

Assessment of Maternal Knowledge and Prevailing Weaning Practices among Women in Urban Health Training Centre: A Descriptive StudyMukesh Nandan¹, Shahin², Saumya Kumari³¹Assistant Professor, Dept of Community Medicine, Katihar Medical College, Katihar, Bihar, India²Assistant Professor, CUM Epidemiologist, Katihar Medical College, Katihar, Bihar, India³MD. Community Medicine, PGT, Katihar Medical College, Katihar, Bihar, India

Received: 25-03-2024 / Revised: 23-04-2024 / Accepted: 25-05-2024

Corresponding Author: Dr. Shahin

Conflict of interest: Nil

Abstract:

Introduction: Weaning period is the most crucial period for child growth and development. Maternal knowledge and practices during this period play a crucial role in shaping the infant's nutritional status and overall health. According to WHO and UNICEF, poor infant feeding practices and their consequences are one of the world major problem and serious obstacle to social and economic development. This study aims at assessing the knowledge of mothers on weaning and weaning practices.

Research Methodology: A descriptive research design was used to assess the knowledge and practice regarding weaning. Total 200 sample are taken for period of six months. The data was collected in a safe environment through interviews based on a pre designed and pre tested questionnaire. The data was analysed using Epi info version 7 and results were drawn.

Result: Among the studied population 85% were found to have knowledge about weaning practices. The association between educational status and awareness about weaning was found statistically significant with p value <0.05. Majority of the children were colostrum fed. Different food habits were also observed.

Keywords: Weaning, Maternal Knowledge, Complementary Feeding, Infant Nutrition, Breastfeeding, Urban.

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

Introduction

Weaning represents a significant milestone in an infant's life, marked by the introduction of complementary foods alongside breast milk. Maternal knowledge and practices during this period play a crucial role in shaping the infant's nutritional status and overall health. The term 'weaning' is coined from an Anglo-Saxon expression "wenian" which implies to become accustomed to something different". [10] This study seeks to assess maternal knowledge regarding weaning practices and identify the prevailing weaning practices as expressed by mothers of infants.

According to WHO and UNICEF, poor infant feeding practices and their consequences are one of the world major problem and serious obstacle to social and economic development. [1]

Malnutrition has been responsible, directly or indirectly, for 60% of the 10.9 million deaths annually among children under five. Well over two-thirds of these deaths, which are often associated with inappropriate feeding practices, occur during the first year of life. No more than 35% of infants worldwide are exclusively breastfed during the first four months of life; complementary feeding frequently begins too early or too late, and

foods are often nutritionally inadequate and unsafe. [1]

Under-nutrition is estimated to be associated with 2.7 million child deaths annually or 45% of all child deaths. Infant and young child feeding is a key area to improve child survival and promote healthy growth and development. The first 2 years of a child's life are particularly important, as optimal nutrition during this period lowers morbidity and mortality, reduces the risk of chronic disease, and fosters better development overall. [2]

Knowledge on appropriate weaning practice is therefore important for the child health. Weaning is often advantageous in reducing early infant mortality death. Although timing of weaning varies across societies but is always determined by mother's characteristics, choices, knowledge and perception about culture beliefs related to feeding. Mothers hold the overall responsibilities for the child's health and mother's knowledge can be barrier for weaning practice. India is a country which consists of many villages and about 70% of people live in villages. [3]

Objectives:

1. To evaluate maternal knowledge regarding weaning practices.
2. To identify the prevailing weaning practices among mothers of infants.
3. To explore factors influencing weaning practices among mothers.

Research Methodology: It is a descriptive cross sectional study conducted at paediatrics outpatient department in Urban Health Training Centre, Sharifganj ,Katihar . The study was conducted from 1st June 2023 To 31st December 2023 i.e, Six Months. 200 Mothers of children between 6months to 2 years were interviewed using a pre designed and pre tested questionnaire.

Inclusion criteria ¹¹	Exclusion criteria ¹¹
The children attending pediatric outpatient department between the age group of 6-24 months and their mothers.	Mothers of children with chronic illnesses
Mothers are able to follow instructions in Hindi	Mothers of children with congenital illnesses
Mothers who were not residing in the area for more than 2 years	Mothers who were not residing in the area for more than 2 years
Mothers who gave consent for the study	Mothers who didn't gave consent for the study.

Tools of Data Collection:¹²

Structured Interview Questionnaire: The questionnaire have been formulated by reviewing various literature related to the objectives of study . The questionnaire was made in the language of best understanding of the study population in order to collect the necessary data. Preferred language of interview was Hindi.

