

Knowledge and attitude about infant feeding practices as per infant and young child feeding guidelines in pregnant women attending antenatal clinics in Western Rajasthan



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ABSTRACT

Background: Infant and young child feeding (IYCF) practices play a crucial role in child survival, growth, and development. Despite national guidelines aligning with global recommendations, adherence remains a challenge, particularly in rural India. **Aims and Objectives:** This study aims to assess the knowledge and attitudes of pregnant women toward IYCF practices in western Rajasthan.

Materials and Methods: A cross-sectional observational study was conducted at the Maternal and Child Unit of a tertiary hospital in western Rajasthan. The study included 100 pregnant women, selected based on inclusion and exclusion criteria. Data were collected through face-to-face interviews using a pre-validated questionnaire. Statistical analysis was performed using the Statistical Package for the Social Sciences 26.0, with $P < 0.05$ considered statistically significant. **Results:** The mean age was 25.9 ± 3.5 years, with 47% from rural areas. Education ranged from 7% illiterate to 12% graduates. Healthcare workers (46%) and digital sources (41%) were key IYCF information sources. Knowledge ($18.5 \pm 2.8/40$) was moderate, with misconceptions on breastfeeding. Attitude ($11.5 \pm 1.5/20$) was positive but had practice gaps. Poor knowledge is linked to early marriage and low parental education.

Conclusion: Significant gaps exist in IYCF knowledge and attitudes, particularly among younger and less-educated women. Targeted educational interventions are necessary to improve IYCF adherence and enhance child health outcomes in western Rajasthan.

Key words: Infant and Young Child Feeding; Breastfeeding; Complementary feeding; Education; Antenatal care; Nutrition

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INTRODUCTION

Infant and young child feeding (IYCF) practices are vital for child survival, growth, and development. The World Health Organization and UNICEF recommend early initiation of breastfeeding, exclusive breastfeeding for 6 months, and continued breastfeeding with complementary feeding up to 2 years or beyond.¹ These practices reduce morbidity and mortality, enhance cognitive development, and strengthen maternal bonds.

In India, the National Guidelines on IYCF align with global recommendations but face adherence challenges, especially in rural areas. The global strategy for IYCF supports breastfeeding through legislation, skilled support, and intersectoral collaboration. The IYCF action plan emphasizes advocacy, capacity building, community interventions, and monitoring.²

IYCF counseling follows three steps: Assessment, analysis, and action. Assessment evaluates feeding practices,

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nutritional status, and sociocultural factors. Analysis identifies deviations from guidelines and underlying causes. The action phase provides tailored guidance using counseling, visual aids, and follow-ups. Counseling is crucial for pregnant women, postpartum mothers, those introducing complementary foods, and high-risk groups.³

Optimal IYCF practices reduce childhood illnesses, prevent malnutrition, and enhance cognitive development. In India, initiatives such as Anganwadi services, PMMVY, POSHAN Abhiyaan, and HBYC support infant nutrition.⁴ Anganwadi centers provide nutrition, education, and community awareness. PMMVY incentivizes maternal health care and nutrition. POSHAN Abhiyaan strengthens IYCF through frontline worker training and technology-driven monitoring. HBYC extends newborn care, ensuring breastfeeding and proper complementary feeding.⁵

Western Rajasthan faces challenges due to sociocultural beliefs and limited health care access. Pregnant women's knowledge and attitudes influence feeding choices, with gaps in understanding exclusive breastfeeding and colostrum use. Antenatal clinics provide education, but effectiveness depends on existing knowledge and attitudes. Addressing cultural practices such as colostrum discarding through targeted interventions can improve IYCF adherence.⁶

This study assesses pregnant women's knowledge and attitudes toward IYCF in western Rajasthan. Understanding barriers will help develop targeted interventions, improving antenatal care and child health outcomes by promoting optimal IYCF practices.

