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Attitude and Practice of Effective Weaning Techniques Among Breastfeeding Mothers Attending General Hospital Koko, Kebbi State, Nigeria.

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Abstract- ***Effective complementary feeding is essential for infant growth, development, and prevention of malnutrition. This study assessed the attitude and practice of effective weaning techniques and identified factors influencing these practices among breastfeeding mothers attending the antenatal clinic at General Hospital Koko, Koko/Besse Local Government Area, Kebbi State, Nigeria. A descriptive cross-sectional design was adopted. The target population comprised 90 eligible breastfeeding mothers with children aged 6–24 months, from which a sample of 73 respondents was obtained using Taro Yamane's formula. A self-structured 25-item questionnaire covering demographic characteristics, attitude, practice, and influencing factors was used for data collection. The instrument was subjected to face and content validity and test-retest reliability, yielding a reliability coefficient of 0.81. Data were analyzed using descriptive statistics with SPSS version 25. All 73 questionnaires were retrieved. Respondents demonstrated a generally positive attitude toward effective weaning techniques, with a grand mean of 3.0. They also reported positive weaning practices, with a grand mean of 3.0, particularly in hygienic preparation of foods, hand hygiene, introduction of complementary foods at six months, and avoidance of harmful foods. Financial status was the most strongly identified influencing factor (mean = 3.3), followed by lack of knowledge and health workers' advice (mean = 3.0 each). The study concludes that although mothers demonstrated favourable attitudes and reported appropriate practices, economic constraints, knowledge gaps, family influence, and other contextual factors may affect effective weaning. Strengthening nutrition education and counselling through antenatal and community-based services is recommended.***

Index Terms - ***Breastfeeding, complementary feeding, effective weaning, maternal attitude, maternal practice, nutrition.***

I. INTRODUCTION

Weaning, more appropriately described as the transition to complementary feeding, is a critical period in infant nutrition because the nutritional requirements of a growing child progressively increase beyond what breast milk alone can provide. The World Health Organization recommends exclusive breastfeeding for the first six months, followed by the introduction of safe, nutritionally adequate, and age-appropriate complementary foods while breastfeeding continues up to two years or beyond. Appropriate feeding during this period supports growth and development and helps reduce the risk of malnutrition and infection.

Weaning, also referred to as complementary feeding, is an important stage in infant growth and development during which foods are gradually introduced alongside breastfeeding. Adequate nutrition during this period is essential for supporting physical growth, brain development, and overall health. The World Health Organization recommends exclusive breastfeeding for the first six months of life, followed by the introduction of safe and nutritionally adequate complementary foods while breastfeeding continues up to two years or beyond (WHO, 2023). Appropriate complementary feeding can help prevent malnutrition, micronutrient deficiencies, growth retardation, and infections among young children.

Globally, inadequate infant and young child feeding practices remain a major public health concern. Poor complementary feeding may increase children's vulnerability to undernutrition, diarrhoeal and

respiratory infections, and impaired cognitive development (UNICEF, 2022). The American Academy of Pediatrics also recommends exclusive breastfeeding for approximately six months, followed by the gradual introduction of complementary foods while breastfeeding continues for at least 12 months (American Academy of Pediatrics [AAP], 2022). However, complementary feeding practices differ considerably across communities because they are influenced by cultural beliefs, maternal attitudes, education, socioeconomic circumstances, availability of food, and family practices (Ilegbusi & Anyadi, 2021).

In Nigeria, inadequate complementary feeding remains a significant concern. Findings from the Nigeria Demographic and Health Survey indicated that only 11% of children aged 6–23 months achieved minimum dietary diversity, while 17% received a minimum acceptable diet (NDHS, 2019). These figures demonstrate gaps in the quality and adequacy of foods provided to young children. UNICEF (2021) also reported a high burden of childhood stunting in Nigeria, indicating the continuing challenge of child malnutrition. The nutritional quality of complementary foods is therefore particularly important because inappropriate feeding during this period may negatively affect children's growth and development.
Complementary feeding practices in Nigeria are influenced by socioeconomic, cultural, educational, and environmental factors. In some communities, mothers rely heavily on traditional foods and methods of preparation. For example, grain-based foods such as pap or gruel are commonly used as complementary foods in some Nigerian communities. Although such foods may be readily available and culturally accepted, their nutritional adequacy depends on their preparation and combination with other foods (Ilegbusi & Anyadi, 2021). Maternal knowledge and education are also important in determining whether recommended complementary feeding practices are adopted.