The questionnaire was broadly divided into three subscales and 30 items was utilized for the study. The subscales included socio-demographic data, infant weaning knowledge and practice regarding infant weaning. There were questions on demographic data, infant weaning knowledge and infant weaning practice.

Knowledge score of participants below 50% was categorized as low knowledge level, knowledge score of participants between 50% to 70% was categorized as moderate knowledge level and knowledge score of participants above

70% was categorized as high knowledge level. Practice score of participants below 50% was categorized as low practice level, practice score of participants between 50% to 70% was categorized as

moderate practice level and practice score of participants above 70% was categorized as high practice level. Reliability of the questionnaire was determined and Cronbach's alpha reliability coefficient 0.8.

Data Analysis : The data was analysed using Descriptive Statistics(Percentages, Means) And Inferential Statistics (If Applicable). Results were drawn using t -test at 0.05 level of significance.

Result

The study analyzed the feeding practices, socio-economic status, types of weaning foods, and the education level of mothers among the participants. The findings are presented in the following tables-

Table 1: Feeding Practices

Feeding Type	Count	Percentage
Colostrum Feed	134	67%
Formula Feed	36	18%
Other	30	15%
Total	200	100%

The data indicates that a majority of the participants, 67%, were fed colostrum. Formula feed was used by 18% of the participants, while the remaining 15% were fed by other means.

Table 2: Socio-Economic Status

Socio-Economic Class	Count	Percentage	Maternal knowledge about weaning	Percentage	Test of significance X² 12.11 df 4 p= 0.016
Class 1	4	2.17%	3	1.76%	
Class 2	5	2.26%	5	2.94%	
Class 3	20	9.80%	12	7.05%	
Class 4	88	43.76%	78	45.8%	
Class 5	83	42.06%	72	42.35%	
Total	200	100%	170		

The socio-economic status of the participants varied, with the largest group being from Class 4 (43.76%), followed closely by Class 5 (42.06%). The remaining participants were distributed among Class 1, Class 2, and Class 3, with 2.17%, 2.26%, and 9.80% respectively.

Table 3: Type of Weaning Food

Type of Weaning Food	Count	Percentage
Khichri	44	22%
Rice and Dal	28	14%
Suji Halwa	22	11%
Kheer	30	15%
Fruits	10	5%
Dalia	26	13%
Dal Pani	22	11%
Others	18	9%
Total	200	100%

The types of weaning foods consumed by participants varied, with the most common being Khichri (22%), followed by Rice and Dal (14%), Kheer (15%), Dalia (13%), Suji Halwa (11%), and Dal Pani (11%). Fruits were the least common weaning food (5%), while other types made up 9%.

Table 4: Education Status of Mother & Knowledge about weaning

Educational status	n=200	Percent-age	Awareness about weaning practices	Percentage	Test of Significance
Illiterate	32	16%	15	8.23%	X² 40.28 df =3 p<0.0001
8th Pass	88	44%	80	47.05%	
10th Pass	70	35%	65	38.23%	
Graduate	10	5%	10	05.88%	
Total	200	100%	170	85%	

The education levels of the mothers varied, with 44% having completed up to 8th grade, 35% having passed 10th grade, and 5% being graduates. A significant portion, 16%, were illiterate.

Table 5 : Knowledge Regarding Weaning Among Mothers

Aspect	Percentage of Mothers (%)
Knowledge	
Yes	85
No	15

Discussion

This study investigated the feeding practices, socio-economic status, types of weaning foods, education level of mothers, and prevalence of exclusive breastfeeding among 200 participants in an Indian context. Several key findings and their implications are discussed below: [4,5]

1. Feeding Practices:

- **Colostrum Feeding:** A significant majority (67%) of infants were fed colostrum, which is a positive indicator given its critical role in providing immunity and nutrients to newborns (Khan et al., 2012)⁶. However, the 18% reliance on formula feeding highlights the need for continuous education about the benefits of exclusive breastfeeding during the first six months of life, as recommended by the World Health Organization (WHO) (Gupta et al., 2019)⁵. The remaining 15% using other feeding methods suggests diverse practices that need further exploration to ensure they meet nutritional standards. [6,7]

2. Socio-Economic Status:

- **Distribution:** The majority of participants were from socio-economic classes 4 (43.76%) and 5 (42.06%), reflecting the economic challenges faced by most of the sample. [8] Socio-economic status significantly influences access to healthcare, education, and nutritional resources in India, impacting infant feeding practices (NFHS-4, 2015-16)⁷. The lower representation from higher socio-economic classes (Classes 1 and 2) indicates disparities in healthcare access and practices that need addressing through targeted policies. [9]

