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Knowledge of Breastfeeding: A descriptive study among mothers in Kirkuk Governorate

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المستخلص

الهدف: تهدف الدراسة الحالية الى تقييم معارف الأمهات حول الرضاعة الطبيعية في محافظة كركوك، وتحديد العلاقة بين هذه المعارف وبعض الخواص الديموغرافية لأولئك الأمهات.

المنهجيّة: أجريت دراسة وصفية استعمل فيها أسلوب التقييم طُبّق على الأمهات في محافظة كركوك للمُدّة من الخامس عشر من كانون الثاني لسنة ٢٠١١ ولغاية الخامس والعشرين من تموز، ٢٠١١. أختيرت عينة غرضية "غير أحتمالية" مكونة من (٧٢) من الأمهات اللواتي راجعن مستشفى الأطفال العام في محافظة كركوك لمتابعة الحالة الصحية لأطفالهن. تمّ بناء استمارة استبيانية خاصة لغرض الدراسة، تضمنت الإستمارة الإستبيانية جزئين: جزء له علاقة بالخواص الديموغرافية للأمهات والجزء الآخر يتكون من مجموعة من الأسئلة (٢٠ سؤال) المتعلقة بالرضاعة الطبيعية. تمّ إجراء دراسة تجريبية للمُدّة من الخامس عشر إلى الخامس والعشرين من كانون الثاني، ٢٠١١ لتحديد ثبات الإستمارة الإستبيانية بإستعمال طريقة (الإختبار وإعادة الإختبار). كما تمّ شمول (٨) خبراء لتحديد مصداقية محتوى الإستمارة الإستبيانية. تمّ تحليل البيانات من خلال تطبيق أسلوب التحليل الإحصائي الوصفي للبيانات (التكرارات والنسب المؤية)، كما أستعمل أسلوب التحليل الإحصائي الإستنتاجي للبيانات (مربع كاي).

النتائج: أشارت نتائج الدراسة إلى أنّ أكثر من نصف الأمهات وبنسبة (٥٨،٣%) تتراوح أعمارهن بين (١٨-٢٥) سنة، (٤٥،٨%) منهن أكملن الدراسة الإبتدائية وأكثر من ثلثي الأمهات (٨٤،٧%) كنّ ربات بيوت، (٦١،١%) من الأمهات كنّ يعشنّ داخل مدينة كركوك وكان لديهنّ أكثر من طفل، (٦٣،٩%) منهن كنّ يراجعن مراكز الرعاية الصحية الأولية بصورة منتظمة. بينما فقط (٤٠،٣%) منهن تلقينَ التوعية الصحية حول الرضاعة الطبيعية. أمّا بخصوص مستوى معارف الأمهات حول الرضاعة الطبيعية، فقد تبين أنّ (٦٦،٧%) منهن كانت إجاباتهنّ صحيحة.

التوصيات: أوصتْ الدراسةَ بالحاجة الماسة للتوعية الصحية حول الرضاعة الطبيعية للأمهات خلال فترة الحمل وكذلك ضرورة التزام الأمهات بمواعيد الزيارات الموصاة خلال فترة الحمل.

Abstract

Aims: The present study aims at assessing mothers' knowledge of breastfeeding in Kirkuk governorate, besides determining the relationship between mothers' knowledge and some of their demographic attributes.

Methodolgy: A descriptive study was used the assessment approach and applied on mothers in Kirkuk governorate from January 15th 2011 to July 25th, 2011. Non-probability sampling a convenience sample of (72) mothers, attending pediatric general hospital in Kirkuk governorate for following up the health status of their children, was selected for the purpose of the study. A questionnaire was developed for the purpose of the study. It was comprised of two parts; the first part includes the mothers' demographic attributes and the second part assessed the knowledge of breastfeeding with (20) True or False questions. A pilot study was carried out for the period of January 15th to 25th, 2011 to determine the questionnaire reliability through the use of (Test – Retest). A panel of (8) experts was involved in the determination of the questionnaire content validity. Data were analyzed through the application of descriptive statistical data analysis approach (frequency and percentage), and inferential data analysis approach (chi-square).

Results: The study findings revealed that more than half (58.3%) of mothers were young, (45.8%) of them had completed primary school, more than two-third (84.7%) of them were housewife mothers, (61.1%) of them have lived inside Kirkuk city, also (61.1) of mothers have more than one children, (63.9%) of them were regularly visited primary health care center during antenatal period and only (40.3%) of them have received antenatal orientation about breastfeeding. According to the level of knowledge of breastfeeding, (66.7%) of mothers answered correctly all questions about breastfeeding, and there was a highly significant relationship between health education during antenatal period and mothers' knowledge of breastfeeding.

Recommendations: The study findings highlight the need for excessive health education about breastfeeding during antenatal period and advice the mothers to comply with recommended visits during pregnancy period.

