

Assess the Knowledge regarding Weaning among Mothers of Infant in selected Urban Community at Jhansi with a View to Develop an Information Booklet

Sujata Poonia¹, Nishtha Thakur², Arpita Phillips Jacob³

¹Smt. Vidyawati College of Nursing, Goramachhiya, Kanpur Road, Jhansi, U.P., India
Email: [sujatapoonia1994\[at\]gmail.com](mailto:sujatapoonia1994[at]gmail.com)

²Smt. Vidyawati College of Nursing, Goramachhiya, Kanpur Road, Jhansi, U.P., India
Email: [nishthathakur2593\[at\]gmail.com](mailto:nishthathakur2593[at]gmail.com)

³Smt. Vidyawati College of Nursing, Goramachhiya, Kanpur Road, Jhansi, U.P., India
Email: [arpitaphillips\[at\]gmail.com](mailto:arpitaphillips[at]gmail.com)

Abstract: Weaning is a significant phase in an infant's development, representing the transition from exclusive breastfeeding or formula feeding to the introduction of solid foods. Proper knowledge about weaning practices is crucial for mothers to ensure their infants receive adequate nutrition and grow healthily. Despite its importance, there often exists a gap in mothers' understanding of appropriate weaning practices, leading to potential nutritional deficiencies and health issues in infants. This study aims to evaluate the knowledge of weaning practices among mothers of infants in a selected urban community at Jhansi, with the goal of developing an informative booklet on weaning to address these knowledge gaps. This study aims to evaluate the knowledge regarding weaning practices among mothers of infants in a selected urban community at Jhansi, with the goal of developing an informative booklet on weaning. A descriptive, cross-sectional study was conducted with mothers of infants aged 6-12 months in an urban community at Jhansi. Participants were selected using simple random sampling. Data were collected through a structured questionnaire covering demographic information and knowledge about weaning practices. Descriptive and inferential statistics were applied to analyses the data and identify significant knowledge gaps. The study revealed that many mothers had inadequate knowledge about appropriate weaning practices. Common misconceptions included the timing of introducing solid foods and the types of suitable foods for infants. Most mothers were unaware of the recommended nutritional requirements during the weaning period. The findings underscore the need for targeted educational interventions to improve weaning knowledge among mothers in the selected community. Based on the identified gaps, an information booklet was developed to provide comprehensive guidance on weaning practices. This resource aims to support mothers in making informed decisions about their infants' nutrition, ultimately promoting better health outcomes.

Keywords: Weaning, infant, nutrition, misconception, information booklet

1. Introduction

The origins of the word 'weaning' are traceable to the Anglo-Saxon expression "wenian" meaning "to become accustomed to something different" [1]. Weaning from breastfeeding is considered a natural and inevitable stage in the development of human child. Weaning is a complex process involving adjustment to a range of nutritional, immunological, biochemical, and psychological changes. Furthermore, cellular growth of essential organs is completed during this period, as well as feeding provides time for meeting the emotional needs of children (Lopes et al., 2017). It is safe and clean and contains antibodies which help protect against many common childhood illnesses. Breast milk provides all the energy and nutrients that the infant needs for the first months of life, and it continues to provide up to half or more of a child's nutritional needs during the second half of the first year and up to one-third during the second year of life [2]. Breastfeeding without any supplementation (infant formula, water, and solid foods) is recommended for the first six months after birth [3]. 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 while also providing other sources of nutrition, usually beginning at approximately six months of age. At this time, weaning foods started according to the child's ability, feed are: LIQUID: soup of vegetables, pulses, rice water, and fruit juices. SEMISOLIDS: Mashed potato, pulses, boiled vegetables, mashed banana, soft, cooked rice, and fish. SOLID: Cooked rice, chapati, idli, bread, biscuits, banana, and fruits. Soft puréed meats may be introduced slowly. From a strictly nutritional perspective, weaning is the gradual process of transitioning infants from mother's milk to complementary foods and, ultimately, to an older child's diet. Complete weaning, or complete cessation of breastfeeding, ideally should be a gradual process accomplished over a long period preferably baby-led.[4]

2. Literature Survey

Kamel, L., Sabry, H., Ismail, M., & Nasr, G. (2020) conducted an exploratory study on "Pattern of infants' feeding and weaning in Suez Governorate, Egypt". Total participants were 333 mother-infant pairs at two PHC centers from April 2017 to June 2018 used structured interviews to gather data during vaccination sessions. Most infants were hospital-born, with common prelacteal feeding

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and rare exclusive breastfeeding. Artificial feeding started early, especially in rural areas. Urban infants (50.9%) had better dietary diversity than rural ones (25.9%). Meal frequency was higher in urban (51.9%) than rural (29.6%) infants. Over 85% of mothers sought more knowledge, mainly from PHC centers and the study found breastfeeding was common, but there were misconceptions about introducing solid foods. Many mothers lacked knowledge about nutritional needs during weaning, resulting in poor food choices. It recommended targeted health education programs to address these gaps [5].

