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Knowledge towards feeding of infants and young children: A mothers feedback

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Abstract--Background: Improved infant and young child feeding is consequently crucial for improved nutrition, health, development, and, ultimately, child survival in children under the age of five. Therefore, the present study aimed to assess mothers knowledge towards feeding of infants and young children; and determine the associated socio-demographic variables in Babylon Province/ Iraq. Methods: A descriptive cross-sectional study conducted by purposive sample of 300 mothers was selected through the use a non-probability sampling approach. The reliability of the questionnaire was achieved through a pilot study and then presented to experts to prove its validity. The total number of items included in the questionnaire was 20-items for knowledge. The data was collected by using the interview method and analyzed by the application of descriptive and inferential statistical data analysis approach Results: The results of the study indicated that (50.3%) of the mothers exhibited a poor knowledge. There were differences in knowledge with regards mothers age ($p=0.000$), education level ($p=0.000$), number of children ($p=0.000$), residents ($p=0.005$) and sources of information ($p=0.011$). Conclusions: The study adds knowledge regarding health education. Further study is needed to explore other factors related to mothers knowledge and attitudes in children to prevent malnutrition and its related factors to reducing hospitals burdens.

Keywords--knowledge, mothers, feeding.

Introduction

In addition to the introduction of complementary foods, minimum dietary diversity, minimum meal frequency, minimum acceptable diet, consumption of iron-rich or iron-fortified foods within the first hour of delivery, exclusive breastfeeding (EBF) for six months, and continued breastfeeding for up to two years and beyond, IYCF refers to the introduction of complementary foods, minimum dietary diversity, minimum meal frequency, minimum acceptable diet, consumption of iron-rich or iron-fortified foods within the first hour of delivery, exclusive breastfeeding (EBF) [1], [2]. IYCF has a critical role in defining children's nutritional condition, maximizing a child's development rate in the early years of life, and has significant potential for lowering under-five malnutrition and hence affecting child mortality rates [3]. Micronutrient deficits, poor quality supplemental foods, inappropriate newborn feeding methods, and frequent infections have all contributed to increased infant and young child mortality in Sub-Saharan African countries [4]. A guideline has been established and applied in Ethiopia since 2004 to improve IYCF feeding practice by mothers' knowledge and attitudes. Only 7% of children aged 6 to 24 months' feeding behaviors achieve the minimal level in all three IYCF practices (breastfeeding status, number of food categories, and times they were fed) [5].

Complementary feeding knowledge may have a favorable impact on practice or may result in no change in feeding habits. When mothers were provided nutritional education to raise awareness of infant feeding in the variety, quantity, quality, and consistency of complementary feeding, it was discovered that 86 percent of complementary feeding practices were inadequate in quality, quantity, frequency, and consistency [6]. In a similar trial in South India, moms were given advice on what complementary foods to choose and how often to feed their children. The intervention group had better feeding habits, such as avoiding feeding bottles, as well as better dietary diversity and complementary food kinds [7]. To improved IYCF knowledge is critical for improving child health and development outcomes in low-resource areas [8]. As a result, factors such as mothers' and caregivers' knowledge and attitudes towards baby and young child nutrition are vital for the health, growth, and development of children during this key period [9]. Therefore, the present study aimed to assess mothers knowledge towards feeding of infants and young children; and determine the associated socio-demographic variables in Babylon Province/ Iraq.

Methodology

To investigate the knowledge among mothers towards feeding of infant and young children. Throughout the non-probability sampling method, a purposive sample of (300) mothers whose infant and young children attended primary health care centers in Babylon Province/ Iraq.

Study instruments

The questionnaire is one of the means to help collect data that contribute to achieving the results expected by the study, so the researcher designed this questionnaire, which aims to clarify the study objectives and significance by

obtaining answers to the study's questions. Based on extensive review of related studies and available literatures, the study is consisting of the following parts:

Part I: This section composed of socio-demographic information which include: mothers age, education, occupation, residents, economic status, number of children and sources of information.

Part II: This section deals with mothers knowledge adopted and developed by Kimwele (2014) who investigated the mothers knowledge towards feeding of children and infants [10]; and composed of 20-items measured on 3-Lihet's scale. Validity was determined by a panel of 11 arbitrators who were asked to comment on each component of the study questionnaire in terms of language appropriateness, correlation with the dimension of study variables to which it was assigned, and suitability for the study population.