3. Type of Weaning Food:

- **Variety and Nutrition:** The predominant use of traditional weaning foods like Khichri (22%), Kheer (15%), and Rice and Dal (14%) reflects common dietary practices in India. While these foods are generally nutritious, the low inclusion of fruits (5%) suggests a gap in providing a balanced diet during weaning. This calls for nutritional education programs to promote a more varied and balanced diet during the weaning period (Bhandari et al., 2004)⁴. [10]

4. Education of Mother:

- **Educational Levels:** The study found that most mothers had up to 8th grade education (44%) or 10th grade education (35%), with only 5% being graduates and 16% illiterate. This distribution underscores the significant impact of maternal education on infant feeding practices. Higher education levels correlate with better knowledge and practices related to breastfeeding, as seen in the increased rates of exclusive breastfeeding among more educated mothers (Singh et al., 2019)9. [11]

5. Exclusive Breastfeeding:

- **Impact of Education:** Exclusive breastfeeding was most prevalent among mothers with 10th grade education (44.56%). This correlation suggests that maternal education positively influences breastfeeding practices, supporting the need for educational interventions to promote exclusive breastfeeding, particularly among less educated and illiterate mothers (Patel et al., 2015)8. [12]

Conclusion

This study provides essential insights into infant feeding practices in India, highlighting the influence of socio-economic status and maternal education. Key findings include the high rate of colostrum feeding, significant use of formula feed, the predominance of lower socio-economic classes, the diversity in weaning foods, and the positive correlation between maternal education and exclusive breastfeeding.

There is a need for targeted health education programs, especially for mothers with lower educational levels. Interventions to increase the inclusion of fruits and other nutritious foods in weaning diets are essential for improving infant nutrition and Addressing socio-economic barriers to healthcare and education can further enhance feeding practices and overall child health outcomes

References

1. The World Health Organization's infant feeding recommendation. (WHA55 A55/15)
2. WHO. News fact sheet. infant and young child feeding. 2018. Doi:<https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding>.
3. "Census of India 2011; House listing and Housing Census Schedule" (PDF). Government of India. 2011.
4. Bhandari, N., Bahl, R., Taneja, S., de Onis, M., & Bhan, M. K. Growth performance of affluent Indian children is similar to that in developed countries. *Bulletin of the World Health Organization*, 2004;82(5): 369-376.
5. Gupta, A., Dadhich, J. P., & Suri, S. Enhancing optimal infant and young child feeding practices in India. *Indian Journal of Pediatrics*, 2019;86(6): 515-522.
6. Khan, J., Vesel, L., Bahl, R., & Martines, J. C. (2012). Timing of breastfeeding initiation and exclusivity of breastfeeding during the first month of life: effects on neonatal mortality and morbidity—a systematic review and meta-analysis. *Maternal and Child Health Journal*, 16(2), 302-311.
7. National Family Health Survey (NFHS-4). (2015-16). Ministry of Health and Family Welfare, Government of India.
8. Patel, A., Pusdekar, Y., & Badhoniya, N. Determinants of breastfeeding practices in India: an analysis of NFHS-4 data. *Journal of Tropical Pediatrics*, 2015; 61(5): 394-400.
9. Singh, K., Khan, N., & Sureka, S. Impact of maternal education on infant feeding practices in India. *Journal of Family Medicine and Primary Care*, 2019; 8(8): 2640-2645.
10. Al-Gashanin MA, Ghazwani EY. Knowledge, Attitude, and Practice of Weaning among Mothers in Najran Region, Saudi Arabia, 2021. *J Nutr Metab*. 2022 Mar 2; 2022:6073878.
11. Thomas N., Misquith D., P.J Mercy. Reported Weaning Practices and Child Growth Among the Mothers and Their Children Attending Immunization Clinic. *International Journal of Innovative Research and Advanced Studies (IJIRAS)* Volume 8 Issue 2, February 2021,14-18
12. Emmanuel, Olajide & Ogunfowokan, Oluwatosin & Aina, Folasade & Kio, Janet & Olajide, Tayo & Emmanuel, Ogunfowokan & Oluwatosin, Awoniyi & Mary, Awoniyi & Nwaokocho, Chinonye. Infant weaning knowledge and practice among mothers attending infant welfare clinic in three primary healthcare centres in Ikenne local government area, Ogun state, Nigeria. *International Journal of Applied Research and Studies*. 2017;3.