

Knowledge Regarding Birth Preparedness Among Primigravida Women: A Descriptive Public Health Analysis

Priyanka Kumari

Master of Science in Obstetrics and Gynecology Nursing
Government College of Nursing, Bikaner, Rajasthan, India

Corresponding Author:

Priyanka Kumari, Master of Science in Obstetrics and Gynecology Nursing, Government College
of Nursing, Bikaner, Rajasthan, India
Email :

Abstract:

Background: Preparing for childbirth is a vital event in a woman's life; however, it can also induce significant fear and anxiety. The World Health Organization estimates that 500,000 to 600,000 women die annually from pregnancy-related complications, with 99% occurring in developing countries. In India, the maternal mortality ratio stands at 190 per 100,000 live births.

Methodology: A cross-sectional descriptive survey was conducted among 1,000 primigravida women in their first trimester across selected antenatal clinics in Bikaner, Rajasthan using a purposive sampling technique and a structured interview schedule.

Results: The study revealed that 75% of respondents possessed average knowledge, 13% had good knowledge, and 12% had poor knowledge. The mean knowledge score was 18.53 (Median: 17, SD: 6.1079), representing a 58% overall mean percentage. Knowledge was highest in the postnatal domain (57.81%) and lowest in the intranatal domain (50.83%). Knowledge scores were significantly associated with age, religion, education, occupation, monthly income, family type, and place of residence ($p < 0.05$).

Conclusion: -Study of 1,000 primigravida women in Bikaner reveals a critical public health gap, with 87% of first-time mothers possessing only average or poor knowledge regarding birth preparedness. Cognitive awareness was dangerously low during the vital intranatal labor phase (50.83%), showing a powerful statistical dependency on socioeconomic barriers like low household income and rural isolation. To systematically reduce maternal mortality, public health policies must transition toward literacy-independent visual screening tools, mandatory partner inclusion in birth planning, and targeted geographic transport subsidies

SDS- International Journal of Interdisciplinary Research is a journal of Open access. In this journal, we allow all types of articles to be distributed freely and accessible under the terms of the creative common attribution- non-commercial share. This allows the authors, readers and all scholars and general community to understand, use and to develop non-commercially work, as long as appropriate credit is given and the newly developed work are licensed with similar terms.

How to cite this article: Kumari. P. Knowledge Regarding Birth Preparedness Among Primigravida Women: A Descriptive Public Health Analysis. SDS-IJIR; 2026; 7-4: 1590-1592

Submitted: 16-August-2026; **Accepted:** 30-August-2026; **Published:** 31-August-2026

INTRODUCTION

BACKGROUND

Pregnancy represents a foundational milestone and a deeply transformative event in a woman's life. While it offers a profound opportunity for learning about child development and experiencing the joyful culmination of motherhood, it frequently stands as a period marked by significant fear, emotional vulnerability, and physical vulnerability. Motherhood carries immense societal responsibility, historically recognized as a woman's crown of honor; however, clinical reality mandates that natural physiological phenomena are rarely free from severe, unpredictable complications.

Globally, maternal mortality remains a substantial public health burden. The World Health Organization (WHO) estimates that between 500,000 and 600,000 women die annually due to pregnancy and childbirth-related complications. Alarming, 99% of these maternal deaths are concentrated within developing nations, reflecting severe disparities in infrastructure and health literacy. Within India, the maternal mortality ratio (MMR) is documented at 190 per 100,000

live births, demanding rigorous preventative public health strategies.

The Three Delays Model

Maternal deaths in resource-limited settings are heavily driven by three distinct systemic delays that prevent timely access to emergency obstetric care:

Phase 1 Delay: The delay in recognizing clinical danger signs and making the immediate decision to seek professional medical care, often hindered by low maternal literacy, traditional misconceptions, or cultural anxieties.

Phase 2 Delay: The delay in physically reaching an appropriate, certified healthcare facility. This phase is exacerbated by geographic isolation, poor transport infrastructure, logistical barriers, and immediate financial deficits.

