International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2024: 7.101

Assessment of Mothers' Knowledge and Attitude Regarding Infant Feeding and Weaning Practices in Selected Urban Communities, West Bengal

Madhurima Kumar[1], Pooja Bakshi[2]

[1]Sister Nivedita University, Department of Nursing, New Town, North 24 Parganas, West Bengal, India (Corresponding Author)

[2]Sister Nivedita University, Department of Nursing, New Town, North 24 Parganas, West Bengal, India

Abstract: ***Infant feeding and weaning practices play a crucial role in a child's early development and long-term health. A mother's knowledge and attitude towards breastfeeding and weaning significantly influence her practices. This descriptive quantitative study assessed mothers' knowledge and attitudes regarding infant feeding and weaning practices in selected urban communities of West Bengal. Data were collected from 100 primipara mothers using non-probability convenience sampling and structured tools including a demographic profile, a knowledge questionnaire, and an attitude scale. Results showed that 47% of mothers had average knowledge scores (9–11), while 61% demonstrated average attitudes (scores 57–89). A moderate positive correlation ($r = 0.62$, $p < 0.001$) was found between knowledge and attitude. The study concludes that enhanced maternal knowledge correlates with improved attitudes towards optimal infant feeding and weaning practices.***

Keywords: Infant feeding, Weaning, Knowledge, Attitude

1. Introduction

Infant feeding and weaning practices play a crucial role in a child's early development and long-term health. Etymologically, the origins of the word 'weaning' is from the Anglo-Saxon expression "wenian" meaning "to become accustomed to something different" [1]. Weaning from breastfeeding has been considered as natural and inevitable stage in the development of human child. Breast milk is the best food for infants [2]. The World Health Organization (WHO) and UNICEF recommend exclusive breastfeeding for the first six months of life, followed by appropriate and timely introduction of complementary (weaning) foods while continuing breastfeeding up to two years or beyond. [3].

Several factors influence maternal feeding practices, including the mother's level of education, socio-economic status, cultural beliefs, family influence, and access to healthcare services. Lack of awareness and improper attitudes can lead to early or delayed weaning, inadequate nutrient intake, or the use of inappropriate foods, thereby jeopardizing infant health. Moreover, in many communities, traditional beliefs and misinformation about infant feeding persist, leading to practices that are not in line with medical recommendations. Partial breastfeeding is recommended until the infant is at least 12 months old, and thereafter for as long as a woman and her child choose to continue. Partial breastfeeding is defined as breastfeeding as well as also providing other sources of nutrition, usually beginning at approximately six months of age. The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months of life, followed by the introduction of complementary foods while continuing breastfeeding for up to two years or beyond. Infant feeding and weaning practices are very essential to a child's health, growth, and development. The decisions made during these early stages have far-reaching implications for both physical and cognitive well-being, influencing everything from immunity and brain development to long-term health risks. Weaning is a gradual process of the introduction of complementary foods to the infant's diet [4]. The very first introduction of foods other than breast milk is, by definition, the true beginning of weaning [2].

Breastfeeding is widely recognized as the optimal form of infant nutrition. Human milk is uniquely tailored to meet the evolving needs of a growing infant, providing a perfect balance of nutrients, antibodies, and protective factors.

A mother's knowledge and attitude towards infant feeding significantly shape her choices and practices, ultimately impacting her child's health and development. Many mothers understand the nutritional and immunological advantages of breast milk. However, gaps in knowledge exist regarding optimal breastfeeding practices, such as proper latching and feeding positions. Positive attitudes towards breastfeeding are crucial for successful initiation and continuation. Factors like social support, cultural norms, and personal beliefs influence a mother's perception of breastfeeding.

2. Need of the Study

Breastfeeding is the cornerstone of infant nutrition, offering unparalleled benefits for both mother and child. Yet, despite its significance, breastfeeding practices and weaning decisions vary widely across cultures and socioeconomic contexts. The prevalence of breastfeeding differs from one country to another and from one society to another, this of course is due to cultural and religious believes. Initiation of delayed breastfeeding, colostrum deprivation, supplementary feeding of breast milk substitutes, early introduction of complementary feeding, and incorrect weaning from breast milk are commonly found practices in communities around the world [5].

A mother's knowledge and attitude towards breastfeeding and weaning play a crucial role in shaping her practices. Research has shown that mothers with adequate knowledge and positive attitudes are more likely to initiate and continue breastfeeding, and to adopt appropriate weaning practices.

