

Knowledge, Attitude and Practices Regarding Breastfeeding and Weaning Among Mothers of Infants in Punjab Rangers Teaching Hospital, Lahore

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ABSTRACT

Objective: To assess the knowledge, attitudes, and practices (KAP) regarding breastfeeding and weaning among mothers of infants attending the outpatient Department of Pediatric Medicine at Punjab Rangers Teaching Hospital, Lahore.

Methodology: This observational cross-sectional study was conducted from January to April 2026 at Punjab Rangers Teaching Hospital, Lahore. A total of 237 mothers of infants aged one month to one year were enrolled through non-probability purposive sampling. Data were collected using a validated structured questionnaire comprising demographic characteristics and KAP domains related to breastfeeding and weaning. Responses were categorized as adequate/inadequate knowledge, positive/negative attitude, and good/poor practice. Data were analyzed using SPSS version 25.0, and findings were expressed as frequencies and percentages.

Results: Among the 237 participants, 53.6% of infants were female, while most mothers (35.4%) were aged 25–29 years. Rural residents constituted 57.4% of the study population. Breast milk was the primary source of nutrition from birth in 35.0% of infants, whereas 38.8% received formula milk. Adequate knowledge regarding breastfeeding and weaning was observed in the majority of mothers. However, only half demonstrated a positive attitude toward breastfeeding, and most mothers exhibited poor breastfeeding practices (71.3%). Similarly, although 78.9% had adequate knowledge of weaning, negative attitudes and poor weaning practices predominated, highlighting a substantial gap between knowledge and actual infant-feeding behaviors.

Conclusion: Mothers of infants demonstrated satisfactory knowledge regarding breastfeeding and weaning; however, this knowledge was not reflected in their attitudes and practices. Targeted maternal education, effective counseling, and behavior change interventions are essential to bridge the knowledge–practice gap and promote optimal infant feeding practices, thereby improving child health outcomes.

Keywords: Breastfeeding, Weaning Complementary feeding, Knowledge Practice.

Introduction

All around the world, progress has been made to improve the nutritional status of people, but still, malnutrition in children remains a big challenge. Each year, around 10 million children die under the age of 5 years. About 22.2%, 7.5%, and 5.6% of children are stunted, wasted, and overweight, respectively. These issues can increase the morbidity and mortality in children if not addressed properly. Malnutrition accounts for more than 50% of these deaths, which could be prevented by adequate health systems to educate mothers and promote appropriate feeding and weaning practices for infants and young children.¹ According to a study conducted in Pakistan, 48% of mothers gave breast milk to their babies, 20% gave formula milk, and 32% gave both. 90% of mothers knew weaning, and in 56%, children's solids were introduced at 6 months of age.²

Good nutrition is essential for the development of proper immune mechanisms, proper development of the brain and other vital organs, and improving a child's activity levels and cognitive functioning. The World Health Organization recommends that infants be exclusively breastfed until 6 months of age, and proper weaning includes the introduction of complementary food that is adequate to address the nutritional requirements of a growing infant at 6 months of age, along with breastfeeding, which should be continued until 2 years of age.³ Breast milk contains everything a newborn child needs, and it should be continued during the entire weaning process in order to provide the best nutrition for the child. Growth during the first year of life is faster than the rest of life; therefore, adequate nutrition is an essential requirement.⁴ Breastfeeding is not only economically beneficial but also provides immunity to

the child. Weaning is the process of the gradual introduction of solid food at the age of 6 months, which can include bananas, porridge, boiled rice, commercially available cereals, etc. Over time, vegetarian and vegan-based weaning has also become popular. Vitamin B12 supplementation is also necessary as its deficiency can lead to anemia, developmental delay, failure to thrive, and neurological symptoms.⁵ A study done in Saudi Arabia revealed that the mean age of weaning was 5.3 months, and literate mothers started weaning earlier than illiterate mothers.⁶

One of the studies conducted in Pakistan with the Pakistan Demographic and Health Survey data summarized that 81% of the mothers between 20 and 34 years of age practiced exclusive breastfeeding for at least six months. It was found that bottle-feeding or other supplemental feeding was detrimental during the first 6 months after birth; hence, exclusive breastfeeding was highly recommended, although it was greatly affected by the social, economic, and demographic factors of the mothers.⁷