Data was obtained from nurses to assess the questionnaire's reliability, and the test was delivered to 30 people from the study population who were not part of the initial sample. The Cronbach's alpha was found to be 0.87. The researcher adhered to the rules of writing the questionnaire due to the importance of the type of information that the researcher is keen to be sufficient and comprehensive for all aspects of the problem and can be relied upon and trusted. To vague and complex answers. The type of questions was of the closed type, which required answering with reference to what was appropriate.

Method of Statistic

A SPSS-20.0 were used analyzed the information was evenly distributed. One-way analysis of variance and independent sample t-test were used to examine variations in variables based on socio-demographic characteristics. For continuous variables, descriptive data is reported as mean standard deviation, and for categorical variables, it is shown as number (percent). Statistical significance was defined as a p 0.05. The overall responses according to total mean of score (M) which follow: (M=20-26 Poor; M=27-33 Moderate; M=34-40 Good).

Results

The findings suggest that the average age of the participants is 29, with the age group 25-29 years old accounting for the biggest number (n=63; 21 percent). In terms of educational attainment, half of the sample (n=155; 51.7 percent) was illiterate. The homemaker was clearly higher (n=181; 60.3 percent) when it came to occupation-related findings. In terms of economic position, the moms expressed insufficient economic standing (n=143; 47.7 percent). When it came to the number of children, the majority of mothers (n=133; 44.3 percent) only had one. In terms of population, the study sampled residents in urban regions (n=156; 52 percent). In terms of information sources, family (n=125; 41.7 percent) are the most common (n=125; 41.7 percent).

Table (1):Socio-Demographic Characteristics

Variables	Class	n=300	%
Age/years (<i>M</i> ± <i>SD</i> = 29.81±7.40)	<20 years old	45	15.0
	20-24 years old	54	18.0
	25-29 years old	63	21.0
	30-34 years old	47	15.7
	35-39 years old	43	14.3
	40 and older	48	16.0
Education	Illiterate	155	51.7
	Read & Write	30	10.0
	Elementary School	48	16.0
	Secondary School	24	8.0
	Institute and above	43	14.3
Occupation	Employ	86	28.7
	Students	33	11.0
	Housewife	181	60.3
Economic	Sufficient	54	18.0
	Moderate	103	34.3
	Insufficient	143	47.7
Number of children	1 child's	133	44.3
	2-3 child's	120	40.0
	>3 child's	47	15.7
Residents	Rural	144	48.0
	Urban	156	52.0
Sources of information	Health Institutions	109	36.3
	Family	40	13.3
	Social media	26	8.7
	Relitives	125	41.7

Findings demonstrated that the (50.3%) of mothers expressed a poor level of knowledge related to feeding of infant and young children as described by low mean scores ($M \pm SD=25.99\pm5.19$).

Table (2):Mothers Knowledge

Knowledge	Freq.	%	<i>M</i> ± <i>SD</i>
Poor (<i>M</i> =20-26)	151	50.3	25.99±5.19
Moderate (<i>M</i> =27-33)	129	43.0	
Good (<i>M</i> =34-40)	20	6.7	
Total	300	100.0	

M: Mean for total score, *SD*=Standard Deviation for total score

Table (3):Statistical Differences in Mothers Knowledge with regards Socio-Demographic Characteristics

Knowledge	Source of variance	Sum of Squares	d.f	Mean Square	F	<i>p</i> ≤ 0.05
Mothers Age	Between Groups	3.062	5	.612	10.540	.000

	Within Groups	17.081	294	.058		
	Total	20.142	299			
Education level	Between Groups	4.637	4	1.159		
	Within Groups	15.505	295	.053	22.057	.000
	Total	20.142	299			
Occupation	Between Groups	.005	2	.003		
	Within Groups	20.137	297	.068	.038	.963
	Total	20.142	299			
Economic	Between Groups	.161	2	.081		
	Within Groups	19.981	297	.067	1.199	.303
	Total	20.142	299			
Number of children	Between Groups	1.788	2	.894		
	Within Groups	18.355	297	.062	14.463	.000
	Total	20.142	299			
Sources of information	Between Groups	.743	3	.248		
	Within Groups	19.399	296	.066	3.780	.011
	Total	20.142	299			

Findings demonstrated that there were significant differences in mothers knowledge with regards age, education, number of children and sources of information ($p < 0.05$).

