

## Examination of Feeding Mistakes and Mothers' Attitudes, Knowledge and Behaviors in (0–1) Year Old Infants

Alper Özklıç<sup>1\*</sup>, Yıldırım Bayezit Deldal<sup>2</sup>

<sup>1</sup>Assistant Professor, Biruni University

<sup>2</sup>Associate Professor, Namık Kemal University

**Corresponding Author** **Alper Özklıç**

Assistant Professor, Biruni University

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**Abstract:** This literature review comprehensively examines common feeding mistakes in infants aged 0–12 months and evaluates mothers' knowledge, attitudes, and behaviors regarding infant nutrition. Feeding practices during the first year play a critical role in growth, development, immune system maturation, and long-term health outcomes.

Reviewed studies indicate frequent early or late introduction of complementary foods, inadequate breastfeeding duration, inappropriate portion sizes and food choices, hygiene deficiencies, and other feeding mistakes. Maternal knowledge, attitudes, and behaviors are influenced by socioeconomic status, education level, and cultural factors.

**Keywords:** *infant feeding, maternal attitude, knowledge, behavior, 0–1 year.*

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## Introduction

The first year of life is a critical period for physical, cognitive, and neurodevelopment. Feeding practices are key determinants of growth and development. The World Health Organization (WHO, 2021) and UNICEF (2019) recommend exclusive breastfeeding for the first six months followed by appropriate complementary feeding. Field studies, however, show that mothers often fail to follow these recommendations or implement them incorrectly, which may lead to inadequate nutrition, weakened immunity, and long-term health consequences.

The 0–12 months age period is a critical developmental stage in human life. Proper nutrition during this period plays a determining role in both physical growth and cognitive development (Victora et al., 2016; Prado & Dewey, 2014). Data from the World Health Organization (WHO, 2021) and UNICEF (2019) indicate that inadequate or incorrect feeding leads to growth retardation, micronutrient deficiencies, and compromised immune function in infants.

Breastfeeding is considered the ideal source of nutrition for the first six months after birth, providing not only adequate energy and nutrients but also strengthening the immune system and protecting against infections (Dewey & Adu-Afarwuah, 2008). However, literature reviews show that a significant proportion of mothers do not maintain recommended breastfeeding durations and fail to introduce complementary foods appropriately (Eren & Koç, 2020; Aksoy, 2017).

Errors during the complementary feeding period are not limited to nutritional inadequacy; portion errors, inappropriate food choices, hygiene deficiencies, and cultural practices are also significant factors affecting infant health (Özkan & Yalçın, 2020; Çetin, 2014). For instance, in some cultures, herbal teas or early cereals are commonly provided instead of breast milk. Such practices may expose the infant's immature digestive system to complex foods, leading to gastrointestinal problems (Ibrahim, 2018).

### Maternal knowledge, attitudes, and behaviors are key determinants of feeding mistakes

Studies indicate that mothers with higher education levels adhere more closely to recommended breastfeeding and complementary feeding practices (Kaya & Demir, 2019; Öztürk, 2015). Additionally, socioeconomic status, family support, and access to healthcare directly influence maternal behaviors. Community-based support programs and healthcare counseling have been shown to reduce incorrect feeding practices effectively (Black, 2013; Dewey, 2001).

Recently, digital media and social platforms have significantly increased mothers' access to feeding information. However, misinformation can spread rapidly, reinforcing traditional incorrect practices. This underscores the necessity of comprehensive interventions targeting not only knowledge transfer but also behavioral change (Gibson, 2017; Victora et al., 2010).

In this context, examining feeding mistakes in 0–12-month-old infants and mothers' knowledge, attitudes, and behaviors is crucial to identify the current situation and inform future intervention strategies. A literature review approach allows for a comprehensive assessment by integrating studies conducted in diverse cultural and socioeconomic contexts.

### Purpose

The purpose of this study is to identify feeding mistakes in infants aged 0–12 months, examine their relationship with mothers' knowledge, attitudes, and behaviors, and develop recommendations based on literature findings.

The primary aim of this study is to identify feeding mistakes in infants aged 0–1 years and to examine mothers' knowledge, attitudes, and behaviors regarding infant nutrition. Conducting the study through a literature review enables an in-depth analysis of both national and international research (Özkan & Yalçın, 2020; Victora, 2016).

Early detection of feeding errors is critical for child health and development. For instance, premature introduction of complementary foods or inappropriate portion sizes can negatively affect growth curves and weaken the immune system (Dewey & Adu-Afarwuah, 2008; Gibson, 2017). The study aims to explore the relationship between maternal knowledge and feeding practices (Kaya & Demir, 2019).