This study is important because malnutrition is a widespread problem in Pakistan. Due to a lack of awareness, many misconceptions about feeding and weaning exist among mothers. These are a result of various factors, including the health of both mother and child, cultural norms, and socio-economic and educational backgrounds.³ Maternal and childhood malnutrition is prevalent in low-income regions, where low-quality monotonous diets lack vegetables, fruits, and animal-source foods.⁸ This study aims to explore the cultural beliefs and practices among mothers associated with feeding and weaning.⁹ The above-mentioned studies have shown variability in the feeding methods, the age at which weaning was started, and the foods that were given. Malnutrition can be prevented by the proper education of mothers. Proper knowledge and awareness of mothers regarding various aspects of feeding and practices during pregnancy and infancy are very important as they are going to influence the health of children.¹⁰

The objective of this study is to assess the knowledge, attitude, and practices of breastfeeding and weaning among mothers of infants presenting in the outpatient department of Pediatric Medicine in Punjab Rangers Teaching Hospital, Lahore.

Methodology

This observational cross-sectional study was conducted in the Department of Pediatric Medicine, Punjab Rangers Teaching Hospital, Lahore, from October 2025- Feb 2026. The sample size was calculated as 237 using the WHO calculator at 81% of the prevalence of mothers who were practicing exclusive breastfeeding for at least

the first six months⁷ when the level of significance was kept at 5%. A non-probability purposive sampling technique was used for recruitment of samples from the infants reporting to the outpatient department of Punjab Rangers Teaching Hospital, Lahore. The inclusion and exclusion criteria for the recruitment of participants were:

Mothers of infants who were willing to participate and signed written consent. Mothers of infants (children from one month up to one year of age) reporting to the OPD Pediatric Department of Rangers Teaching Hospital, Lahore and both male and female children were included in the study

Infants who were known cases of chronic disease, severely ill infants reporting to the OPD of the Pediatric Department, severely ill mothers of infants, e.g., depressive illness, eating disorders, children with congenital abnormalities or any disorders that affect breastfeeding were excluded from the study

- Operational Definitions:
- Exclusive breastfeeding: "The infant received only breast milk and no other nutritional fluids or solids except vitamins, mineral supplements, or medicines (including pre-lacteal feeds and herbal fluids)."¹¹
- Weaning: "It is a complex process of gradual introduction of complementary foods to an infant's diet."⁶

After approval from the ethical committee of Punjab Rangers Teaching Hospital (Reference# PRTHL/ERC/22/2024), 237 patients were included in the study through non-probability purposive sampling. The instrument tool used in the study for data collection was widely accepted and validated, due to which no pilot testing was required.¹² At the start of the questionnaire, the consent form was attached, and it further comprised three main segments. The first part included the demographic factors, which had 10 items. The second and third segments included the knowledge, attitudes, and practices among the mothers of infants regarding breastfeeding and weaning, respectively. Both of these segments comprised 15 items each. Each sub-segment comprised 5 questions. If 3 or more of the 5 questions were answered "correctly", the respondent was labeled as having adequate knowledge, a positive attitude, and good practice. However, if 2 or fewer questions were answered incorrectly, the respondent was labelled as having inadequate knowledge, a negative attitude, and poor practice. Data was collected by administering a questionnaire to each participant by the primary investigator (F.F), who translated each question in the Urdu language to

participants in the study individually and collected the data to overcome the language barrier with the participants.

The data entry and analysis were done using the Statistical Package for Social Sciences (SPSS) version 25.0. Qualitative variables were expressed as frequencies and percentages.

Results

Out of the total infants, 110 were males, while 127 were females. The ages of mothers were between the childbearing age, i.e., 20–40 years. The majority of mothers (35.4%) were between the age group of 25–29 years. Table I illustrates the socio-demographic factors of the mothers of infants included in the study.

The knowledge, attitudes, and practices regarding breastfeeding among the mothers of infants are mentioned in Figure 1. One hundred and forty mothers scored 3–5 correct answers, indicating that the majority of mothers possessed adequate knowledge of breastfeeding. While reviewing the attitudes, it was seen that each half of the mothers had positive and negative attitudes, respectively. Even so, the majority of mothers (71.3%) had bad practices towards breastfeeding, and only 28.6% had good practices.

In regard to weaning, a large number of participants (78.9%) had adequate knowledge of weaning. Whereas the majority of mothers had negative attitudes and possessed bad practices. The figure below demonstrates the knowledge, attitudes, and practices of infants' mothers towards weaning. (Figure 2)

Table I: Sociodemographic characteristics of the participants.

