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## ASSESSMENT OF FEEDING PATTERNS FOR CHILDREN BELOW TWO YEARS OF AGE IN PHCCS IN KARBALA

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### ABSTRACT

**Introduction:** Breastfeeding is considered the healthiest start for babies. Breast milk should be the only food offered to infants for the first six months of life. The first two years of age are very important for the child's growth and development, Poor feeding patterns in children may lead to their undernutrition, which is a major public health problem.

#### Objectives:

1. To investigate and document the prevailing feeding patterns practiced by care givers for children under the age of two in Primary Health Care Centers (PHCCs) within Karbala.
2. To identify factors influencing caregivers' decisions regarding the choice of feeding practices for infants and young children attending PHCCs in Karbala.

**Patients & Methods:** This is a cross-sectional study. A convenient sample included 680 mothers of children below two years of age, and the mothers' ages were more than thirteen years. The study was carried out at ten PHCCs in Karbala City from January 5–28, 2023.

**Results:** The results showed that the majority of children (63%) were breast feeding and most of the mothers were housewives, there was a significant relationship between the type of feeding and type of labor ( $p=0.000^*$ ).

**Conclusion:** Breastfeeding was the most common feeding pattern among children included in the study, but still, there were baby's bottle feeding without real indication for using it.

**Recommendation:** Encouraging breastfeeding and increasing awareness about it among women of childbearing age.

**KEYWORDS:** Karbala, children, feeding.

## BACKGROUND

In Iraq, particularly in the city of Karbala, primary healthcare centres (PHCCs) play a pivotal role in providing essential healthcare services to children and their families. These centres offer a unique platform to observe and influence feeding practices among caregivers of children under two years of age. Despite the existing guidelines and recommendations for infant and young child feeding, variations in cultural practices, socio-economic factors, and access to information may impact the implementation of these guidelines at the community level.

Several studies have explored feeding practices for infants and young children globally, highlighting the significance of appropriate feeding patterns for early childhood development (Chakona, 2020) (Latchford et al., 2020). However, limited research has been conducted within the context of Karbala's PHCCs to assess the feeding practices followed by caregivers of children below two years of age. Understanding the prevailing feeding patterns, identifying challenges, and recognizing influencing factors specific to this context is essential for devising effective interventions and policies aimed at promoting optimal child nutrition and health.

This study aims to bridge the knowledge gap by systematically assessing the feeding patterns of children under two years of age attending PHCCs in Karbala. By investigating the alignment of current practices with recommended guidelines, identifying determinants of these practices, and exploring their impact on child health outcomes, this research seeks to contribute valuable insights for improving child nutrition and well-being in the local community.

## INTRODUCTION

In recent years, child nutrition and health have gained increasing recognition as critical components of global development agendas. Adequate nutrition during the early years of life is pivotal for optimal growth, cognitive development, and long-term health outcomes (Koletzko et al., 2019).

Inadequate feeding practices during this period can have lasting implications on their physical and cognitive development. Consequently, assessing and enhancing feeding patterns for children in this age group has become a priority within the public health domain (Wallenborn et al., 2021).

### Early Childhood Nutrition Importance:

Proper nutrition during the early stages of life is fundamental for overall child development and long-term health outcomes. Adequate intake of essential nutrients supports physical growth, cognitive development, and immune function (Black et al., 2020). The first two years of life, known as the "critical window," are particularly crucial as they coincide with rapid brain development and the establishment of lifelong dietary preferences (Buchanan et al., 2022). Nutritional deficiencies during this period can lead to irreversible consequences, affecting not only immediate health but also future educational attainment and economic productivity (Vyas, 2021).

### Infant and Young Child Feeding Practices:

Appropriate feeding practices during infancy and early childhood significantly impact a child's health and development (Daniels, 2019). The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months, followed by continued breastfeeding alongside complementary foods for up to two years or beyond (Pérez-Escamilla et al., 2019). Complementary feeding should be introduced at six months to meet the increasing nutritional requirements of growing children (EFSA Panel on Nutrition et al., 2019). Improper feeding practices, such as early introduction of solid foods or inadequate diversity in diets, can lead to malnutrition and compromised health outcomes (Ali, 2021).