Phase 3 Delay: The delay in receiving high-quality, adequate emergency obstetric or neonatal care once inside the medical facility due to provider shortages, lack of blood supply, or equipment gaps.

METHODOLOGY

To explore the baseline awareness levels regarding safe motherhood, a rigorous cross-sectional descriptive survey approach was deployed. The study targeted a total sample size of 1,000 primigravida women (women pregnant for the very first time) who were in their first trimester of pregnancy and attending the antenatal outpatient clinics of selected hospitals in Bikaner, Rajasthan.

A purposive sampling technique was utilized based on pre-established inclusion criteria: participants had to be accessible during the investigation window, willing to participate via signed informed consent, and able to comprehend the language of administration. Multigravida mothers and primigravida women who had already attended formal birth preparedness classes were strictly excluded from enrollment.

Theoretical Framework & Validation Metrics

The study's conceptual architecture was explicitly mapped onto Becker's Health Belief Model (incorporating foundational elements from Kegeles, 1965, and Rosenstock, 1974). This framework evaluates how an individual's perception of susceptibility, perceived clinical severity, and modifying demographic factors ultimately interact to determine the likelihood of a family taking preventative health actions.

The structured data collection tool consisted of a two-part interview schedule: a 7-item baseline demographic proforma and a 35-item structured knowledge questionnaire covering antenatal preparation, intranatal logistics, and postnatal care requirements. Content validity was established by submitting the instrument to a specialized panel of nine clinical experts from the Department of Obstetric and Gynecological (OBG) Nursing, achieving 100% initial expert agreement on 13 items and adjusting 7 items per precise clinical feedback. Tool reliability was empirically verified via pilot testing, analyzed using the Cronbach's Alpha formula, which yielded an exceptionally high correlation coefficient of 0.84, confirming strong structural reliability.

RESULTS & EMPIRICAL FINDINGS

Data gathered from the 1,000 primigravida subjects underwent exhaustive descriptive and inferential statistical analysis to track maternal knowledge levels and uncover critical socio-demographic associations.

Distribution of Maternal Knowledge Scores

The sample demonstrated an overall average baseline knowledge regarding birth preparedness, with a collective mean score of 18.53, a median score of 17, and a standard deviation (SD) of 6.1079. The total mean percentage score across the cohort was calculated at 58%. Over three distinct performance tiers, the maternal knowledge metrics were distributed as follows:

Knowledge Tier	Score Range	Frequency (n=1000)	Percentage (%)
Poor Knowledge	0 – 12	120	12%
Average Knowledge	13 – 24	750	75%
Good Knowledge	25 – 35	130	13%

Domain-Specific Phase Disparities

Granular analysis of the tool's core content areas revealed prominent differences in cognitive scores depending on the specific phase of pregnancy. Mothers displayed their highest conceptual awareness in the postnatal preparation domain, marking a mean score percentage of 57.81%. Awareness dropped slightly within general antenatal tracking down to 57.00%. Crucially, the lowest level of conceptual awareness was observed in the active labor and intranatal support domain, collapsing to a mean score percentage of just 50.83%. This significant deficit emphasizes that first-time mothers are structurally unprepared for the acute, immediate realities of the active labor delivery window.

Inferential Analysis & Demographic Correlations

To determine whether the observed knowledge levels were significantly associated with background variables, a series

of Chi-square (χ^2) analyses were executed at an established 0.05 level of significance. The statistical computations revealed that maternal awareness is tightly bound to systemic socio-demographic realities rather than being randomly distributed:

Monthly Family Income: Socio-economic status stood out as the most powerful determinant of maternal knowledge, indicating severe vulnerabilities among low-income brackets ($\chi^2 = 62.71$).

Place of Residence: Reflected sharp divides between mothers living in well-serviced urban pockets versus marginalized suburban, rural, or slum segments ($\chi^2 = 57.854$).