Socio-demographic factors		N (%)
Gender of child	Male	110 (46.4)
	Female	127 (53.6)
Age of mother	20-24 years	60 (25.3)
	25- 29 years	84 (35.4)
	30-34 years	65 (27.4)
	35-40 years	28 (11.8)
Number of children	1-2	87 (36.7)
	3-4	105 (44.3)
	5-6	32 (13.5)
	7-8	13 (5.5)
Place of living	Rural	136 (57.4)
	Urban	92 (38.8)
	Slum	9 (3.8)
Family type	Joint family	135 (57.0)
	Nuclear family	102 (43.0)
Mother Education	No formal education	29 (12.2)
	Primary	85 (35.9)
	Matric	78 (32.9)
	College/ university	45 (19.0)
Medical history (If any?)	Yes	84 (35.4)
	No	153 (64.6)
Milk given to the baby from birth till weaning	Breast milk	83 (35.0)
	Formula milk	92 (38.8)
	Cow milk	62 (26.2)

weaning, but bad attitudes and poor practices towards breastfeeding and weaning, respectively. The previous literature interpreted the factors that influenced the exclusive breastfeeding duration, which was not considered in this study. These factors can greatly

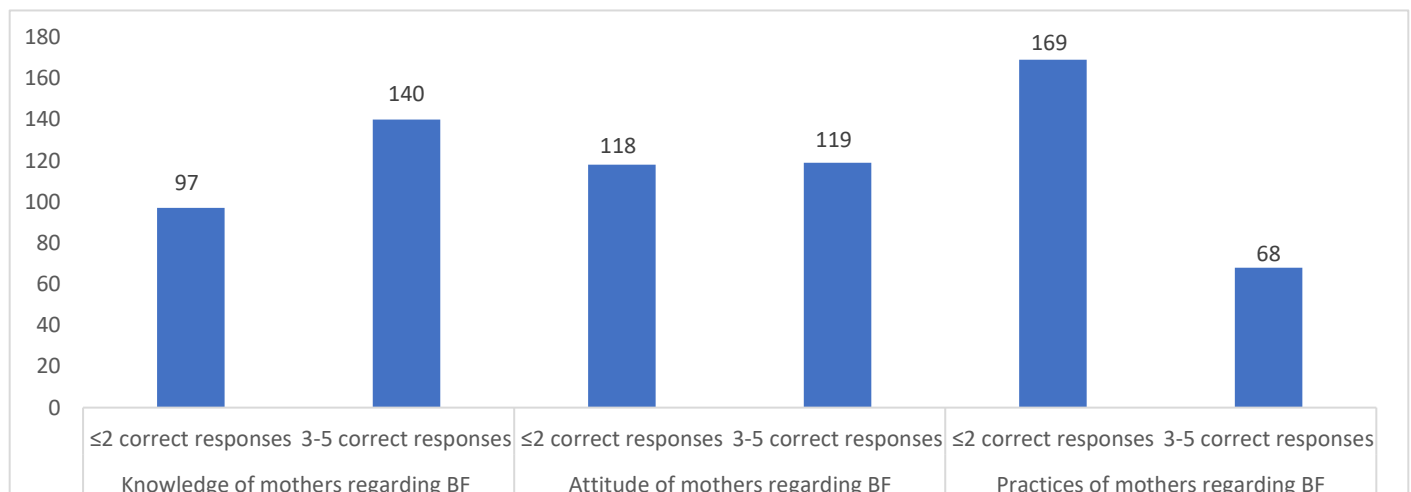


Figure 1. Knowledge, Attitudes, and Practices regarding Breastfeeding among mothers of infants.

Discussion

The findings of this study state that infant mothers had adequate knowledge regarding breastfeeding and

influence the weaning practices of the infants by their mothers.⁷ One of the studies conducted by Albar et. al. in Saudi Arabia emphasized that maternal education and professional advice play a major role in breastfeeding and weaning practices.¹³ In contrast, the present study did not include this aspect of the findings. It is further recommended for future

researchers to work in this area to improve maternal education among mothers reporting to government hospitals.

