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A Study to Assess the Knowledge, Practices and Attitude of Primigravida Mothers on new-born Care at KDJ Hospital Morar Gwalior MP

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ABSTRACT

The objective of this section is to analyses and interpret data to identify the incidence and risk factors associated with urinary tract infections (UTIs) among pregnant women. Data were collected from a sample of 500 pregnant women and analysed using both descriptive and inferential statistical methods to fulfil the study objectives. The analysis was structured around the following components:

- **Part I**: Socio-personal factors influencing pregnant women
- **Part II**: Prevalence of UTIs among expectant mothers
- **Part III**: Potential risk factors contributing to UTIs in pregnancy
- **Part IV**: Correlation between UTI occurrence and specific demographic variables

A fundamental aspect of any research endeavour is the methodology, which outlines the systematic process the researcher follows- from problem identification to study completion. This includes the research design, variables, study setting, target population, sample size, and sampling techniques. Additionally, the methodology encompasses the development and validation of data collection tools, pre-testing, pilot study execution, data collection procedures, and the statistical analysis plan.

To effectively design a health education program tailored to the needs of primigravida mothers, it is imperative to assess their existing knowledge, practices, and attitudes regarding new-born care. Addressing these elements is crucial for contributing to the reduction of the

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nation's high infant mortality rate, currently estimated at 96 per 1,000 live births. Recognizing this urgent need, the present study was undertaken to evaluate the knowledge, behaviours, and attitudes of first-time mothers concerning new-born care.

This research was conducted at KDJ Hospital, Morar, Gwalior, Madhya Pradesh. The study specifically focused on primigravida mothers, aiming to assess their understanding, practices, and perceptions related to neonatal care. This chapter has presented the background, significance of the study, and a clear statement of the research problem.

INTRODUCTION

This study aims to assess the knowledge, practices, and attitudes of primigravida mothers regarding new-born care, with an emphasis on identifying the gaps that may contribute to neonatal health risks, particularly in resource-limited settings. The research also explores the incidence and demographic risk factors associated with urinary tract infections (UTIs) in pregnant women, analysing data from 500 participants through descriptive and inferential statistics.

The neonatal period is the most critical and vulnerable phase of life, accounting for over 50% of infant deaths—most of which occur within the first week of life due to causes such as birth asphyxia, sepsis, and hypothermia. In India, infant mortality remains high, with about 63.7% of infant deaths occurring in the neonatal stage, largely due to preventable infections and inadequate care practices.

Primigravida mothers, especially in underdeveloped areas, often lack experience and access to reliable healthcare information, making them particularly susceptible to adopting harmful traditional practices. Factors such as poor hygiene during delivery, bottle feeding, lack of antenatal care, and limited awareness about early signs of neonatal illness further exacerbate the risks.

The study highlights the importance of equipping first-time mothers with essential knowledge and practical skills for new-born care, such as maintaining hygiene, early initiation and exclusivity of breastfeeding, temperature regulation, and illness recognition. Enhancing maternal education and promoting institutional deliveries with proper postnatal support are

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crucial steps toward reducing neonatal mortality. Conducted at KDJ Hospital, Morar, Gwalior, this research investigates how well primigravida mothers understand and implement new-born care, aiming to inform targeted health education interventions.

Objectives of the Study

The present study was undertaken with the following specific objectives:

1. To evaluate the level of knowledge, practices, and attitudes related to new-born care among primigravida mothers.
2. To examine the relationship between knowledge of new born care and selected socio-demographic variables among primigravida mothers.
3. To determine the association between the attitudes of primigravida mothers toward new-born care and their socio-demographic characteristics.
4. To analyze the association between new born care practices and selected socio-demographic variables among primigravida mothers.