Infant feeding and weaning are critical aspects of child development and nutrition, particularly in the first two years of life. Optimal feeding practices are essential for reducing infant mortality and morbidity, promoting healthy growth and development, and laying the foundation for lifelong health. According to the World Health Organization (WHO), inappropriate feeding practices are one of the major causes of under nutrition, which contributes to more than one-third of child deaths globally [6].

In many parts of the world, including developing countries like India, misconceptions and cultural beliefs often influence infant feeding and weaning practices. Despite global recommendations for exclusive breastfeeding for the first six months followed by appropriate complementary feeding, there is a wide gap between recommended practices and actual practices followed by mothers. This can be attributed to a lack of knowledge, improper attitudes, and inadequate support systems for mothers.

Mothers play a central role in determining the health of their children, particularly during infancy. Therefore, understanding mothers' knowledge and attitudes regarding infant feeding and weaning practices is essential to identify gaps and implement targeted health education programs. Early intervention and awareness among mothers can prevent nutritional deficiencies, infections, and growth retardation in infants.

Despite numerous health initiatives, the prevalence of malnutrition and improper feeding practices remains high in certain communities, indicating a need for further research and educational outreach.

Thus, the present study is essential to:

- Assess the level of knowledge and attitude of mothers, identify misconceptions or harmful practices.
- Provide a basis for designing community-based health education and nursing interventions.
- Promote safe, effective, and culturally acceptable infant feeding and weaning methods.

By conducting rigorous research on breastfeeding and weaning practices, we can gain a better understanding of the factors that influence these practices and develop effective interventions to promote and support optimal infant feeding. This is why the researchers have intended to do the a study based on mothers' knowledge and attitude on breastfeeding as well as weaning practices which will ultimately lead to healthier babies and mothers.

Objectives of the study

1) To assess mothers' knowledge regarding infant feeding and weaning practices.
2) To determine mothers' attitude regarding infant feeding and weaning practices.
3) To identify relationship between mothers' knowledge and attitude regarding infant feeding and weaning practices.

3. Materials & Methods

Research approach - Quantitative research approach.

Research design - Descriptive survey research design.

Population - Primipara mothers.

Sample - Primipara mothers in selected urban communities, West Bengal.

Sample size - 100 primipara mothers in selected urban communities, West Bengal.

Inclusion criteria

- Primipara mothers who were present at the time of data collection.
- Primipara mothers who were willing to participate in the study.

Exclusion criteria

- Multipara mothers.
- Primipara who were mentally unstable.

Sampling technique - Non – probability convenient sampling technique.

Setting -
For Pilot Study – Lohapul urban community, West Bengal
For Final Study – Polenite, Mahishbathan, Thakdari urban communities, West Bengal

Data collection tool and technique

Table 1: Data collection tools and techniques

Tool No.	Tool Name	Variables to be measured	Techniques
I	Semi structured Demographic Profile	Demographic characteristics	Interviewing
II	Structured Knowledge on infant feeding & weaning practices	Knowledge	Interviewing
III	Attitude Scale on infant feeding & weaning practices	Attitude	Interviewing

Validity of the tool
Tools were validated by 5 experts where 100% agreement were found in Tool I and Tool II and Tool III.

Pilot study
Pilot study was conducted on 20 primipara mothers at Lohapul urban community, West Bengal on 02/08/2024. Investigators were satisfied with the feasibility and practicability of the study. All items were clear to the subjects.

Procedure for final study data collection
The data for final study was collected from 10/09/2024 to 27/09/2024 at Polenite, Mahishbathan, Thakdari urban communities of West Bengal from 100 samples by using convenience sampling technique.

Following steps were undertaken for data collection –

- Administrative permissions were taken.
- Samples were selected based on inclusion and exclusion criteria.
- Self – introduction was made.
- The objectives of the study were clearly stated to participants.
- Anonymity and confidentiality of their responses were assured.
- Informed consent was taken from them.
- Data collection was done. It took nearly 3 – 4 hours per day to collect data.
- After data collection was done, gratitude was conveyed to the participants.

Statistical Analysis: Descriptive and inferential statistics was used for the study.

4. Result

Section I: Findings related to the demographic characteristics of the senior citizens

This section describes the general characteristics of senior citizens which include Age, educational status, marital status, occupation, type of family, family economic status, dietary habit, religion, type of delivery and source of knowledge. The characteristics of the subjects are described in terms of frequency and percentage.