Evidence from Northern Nigeria demonstrates continuing gaps in mothers' knowledge and practices regarding complementary feeding. Abegunde and Idowu (2022) reported that only 35% of mothers studied in a northern rural community had accurate knowledge of recommended weaning practices, with inadequate knowledge contributing to inappropriate timing of complementary feeding. Similarly, Yohanna et al. (2023) found that although 76.3% of mothers in Plateau State introduced complementary foods at six months, only 47% demonstrated good knowledge of appropriate weaning foods. These findings suggest that appropriate timing of complementary feeding does not necessarily guarantee adequate knowledge about the nutritional quality and preparation of complementary foods.

II. STATEMENT OF THE PROBLEM

Malnutrition among infants and young children remains a serious global public health concern, with inadequate infant and young child feeding practices, particularly inappropriate weaning and complementary feeding, contributing significantly to poor nutritional outcomes. Globally, approximately 45 million children under five are wasted, 148 million are stunted, and 37 million are overweight, reflecting the continuing triple burden of malnutrition (UNICEF, 2023). In addition, only about 44% of children aged 6–23 months receive a minimum acceptable diet, indicating persistent challenges in achieving adequate dietary diversity and feeding frequency during the complementary feeding period (WHO, 2023).

The problem is particularly pronounced in Sub-Saharan Africa, where more than 30% of children under five are affected by stunting and only about one-fifth receive foods that meet minimum dietary diversity requirements (Global Nutrition Report, 2022). Many children depend heavily on starchy staple foods with limited nutritional diversity, increasing their risk of micronutrient deficiencies and other forms of malnutrition (FAO, 2022).

Nigeria continues to experience a substantial burden of childhood malnutrition. Available national data indicate that 37% of children under five are stunted, 7% are wasted, and 22% are underweight (NDHS, 2018; UNICEF, 2021). Complementary feeding practices are also inadequate, as only 11% of children aged 6–23 months achieve minimum dietary diversity

and 17% receive a minimum acceptable diet. Practices such as delayed introduction of complementary foods, dependence on low-nutrient foods, and culturally influenced food restrictions may further contribute to poor nutritional outcomes (UNICEF, 2021).

The situation may be more challenging in Northern Nigeria, where poverty, limited maternal education, cultural beliefs, and inadequate access to health information can influence infant feeding decisions. In Kebbi State, reported levels of stunting, wasting and underweight are higher than the national figures, with 42% of children under five reported as stunted, 9% wasted and 28% underweight (NDHS, 2019). In addition, reliance on staple foods such as millet and sorghum, together with limited nutrition knowledge and traditional feeding practices, may affect the adequacy of children's diets (Yusuf & Mohammed, 2020).

Despite the importance of appropriate weaning in promoting child growth and preventing malnutrition, there is limited specific information on the attitude, practices, and factors influencing effective weaning techniques among breastfeeding mothers attending General Hospital Koko. This gap makes it difficult to determine the extent to which mothers' attitudes and practices conform to recommended feeding guidelines and the factors that may hinder effective weaning. Therefore, this study seeks to assess the attitude and practice of effective weaning techniques among breastfeeding mothers attending General Hospital Koko, to generate evidence that can support culturally appropriate health education and nutrition interventions for improved child health outcomes.

Study Objectives

- To determine the level of attitude of breastfeeding mothers towards effective weaning techniques.
- To assess the weaning practices adopted by breastfeeding mothers.
- To identify factors influencing the attitude and practice of effective weaning techniques among breastfeeding mothers.

Research Questions

- What is the level of attitude of breastfeeding mothers towards effective weaning techniques at General Hospital Koko?
- What weaning practices are adopted by breastfeeding mothers attending the clinic?
- What factors influence the attitude and practice of effective weaning techniques among these mothers?