Tyagi Anshika, Rachna and Kaur Kiran. (2023) conducted a descriptive study to assess the knowledge and attitude regarding weaning among mothers of infants. The total participant were 80 mothers of infants (4-12 months) using non-probability purposive sampling, found no significant association between knowledge and attitude regarding weaning ($\chi^2 = 0.445$, $p > 0.005$). The chi-square test determined that the mean value of knowledge was higher compared to attitude, with no statistically significant association [6].

Mukesh Nandan, Shahin, Saumya Kumari. (2024) Conducted a descriptive Study on Assessment of Maternal Knowledge and Prevailing Weaning Practices among Women in Urban Health Training Centre Data from 200 samples over six months was safely collected via interviews using a pre-tested questionnaire and analyzed with Epi Info version 7. Among the studied population, 85% had good knowledge about weaning practices. Educational status significantly correlated with awareness ($p < 0.05$) [7].

3. Method and approach

A descriptive, cross-sectional study was conducted with mothers of infants aged 6-12 months in an urban community at Jhansi. Participants were selected using simple random sampling. Data were collected through a structured questionnaire that included sections on demographic information and knowledge about weaning practices.

Study Design: The study employed a descriptive, cross-sectional design to assess the knowledge of mothers regarding weaning practices.

Setting and Population: The study was conducted in an urban community in Jhansi. The population included mothers of infants aged 6-12 months.

Sample Size and Sampling Technique: A total of (specify the number) mothers were selected using simple random sampling to ensure a representative sample of the urban community.

Data Collection Tool: A structured questionnaire was used to gather data. The questionnaire comprised sections specific knowledge related to weaning (e.g., timing of weaning, types of foods, nutritional requirements).

Data Collection Procedure: Data were collected through pre-test and post-test. The questionnaire was administered to each participant, and responses were recorded for analysis.

Data Analysis: Descriptive statistics (frequencies, percentages) were used to summarize knowledge levels were mothers regarding weaning to identify significant knowledge gaps and misconceptions about weaning practices.

4. Result and discussion

The data analyzed shows that intervention greatly improved the knowledge of mothers regarding weaning practices. Before the intervention, only 3 mothers scored in the "EXCELLENT" category, but this number surged to 25 post-interventions. The mothers' understanding of weaning foods and nutritional needs showed a marked increase, reflecting the effectiveness of the health education programs. Additionally, no mothers remained in the "POOR" knowledge category after the intervention, indicating that all participants had at least a basic understanding of weaning practices.

Despite the overall improvement, some gaps and misconceptions persisted. Initially, 25 mothers had "GOOD" knowledge, but after intervention, 4 mothers still fell into this category, suggesting that further education is needed to address specific areas of misunderstanding. Moreover, even with improved knowledge scores, practical application and retention of the weaning information over a longer period were not assessed, leaving room for potential future research on the sustainability of these educational interventions. The study revealed that many mothers had average knowledge about appropriate weaning practices. Common misconceptions included the timing of introducing solid foods and the types of suitable foods for infants. Most mothers were unaware of the recommended nutritional requirements during the weaning period.

Knowledge Assessment:

- **Poor Knowledge (Score 0-9):** In the pre-test phase, 2 mothers scored in this category, indicating very limited knowledge. Post-intervention, no mothers remained in this category.
- **Good Knowledge (Score 10-19):** Initially, 25 mothers were in this category, reflecting some understanding but with notable gaps. Post-intervention, this number decreased to 4.
- **Excellent Knowledge (Score 20-27):** The number of mothers scoring in this category increased dramatically from 3 in the pre-test to 25 in the post-test, demonstrating significant knowledge improvement.

Table 1.1: Pre-test knowledge score

Level of knowledge	Frequency (n)	Percentage (%)
Poor knowledge	2	7%
Good knowledge	25	83%
Excellent knowledge	3	10%

According to the data presented in Table 1.1, the majority of mothers (83%) had good knowledge regarding weaning, with 25 individuals falling into this category. Additionally, 10% of mothers demonstrated excellent knowledge, represented by 3 individuals. Conversely, 7% of mothers, or 2 individuals, were found to have poor knowledge regarding weaning practices.

Table 1.2: Post-test knowledge score

Level of knowledge	Frequency (n)	Percentage (%)
Poor knowledge	0	0%
Good knowledge	4	13%
Excellent knowledge	26	87%

According to the data presented in table 1.2, The majority 87% of mothers 26 individuals, demonstrated excellent knowledge regarding weaning practices. Additionally, 13% of mothers, represented by 4 individuals, had good knowledge. Notably, there were no individuals with poor knowledge, resulting in a 0% representation in this category.