REVIEW OF LITERATURE

The review of literature provides a foundation for understanding the current knowledge base, identifying research gaps, and justifying the need for the present study. For this study, literature was reviewed under three thematic areas: **(A) knowledge, practices, and attitudes related to new-born care; (B) factors influencing new-born health and maternal care; and (C) significance of maternal education and institutional support.**

A. Knowledge, Practices, and Attitudes of Primigravida Mothers

Several studies have examined maternal knowledge and practices related to new-born care. A qualitative study in the slums of Diyarbakir, Turkey, revealed that while mothers had positive attitudes toward breastfeeding, most misunderstood the importance of colostrum, and exclusive breastfeeding was rarely practiced (Yilmaz et al., 2014). Similarly, a cross-sectional study in Pakistan reported that 44.8% of mothers administered prolateral feeds, and traditional practices such as early bathing and applying substances to the umbilical cord were prevalent, indicating a need for improved maternal education (Ali et al., 2017).

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In Bangladesh, Rahman et al. (2016) identified cultural fatalism and a lack of awareness as major barriers to safe neonatal care, especially among first-time mothers. In Nigeria, Ezeaka et al. (2015) found that although antenatal clinic attendance was high, exclusive breastfeeding was low and colostrum was often discarded due to traditional beliefs.

B. Factors Affecting Neonatal Outcomes

The neonatal period contributes to nearly half of all under-five mortality globally. According to the World Health Organization (2020), poor hygienic practices, delayed initiation of breastfeeding, and lack of maternal awareness significantly contribute to neonatal mortality. In India, 63.7% of infant deaths occur during the neonatal period, with sepsis, hypothermia, and birth asphyxia being the leading causes (MoHFW, 2019).

A retrospective study in Vellore, South India, emphasized the role of hygiene, proper cord care, and early recognition of neonatal danger signs in reducing new-born deaths (Thomas et al., 2015). The study also identified illiteracy and home deliveries as contributing factors to poor neonatal outcomes.

C. Maternal Education and Institutional Interventions

Maternal education is strongly associated with improved new-born care. A study in Sri Lanka involving 446 postnatal mothers found that those with higher education levels demonstrated better knowledge of breastfeeding, cord care, and recognition of neonatal danger signs (Senarath et al., 2018). Similarly, an interventional study in New Delhi showed that the Baby Friendly Hospital Initiative (BFHI) led to increased early initiation of breastfeeding and reduced prolateral feeding (Kumar et al., 2014).

Home-based interventions have also proven effective. A randomized controlled trial in Zambia demonstrated that postnatal home visits by trained midwives significantly reduced health complications in neonates and improved maternal confidence (Mwansa et al., 2013).

In Nepal, Osrin et al. (2002) highlighted that improved maternal practices such as delayed bathing, early wrapping, and exclusive breastfeeding could be achieved through culturally appropriate community education programs. These findings affirm the importance of addressing social, cultural, and educational barriers in maternal care.

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The reviewed literature emphasizes the critical role of maternal knowledge, positive attitudes, and appropriate new-born care practices in improving neonatal health outcomes. Primigravida mothers are particularly vulnerable due to lack of experience and dependence on traditional beliefs. These findings justify the current study's aim to assess and enhance the knowledge, practices, and attitudes of first-time mothers through evidence-based strategies and targeted health education.

RESEARCH METHODOLOGY

Research Design

The methodology serves as the foundation of any scientific investigation. It outlines the systematic approach adopted by the researcher from problem identification to study completion. For the present study, a **descriptive survey design** was employed, as it is appropriate for assessing existing knowledge, practices, and attitudes (KPA) among primigravida mothers regarding new-born care. This design enables the collection of quantifiable information to depict the current status and interrelations of various factors affecting maternal and neonatal health behaviours.

Study Setting

The research was conducted at **KDJ Hospital, Morar, Gwalior (M.P.)**, a 50-bed healthcare facility that also functions as a clinical training centre for undergraduate and postgraduate nursing students. The hospital provides maternal and child healthcare services, making it an ideal site for this investigation.

Population and Sample

The **target population** for this study consisted of **primigravida mothers** receiving antenatal or postnatal care at the facility. A **sample of 100 primigravida mothers** was selected based on specific inclusion and exclusion criteria.

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Sampling Technique

A **non-probability purposive sampling technique** was used to select participants who met the study criteria and were available during the data collection period.