### Nutrition Challenges in Iraqi Context:

The nutrition landscape in Iraq is influenced by a combination of socio-economic factors, cultural practices, and healthcare accessibility. Despite improvements in healthcare infrastructure, challenges such as poverty and limited access to quality healthcare services persist (Abyad, 2021). Cultural norms and traditions can impact feeding practices, affecting the timing and types of foods introduced to infants. Understanding these challenges is vital for designing interventions that are culturally sensitive and contextually relevant (Concha & Jovchelovitch, 2021).

### Patients & Methods:

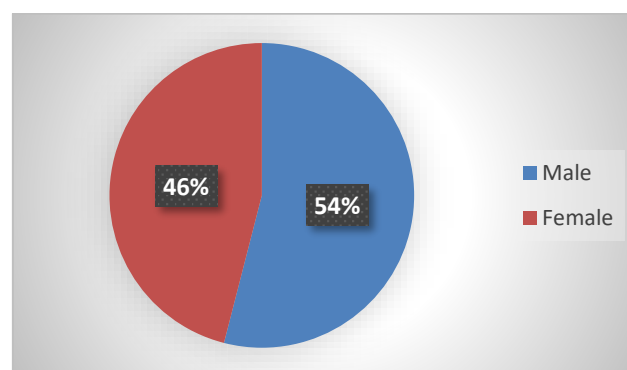
A descriptive cross-sectional exploratory design study was carried out during the period between the first of September 2021 and the end of June 2022. The study was carried out at ten PHCCs in Karbala city, for the period of 5th – 18th of January 2023.

A convenient sample included (680) mothers of children below two years of age who were interviewed using a questionnaire which was designed to elicit information on infant feeding practices and factors that can affect infant feeding practices (type of delivery, parity, occupation, education, and breast problems).

## RESULTS

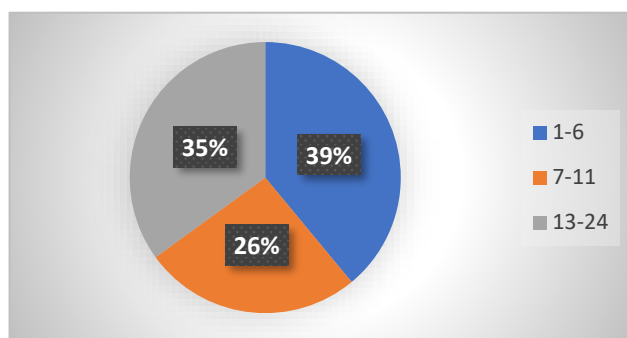
Even though 60.6% of mothers initiate breastfeeding and 26.1% of mothers are found to breastfeed for up to 2 years, the practice of EBF for the first 6 months is low (17.9%).

(Figure 1 shows that 54% of children were males and 46% were female.)



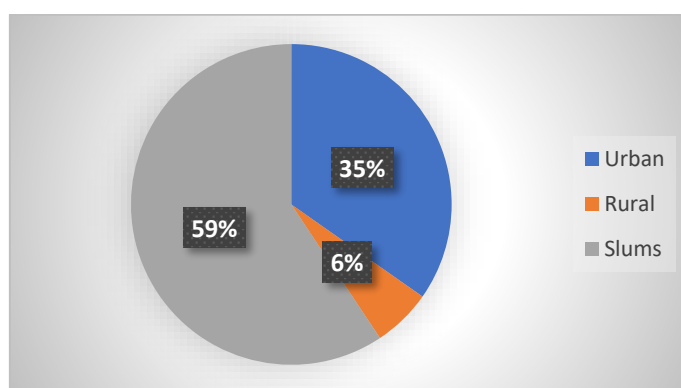
(Figure 1: Gender of children.)