Table 2: Frequency and percentage distribution of the sample according to age and educational qualification, N = 100

Sample Characteristics	Frequency	Percentage (%)
Age (in years)		
17 – 20	17	17
21- 24	23	23
25- 28	35	35
Above 28	25	25
Education		
No formal education	14	14
Primary level	24	24
Secondary level	33	33
Higher secondary level	25	25
Graduation & above	04	04

Data represented in table 2 shows that the maximum percentage of the sample that is 35% (35) belonged to the age group of 25 to 28 years, followed by 25% (25) within the age group of more than 28 years, 23% (23) and 17% (17) of the primipara mothers belonged to the age group of 21 to 24 years and 17 – 20 years respectively.

Data depicted in this table showed that maximum participants which is 33% (33) had secondary level of education, 25% (25) of the participants completed higher secondary education, 24% (24) had received primary level of education, 14% (14) of them never received any formal education and remaining 4% (04) were graduates.

Table 3: Frequency and percentage distribution of the sample according to the marital status, N = 100

Sample Characteristics	Frequency	Percentage (%)
Marital status		
Married	97	97
Widow	02	02
Divorce	01	01

Table 3 depicts that among the respondents 97% (97) were married, 2% (02) were widows followed by 1% (01) of the respondents that were divorcee.

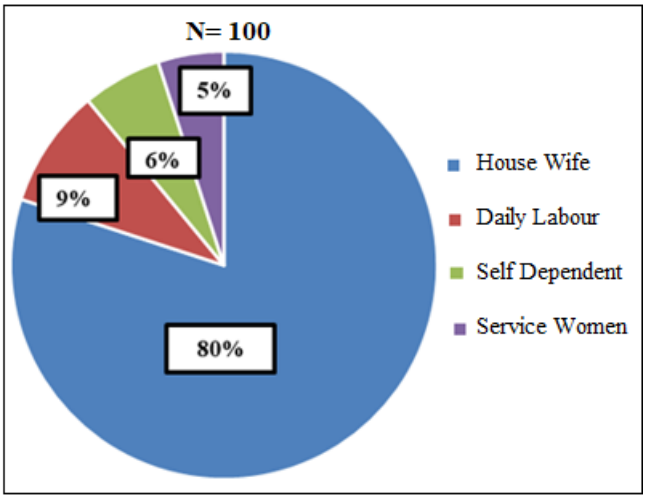

Figure 2: Frequency and percentage distribution according to the occupational status of the subjects

It was revealed in figure 2 that most of the participants that is 80% (80), were home makers. Followed by 9% (09) who had been working as daily labors, 6% (06) of the respondents were self-dependent and rest of them that is 5% (05) were service women.

Table 4: Frequency and percentage distribution of the sample according to type of family, N = 100

Sample Characteristics	Frequency	Percentage (%)
Type of Family		
Nuclear	80	80
Joint	19	19
Extended	01	01

In table 4 it was evident that, 80% (80) of the participants belonged to nuclear families, 19% (19) were from joint families and only 1% (01) of the primipara mothers were from extended families.

Table 5: Frequency and percentage distribution of the sample according to monthly family income, N = 100

Sample Characteristics	Frequency	Percentage (%)
Monthly Family Income		
Rs. 5000/-10000/-	15	15
Rs. 10000/-15000/-	39	39
Rs. 15000/-20000/-	21	21
Above Rs. 20000/-	25	25

Table 5 depicts that, majority of the respondents 39% (39) had the monthly family income between Rs. 10000/ - 15000/-, 25% (25) of the participants had the monthly family income of more than Rs. 20000/-, followed by 21% (21) and 15% (15)

of the sample with the monthly family income of Rs. 15000/- 20000/- and Rs. 5000/-10000/- respectively.

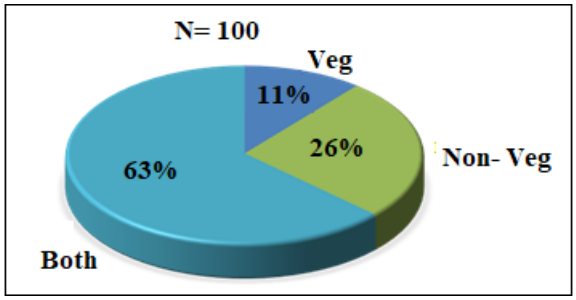

Figure 3: Frequency and percentage distribution of sample based on dietary habit

Figure 3 has shown that, 63% (63) of the participants had dietary habit which included both veg and non- veg diet, 26% (26) of them was non – vegetarian and 11% (11) were vegetarian.