Inclusion Criteria

- Primigravida mothers attending antenatal clinics or admitted for delivery.
- Mothers who had recently delivered and were willing to participate.
- Participants available during the study period at KDJ Hospital.

Exclusion Criteria

- Mothers in their first trimester who declined participation.
- Pregnant women not present physically at the facility during data collection.

Variables of the Study

- **Dependent Variables**: Knowledge, practices, and attitudes related to new-born care.
- **Extraneous Variables**: Socio-demographic factors such as age, religion, education, income, occupation, family type, and source of health information.

Development and Description of Tools

The data collection instrument consisted of a **structured interview schedule** and a **rating scale**, developed and validated to assess the key variables of the study.

Tool Development Process

1. Comprehensive literature review of journals, textbooks, and research articles.
2. Consultation with subject matter experts in obstetrics and gynaecology nursing.
3. Drafting, formatting, and validating the tool based on expert feedback.

Description of the Tool

The tool was structured into four sections:

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- **Section A: Demographic Profile** – Collected data on age, religion, income, education, occupation, family type, and sources of information.
- **Section B: Knowledge Assessment** – Comprised **30 multiple-choice questions** covering general new-born information, physiological functions, breastfeeding, cord care, hygiene, temperature regulation, and immunization. Each correct response was scored as '1' and incorrect as '0'. The maximum score was 30.
- **Section C: Practice Assessment** – Included **20 structured items** to evaluate the practical application of new-born care practices, such as bathing, feeding, and cleanliness. Responses were recorded in Yes/No format.
- **Section D: Attitude Assessment** – Utilized a **12-item Likert scale** to capture the mother's attitude toward new-born care. Responses ranged from "Strongly Agree" to "Strongly Disagree," including both positively and negatively framed items.

Content Validity and Reliability

Content validity was established through expert review and revisions. The tool was refined for clarity, relevance, and accuracy. The reliability of the instrument was confirmed using standard statistical methods, with satisfactory reliability coefficients reported:

- Knowledge: 0.6896
- Practices: 0.9134
- Attitude: 0.7249

Pilot Study

A pilot study was conducted on 10 participants to test the feasibility, clarity, and applicability of the tool. The results confirmed the tool's usability, and minor adjustments were made before proceeding with the full-scale data collection.

Data Collection Procedure

Ethical approval was obtained from the concerned institutional authorities. Participants were briefed about the study's purpose and gave informed consent. Data were collected through face-to-face structured interviews, with each session lasting approximately 30–45 minutes. Participants' confidentiality and anonymity were strictly maintained.

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Plan for Data Analysis

Data were coded and entered into statistical software for analysis. The analysis plan included:

- **Descriptive Statistics**: Frequency, percentage, mean, and standard deviation were used to summarize demographic data and KPA scores.
- **Inferential Statistics**:
  - **Chi-square test**: To assess the association between socio-demographic variables and knowledge, practices, and attitudes.
  - **F-test**: To compare the mean scores of KPA across different demographic groups.

DATA ANALYSIS AND INTERPRETATION

Data analysis is a crucial step in the research process, allowing researchers to make sense of the large volumes of information collected and to extract meaningful insights that directly answer the research questions. In this study, data collected from **100 primigravida mothers** at KDJ Hospital Morar, Gwalior, were analysed using **descriptive and inferential statistics** to assess their knowledge, practices, and attitudes (KPA) related to new-born care.

The analysis was guided by the following research objectives:

1. To assess the knowledge, practices, and attitudes of primigravida mothers regarding new-born care.
2. To determine the relationship between knowledge and selected socio-demographic variables.
3. To determine the association between attitudes and selected socio-demographic variables.
4. To examine the association between new-born care practices and selected socio-demographic variables.

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Statistical Methods Used

- **Descriptive statistics** (frequency, percentage, mean, standard deviation) were used to summarize socio-demographic characteristics and scores on knowledge, practices, and attitudes.
- **Inferential statistics**, including the **Chi-square test** and **F-test**, were employed to assess the association between KPA components and selected socio-demographic variables.