(Figure 2 shows that 39% of children were in age 1-6 month.)



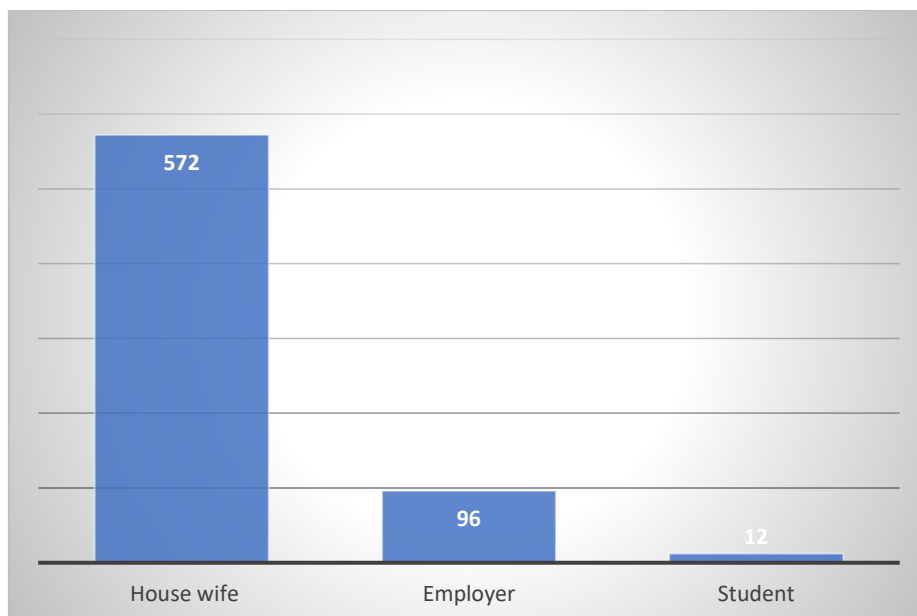
**(Figure 2: Age of children in months.)**

**(Figure 3 shows that 59% of children were living in slums area.)**



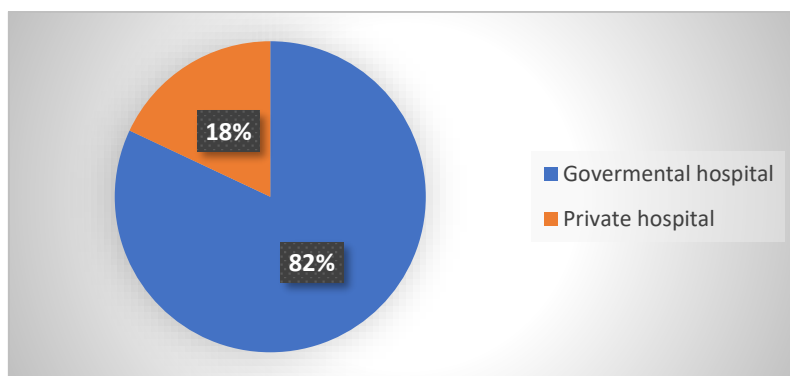
**(Figure 3: Residence of children.)**

**(Figure 4 shows that 572 of children mother were a house wife.)**



**(Figure 4: Job of mothers included in the study.)**

**(Figure 5 shows that 82% of children were birth in governmental hospital.)**

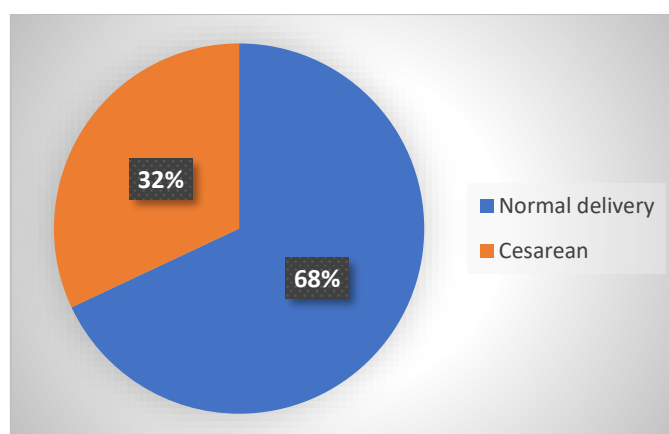


**(Figure 5: Children place of birth included in the study.)**

## Dissection

Figure 6 showed that 68% of children birth with normal delivery and 32% with CS, this result agrees with Alina Luca's research that represents (45.2%) were delivered by CS and 34,139 (54.8%) had a spontaneous vaginal delivery (Luca et al., 2022).

