Mothers' Knowledge and Practice on Optimal Complementary Feeding

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Abstract

Background: Optimal complementary feeding during first two year of life is crucial for optimal development and growth of infant and young children during first two years of life.

Objectives: The goal of this study is to investigate mothers' knowledge and practices about the complementary feeding among infants and young children age from four months to two years of life.

Materials& Methods: A cross-sectional study was designed to interview 210 mothers of infant and young children, aged from 4 month to two year who attended outpatient pediatrics clinic in Al-Mawani Teaching Hospital in Basrah, the relation between mothers' age and educational level, with their knowledge and practices about complementary feeding was evaluated.

Results: The results revealed only 28.57% of the participated mothers know the proper time of starting complementary food, and about 52% of the mothers start complementary food before six months of age. we didn't found statistical significant relation between mothers' age , mothers' education level and mothers' knowledge and practices, apart from a significant relation between level of mothers' education level and correct frequency of introduction new food per week (p-value 0.001).

Conclusion: There is a need to promote optimal feeding practices among mothers to insure optimal complementary feeding.

Keywords: Complementary feeding; Mothers ; Knowledge ; Practice

Introduction

The process of giving of appropriate food at the proper time in addition to mothers' breast milk to face increased needing nutrients for the growing child is called complementary feeding .

The exclusive breast feeding of the babies during the first six months of life endows the baby a passive immunity that is essential to protects them from various bacterial and viral infections with the lack of a well-developed immune system at this critical period of time. In addition to that, the infants and young children who are provided with complementary food after the first half year will meet the rising nutritional requirements necessary for development and growth. This process called weaning, and mothers who do weaning should be knowledgeable about the timing and types of complementary feeding (1, 2)

In addition to that first two years of life considers as a critical period of time for development and growth of children. Most cases of malnutrition occur during this time, thus appropriate nourishment is critical. Malnutrition in the first two years of life can cause permanent impairment to physical and intellectual development. As a result, improving food habits during this time is critical to improve children's health and nutrition levels. (3,4)

Suboptimal complementary feeding practices are associated with a large burden of malnutrition and mortality in children.(5)

Mother's information and work on with respect to reciprocal food play a significant part on their taking care of practices. The capacity of the mothers to do the suggested reciprocal taking care of practices is related with their insight and demeanor on ideal integral taking care of. Numerous variables could influence mothers' information and disposition towards complementary feeding.(6-8)

The goal of our study is to determine the knowledge and practices of the mothers about complementary feeding and to identify the factors like mothers' education and mothers' age which could be affecting their knowledge and practice of complementary food .

Methodology

Study design

A cross-sectional descriptive study was carried out among mothers who visited the outpatient department of Al-Mawani Teaching Hospital in Basrah, over the period of four months, from January 2023 to April 2023

Sample size

210 mothers of up to two years children were included in this study aged (17–44 years) who visited the pediatrics outpatient clinic in Al-Mawani Teaching Hospital in Basrah during the study period .

Exclusion criteria

Mothers of infants aged less 4 months or more than 24 months were excluded.

Inclusion criteria

Mothers of infants and young children between 4 - 24 months of age visiting the outpatient clinic of pediatrics were involved in this study.

Data collection

The study is based on interviews using questionnaire, data were included information about age of starting complementary food, type of food start with, causes of delay complementary feeding, correct frequency of introducing new foods per week, and the way of feeding whether by the mother or baby -led which means babies are allowed to feed themselves.

Other variables addressed were the age of the mother, educational level and occupation of mother, family size, child age and sex and feeding pattern of child whether breast, bottle or mixed feeding.

Data analysis

The data collected was analyzed using SPSS version 23, Chi-square test was used to measure *P*-value , and a *P*-value of < 0.05 is considered significant.

Results

Table 1: General and sociodemographic characteristics of the mothers and their children

Character	Freq.	%
Mothers' Age(year)		
<20	**14**	**6.67**
20-40	**186**	**88.57**
>40	**10**	**4.76**
Mothers' Education Status		
Illiterate	**33**	**15.71**
Primary	**84**	**40.00**
Secondary	**72**	**34.29**
College and above	**21**	**10**
Mothers' Occupation		
Housewife	**195**	**92.85**
Government Employee	**14**	**6.67**
Private Employee	**1**	**0.48**
Student	**0**	**0**
Sex of the child		
Male	**120**	**57.14**
Female	**90**	**42.86**
Childs' Age(month)		
<6 m	**16**	**7.62**
6-12	**82**	**39.05**
12-18	**54**	**25.71**
18-24	**58**	**27.62**
Childs' feeding pattern		
Breast	**50**	**23.81**
Bottle	**140**	**66.67**
Mixed	**20**	**9.52**

210 mothers were involved in this study, majority of the mothers were belong to age group 20-40 years (88.57%) and majority of the mothers were housewives (92.85%) ,and about 74% of the mothers had primary and secondary school education. 15.7% of the mothers were illiterate and only 10% have college and above education.

About 57% of children included in this study were male ,and about 43% of them were female. Regarding the age of children 39.05% of them belong to age group 6-12 month, and 7.62% aged less than 6 months and 25,71% belonged to age group 12-18 and 27.62 belonged to age group 18-24 month.

About tow third of children (66.67%) are bottle fed, were the remaining children were breast and mixed feeding with 23.81% and 9.52% respectively.

