support and structured postpartum education into routine nursing care may enhance maternal adaptation and mental well-being.

## Introduction

The postpartum period represents a critical transitional phase during which women adapt to maternal responsibilities while simultaneously managing physical recovery and psychological adjustment. Maternal confidence—defined as a mother's perceived ability to care for herself and her newborn—plays a pivotal role in shaping infant care practices, mother–infant bonding, and long-term child health outcomes.

Primiparous mothers often experience heightened vulnerability due to lack of prior caregiving experience, limited coping mechanisms, and socio-environmental stressors. Concurrently, postnatal depression remains a

major public health concern, particularly in low- and middle-income countries, where socioeconomic constraints and reduced social support further exacerbate maternal mental health challenges.

The Indian postpartum context is uniquely shaped by sociocultural practices such as joint family living, traditional caregiving norms, and variable female workforce participation. Unlike Western settings, postpartum care in India often involves extended family members who play a central role in newborn care and maternal support. However, rapid urbanization and the transition toward nuclear family systems have altered traditional support mechanisms, potentially increasing vulnerability to postnatal psychological distress. Despite



these contextual differences, Indian sociocultural determinants of maternal confidence and postnatal depression remain underrepresented in the literature, underscoring the need for context-specific evidence. [1](#)

## Objectives

- To identify factors influencing maternal confidence and postnatal depression among primipara mothers.
- To determine the association between sociodemographic variables with maternal confidence and postnatal depression.

## Hypotheses:

**H0:** There is no significant association between maternal confidence, postnatal depression and sociodemographic variables

**H1:** There is a significant association between maternal confidence, postnatal depression and sociodemographic variables

## Materials and Methods

**Study Design & Setting:** A descriptive cross-sectional study was conducted in the postnatal wards of a tertiary care hospital in Karamsad, Gujarat, India.

**Study Population and Period:** Two hundred primiparous mothers aged 20–35 years, who had delivered healthy term neonates and were at least 24 hours postpartum, were recruited using convenience sampling.

**Sample and Sampling Technique:** A total of 200 primiparous mothers were selected using convenience sampling.

## Study Variables:

The independent variable were the sociodemographic variables like age, Education level, Family income, Type of family.

The dependent variables included knowledge of newborn care, maternal self-care, breastfeeding self-efficacy, and postpartum depression.

## Ethical Considerations:

This study was conducted and reported in accordance with the Strengthening the Reporting of Observational

Studies in Epidemiology (STROBE) guidelines for cross-sectional studies. All relevant items related to study design, participant selection, variables, data sources, bias, study size, statistical methods, and ethical considerations have been adequately addressed to ensure transparency and reproducibility of findings.

## Criteria for Sample Selection:

**Inclusion Criteria:** Primipara mothers aged 20–35 years who had undergone vaginal or cesarean delivery at least 24 hours prior, were willing to participate, and provided informed consent. Participants were required to be able to read and write Gujarati and have delivered healthy newborns weighing between 2.5 kg and 3.5 kg.

**Exclusion Criteria:** Mothers who were medically unfit, diagnosed with severe mental health disorders, classified as high-risk, or whose newborns were stillborn, preterm, or admitted to the NICU were excluded from the study.

## Data Collection Instruments

- Demographic Proforma
- Karitane Parenting Confidence Scale (KPCS)
- Edinburgh Postnatal Depression Scale (EPDS)
- Breastfeeding Self-Efficacy Scale–Short Form (BFSE-SF)

## Procedure for Data Collection

The study was conducted following approval from the Institutional Ethics Committee, and permission was obtained from selected hospital of Gujarat. Informed consent was obtained from postnatal primipara mothers who met the inclusion criteria. questionnaires were administered individually.

## Results

**Hypothesis Testing to see the association between sociodemographic variables with maternal confidence and postnatal depression.**

**H0:** There is no significant difference in maternal confidence and postnatal depression with sociodemographic variables

**H1:** There is a significant difference in maternal confidence and postnatal depression with sociodemographic variables.



**Table.1: Association between Maternal confidence and various income levels.**

Group	Test	P-Value	Decision
Below Rs. 1050	Shapiro	0.5233	Normal
Rs. 1051-2101	Shapiro	0.3803	Normal
Rs. 2102-3503	Shapiro	0.2707	Normal
Rs. 3504-7007	Shapiro	0.5811	Normal
Above Rs. 7008	Shapiro	0.2123	Normal
All	Levene	0.2438	Equal Variances

#### ANOVA For Groups:

**Interpretation:** As the p-value = 0.00104 < 0.05, we reject H<sub>0</sub> at 5% level of significance. A statistically significant difference in maternal confidence was observed across different income groups (ANOVA, p = 0.001). The effect size ( $\eta^2 = 0.09$ ) indicated a moderate practical significance, suggesting that income level explains a meaningful proportion of variance in maternal confidence among primiparous mothers.