Aims and objectives

To assess the knowledge and attitude about infant feeding practices as per IYCF guideline in pregnant women attending antenatal clinic.

MATERIALS AND METHODS

A cross-sectional observational study was conducted at the Maternal and Child Unit of a tertiary center in western Rajasthan. The study aimed to assess the knowledge and attitudes of pregnant women regarding infant feeding practices as per IYCF guidelines. The study included pregnant women attending the antenatal clinic. Pregnant women with psychiatric illnesses or severe medical/surgical disorders were excluded.

Inclusion criteria

Pregnant women attending the antenatal clinic at Umaid Hospital.

Exclusion criteria

Pregnant women with psychiatric illness or severe medical/surgical disorders.

Sample size calculation

The sample size was determined using a 95% confidence interval, assuming 68.2% of mothers initiate breastfeeding within the 1st h, with a 10% allowable error. Using the formula $N = ([Z(1-\alpha/2)]^2 \times P \times (1-P)] / E^2$, the minimum required sample size was 84, rounded to 100 participants.

Data collection

Data were collected through face-to-face interviews using a pre-designed, pre-validated questionnaire in Hindi and English language for knowledge and attitude among antenatal women covering key IYCF aspects: Breastfeeding initiation, exclusivity, complementary feeding, and benefits (Annexure 1). Interviews were private, with manual recording and later digital transfer.

Statistical analysis

Data were analyzed using the Statistical Package for the Social Sciences 26.0, with qualitative data in percentages and quantitative data in means and standard deviation. The Chi-square and unpaired t-tests were used, with $P < 0.05$ considered statistically significant.

Ethical

The study was approved by the Scientific and Ethical Committee of Dr. S.N. Medical College, Jodhpur. Informed consent was obtained, ensuring voluntary participation and confidentiality. Participants were informed about the study's purpose, procedures, risks, and benefits, with the right to withdraw at any time without consequences.

RESULTS

The study included 100 women (mean age: 25.9 ± 3.5 years). Age distribution: <25 years (38%), 25–29 years (51%), ≥ 30 years (11%) as shown in Table 1. Rural–urban split was 47–53%. The mean marriage age was 20.3 ± 2.7 years, with 16% marrying at age <18 years. Education: 7% illiterate, 52% primary, 18% secondary, 11% senior secondary, 12% graduate or higher. Husbands' education: 3% illiterate, 30%

Table 1: Distribution of women according to their age at marriage (n=100)

Age at marriage	Frequency	Percentage
<18	16	16
18-20	41	41
21-24	32	32
25 and above	11	11
Total	100	100