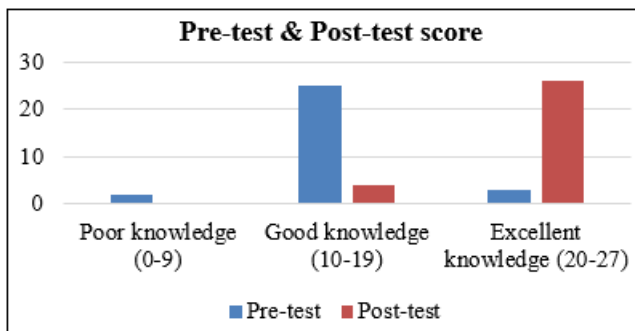


Figure 1: Diagrammatic representation of pre-test & post-test score

The Figure 1 illustrates a comparative analysis of performance scores categorized into three levels: Poor (0 to 9), Good (10 to 19), and Excellent (20 to 27). The blue bars (Series 1) represent pre-test scores, while the orange bars (Series 2) indicate post-test scores. In the Poor category, the number of participants was relatively low in both the pre-test and post-test, demonstrating minimal change. However, in the good category, the pre-test scores were significantly higher than the post-test scores, indicating that many participants initially performed at a moderate level. Conversely, in the Excellent category, the post-test scores showed a substantial increase compared to the pre-test, suggesting notable improvement in performance. This trend highlights the effectiveness of the intervention or training program, as more participants moved from lower to higher performance levels.

5. Discussion

The present study assessed the knowledge of mothers regarding weaning practices and identified significant gaps. The findings indicated that before the intervention, only 10% (3) mothers demonstrated excellent knowledge, 83% (25) had good knowledge, and 7% (2) had poor knowledge regarding weaning. In post-intervention results showed a significant improvement, with 87% (26) mothers demonstrating excellent knowledge and 13% (4) having good knowledge, while no mothers fell into the poor knowledge category.

Bandbe Shrushti & Fernandis Ashley (2021), conducted a study to assess the level of knowledge regarding importance of weaning among primi mothers at Bhelsai, Maharashtra, the study found that 76.66% demonstrated excellent knowledge, 20% exhibited good knowledge, and 3.33% had poor knowledge regarding the importance of weaning [8].

Kumar Komal, Anand Keshav, Tiwari Komal & Devi Khundrakpam Sarita (2023), conducted a descriptive study to assess the level of knowledge and practice regarding weaning among mothers of children between 6 months to 2 years at Nahauna, Sasaram. The demographic result shows that the Majority 2% (1) Participants their knowledge level is below average, 68% (34) participants their knowledge level is average and 30% (15) participants are above average and in another hand majority 12% (6) Participants their Practice level is below average, 78% (39) participants their knowledge level is average and 10% (5) participants are above average [9].

6. Future Scope

Further studies could explore long-term impacts of weaning education on children's health and development, providing a longitudinal perspective on the benefits of such interventions. Additionally, similar educational programs can be tailored and implemented in diverse geographical and socio-economic settings to validate the universality of the findings.

Moreover, the integration of digital tools and resources in weaning education could be examined, assessing the efficacy of online platforms and applications in disseminating knowledge. Interdisciplinary collaborations between healthcare professionals, educators, and technology developers could lead to innovative solutions that make weaning education more accessible and engaging for mothers.

Finally, future research could delve into the specific components of the educational intervention that were most effective, offering a more refined understanding of what works best. This could lead to the development of a standardized weaning education curriculum that can be adopted widely, ensuring that all mothers receive the support and information necessary to make informed decisions about weaning practices.

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among Women.

Author's Profile

Ms. Nishtha Thakur received the degree of B.Sc. Nursing from IGMC, Shimla, Himachal Pradesh in 2014. She received her degree of M.Sc. Nursing (Psychiatry Nursing) from Amity University Haryana, India in 2018. In August 2018 she joined Nightingale Institute of Nursing, Noida in the post of Nursing lecturer. She worked with Nightingale Institute of Nursing, Noida till November, 2022 and relieved from there on the post of Assistant Professor. In the month of November 2022, she joined Amity College of Nursing, Gurugram as an Assistant Professor-I (Mental Health Nursing Department) in ACON, AUH. She has given her duties there till January, 2024. Right now, she is working as Assistant Professor in Mental Health Department at Smt. Vidyawati college of Nursing, Jhansi w.e.f. 11. June. 2024.

Ms. Sujata Poonia received the degree of B.Sc. Nursing from Annapurna medical training Institute, Sikar, Rajasthan in 2016. She received her degree of M.Sc. Nursing (Child Health Nursing) From Rajasthan university of health science College of Nursing, Jaipur in 2021. Right now, she is Working as Assistant Professor in Child health Nursing at Smt. Vidyawati College of Nursing, Jhansi w.e.f. 9. September. 2021.

Ms. Arpita Phillips Jacob received the degree of B.Sc. Nursing from King George Medical University, Lucknow, U.P in 2019. She received her degree of M.Sc. Nursing (Medical Surgical Nursing) from Era College of Nursing, Lucknow, U.P in 2021. In February 2022 she joined Era College of Nursing, Lucknow in the post of Nursing Lecturer. She worked at Era College of Nursing till March 2024. Right now, she joined Smt. Vidyawati College of Nursing, Jhansi w.e.f. 1 April 2024.