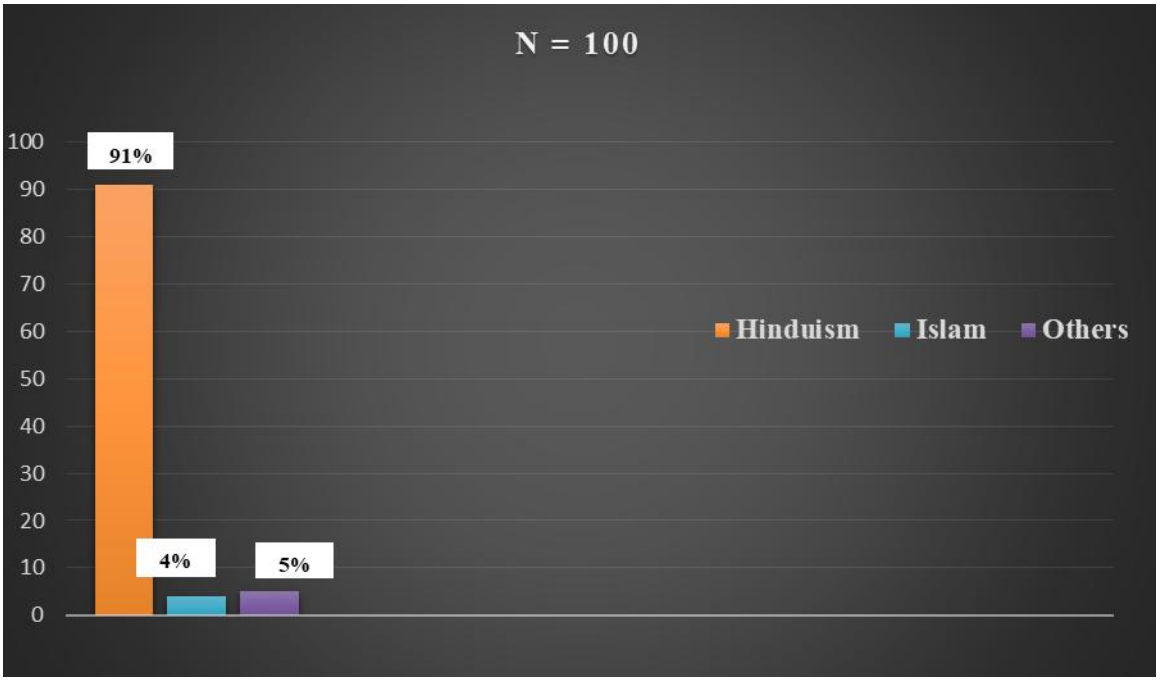

Figure 4: Frequency and percentage distribution of sample based on religion

Figure 4 depicts that, 91% (91) of the primipara mothers were Hindu, followed by 5% (05) respondents belonged to other category of religion and rest of the 4% (04) Muslim.

Table 6: Frequency and percentage distribution of sample according to type of delivery, N = 100

Sample characteristics	Frequency	Percentage (%)
Type of Delivery		
Normal delivery	13	13
Cesarean delivery	25	25
Vacuum delivery	33	33
Forceps delivery	29	29

In table 6 it was evident that, majority of the participants 33% (33) had vacuum delivery, 29% (29) had forceps delivery, and followed by 25% (25) and 13% (13) had cesarean delivery and normal delivery respectively.

Table 7: Frequency and percentage distribution of sample according to the source of knowledge, N = 100

Sample characteristics	Frequency	Percentage (%)
Source of knowledge		
Health workers	53	53
Friend and family	21	21
Social media	17	17
Mass media	9	9

Table 7 reveals that, 53% (53) mothers' knowledge source was health workers, 21% (21) of the respondents' knowledge source were from family and friends, 17% (17) of the participants knew from social media, and rest of the 9% (9) of the respondents came to know from mass media.

Section II: Findings related to the knowledge level of the primipara mothers regarding infant feeding and weaning practices

This section determines the knowledge level of the primipara mothers regarding infant feeding and weaning practices.