Household Family Structure: Maternal knowledge varied heavily depending on whether the woman resided in a nuclear family unit, an extended household, or a single-parent setup ($\chi^2 = 57.378$).

Educational Status: Maternal knowledge correlated directly with formal school completion, showing that higher literacy directly drives better safety preparation ($\chi^2 = 56.45$).

Maternal Age: Proved highly significant, indicating distinct cognitive variations between younger primigravida cohorts and older first-time mothers ($\chi^2 = 45.86$).

Religious Affiliation: Demonstrated significant baseline cognitive differences among cultural cohorts ($\chi^2 = 32.94$).

Occupational Engagement: Showed an undeniable relationship to awareness, separating professional corporate workers from housewives ($\chi^2 = 31.73$).

Because every calculated Chi-square index vastly exceeded its corresponding critical table value at the 0.05 alpha level, the null hypotheses were robustly rejected across all tracking variables, and the research hypotheses were accepted.

4. RECOMMENDATIONS

The finding that 87% of primigravida mothers lack an optimal standard of 'Good Knowledge' highlights a critical gap in preventative maternal healthcare. To reduce the Phase 1 decision delay and successfully bring down maternal mortality, three strategic public health interventions are recommended:

1. Standardized Warning Sign Screenings: Antenatal care clinics must institutionalize mandatory, highly visual screening education during regular checkups. Rather than relying on text-heavy manuals, healthcare settings should deploy standardized pictographic charts that clearly show absolute warning signs such as severe vaginal bleeding, sudden visual blurring, severe localized pre-eclampsia headaches, and diminished fetal movement.

2. Partner and Decision-Maker Inclusion: Maternal counseling protocols must be reformed to explicitly include husbands, partners, and family decision-makers. Clinical evidence proves that educating the pregnant woman alone is insufficient if the domestic partners who control the family funds and transport choices remain un-sensitized. Partner inclusion directly accelerates immediate resource mobilization during a sudden obstetric crisis.

3. Direct Institutional Transit Subsidies: Public health agencies should expand targeted, direct financial and transit subsidies tailored for rural, low-income nuclear households. Providing reliable, pre-arranged institutional transport vouchers directly mitigates the financial delays that frequently turn minor obstetric complications into tragic maternal mortality outcomes.

BIBLIOGRAPHY

1. Richard M. Learning needs and self care practices of primipara mothers following emergency LSCS. *Nightingale Nursing Times* 2010 Mar;5(12):9-13.
2. Anuchitra S. Attitude of antenatal mothers towards infant feeding. *Nightingale Nursing Times* 2011 Mar;6(12):6-10.
3. Devi MK. Knowledge of antenatal mothers preparing for safe delivery. *Nightingale Nursing Times* 2011 Jun;7(3):37-9.
4. Jayasudha A. Knowledge of pregnant woman on warning signs during pregnancy. *Nightingale Nursing Times* 2010 Mar;5(12):51-2.
5. Gloria L. Introduction to maternity & paediatric nursing. 6th ed. USA: Elsevier publication;2011
6. Hailu M, Gebremariam A, Alemseged F, Deribe K. Birth Preparedness and complication readiness among pregnant women in Southern Ethiopia *Journal of PLOS One*. 2011;6(6)
7. Kaur V, Saini S K, Walia I. Development of Birth Preparedness Tool (BPT). *Nursing and Midwifery Research Journal*, 2009;5(2):45-58
8. Birthpreparedness an essential part of ANC counseling. [online]. Available from: www.familycareintl.org/UserFiles/File/pdfs/sci_birth_prep_mod.pdf
9. Thaddeus S and D Maine. Maternal and Neonatal Health (MNH) Program. Birth Preparedness and Complication Readiness: A Matrix of Shared Responsibilities. 2001;38
10. Birth and emergency preparedness in antenatal care. Integrated management of pregnancy and childbirth. [online]. Available from: who.int