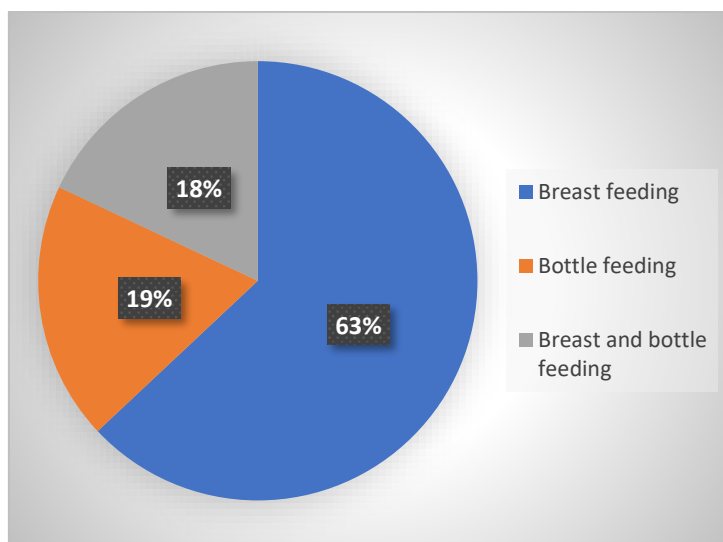
*(Figure 6 shows that 68% of children were birth in normal delivery.)*



**(Figure 6: Types of delivery of mothers included in the study.)**

Figure 7 displayed that (63%) of infants were exclusively fed breast milk, (18%) were receiving breast milk and formula and (19%) were fed only bottle-feeding, these results agree with Alison Ventura that the majority of infants (76.6%) were exclusively fed breast milk; the remaining 23.4% were receiving breast milk and formula (Ventura et al., 2021).

*(Figure 7 shows that 63% of children were breast feeding nutrition.)*



(Figure 7: Nutrition types of children included in the study.)

As it can be vividly seen in Table 1, the prevalence of women who initiated breastfeeding is much higher in case of normal delivery (340) as compared to caesarean section delivery (84); this is uniform across all age groups, and this agree with Aditi Aditi, Ajit Kumar Jaiswal and Arish Qamar's research in 2022 that breastfeeding is higher in case of normal delivery (72%) as compared to caesarean section delivery (56.7%) (Aditi *et al.*, 2022).

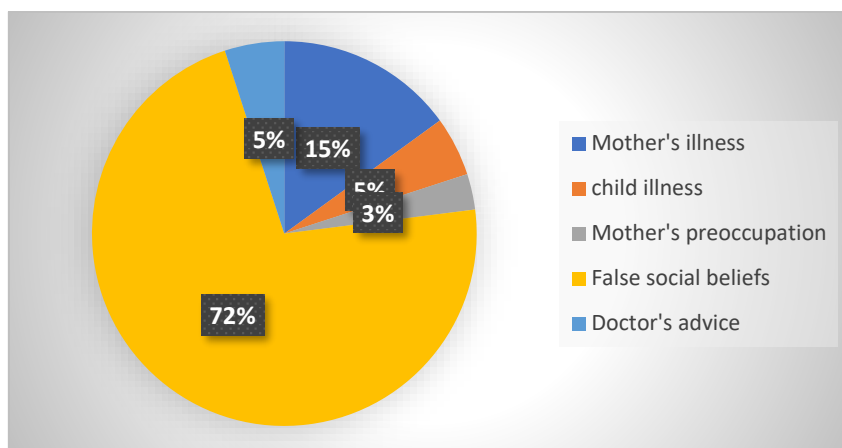
**Table .1** shows that 340 children were birth in normal delivery and nutrition by breast feeding.