III. MATERIALS AND METHODS

Research Design: A descriptive cross-sectional design was used to assess mothers' attitudes, reported practices and perceived influencing factors at a defined period. The design was appropriate for describing the existing situation and identifying patterns without attempting to establish causal relationships.

Study Setting: The study was conducted at General Hospital Koko, located in Koko Town, Koko/Besse Local Government Area of Kebbi State, Nigeria. The hospital is a secondary health facility providing preventive, promotive, curative and rehabilitative services. Relevant services include antenatal care, postnatal care, maternity services, child welfare, immunization, family planning, health education, and nutritional counselling.

Population and Sample: The target population consisted of 90 breastfeeding mothers with children aged 6–24 months attending the General Hospital Koko. Using Taro Yamane's formula at a 5% precision level, a sample size of 73 respondents was obtained. All 73 questionnaires distributed were retrieved, giving a 100% retrieval rate.

Sampling Technique: A simple random sampling approach was reported in the project. Eligible mothers were selected from the study population, with inclusion based on having a child aged 6–24 months, attending the hospital, and providing informed consent. Mothers outside the specified age range or not attending the study setting were excluded.

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Instrument for Data Collection: Data were collected using a self-structured, closed-ended questionnaire consisting of 25 items arranged into four sections: demographic characteristics, attitude toward effective weaning, weaning practices, and factors influencing attitude and practice.

Validity and Reliability: The instrument was reviewed by 3 senior researchers in the nursing profession for face and content validity, and corrections were made before administration. Test-retest reliability was used and produced a reliability coefficient of 0.81, indicating acceptable consistency for the study instrument.

Data Collection and Analysis: Questionnaires were self-administered to eligible respondents. Where necessary, questions were explained in Hausa, and responses were recorded. Data were analyzed using SPSS version 25. Frequencies, percentages, means and remarks were used to summarize findings. The study used a mean-based decision criterion for interpreting Likert-scale responses.

Ethical Considerations: An introductory letter was obtained before data collection. Participation was voluntary; respondents were informed of their right to decline or withdraw, and confidentiality of information was maintained.

IV. RESULTS

A total of 73 respondents participated in the study. The demographic profile and responses to the three study areas are summarized below.

Table 1. Demographic characteristics of respondents

Variable	Category	n	%
Age	15–20	17	23
	21–25	12	16
	26–30	15	21
	31–35	14	19
	36 and above	15	21
Religion	Islam	52	71
	Christianity	15	21
	Traditional	6	8
Education	No formal education	19	26
	Primary	14	19
	Secondary	24	33
	Tertiary	16	22
Occupation	Housewife	29	40
	Trader	15	20
	Civil servant	13	18
	Farmer	8	11
	Other	8	11
Number of children	1	12	16
	2–3	23	32
	4–5	18	25
	6 and above	20	27
Monthly income	< ₦30,000	22	30
	₦31,000–₦60,000	19	26
	₦61,000–₦100,000	15	21
	₦101,000 and above	17	23

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The respondents were predominantly aged 15–20 years (23%), followed by those aged 26–30 and 36 years and above (21% each). Most respondents were Muslim (71%). Secondary education was the most common educational level (33%), while 40% were housewives. The largest proportion had 2–3 children (32%), and 30% reported monthly income below ₦30,000.

Table 2. Attitude of breastfeeding mothers toward effective weaning techniques

Statement	Mean	Remark
Effective weaning is important for proper child growth and development	3.2	Agree
Complementary feeding should be introduced at 6 months	2.9	Agree
Gradual weaning is better than sudden weaning	2.9	Agree
Proper hygiene should be maintained during weaning	3.2	Agree
Exclusive breastfeeding before weaning is beneficial	2.9	Agree
Mothers should have adequate knowledge before starting weaning	3.0	Agree
Grand mean	3.0	Positive attitude

Respondents demonstrated an overall positive attitude toward effective weaning techniques, with a grand mean of 3.0. The highest mean scores (3.2) were recorded for the importance of effective weaning for child growth and the need for proper hygiene during weaning.