**Conclusion:** *Maternal confidence among mothers is different for various income levels.*

**Table-2- Association between Postnatal depression and various family types**

Group	Test	P-value	Decision
Joint family	Shapiro	0.003083	Non-Normal
Nuclear family	Shapiro	0.008752	Non-Normal
Others	Shapiro	0.01743	Non-Normal
Single parent	Shapiro	0.002141	Non-Normal
All	Levene	0.9258	Equal Variances

Test	Df	P value	Decision
Kruskal Wallis	3	0.03978	Reject H <sub>0</sub>

**Interpretation:** As the p-value = 0.03978 < 0.05, reject H<sub>0</sub> at 5% level of significance. Postnatal depression scores differed significantly across family types (Kruskal–Wallis test, p = 0.039). The corresponding effect size (r = 0.21) reflects a small-to-moderate association, highlighting the influence of family structure on maternal psychological well-being

**Conclusion:** *Postnatal depression among mothers is different for various family types.*

**Table-3-Association between Postnatal depression and various Occupation**

Group	Test	P-Value	Decision
Laborer	Shapiro	0.01685	Non-Normal
Business	Shapiro	0.02404	Non-Normal
Housewife	Shapiro	0.0005762	Non-Normal
Office work	Shapiro	0.007828	Non-Normal
All	Levene	0.9994	Equal Variances

Test	Df	P value	Decision
Kruskal Wallis	3	0.02596	Reject H <sub>0</sub>

**Interpretation:** As the p-value 0.02596 < 0.05, reject H<sub>0</sub> at 5% level of significance. A significant association was identified between maternal occupation and postnatal depression (Kruskal–Wallis test, p = 0.026), with an effect size of r = 0.23, indicating a moderate effect of



occupational demands on depressive symptoms during the postpartum period.

**Conclusion: Postnatal depression among mothers is different for various Occupations**

### Socio-demographic Associations:

A significant association was found between family income and maternal confidence (ANOVA,  $p = 0.0010$ ). Additionally, family type ( $p = 0.0398$ ) and occupation ( $p = 0.0260$ ) showed significant relationships with postnatal depression (Kruskal–Wallis test).

- Maternal confidence varied significantly across income levels (ANOVA,  $p = 0.001$ ), indicating a strong socioeconomic gradient.
- Postnatal depression differed significantly by family type (Kruskal–Wallis,  $p = 0.039$ ), with higher scores among mothers from nuclear and single-parent families.
- Occupational status was significantly associated with postnatal depression ( $p = 0.026$ ), particularly among mothers engaged in physically demanding work.

### Discussion

#### Effect of Socio-demographic Variables on Maternal Confidence and postnatal depression Maternal Confidence and Income Levels

The study highlighted a notable difference in maternal confidence among various income groups ( $p=0.00104$ ), suggesting that a family's economic situation influences how confident mothers feel. Amwonya et al. (2022) observed similar patterns, noting that mothers with higher education and better financial stability tended to use maternal health services more and felt more confident in their roles. To address this gap, policymakers should think about combining financial support programs with maternal education initiatives.

#### Postnatal Depression and Family Type

The results from the Kruskal-Wallis test ( $p=0.03978$ ) showed that there are significant differences in postnatal depression levels depending on family structure, with single mothers facing higher rates of depression. This aligns with the findings from Melo e Lima et al. (2018), which highlighted the importance of family support in

reducing postpartum stress and enhancing maternal well-being. Moving forward, it's essential to plan for programs to focus on educational interventions and psychosocial support systems that include families, especially for single mothers.

#### Postnatal Depression and Occupation

A notable difference was found in postnatal depression levels among mothers with various job backgrounds ( $p=0.02596$ ). Those working in physically demanding roles reported higher levels of depression compared to their counterparts in business or office settings. Lassi et al. (2016) highlighted that stress from work and job insecurity can take a toll on a mother's mental health. These insights point to the importance of implementing workplace policies that promote maternal well-being, like flexible maternity leave and support programs for postnatal mental health.

The findings underscore the multidimensional nature of maternal adaptation in the postpartum period. Income emerged as a key determinant of maternal confidence, reflecting the role of financial security in accessing healthcare resources and social support. These findings corroborate earlier evidence suggesting that economic stability enhances maternal self-efficacy and caregiving competence.

Family structure significantly influenced postnatal depression, highlighting the protective role of extended family support in Indian sociocultural settings. Mothers lacking consistent familial assistance reported higher depressive symptoms, emphasizing the need for family-inclusive postpartum interventions.

Occupational stress was another critical determinant, aligning with prior studies linking physically demanding work and job insecurity with adverse maternal mental health outcomes. Workplace-responsive maternal health policies are therefore essential.

A key novelty of the present study lies in its focus on Indian sociocultural determinants of maternal confidence and postnatal depression. The significant influence of family structure observed in this study highlights the protective role of traditional joint family systems, which is less frequently addressed in Western literature. Additionally, the association between occupational demands and postnatal depression reflects the growing participation of Indian women in physically demanding



and informal employment sectors, a context seldom explored in postpartum mental health research. These findings contribute culturally relevant evidence that can inform nursing practices and maternal health policies in similar low- and middle-income settings.

## Conclusion

Maternal confidence and postnatal depression among primiparous mothers are significantly shaped by socio-economic status, family structure, and occupational demands. Nursing-led, context-specific interventions that address these determinants are essential to improve maternal psychological well-being and newborn care outcomes.

## Implications

In nursing practice, routine assessment of maternal confidence should be integrated into postnatal care to identify areas requiring additional support. Teaching modules focusing on self-care and newborn care practices can further empower mothers and improve caregiving outcomes. In nursing education, emphasis should be placed on developing effective maternal teaching strategies within the curriculum, along with encouraging community-based health education projects to enhance real-world application. From an administrative perspective, hospital-wide implementation of standardized postpartum education modules is essential to ensure consistency and quality in maternal and newborn care education.

## Limitations

This study was conducted at a single center, which may limit the generalizability of the findings. Additionally, the use of self-reported scales may have introduced response bias, affecting the accuracy of the measured outcomes.

## Recommendations

Future research should consider multi-center studies to enhance the generalizability of findings. Incorporating mental health counseling into maternal education modules may provide additional support for mothers as intervention.

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