Section I: Description of Sample Characteristics

The sample included 100 primigravida mothers. The socio-demographic profile was as follows:

Variable	Category	Frequency (n)	Percentage (%)
Age	Below 20 years	15	15.0
	20–27 years	52	52.0
	28–34 years	26	26.0
	35 years and above	7	7.0
Religion	Hindu	59	59.0
	Muslim	32	32.0
	Christian	9	9.0
Income	Below ₹4000	29	29.0
	₹4000–5999	47	47.0
	₹6000–7999	13	13.0
	₹8000 and above	11	11.0
Education	Illiterate	8	8.0
	Primary	18	18.0

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Variable	Category	Frequency (n)	Percentage (%)
	Secondary	27	27.0
	Degree	32	32.0
	Postgraduate	15	15.0
Family Type	Nuclear	27	27.0
	Joint	54	54.0
	Extended	19	19.0
Occupation	Housewife	40	40.0
	Government Employee	24	24.0
	Private	27	27.0
	Labourer	9	9.0
Source of Information	Elders/Relatives	39	39.0
	Friends	20	20.0
	Media	18	18.0
	Health Professionals	23	23.0

Section II: Knowledge, Practices, and Attitude Scores

Knowledge on New-born Care

- Low knowledge**: 22%**
- Moderate knowledge**: 62%**
- High knowledge**: 16%**

New-born Care Practices

- Good practice**: 58%**
- Poor practice**: 42%**

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Attitudes Toward new-born Care

- Favourable attitude**: 67%**
- Neutral**: 23%**
- Unfavourable attitude**: 10%**

Section III: Inferential Analysis

A. Association Between Knowledge and Socio-Demographic Variables

Using the Chi-square test:

- **Education** and **source of information** were significantly associated with knowledge levels ($p < 0.05$).
- Higher knowledge scores were observed among degree holders and those informed by health professionals.

B. Association Between Practices and Socio-Demographic Variables

- A significant association was found between new-born care practices and **educational status**, **occupation**, and **income**.
- Mothers with higher education and those employed in the government sector were more likely to follow recommended new-born care practices.

C. Association Between Attitude and Socio-Demographic Variables

- **Attitude** was significantly related to **education**, **occupation**, and **family type**.
- Favourable attitudes were more common among mothers from joint families and those who had received information from health professionals.

D. F-test Comparisons

- F-test analysis confirmed statistically significant differences in mean knowledge, practice, and attitude scores across different levels of education and income.
- For example, mothers with higher educational levels had significantly higher mean scores in all three domains ($p < 0.05$).

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Section IV: Correlation Between Knowledge, Practices, and Attitude

- Positive correlations were observed:
  - **Knowledge and practice** ($r = 0.63$, $p < 0.01$)
  - **Knowledge and attitude** ($r = 0.59$, $p < 0.01$)
  - **Attitude and practice** ($r = 0.67$, $p < 0.01$)

These findings suggest that better-informed mothers not only adopt safer practices but also exhibit more positive attitudes toward new-born care.

Interpretation of Findings

The findings indicate that while most primigravida mothers possess moderate knowledge and favourable attitudes regarding new-born care, gaps remain in practical application. Educational background, income, and access to professional health education emerged as key determinants of KPA levels. These insights highlight the need for targeted health education interventions during antenatal care, especially for less-educated and economically disadvantaged mothers.

RESULT

The present study was conducted among 100 primigravida mothers at KDJ Hospital, Morar, Gwalior, to assess their knowledge, practices, and attitudes (KPA) regarding new-born care. The findings are presented in the following key areas:

1. Socio-Demographic Characteristics

- A majority of participants (52%) were aged 20–27 years, with 32% holding a degree and 27% having secondary education.
- Most mothers belonged to joint families (54%) and were housewives (40%).
- Sources of information about new-born care varied: 39% relied on elders/relatives, while only 23% received information from health professionals.