Additionally, the effects of cultural and traditional practices on infant feeding are included in the study. Literature indicates that maternal attitudes and feeding habits vary across cultural settings (Ibrahim, 2018; Smith, 2020). Accordingly, this study provides scientific evidence to health professionals, parental education programs, and policymakers.

#### ***In summary, the objectives of the study are:***

- To identify feeding mistakes in infants aged 0–1 years.
- To analyze mothers' knowledge, attitudes, and behaviors regarding nutrition.
- To examine the influence of cultural and traditional practices on infant feeding.
- To provide evidence-based recommendations for health policies.

## **Methodology**

This study was conducted using a **literature review method**. Literature review allows a comprehensive evaluation of feeding mistakes in infants aged 0–12 months, as well as maternal knowledge, attitudes, and behaviors regarding infant nutrition (Higgins & Green, 2011). The study included both national and international peer-reviewed journal articles, book chapters, and official reports.

For literature selection, PubMed, Scopus, Web of Science, and ULAKBİM (Turkey) databases were searched. Search criteria included keywords such as “0–12 months infant feeding,” “maternal attitude,” “maternal knowledge,” “complementary feeding,” and “feeding mistakes” (Victora, 2016; Özkan & Yalçın, 2020). The search was limited to the years 2000–2024, and only peer-reviewed articles were included.

The collected literature was analyzed using **descriptive analysis**. During analysis, themes such as feeding errors, exclusive breastfeeding, timing of complementary foods, portion control, hygiene, and cultural influences were identified and classified (Dewey & Adu-Afarwuah, 2008; Gibson, 2017). This allowed the study to reveal the relationships between maternal knowledge, attitudes, behaviors, and feeding mistakes.

This method enabled the integration of both qualitative and quantitative studies, allowing country-based statistical data to be compared with international literature (Black, 2013). The literature review ensured that the study was ethically risk-free, observational, and of a review nature.

## **Findings**

This section examines feeding mistakes and maternal knowledge, attitudes, and behaviors in infants aged 0–12 months, integrating literature, statistical data, and case studies.

### **Breastfeeding Duration and Deficiency**

Studies indicate that only 45–50% of mothers practice exclusive breastfeeding for six months (Victora, 2016; Özkan &

Yalçın, 2020). A survey in Turkey showed only 48% maintained exclusive breastfeeding (Eren & Koç, 2020).

Insufficient breastfeeding negatively impacts immune system development and long-term health outcomes. Short-duration breastfeeding often leads to early complementary feeding, increasing digestive and metabolic problems (Dewey & Adu-Afarwuah, 2008; Brown & Peerson, 2002).

**Table 1. Exclusive breastfeeding rates in Turkey**

Study	Sample Size	Exclusive Breastfeeding (%)
Özkan & Yalçın, 2020	300	50
Eren & Koç, 2020	500	48
Aksoy, 2017	250	42

Introducing complementary foods before the 6th month can expose the infant to food complexity before digestive maturation (Prado & Dewey, 2014). Delayed introduction, on the other hand, can result in energy and micronutrient deficiencies (Lutter & Dewey, 2003). Cultural factors also play an important role; in some societies, early cereals or herbal drinks are provided instead of breast milk (Ibrahim, 2018).

### **Timing of Complementary Foods**

WHO recommends introducing complementary foods around 6 months (WHO, 2021). Some mothers start at 4 months, others at 8 months (Prado & Dewey, 2014).

**Table 2. Introduction of complementary foods (%)**

Month Percentage (%)	Month Percentage (%)
0–3	12
4–5	28
6	45
7–8	15

### **Incorrect Portion Sizes and Food Choices**

Improper portioning can lead to undernutrition or overnutrition (Gibson et al., 2017; Öztürk, 2015). Early sugary foods increase obesity risk (Brown & Peerson, 2002).

Foods provided in the first 0–6 months often fail to meet infant nutritional needs. Improper portions may result in both undernutrition and excessive energy intake (Özkan & Yalçın, 2020). Early introduction of ready-to-eat or sugary foods increases the risk of obesity in the long term (Gibson, 2017).

### **Hygiene and Safe Food Practices**

Lapses in hygiene increase gastrointestinal infection risk (Çetin, 2014; Black et al., 2013).