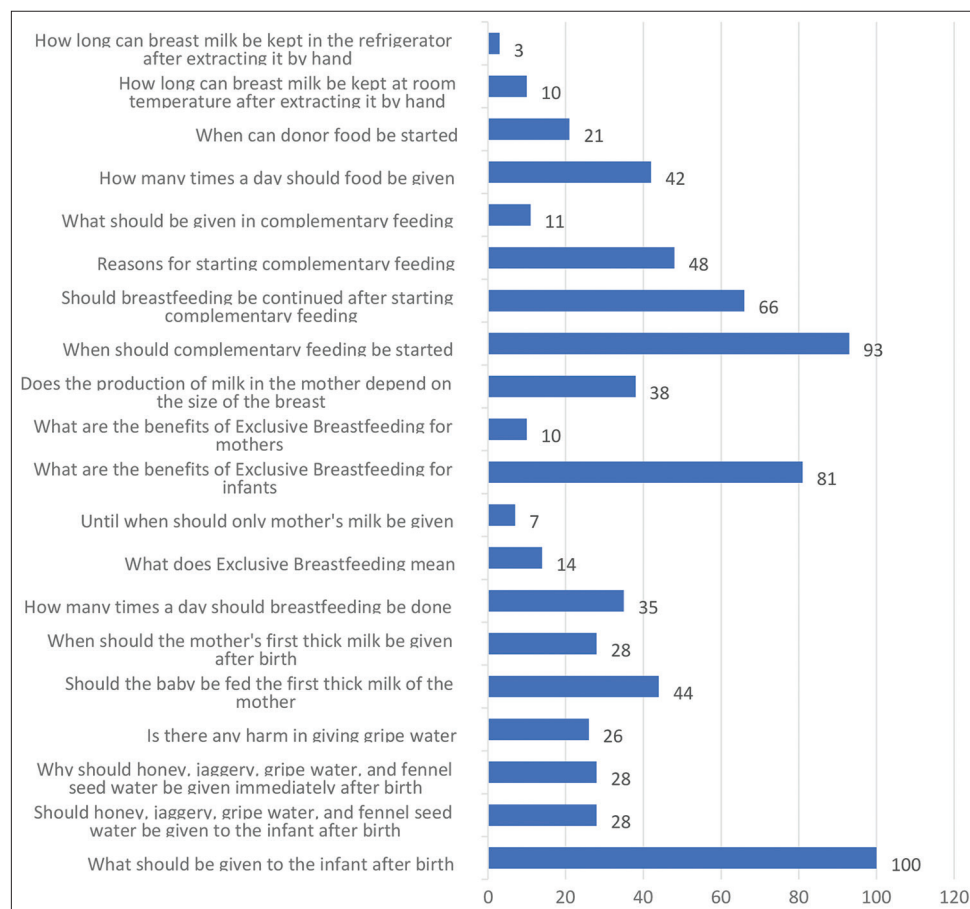


Figure 1: Distribution of women according to their knowledge of infant and young child feeding practices (n=100)

primary, 18% secondary, 18% senior secondary, 31% graduate or higher. Gravity: 26% primigravida, 30% secundigravida, and 44% multigravida. Socioeconomic status: 17% upper, 32% upper-middle, 38% middle, 8% upper-lower, and 5% lower. Religion: 71% Hindu and 29% Muslim.

The sources of knowledge on IYCF practices were healthcare workers (46%), family (13%), and the Internet (41%). This indicates a significant reliance on healthcare workers and digital sources for information.

The distribution of women according to their knowledge or awareness about the feeding practices is shown in Figure 1. The knowledge assessment on IYCF practices showed that all participants knew what should be given to an infant after birth. However, misconceptions existed about using honey, jaggery, gripe water, and fennel seed water. While most women understood the benefits of exclusive breastfeeding, fewer knew the exact practices and timelines. The knowledge scores showed that 22% of the participants had good knowledge (scores >20), whereas 78% had poor knowledge (scores ≤20), suggesting that a majority of the participants lacked comprehensive knowledge about IYCF practices. The mean knowledge score was 18.5 ± 2.8 out of

Table 2: Distribution of women according to their knowledge scores (n=100)

Knowledge score (total score 40)	Frequency	Percentage
Good (>20)	22	22
Poor (≤20)	78	78
Total	100	100
Mean±SD	18.5±2.8	

40 (score >20 was good and score of <20 was considered to be poor), indicating moderate awareness with room for improvement (Table 2).

The attitude assessment toward IYCF practices revealed that many women had favorable attitudes toward breastfeeding and complementary feeding (Figure 2). However, there were gaps in practices such as feeding in public and continuing breastfeeding during maternal or infant illness. The mean attitude score was 11.5 ± 1.5 out of 20, indicating a generally positive attitude but with some misconceptions (score >10 was considered a good or positive attitude, whereas score <10 was a poor or negative attitude) as mentioned in Table 3.