Table (4): Statistical Differences in Mothers Knowledge with regards their Residents

Variables	Residents	Mean	SD	t-value	d.f	$p \leq 0.05$
Mothers Knowledge	Rural	1.255 9	.25581	2.828	298	.005
	Urban	1.339 7	.25726			

Findings demonstrated that there were significant differences in mothers knowledge with regard their residents ($p < 0.05$).

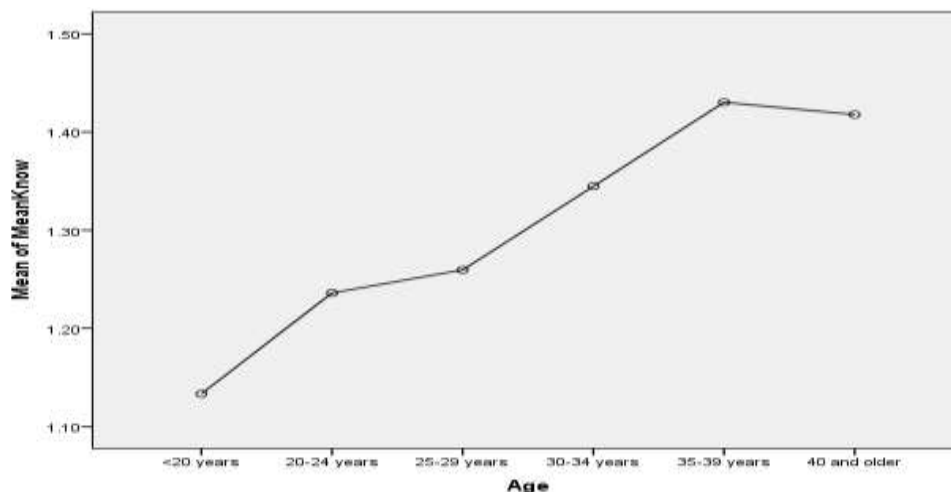


Figure 1: Distribution of Mothers Knowledge according Age

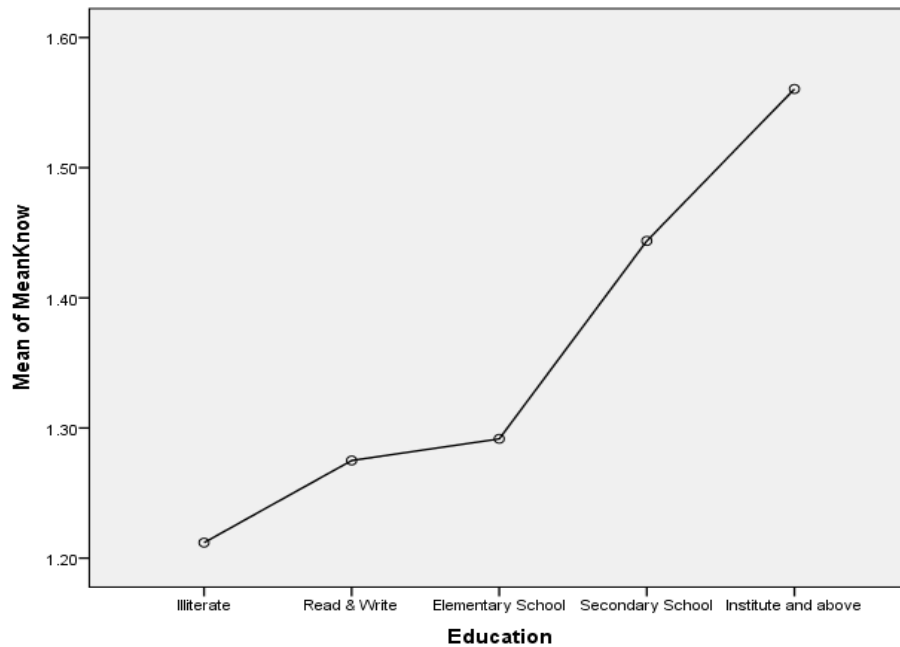


Figure 2: Distribution of Mothers Knowledge according Education Level

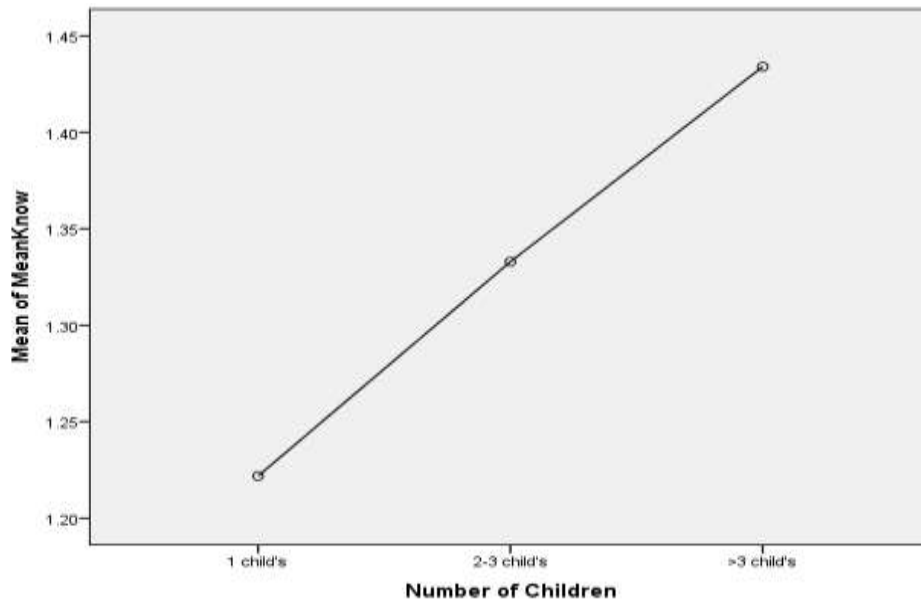


Figure 3: Distribution of Mothers Knowledge according Number of Children

Discussion

Improved infant and young child feeding is consequently crucial for improved nutrition, health, development, and, ultimately, child survival in children under the age of five. As a result, the goal was to measure mothers' expertise in these

areas. With a rate of 54 percent, malnutrition is one of the primary causes of under-five mortality, and exclusive breastfeeding is presently the only intervention approved to reverse the situation. This necessitates the presence of a qualified mother [11]. In current study findings (50.3%) of mothers expressed a poor level of knowledge related to feeding of infant and young children as described by low mean scores 25.99 (± 5.19). Many influencing factors contribute to the low level of education, including a lack of social media awareness about nutrition and feeding, the majority of the mothers studied were not formal educated, young mothers may contribute to the low level of education, and housing areas play an important role. In line with current findings, a study conducted in Erbil City revealed that the mothers studied lacked adequate knowledge about properly feeding infants and young children, prompting investigators to develop an educational health program to be implemented by nurses in Erbil City's Primary Health Care Centers in order to improve mothers' knowledge, attitudes, and practices regarding infant and young child feeding [12]. Mothers' awareness levels about baby and young child feeding recommendations were also found to be lacking, despite a generally positive attitude toward child feeding recommendations [13]. Nutrition education should focus on enhancing mothers' nutrition understanding of baby and young child feeding recommendations, as well as assisting mothers in overcoming hurdles to providing enough nutrition to their children. It is vital to educate families about correct IYCF procedures in order to combat child malnutrition. This study recommends that women be appropriately taught about IYCF recommendations during their visits to health-care facilities, as well as the promotion of suitable IYCF through various media [14]. The lack of knowledge in the current study sample could be due to a number of factors, including the mother's sole focus on raising her child, a lack of media awareness of the importance of improving children's health, and the fact that the majority of the sample was made up of children who were unable to read and write. More awareness seminars on controlling children's feeding are needed at health centers, which could help to reduce the impact of malnutrition. This response revealed that mothers need to be empowered with knowledge by attending education sessions focused on newborn and young child nutrition and feeding [15].