**Table 3. Hygiene practices in infant feeding (%)**

Practice	Mothers (%)
Bottle sterilization	62
Handwashing	78
Food storage	55

Research shows that hygiene lapses contribute to gastrointestinal infections in infants. Improper bottle cleaning, food storage, and hand hygiene are major contributors to feeding mistakes (Çetin, 2014; Black, 2013).

### Maternal Knowledge, Attitudes, and Behaviors

Mothers' education and knowledge critically reduce feeding errors (Kaya & Demir, 2019; Eren & Koç, 2020).

### Cultural and Traditional Practices

Cultural beliefs, such as early cereals or herbal teas instead of breast milk, affect infant nutrition adequacy (Ibrahim, 2018). The findings indicate that not only maternal knowledge but also behavioral and environmental factors significantly contribute to feeding mistakes.

Literature shows that mothers who participate in education programs demonstrate reduced feeding errors and improved infant nutritional adequacy (Dewey, 2001; Victora, 2010).

## Discussion

Findings indicate that feeding mistakes cannot be resolved by a single intervention. Education, income, cultural structure, and access to healthcare services interact. Providing information alone may be insufficient; behavioral interventions and societal support mechanisms are necessary.

Furthermore, health professionals should develop continuous education and follow-up programs for mothers, utilize social media consciously, and implement breastfeeding-friendly policies.

### Recommendation

This literature review has comprehensively identified common feeding mistakes and maternal knowledge, attitudes, and behaviors in infants aged 0–12 months.

- Strengthen maternal education programs in healthcare institutions.
- Increase dissemination of accurate and accessible feeding materials via social media.
- Implement breastfeeding-friendly workplace policies.
- Develop targeted nutrition counseling and individual guidance programs.
- Conduct field-based research in future studies.

These approaches aim not only to transfer knowledge but also to enhance behavioral change and application levels. Literature shows that mothers participating in education and support programs significantly improve breastfeeding duration and complementary feeding practices (Dewey & Adu-Afarwuah, 2008; Black, 2013).

Furthermore, maternal knowledge plays a critical role in adherence to portion control and hygiene practices (Gibson, 2017; Öztürk, 2015).

### Policy and Implementation Recommendations

The findings reveal that maternal and infant health policies in Turkey need to be reviewed. Firstly, it is important that health education provided during the prenatal and postnatal periods is supported by content that encourages behavioural change, rather than merely providing information (Karataş, 2020).

Furthermore, it is critically important for nurses and midwives working in healthcare institutions to receive continuous training on this subject in order to provide accurate counselling to mothers.

Strengthening control mechanisms on media and social media platforms is another important step. Sanctions should be imposed on accounts spreading misinformation, and accurate content should be supported (Güven & Sevim, 2021).

Online training modules for mothers can be developed in collaboration between the Ministry of Health and civil society organisations. These modules should be accessible to women in both urban and rural areas.

Special programmes should be developed for mothers living in low-income areas to protect public health. For example, local authorities organising free 'Breastfeeding and Infant Nutrition' workshops at public health centres could raise awareness on this issue (Erdoğan & Altun, 2019). In addition, awareness campaigns on the importance of breastfeeding and nutritional mistakes should be conducted through public service announcements and television programmes.

### Recommendations for Future Studies

As this study is based on a literature review, it is recommended that future research utilise field data. Mothers' actual behaviour patterns, knowledge levels and attitudes should be analysed in depth through questionnaires, observations and qualitative interviews.

Furthermore, the effects of fathers and extended family members on infant feeding should also be examined. This is because the literature shows that feeding decisions are not solely made by the mother; cultural and familial factors also shape the process (Balci, 2020; Çetinkaya & Uğurlu, 2021).

Finally, the adaptation of successful mother-infant feeding education models implemented in different countries to Turkey could be evaluated. For example, the 'mother-infant guidance programmes' implemented in Scandinavian countries include psychological support as well as information transfer (Smith, 2021). Such models could contribute to sustainable changes in maternal behaviour in Turkey.

## Conclusion

This literature review has comprehensively identified common feeding mistakes in infants aged 0–12 months and maternal knowledge, attitudes, and behaviors. Reviews indicate that inadequate breastfeeding, early or late introduction of complementary foods, inappropriate portion sizes and food choices, hygiene deficiencies, and traditional practices directly affect children's growth, immune function, and cognitive development (Victora, 2016; Prado & Dewey, 2014; Özkan & Yalçın, 2020).

Maternal knowledge and attitudes are influenced by socioeconomic status, education level, access to healthcare, and cultural factors (Eren & Koç, 2020; Aksøy, 2017).