Nutrition type Delivery type	Breast feeding	Bottle feeding	Total	P- value
Normal delivery	340	60	400	0.01
Cesarean	84	70	154	
Total	424	130	554	

(Table 1: Relationship between type of feeding and type of labor.)

Figure 8 shows that (72%) for dissatisfied with artificial and mixed nutrition because of false social beliefs, these results agree with Ekhlass M. Eltomy's research, (89.9%) of mother's beliefs insufficient breast milk to infant (M Eltomy *et al.*, 2021).

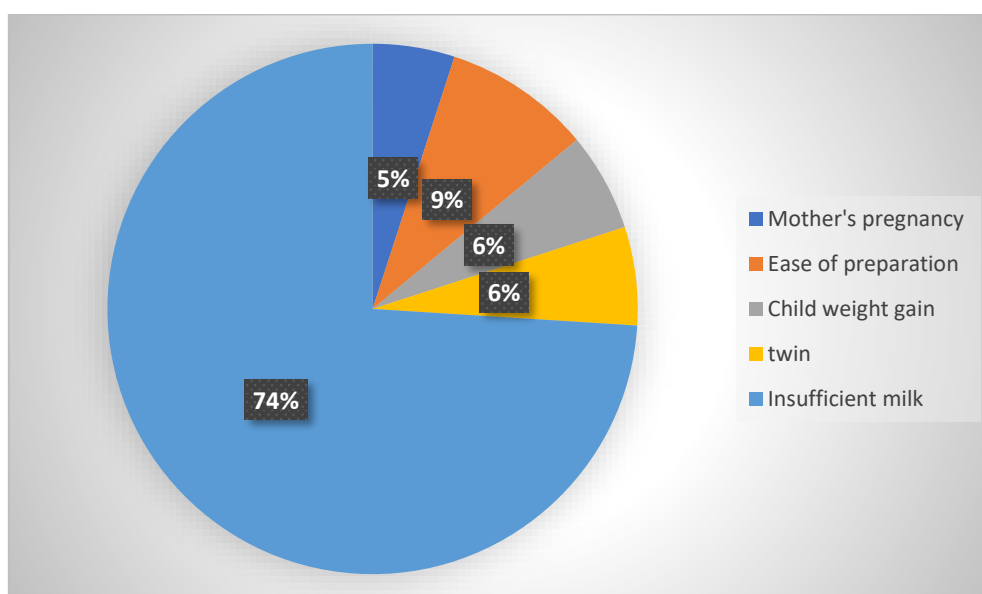
(Figure 8 shows that 72% of mother were had false social beliefs for dissatisfaction with artificial and mixed nutrition.)



(Figure 8: The reason for dissatisfaction with artificial and mixed nutrition.)

Figure 9 presented that 74% of children were artificially fed because their mothers perceived insufficient milk, this result agrees with Safaa Tawfik's research, about (61%) of children's mothers perceived insufficient milk (Tawfik et al., 2019).

(Figure 9 illustrates the misconceptions regarding mothers turning to artificial feeding—74% of mothers were believed to have insufficient milk.)



(Figure 9: Misconceptions about mothers resorting to artificial feeding.)

## CONCLUSION

Mother and child can have instant contact during a natural birth. It also makes nursing easier to start. The average hospital stay is brief, which is a sign of the child's health in an indirect way. Breastfeeding is the natural way to give a developing baby the needed and well-balanced nutrients through breast

milk. It is advised to nurse the infant for the first several hours after birth, particularly if the baby was born naturally.

Many factors influence a mother to cut back on or avoid breastfeeding, and the majority of these factors in this study stem from the false perception that the mother's milk is insufficient for the infant.

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