While looking at the attitude of mothers, we found that 83% of women had a good attitude toward IYCF. Poor

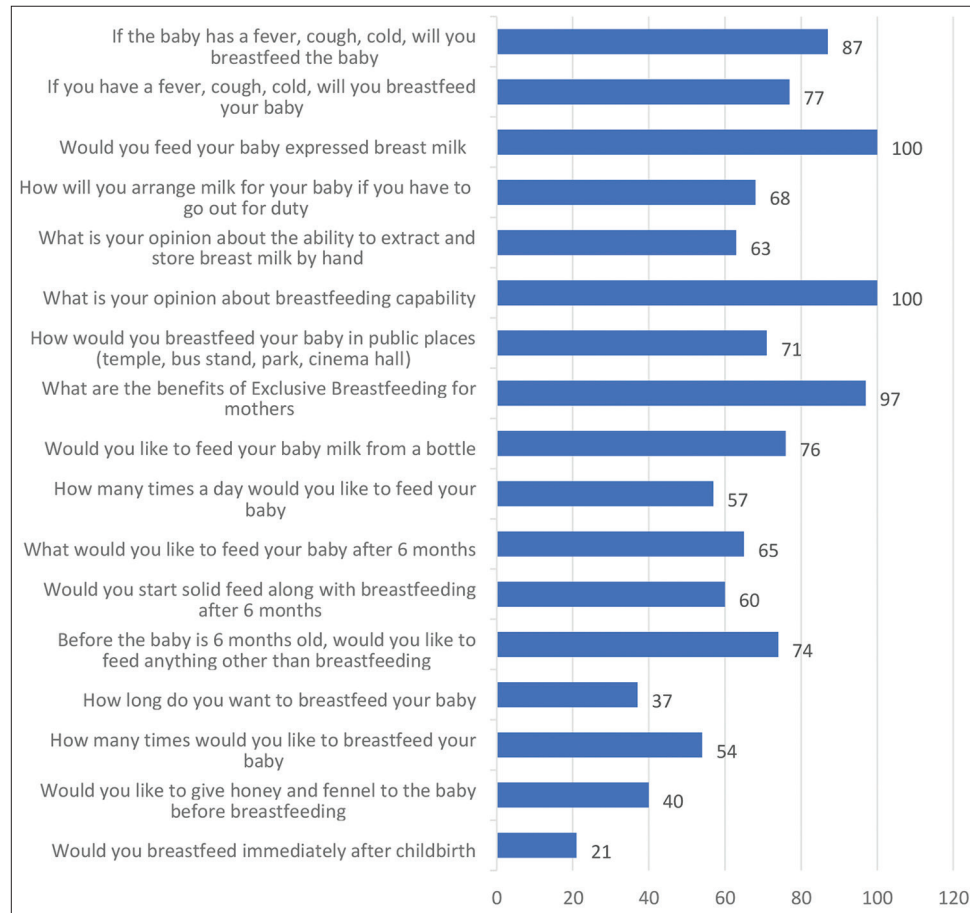


Figure 2: Distribution of women according to their attitude toward infant and young child feeding practices

Table 3: Distribution of women according to their attitude scores (n=100)

Attitude score (total score 20)	Frequency	Percentage
Good (score >10)	83	83
Poor (≤10)	17	17
Total	100	100
Mean±SD	11.5±1.5	

knowledge could be explained by a younger marriage age and lower parental education. No significant factors affected attitudes, but trends suggested socioeconomic status and gravidity might play a role. Educational interventions were needed for young and less-educated mothers.

DISCUSSION

The sociodemographic analysis showed a mean participant age of 25.9 years, with 51% in the 25–29 age group, similar to Krishnendu and Devaki.⁷ In terms of residence, 53% lived in urban areas, aligning with though their study had a rural majority (69.4%). The mean age at marriage was 20.3±2.7 years, with 16% marrying before 18, 41% at 18–20, 32% at 21–24, and 11% at 25+ years. Educationally, 52% of women had only primary education, whereas 12% had a graduate degree

or higher, reflecting Hackett et al.,⁸ findings on limited IYCF knowledge. Husbands had higher education levels, with 31% holding a graduate degree or higher, supporting Demilew⁹ link between parental education and IYCF knowledge. These findings emphasize the need for enhanced educational interventions to improve IYCF practices.