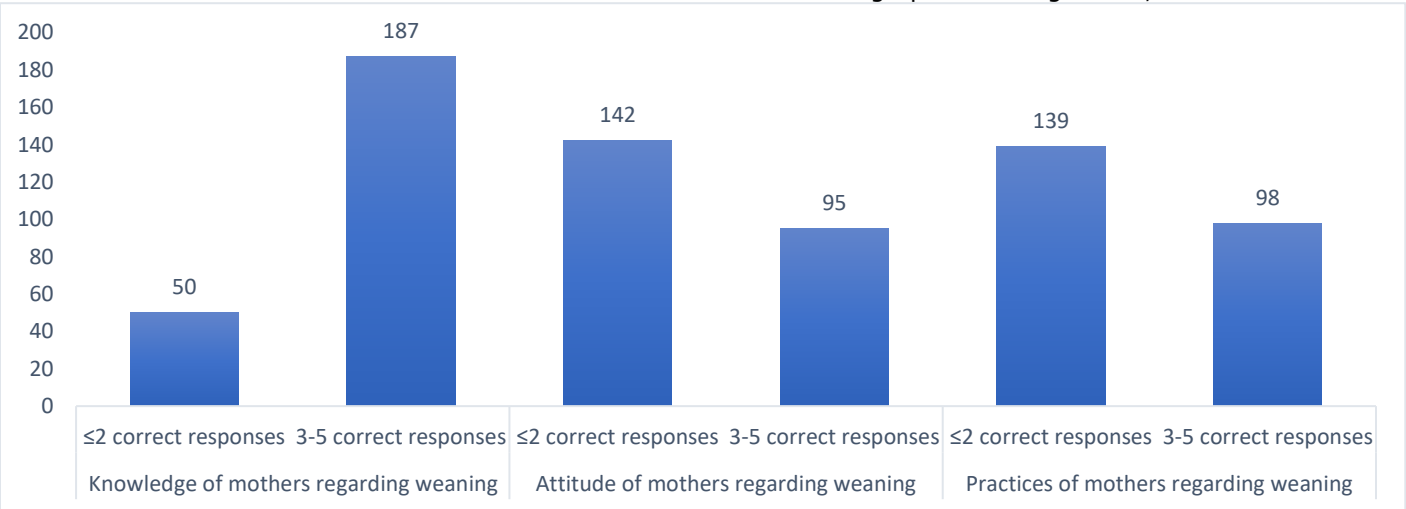
The study conducted in one of the government hospitals of Southern Punjab, Pakistan, concluded that mothers were practicing breastfeeding and weaning in a good manner. Furthermore, this study also highlighted the delayed initiation of breastfeeding.¹⁴ These findings were in contrast to the present study. This difference may be due to the difference in areas. The former study includes the slum areas of Southern Punjab, Pakistan, while in this study, the majority of mothers belonged to Lahore. This awareness needs to be disseminated among all the hospitals for uninterrupted and smooth practices. One more study reported average knowledge and attitudes towards exclusive breastfeeding (EBF), while practices regarding EBF were found to be suboptimal compared to the set standards.¹⁵ The findings regarding the knowledge and practices were found to be in coherence with the results of this study. Another research conducted by Misbah et. al. in Khyber Pakhtunkhwa, Pakistan, summarized that the mothers of infants possessed adequate knowledge. However, they were not practicing as per their knowledge. This identified a knowledge-practices gap, and this finding was similar to our findings. A few more studies concluded that the mothers of infants possessed adequate knowledge but poor practices.^{16, 17} These results were similar to the

working mothers with non-working mothers, highlighting the environmental factors influencing breastfeeding and weaning knowledge and practices. This study did not include this comparison.¹⁸ One more study conducted in Karachi, Pakistan, concluded that the mothers of infants had poor knowledge with decreased breastfeeding duration, which was in contrast to our findings.

Overall, although the mothers possessed enough knowledge, they could not practice as such. This gap between knowledge and practice needs to be addressed. It is further recommended for future researchers to emphasize more on the socio-economic factors related to breastfeeding and weaning practices. Effective communication between mothers and their doctors and counselling sessions can also help bridge this gap, and contribute to better infant growth leading to healthy future.

Conclusion

This study concludes that the mothers of infants possessed adequate knowledge about breastfeeding and weaning. However, the majority of the mothers had bad attitudes and poor practices towards breastfeeding and weaning practices. It is further recommended for future researchers to include larger and more diverse populations, including various sociodemographic backgrounds, to achieve the



findings of this study.

Figure 2. Knowledge, Attitudes, and Practices regarding weaning among mothers of infants.

The study conducted by Khaliq et. al. in Karachi, Pakistan, compared the knowledge and practices of

generalizability of results. It is further suggested to conduct qualitative studies on this topic to get insights into mothers' cultural beliefs and barriers regarding breastfeeding and weaning practices.

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