Table 2 : Mothers' Knowledge and their practice about complementary feeding

Variable	Freq.	%
Age of initiation of complementary feeding		
< 6 m	**110**	**52.38**
At 6 m	**60**	**28.57**
> 6 m	**40**	**19.05**
Way of giving complementary Feeding		
By Mother	**192**	**91.43**
Baby-- Led	**18**	**8.57**
Correct Frequency of introduction new food per week.		
Yes	**62**	**29.52**
No	**148**	**70.48**
Frequency of complementary feeding		
Twice a day	**88**	**41.90**
Thrice a day	**122**	**58.10**

Age of starting of complementary feeding was less than 6 months in 52.38% of children, and at age of 6 months of age in 28.57% of children and older than 6 months in about 19.05% of studied children.

Way of giving complementary feeding was by mother in 91.43% of children and by baby-led in only 8.57% of studied children.

Correct frequency of introduction new food per week was found in only 29.5% of children while about 70.5% of children had incorrect frequency of introduction new food per week.

Frequency of complementary feeding was twice a day in about 41.9% of children and thrice a day in 58.1 of children.

Table 3: Relation between mothers' age and age of initiation of complementary food, way of giving complementary feeding and correct frequency of introduction new food per week.

	Age of mother			
	<20	20-40	>40	p-value
Age of initiation of complementary feeding				
< 6 m	**9**	**96**	**5**	**0.635**
At 6 m	**4**	**52**	**4**	
> 6 m	**1**	**38**	**1**	
Way of giving complementary Feeding				
By Mother	**13**	**169**	**10**	**0.969**
Baby Led	**1**	**17**	**0**	
Correct frequency of introduction new food per week.				
Yes	**4**	**56**	**2**	**0.789**
No	**10**	**130**	**8**	

There was no significant correlation between mothers' age and age of initiation of complementary feeding, way of giving complementary feeding, and correct frequency of introduction new food per week , p-value is (0.635), (0.969) , (0.789) respectively.

Table 4: Relation between mothers' education level and age of initiation of complementary feeding, way of giving complementary feeding and correct frequency of introduction new food per week.

	Mother education level				
	Illiterate	Pri.	Sec.	College	p-value
Age of initiation of complementary feeding					
< 6 m	**16**	**44**	**41**	**9**	**0.747**
At 6 m	**10**	**21**	**21**	**8**	
> 6 m	**7**	**19**	**10**	**4**	
Way of giving complementary Feeding					
By Mother	**32**	**80**	**62**	**18**	**0.09**
Baby Led	**1**	**4**	**10**	**3**	
Correct Frequency of introduction new food per week.					
Yes	**1**	**1**	**40**	**20**	**0.001**
No	**32**	**83**	**32**	**1**	

There was a significant correlation between mothers' education level and correct frequency of introduction new food per week (*p*-value 0.001).

There was no significant correlation between mothers' education level and the way of giving complementary feeding, age of initiation of complementary feeding p-value was (0.09) and (0.747) respectively.

Discussion

Complementary feeding play a crucial for healthy growth and development of infants and young children during the first two years of life .(9)

According to World Health Organization guidelines, complementary feeding should begin at six months of age, and breastfeeding should continue until two years of age. (10,11) Delayed beginning of complementary foods may enhance the risk of malnutrition, immune diseases, and development of diabetes mellitus in later life in high-risk population. (12)

In this study we investigated mothers' knowledge and practices toward optimal complementary feeding of children from the age 4-24 months in Basrah.

the study shows that the most of participated mothers were young housewives and had low education level, these results are comparable with other studies was done in Baghdad (13), Erbil (14) , and Al-Najaf (15).

In this study 28.57% of mothers know the correct age of introduction of complementary feeding, which is lower compering with other regions universally (16).

In this study (52.38%) of the participated mothers start complementary feeding before age of 6 months. Many mothers start complementary feeding before the recommended age of 6 months .(17) these no add benefits from this practice (18) this may also increase risk of infants' alimentary infections and may increase the incidence of childhood obesity in the future. (19)

The majority of the involving mothers (70.48%) didn't had an idea about the correct frequency of introduction new food per week, this may be due to low educational level of the participated mothers.

Regarding the way of giving complementary feeding, we found that the majority of the babies (91.42%) was fed by the mother and only (8.58%) by baby-led method.

In our study there was no significant relation between mothers' age and age of initiation of complementary feeding, way of giving complementary feeding, and correct frequency of introduction new food per week. Also there was no significant relation between mothers' education level and the age of initiation of complementary feeding, way of giving complementary feeding ,apart from a significant relation between level of mothers' education and correct frequency of introduction new food per week, similar results was obtained in study done in Kosova (20).

There was some limitations of our study is that cross-sectional design and small-sized sample which collected from single site of Basrah . in spite of that this study can be used as a foundation for future researches.

Conclusion

Optimal complementary feeding during first two year of play a crucial role in healthy development and growth of infant and young children .

Many factors influence mothers' understanding and practices on complementary feeding, including their age, educational level, and family socioeconomic status. There is a need to promote optimal feeding knowledge and practices among mothers to insure ideal complementary feeding.

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Nil

Conflicts of interest

The authors have no conflict of interest

Ethical approval

The study protocol received approval from the College Council and Ethical Committee at Basrah College of Medicine, University of Basrah, with reference number 030411-036-2022 on 3/4/2022.

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