Knowledge gaps alone can lead to incorrect practices, but behavioral and environmental factors are equally important. For instance, a mother's social environment and family support directly

affect breastfeeding duration and timing of complementary feeding (Kaya & Demir, 2019).

The findings indicate that feeding mistakes cannot be corrected with a single intervention. Regular educational programs, individualized counseling, and follow-up mechanisms by health professionals are necessary. Furthermore, the conscious use of social media and digital platforms is critical for spreading accurate information. Breastfeeding-friendly workplace policies and community-based support programs can positively influence maternal behavior (WHO, 2021; UNICEF, 2019).

This study comprehensively examined the relationship between errors made in feeding infants aged 0–1 years and mothers' levels of knowledge, attitudes, and behaviours. A review of the literature shows that feeding errors made during the first year of life affect children's short- and long-term health (WHO, 2020; UNICEF, 2021).

In particular, errors such as introducing complementary foods at the wrong time, early weaning, and feeding infants foods that may be harmful have been frequently reported (Demir & Aydin, 2019; Arslan & Günay, 2019).

The main reasons for these mistakes include mothers' lack of knowledge, traditional habits, socio-economic conditions, and misinformation sources (Köseoğlu, 2018; Balcı, 2020).

It has been found that mothers' attitudes and behaviours are linked not only to their level of knowledge but also to cultural structure, the influence of older family members, social media guidance, and the frequency of interaction with health professionals (Güven & Sevim, 2021; Karataş, 2020).

Especially in rural areas, traditional feeding habits can override modern medical knowledge and lead to incorrect practices (Şahin & Kaplan, 2021). Therefore, it is necessary to develop an educational approach focused on behavioural change, not just knowledge transfer.

Similar studies conducted worldwide have yielded results comparable to those in Turkey. For example, a study conducted in India (Sharma et al., 2020) found that 42 per cent of mothers transitioned to complementary foods early. Research conducted in the USA found that low-income mothers breastfed for shorter periods and relied more on prepared foods for infant feeding (CDC, 2021).

These findings show that mothers' educational level, income level, and access to healthcare directly affect the quality of infant feeding. Studies conducted in the Turkish context (Yıldız, 2022; Erdoğan & Altun, 2019) show that a significant proportion of mothers do not fully comply with the recommendation of 'exclusive breastfeeding for the first six months'. Furthermore, inaccurate content in the media creates confusion among mothers (Güven & Sevim, 2021).

In particular, unscientific recommendations shared by social media influencers under the guise of 'natural motherhood' or 'alternative feeding' pose serious risks to public health. In conclusion, errors in infant feeding between 0 and 1 years of age are a combination of lack of knowledge and behavioural mistakes. Mothers' attitudes are shaped by education, socio-economic status, traditional values and media influence. Therefore, solving this problem requires a multi-dimensional approach.

It is anticipated that when education, awareness, policy development, and media control are addressed together, infant feeding quality in Turkey will improve and public health will strengthen in the long term.

In this regard, the establishment of national nutrition strategies supported by multidisciplinary studies will contribute to improving not only the health of infants but also the overall health of society.

Finally, the adaptation of successful mother-infant feeding education models implemented in different countries to Turkey could be evaluated. For example, the 'mother-infant guidance programmes' implemented in Scandinavian countries include psychological support as well as information transfer (Smith, 2021). Such models could contribute to sustainable changes in maternal behaviour in Turkey.

### Limitations

The limitations of this study are as follows:

- As the study is based on a literature review, some regional studies and grey literature (theses, reports) were excluded.
- Publications released after 2025 were not included.
- The methodological diversity of included studies varies, so overall findings may not represent the entire population.
- Some studies focused on specific cultural or socioeconomic groups, limiting the generalizability of the results.
- Only Turkish and English language publications were included due to language barriers; studies in other languages were excluded.

### Ethical Considerations

Since this study was conducted as a **literature review**, no direct experiments or interventions were carried out on human or animal participants. Therefore, there are no **ethical risks** associated with conducting the study (Higgins & Green, 2011). The research was conducted solely using previously published articles, reports, and official data, without the use of personal or identifiable information.

All studies included in the literature review were published in peer-reviewed journals and were conducted in compliance with research ethics. Proper citations were provided for all sources, and no unauthorized content reproduction occurred (APA, 2020).

Moreover, since the study addresses a sensitive topic such as **child health and feeding practices**, care was taken to respect social and cultural sensitivities in interpreting and presenting the data. The study's objective is solely academic and scientific, with no risk of harm to individuals or society.

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