Table 8: Range of score, Mean, Median, and Standard Deviation (SD) of the primipara mothers according to the knowledge level, N = 100

Variable	Range of Score	Mean	Median	SD
Knowledge	0- 17	9.53	10	2

Table 8 reveals that, range of score for knowledge level of the primipara mothers was 00 – 17, mean was 9.53 and median was 10. SD was 2 indicating symmetrical distribution of knowledge score.

Table 9: Frequency and percentage distribution of sample according to the knowledge level, N = 100

Knowledge Level	Range of Score	Frequency	Percentage (%)
Good	≥ 12	15	15
Average	9- 11	47	47
Poor	≤ 8	38	38

Table 9 depicts that majority of the respondents with 47% (47) had average knowledge score ranging from 9 – 11, 38% (38) of the participants reported to have poor knowledge score ranging ≤ 8 and 15% (15) had good knowledge score ranging ≥ 12.

Section III: Findings related to the determination of attitude of the primipara mothers regarding infant feeding and weaning practices

This section deals with determining attitude of the primipara mothers regarding infant feeding and weaning practices.

Table 10: Range of score, Mean, Median, and Standard Deviation (SD) of the primipara mothers according to the level of attitude, N = 100

Variable	Range of Score	Mean	Median	SD
Attitude	21- 105	72.08	73	17.11

Table 10 reveals that, range of score for attitude level of the primipara mothers was 21 – 105, with mean – 72.08, median – 73. SD was 17.11 indicating symmetrical distribution of attitude score.

Table 11: Frequency and percentage distribution of sample according to the level of attitude, N = 100

Attitude Level	Range of Score	Frequency	Percentage (%)
Good	≥90	17	17
Average	57- 89	61	61
Poor	≤56	22	22

Table 11 has been depicted that majority of the respondents with 61% (61) had average attitude score ranging from 57 – 89, 22% (22) of the participants reported to have poor attitude score ranging ≤ 56 and 17% (17) had good attitude score ranging ≥ 90.

Section IV: Findings on relationship between level of knowledge and attitude of primipara mothers regarding infant feeding & weaning practices

This section explains relationship between the level of knowledge and attitude of primipara mothers regarding infant feeding & weaning practices by using inferential statistics.

Table 12: Correlation between the level of knowledge and attitude of primipara mothers regarding infant feeding & weaning practices, N = 100

Variable	'r'	't'
Knowledge and Attitude	0.62	36.53***

't' df (99) = 3.174, p<0.001

Table 12 reveals that there was a moderate positive and linear correlation (0.62) between knowledge and attitude which was also found significant from 't' value of 36.53 at 0.001 level of significance. Therefore, it can be interpreted that, primipara mothers with good knowledge score also had an increased level of attitude regarding infant feeding and weaning practices.

5. Discussion

Major findings related to knowledge & attitude level of the primipara mothers regarding infant feeding and weaning practices

- Majority of the respondents with 47% (47) had average knowledge score ranging from 9 – 11, 38% (38) of the participants reported to have poor knowledge score ranging < 8 and 15% (15) had good knowledge score ranging > 12.
- Majority of the respondents with 61% (61) had average attitude score ranging from 57 – 89, 22% (22) of the participants reported to have poor attitude score ranging < 56 and 17% (17) had good attitude score ranging > 90.

Major findings related to the relationship between knowledge and attitude level of the primipara mothers regarding infant feeding and weaning practices

- A moderate positive and linear correlation (0.62) between knowledge and attitude had been established which was also found significant from 't' value of 36.53 at 0.001 level of significance. Therefore, it can be interpreted that, primipara mothers with good knowledge score also had an increased level of attitude regarding infant feeding and weaning practices.

Discussion of the major findings in relation to other studies are presented below -

Findings related to demographic characteristics of the primipara mothers

The findings of the present study revealed that majority of the respondents, 35% (35) belonged to the age group of 25 to 28 years.

Ibrahim, H. M., Jumaah, L. F., Khalaf, S. A., & Mustafa, M. A. (2021) conducted a descriptive cross-sectional study on the knowledge and practice of breastfeeding and weaning in mothers. The findings revealed that 69% of participants belonged to the age group of 25 – 30 years, with a mean age of 28 ± 3 years which were consistent with the present study findings [7].

The findings of the present study showed that majority of the participants 33% (33) had secondary level of education.