There were only mothers age, education level, number of children, residents and sources of information as a factors associated with their knowledge which are discussion as the following:

According to the current data, there are substantial differences in mothers' understanding of newborn and young child feeding across age groups ($p=0.000$). The age of the study sample was one of the influencing elements of knowledge regarding newborn and young child feeding; the older age group (40 years) had the highest mean scores of knowledge, while the younger age group (20 years) had the lowest mean scores (Fig. 1). That is, the older the mothers are, the better their knowledge of infant and young child feeding is, but the younger the mothers are, the worse their knowledge of infant and young child feeding is. This research supports data from the Oromia area of Ethiopia, which found a substantial relationship between mothers' knowledge and their age groups, with young moms expressing less knowledge than older mothers [16]. That is, the mother's feeding experience is linked to their age (the older the age, the greater the knowledge).

This was corroborated by Vitta et al. (2016), who discovered a link between mothers' understanding of infant feeding and the advancement of mothers' ages [17].

Findings demonstrated that there were significant differences in mothers' knowledge with regard to education level ($p=0.000$). According to the statistics, people who are institute and above graduates have the greatest mean knowledge scores. The lowest mean knowledge scores were connected with individuals who were illiterate (unable to read and write) (Fig. 2). As a result, educational attainment is a significant determinant of knowledge, and the gap between an educated mother and an uneducated mother is significant. The majority of those who were unable to read and write (51.7 percent) were included in the survey, which was the cause for their lack of knowledge (fig. 2). Previous research, including findings from Nepal, has shown that illiterate mothers are highly associated with poor knowledge of how to feed infants and young children [18]. Onah et al. (2014), confirmed that a mother's education has a substantial beneficial relationship with her knowledge (more education greatly increased their knowledge about newborn and child food and care) [19]. In terms of newborn and early child feeding, illiterate and primary school graduates moms were substantially connected with low knowledge [20], [21].

Findings demonstrated that there were significant differences in mothers' knowledge ($p=0.000$). These differences confirmed that the higher the number of children, the better the mothers' knowledge of the nutrition of their young children, as the mother with one child recorded the lowest average knowledge, while the mother with more than 3 children recorded the highest average knowledge (Fig. 3). This research supports the findings of Berihu et al. (2013), who found that mothers have a moderate to low understanding of newborn and young child nutrition. Knowledge grows in lockstep with educational attainment and the number of children. It is suggested that information be promoted more effectively by involving the media and the healthcare profession [22].

Mothers' residents considered an influencing factor of knowledge towards feeding of infant and young children ($M \pm SD=1.33 \pm 0.257$) than those who are rural residents ($M \pm SD=1.25 \pm 0.255$), and there were significant differences between them ($t=2.282$; $p=0.005$). These results have been confirmed by Paudel et al. (2017), who find that the urban residents significantly improved knowledge about feeding of infant and young children [23]. According to moms, family are the most common sources of knowledge 125 (41.7). In terms of information sources, there were significant disparities in mothers' knowledge ($p=0.011$). The level of understanding of mothers was greatly increased by health insinuations (physicians and nurses) and social media (Fig. 4). This research supports the conclusions of Demilew (2017), who stated that sources of knowledge were influential variables in early children's feeding. Primary health care nurses were the best sources of knowledge on child nutrition [24].

Conclusion

Knowledge in terms of feedings of infants and young children, mothers expressed a poor level due to influencing factors includes: Mothers' age (knowledge

significantly higher with introduced age). Mothers education level (knowledge significantly higher with mothers who are institute and above graduated). Number of children (mothers who had more than one child's is significantly better knowledge than those who had one). Residents (the urban housing significant associated with improved feeding knowledge). Sources of information (health institutions as physician and nurses is significantly higher knowledge scores).

Study suggestion

1. Educational sessions can be designed and offered to mothers who attending primary health care centers free of charge by specialized owners deals with nutrition and feeding of under five years children.
2. Encourage mass media to discuss topics related to educate mothers about avoiding malnutrition and maintaining children health.
3. A manual booklet of nutrition instructions in children and how to deals it should be write in simple words and use attractive pictures given to the mothers and family.

Ethical Clearance

"All experimental protocols were approved under the Health Directorate, Iraq and all experiments were carried out in accordance with approved guidelines".

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