The study found 44% of women were multigravida, indicating larger family trends, aligning with Mekonnen et al.¹⁰ Socioeconomic analysis showed 38% were middle class, a key factor, as Swetha et al.,¹¹ linked lower status to poor infant feeding knowledge. Religiously, 71% were Hindu and 29% Muslim, with Adhikari et al.,¹² emphasizing cultural influences on IYCF. For IYCF knowledge, 46% relied on healthcare workers, and 41% on the Internet. Sriram et al.,¹³ found that 58.67% received medical guidance, but 34.67% still practiced pre-lacteal feeding. Chandorkar and Miyawala¹⁴ noted gaps in Anganwadi workers' knowledge transfer. The rise in digital sources presents an opportunity for improved IYCF education.

The assessment of IYCF knowledge revealed significant gaps. While all participants knew what to give an infant after birth, only 7% correctly identified the duration of

exclusive breastfeeding. This aligns with Guled *et al.*,¹⁵ who found high awareness of colostrum (96.1%) but lower early breastfeeding initiation (50%), highlighting a gap between knowledge and practice. Similarly, Hackett *et al.*,⁸ reported widespread misconceptions despite some awareness. In addition, 28% of women believed in using honey, jaggery, and fennel seed water for infants, consistent with Krishnendu and Devaki,⁷ where 15% practiced pre-lacteal feeding. These findings highlight the need for targeted education to correct misconceptions and improve IYCF practices.

The knowledge assessment showed that only 22% of participants had good IYCF knowledge, with a mean score of 18.5 out of 40, highlighting a significant gap. This aligns with Mekonnen *et al.*,¹⁰ where only 65.8% practiced appropriate IYCF, and 19.2% met dietary diversity standards. Similarly, only 47.6% practiced exclusive breastfeeding, and Swetha *et al.*,¹¹ reported that inadequate knowledge led to poor feeding practices, with just 60% initiating breastfeeding within an hour. These findings stress the need for targeted education to address misconceptions and improve IYCF adherence.

Limitations of the study

Being a cross-sectional study, it only captures the participants' knowledge and attitudes at one point in time, limiting the ability to assess changes over time or establish causality. Additionally, the study relies on self-reported data, which may be subject to recall bias or social desirability bias, where participants might overstate positive behaviors or knowledge. Lastly, the exclusion of women with psychiatric illnesses or severe medical/surgical conditions could limit the generalizability of the findings to a broader population of pregnant women who may face different challenges in adopting optimal infant feeding practices.

CONCLUSION

The study in Western Rajasthan identified significant gaps in IYCF knowledge and attitudes, despite general awareness of breastfeeding benefits. Misconceptions about exclusive breastfeeding and complementary feeding were prevalent, especially among less-educated and younger married women. Socioeconomic status influenced knowledge, with higher status linked to better awareness. The findings highlight the need for targeted educational interventions, particularly for rural and disadvantaged groups, to improve IYCF adherence and child health outcomes.