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2. Knowledge, Practices, and Attitude Assessment

- **Knowledge**: 62% of mothers had moderate knowledge, 16% had high knowledge, and 22% had low knowledge.
- **Practices**: 58% of participants demonstrated good new-born care practices, while 42% showed poor practices.
- **Attitude**: 67% of mothers had a favourable attitude, 23% were neutral, and 10% had an unfavourable attitude toward new-born care.

3. Association with Socio-Demographic Variables

- **Knowledge** showed a statistically significant association with educational status and source of information ($p < 0.05$).
- **Practices** were significantly associated with education, occupation, and income level ($p < 0.05$).
- **Attitude** was significantly associated with education, family type, and occupation ($p < 0.05$).
- The **F-test** results confirmed significant variation in mean KPA scores across different education and income groups.

4. Correlation Between KPA Variables

- A strong positive correlation was found between:
  - **Knowledge and Practice** ($r = 0.63$, $p < 0.01$)
  - **Knowledge and Attitude** ($r = 0.59$, $p < 0.01$)
  - **Attitude and Practice** ($r = 0.67$, $p < 0.01$)

This indicates that improved knowledge is directly related to better practices and more favourable attitudes among primigravida mothers.

CONCLUSION

The study concludes that most primigravida mothers possess moderate levels of knowledge and favourable attitudes regarding new-born care; however, a significant proportion still lacks

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proper practices. Socio-demographic factors such as education, income, occupation, and source of information significantly influence maternal knowledge, behaviours, and attitudes.

The findings emphasize the critical role of maternal education and professional health guidance in shaping safe and effective new-born care practices. Given that first-time mothers often depend on non-professional sources for guidance, there is an urgent need to strengthen antenatal education programs and increase access to credible health information, especially among low-income and less-educated women.

Improving maternal understanding and behaviours through structured educational interventions can contribute significantly to reducing neonatal morbidity and mortality and fostering healthier generations.

REFERENCES

1. Ali, M., Qureshi, S., & Zubair, M. (2017). Knowledge and practices of mothers regarding new-born care in selected urban slums of Lahore. *Journal of Postgraduate Medical Institute*, 31(3), 231–235.
2. Ezeaka, V. C., Olateju, A. O., & Ekure, E. N. (2015). Knowledge, attitude, and practices of mothers towards new-born care in tertiary hospitals in Nigeria. *Nigerian Journal of Clinical Practice*, 18(3), 403–408.
3. Kumar, D., Goel, N. K., Mittal, P. C., & Misra, P. (2014). Influence of infant-feeding practices on nutritional status of under-five children. *Indian Journal of Paediatrics*, 73(5), 417–421.
4. Osrin, D., Tumbahangphe, K. M., Shrestha, D., et al. (2002). Cross sectional, community-based study of care of newborn infants in Nepal. *BMJ*, 325(7372), 1063.
5. Rahman, A., Haque, S. E., Zahan, M. S., & Islam, M. (2016). Factors affecting newborn care practices in rural Bangladesh. *Health Policy and Planning*, 26(1), 13–21.
6. Senarath, U., Fernando, D. N., Vimpani, G., & Rodrigo, I. (2018). Factors associated with maternal knowledge of newborn care among postnatal mothers in Sri Lanka. *Maternal and Child Health Journal*, 12(6), 948–956.

ISSN: 2320-3714
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7. Thomas, E., George, B., & Thomas, M. (2015). A study on newborn care practices among mothers in a tertiary care center in Vellore, India. *International Journal of Community Medicine and Public Health*, 2(1), 78–84.
8. World Health Organization. (2020). *Newborns: Improving survival and well-being*. https://www.who.int/news-room/fact-sheets/detail/newborns-reducing-mortality
9. Yilmaz, G., Caylan, N., Karacan, C. D., & Yildiz, D. (2014). Traditional practices of mothers in newborn care. *Turkish Journal of Pediatrics*, 55(1), 83–87.
10. Ministry of Health and Family Welfare. (2019). *National Family Health Survey – 5 (2019-21): India Fact Sheet*. Government of India. https://rchiips.org/nfhs/

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