Table 3. Weaning practices adopted by breastfeeding mothers

Practice statement	Mean	Remark
Introduced complementary feeding when baby reached 6 months	3.1	Agree
Continued breastfeeding after introducing complementary foods	3.0	Agree
Prepared weaning foods hygienically	3.1	Agree
Washed hands before feeding the baby	3.1	Agree
Fed child regularly with appropriate complementary foods	3.0	Agree
Monitored baby's response to weaning foods	2.9	Agree
Avoided harmful or unsuitable foods during weaning	3.2	Agree
Grand mean	3.0	Positive practice

Reported practices were generally positive, with a grand mean of 3.0. The strongest practice was avoidance of harmful or unsuitable foods (mean = 3.2). Introduction of complementary feeding at six months, hygienic preparation and handwashing each had a mean of 3.1. Monitoring the infant's response to new foods recorded the lowest mean (2.9), although it remained within the positive response category.

Table 4. Factors influencing attitude and practice

Factor	Mean	Remark
Family members influence mothers' weaning decisions	2.9	Agree
Lack of knowledge affects proper weaning practices	3.0	Agree
Advice from health workers improves weaning practices	3.0	Agree
Peer influence affects weaning practices	2.8	Agree
Mother's occupation affects weaning practices	2.7	Agree
Financial status affects quality of weaning foods	3.3	Agree
Grand mean	3.0	Influential factors present

Financial status was the most strongly reported factor influencing effective weaning, with a mean of 3.3. Lack of knowledge and advice from health workers each recorded a mean of 3.0. Family and peer influence were also reported, while occupation recorded the lowest mean (2.7).

V. DISCUSSION

Attitude toward effective weaning: The study found a generally positive attitude toward effective weaning techniques (grand mean = 3.0). Respondents particularly recognized the importance of effective weaning for growth and the need for hygiene. This finding is consistent with the literature reviewed in the project, which indicates that mothers with favourable perceptions of complementary feeding are more likely to support recommended feeding practices. The finding is also important because positive attitudes can create a favourable basis for behaviour change and sustained adherence to health advice.

Weaning practices: The respondents reported generally appropriate practices, including introduction of complementary foods at six months, continuation of breastfeeding, hygienic preparation and handwashing, with an overall grand mean of 3.0. The finding suggests that contact with health services may provide opportunities for mothers to acquire and apply feeding information. However, the relatively lower score for monitoring the child's response to new foods suggests an area where counselling can be strengthened.

Influencing factors: Financial status emerged as the strongest reported influence (mean = 3.3). This finding is consistent with evidence cited in the project that low household income can restrict access to diverse, nutrient-rich foods and encourage reliance on inexpensive staples. Knowledge and health workers' advice were also important, indicating that health education and counselling may help mothers make better feeding decisions. Family and peer influences demonstrate that infant feeding is not solely an individual maternal decision and that interventions may benefit from involving influential family members and community networks.

VI. CONCLUSION AND RECOMMENDATIONS

The study demonstrates that breastfeeding mothers attending antenatal clinic at General Hospital Koko generally had a positive attitude toward effective weaning techniques and reported positive practices, with a grand mean of 3.0 for both domains. Nevertheless, financial constraints, knowledge gaps, health information, family influence, peer influence and maternal occupation may shape how mothers implement recommended feeding practices. The findings support the need for continuous, practical and culturally appropriate nutrition counselling within maternal and child health services.

Recommendations

- Midwives, nurses and other health professionals should intensify nutrition education and counselling during antenatal and postnatal contacts, with emphasis on the timing, diversity, frequency, hygiene and preparation of complementary foods.
- Health workers should demonstrate affordable, locally available and nutrient-dense complementary food combinations to help mothers overcome financial barriers.
- Community outreach programmes should involve spouses, grandmothers and other influential family members so that health messages are reinforced at household level.
- Health facilities should strengthen routine assessment of mothers' understanding and practical application of complementary feeding recommendations.
- Government and relevant agencies should support maternal and child nutrition programmes, particularly in rural and underserved communities, to improve access to nutrition information and resources.

Study Limitations

The study was conducted in a single health facility and involved a relatively small sample, which limits generalization to all breastfeeding mothers in Kebbi State. Data were based largely on self-reported practices and may therefore be affected by recall or social-desirability bias. Time and financial

constraints and some reluctance among respondents to participate were also reported in the original project.

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