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REFERENCES

1. Kramer MS and Kakuma R. Optimal duration of exclusive breastfeeding. *Cochrane Database Syst Rev.* 2012;2012(8):CD003517.
<https://doi.org/10.1002/14651858.CD003517>
2. Godakandage SS, Senarath U, Jayawickrama HS, Siriwardena I, Wickramasinghe SW, Arumapperuma P, et al. Policy and stakeholder analysis of infant and young child feeding programmes in Sri Lanka. *BMC Public Health.* 2017;17(Suppl 2):522.
<https://doi.org/10.1186/s12889-017-4342-4>
3. Dube WG. UNICEF Infant And Young Child Feeding Training In Zimbabwe: Analysis And Recommendations (Doctoral Dissertation); 2014.
4. Puri S, Fernandez S, Puranik A, Anand D, Gaidhane A, Quazi Syed Z, et al. Policy content and stakeholder network analysis for infant and young child feeding in India. *BMC Public Health.* 2017;17(Suppl 2):461.
<https://doi.org/10.1186/s12889-017-4339-z>
5. Das P, Singh M, Sakalle SK, Bhargava S, Khanna R, Ganvir DR, et al. Assessment of home-based care for young child (HBYC) program in aspirational districts of Madhya Pradesh, India: A cross-sectional study. *Indian J Community Med.* 2023;48(3):471-477.
https://doi.org/10.4103/ijcm.ijcm_782_22
6. Ogbo FA, Dhami MV, Awosemo AO, Olusanya BO, Olusanya J, Osuagwu UL, et al. Regional prevalence and determinants of exclusive breastfeeding in India. *Int Breastfeed J.* 2019;14:20.
<https://doi.org/10.1186/s13006-019-0214-0>
7. Krishnendu M and Devaki G. Knowledge, attitude and practice towards breastfeeding among lactating mothers in rural areas of Thrissur District of Kerala, India: A cross-sectional study. *Biomed Pharmacol J.* 2017;10(2):683-690.
<https://doi.org/10.13005/bpj/1156>
8. Hackett KM, Mukta US, Jalal CS and Sellen DW. Knowledge, attitudes and perceptions on infant and young child nutrition and feeding among adolescent girls and young mothers in rural Bangladesh. *Matern Child Nutr.* 2015;11(2):173-189.
<https://doi.org/10.1111/mcn.12007>
9. Demilew YM. Factors associated with mothers' knowledge on infant and young child feeding recommendation in slum areas of Bahir Dar City, Ethiopia: Cross sectional study. *BMC Res Notes.* 2017;10(1):191.
<https://doi.org/10.1186/s13104-017-2510-3>
10. Mekonnen M, Kinati T, Bekele K, Tesfa B, Hailu D and Jemal K. Infant and young child feeding practice among mothers of children age 6 to 23 months in Debrelibanos district, North Showa zone, Oromia region, Ethiopia. *PLoS One.* 2021;16(9):e0257758.
<https://doi.org/10.1371/journal.pone.0257758>
11. Swetha E, Anusuya Devi K and Harinivashini M. Knowledge, attitude, practice on complementary feeding of young mothers. *Int J Home Sci.* 2022;8(2):305-311.
<https://doi.org/10.22271/23957476.2022.v8.i2e.1330>
12. Adhikari N, Acharya K, Upadhyaya DP, Pathak S, Pokharel S and Pradhan PM. Infant and young child feeding practices and its associated factors among mothers of under two years children in a western hilly region of Nepal. *PLoS One.* 2021;16(12):e0261301.
<https://doi.org/10.1371/journal.pone.0261301>
13. Sriram S, Soni P, Thanvi R, Prajapati N and Mehariya KM. Knowledge, attitude and practices of mothers regarding infant

feeding practices. Nat J Med Res. 2013;3(2):147-150.

14. Chandorkar S and Miyawala T. Assessing gaps in infant and young child feeding (IYCF) practices and capacity building of functionaries and beneficiaries of integrated child development services (ICDS) for improved outcomes. J Nutr Res. 2014;2(1):26-31.

<https://doi.org/10.55289/jnutres/v2i1.3>

15. Guled RA, Mamat NM, Bakar WA, Assefa N and Balachew T. Knowledge, attitude and practice of mothers/caregivers on infant and young child feeding in Shabelle Zone, Somali Region, Eastern Ethiopia: A cross sectional study. Rev Sci. 2016;6(2):42-54. <https://doi.org/10.31436/revival.v6i2.182>

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SMS- Study design, data collection, analysis; **HS-** Data analysis, writing draft; **HV-** Draft writing , data analysis; **SKV-** Supervision of data analysis and manuscript writing; **NM-** Manuscript writing, supervision of work.

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