The findings of the present study were consistent with the findings of the descriptive study on effectiveness of STP

regarding breastfeeding and importance proper weaning among primipara mothers by **Paul, M. M. (2022)** which showed that 52% of participants completed secondary level of education, corresponding with the present study [8].

The findings of the present study revealed that 53% (53) of the primipara mothers' knowledge source was from the health care workers.

Maheshwari, L., Mary, A. S., & Devi, L. D. (2023) conducted a descriptive longitudinal study on effect of Structured Teaching Program on knowledge and attitude regarding breastfeeding and weaning practices among post-natal mothers. The findings were in consistence with the present study findings that was 76% of participants' knowledge developed from the health care workers. [9]

Findings related to the relationship between knowledge and attitude level of the primipara mothers regarding infant feeding and weaning practices

A moderate positive and linear correlation (0.62) between knowledge and attitude had been established which was also found significant from 't' value of 36.53 at 0.001 level of significance. Therefore, it can be interpreted that, primipara mothers with good knowledge score also had an increased level of attitude regarding infant feeding and weaning practices.

The findings were somehow consistent with the findings of the descriptive study on the knowledge and attitude of breastfeeding and weaning among Bangladeshi Rural mothers by **Das, D. K., & Ahmed, S. (2020)** which founded that there is a strong positive correlation between knowledge and attitude level (r = 0.88). [10]

6. Conclusion

From the present study, it was found that majority of the primipara mothers belonged to the age group 25 to 28 years. Among 100 participants, majority of the participants 33% (33) had secondary level of education. It was revealed in the study that majority of the respondents' knowledge (53%) were from the health care workers. Present study also depicted that majority of the primipara mothers had average knowledge and attitude level regarding infant feeding and weaning practices. And a moderate positive and linear correlation (0.62) between knowledge and attitude had been established.

Declaration by Authors

Ethical Approval: Approved

Acknowledgement: None

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

References

[1] Toller B. (2021). *The online Anglo-Saxon dictionary.* Retrieved from https://bosworthtoller.com/35085

[2] Grueger B., Society C. P., & Committee C. P. (2013). *Weaning from the breast. Paediatrics and Child Health*, 18(4), 210–216. https://doi.org/10.1093/pch/18.4.210

[3] Brown K. H., Engle-Stone R., Krebs N. F., & Peerson J. M. (2009). *Dietary intervention strategies to enhance zinc nutrition: Promotion and support of breastfeeding for infants and young children. Food and Nutrition Bulletin*, 30(1), S144–S171. https://doi.org/10.1177/15648265090301S108

[4] Mohammed, E. S., Ghazawy, E. R., & Hassan, E. E. (2014). *Knowledge, attitude, and practices of breastfeeding and weaning among mothers of children up to 2 years old in a rural area in El-Minia Governorate, Egypt. Journal of Family Medicine and Primary Care*, 3(2), 136–140. https://doi.org/10.4103/2249-4863.137639

[5] World Health Organization. (2021). *Infant and young child feeding.* https://www.who.int/health-topics/infant-feeding

[6] Al-Gashanin, M. A., & Ghazwani, E. Y. (2022). *Knowledge, attitude, and practice of weaning among mothers in Najran region, Saudi Arabia, 2021. Journal of Nutrition and Metabolism*, 2022, 6073878. https://doi.org/10.1155/2022/6073878

[7] Ibrahim, H. M., Jumaah, L. F., Khalaf, S. A., & Mustafa, M. A. (2021). *Knowledge and practice of breastfeeding and weaning in mothers in Samarra City, Iraq. Biochemical & Cellular Archives*, 21, 45–50.

[8] Paul, M. M. (2022). *A study to assess the effectiveness of a structured teaching programme on knowledge and attitude regarding breastfeeding and weaning practices among postnatal mothers in Channasandra Urban, Bangalore City.* https://doi.org/10.13140/RG.2.2.17893.55528

[9] Maheshwari, L., Mary, A. S., & Devi, L. D. (2023). *Effect of a structured teaching program on knowledge and attitude regarding breastfeeding and weaning practices among postnatal mothers. Asian Journal of Nursing Education and Research*, 13(2), 130–134. https://doi.org/10.52711/2349-2996.2023.00027

[10] Das, D. K., & Ahmed, S. (2020). *Knowledge and attitude of the Bangladeshi rural mothers regarding breastfeeding and weaning. The Indian Journal of Pediatrics*, 62, 213–217. https://doi.org/10.1007/BF02755084