Keywords: Breast Feeding, Mothers' Knowledge

Introduction

Breastfeeding is the feeding of an infant or young child with breast milk directly from female human breasts rather than from a baby bottle or other container [(1)]. Breast feeding by the mother to her new born infant is mandatory in the Holly Quran. ALLAH ordered the mother to breast feed her child for two full years [(2)]. The World Health Organization (WHO) recommends breastfeeding with complementary feeding up to 2 years of age or beyond, and it should be on demand, as often as the child wants [(3)]. Exclusive breastfeeding means that an infant receives only breast milk from his or her mother or a wet nurse, or expressed breast milk, and no other liquids or solids, not even water, with the exception of oral rehydration solution, drops or syrups consisting of vitamins, minerals supplements or medicines [(4)]. Whereas, complementary feeding is defined as the process starting when breast milk is no longer sufficient to meet the nutritional requirements of infants, and therefore other foods and liquids are needed, along with breast milk. The target range for complementary feeding is generally taken to be 6 to 23 months of age, even though breastfeeding may continue beyond two years [(5)].

Human breast milk is the healthiest form of milk for babies. It has just the right amount of fat, sugar, water, and protein that is needed for a baby's growth and development [(6, 7)]. Artificial feeding is associated with more deaths from diarrhea in infants in both developing and developed countries [(8)]. Reviews of studies from developing countries show that infants who are not breastfed are 6 to 10 times more likely to die in the first months of life than infants who are breastfed [(9)]. Diarrhea and pneumonia are more common and more severe in children who are artificially fed, and are responsible for many of these deaths [(10)]. Regarding intelligence, a meta-analysis of 20 studies showed scores of cognitive function on average 3.2 points higher among children who were breastfed compared with those who were formula fed [(11)].

Poor breastfeeding and complementary feeding practices are widespread. Worldwide, it is estimated that only 34.8% of infants are exclusively breastfed for the first 6 months of life, the majority receiving some other food or fluid in the early months [(12)]. A downward trend in breastfeeding has been noted widely in different countries of the Middle East, especially in urban areas where mothers with raised socioeconomic status resort to bottle-feeding quite early [(13)]. Some mother's have not practiced breastfeeding for their own personal reasons. These mothers may have inadequate knowledge regarding benefits and importance of breastfeeding, and by not practicing it; they can debar their babies and themselves from the benefits of breastfeeding, because almost all mothers think that breastfeeding has only benefits for the baby, while in fact there are also benefits for them [(14)]. Furthermore, and because of lacking of knowledge about breast feeding, a new mother who is discharged early from the hospital may find it challenging to initiate breastfeeding for her healthy newborn infant [(15)]. Therefore, the present study was carried out to assess the level of breastfeeding knowledge among mothers in Kirkuk governorate.

Methodology

The present study was carried out through the application of quantitative design of a descriptive study which uses the assessment approach, and it was conducted on mothers in Kirkuk governorate from January 15th 2011 to July 25th, 2011. Non-probability sampling a convenience sample of (72) mothers who attending pediatric general hospital in Kirkuk governorate, was selected for the purpose of the study. Of (90) mothers, (18) of them were not included in the study because (8) did not reply the questionnaires and (10) mothers did not complete all items of the questionnaires, so that they excluded. The study was conducted with the remaining (72) mothers. A questionnaire was developed for the purpose of the study. It was comprised of two parts; the first part includes the mothers' demographic attributes and the second part assessed the knowledge of breastfeeding with (20) true or false questions. A pilot study was carried out for the period of January 15th to 30th, 2011 to determine the questionnaire reliability through the use of (Test – Retest). A panel of (8) experts was involved in the determination of the questionnaire content validity. Mothers' knowledge level were described as high if they scored more than 75%

correct answers, moderate if 50%–75% correct answers or low if less than 50% correct answers. The obtained data of the respondent's responses to the questionnaire were entered in to the computer and analyzed through the use of the statistical package social sciences (*SPSS 11.5*); the data analyzed was preformed through the following approaches, which are: descriptive statistical data analysis approach such as (frequency and percentage), and inferential data analysis approach such as (chi-square).

Results

Table 1. Distribution of the subjects (72 mothers) by their Socio-demographic attributes

Age (Years)	**Frequency**	**Percent**
18-25	42	58.3
26-30	12	16.7
31-35	8	11.1
≤ 36	10	13.9
Total	**72**	**100**
Educational level	**Frequency**	**Percent**
Illiterate	16	22.2
Read and Write	4	5.6
Primary school	33	45.8
Secondary school	8	11.1
Institute graduate	6	8.3
College graduate	5	6.9
Total	**72**	**100**
Occupational status	**Frequency**	**Percent**
Housewife	61	84.7
Employee	11	15.3
Total	**72**	**100**
Residential area	**Frequency**	**Percent**
Rural	28	38.9
Urban	44	61.1
Total	**72**	**100**
Parity	**F**	**%**
Primiparity	28	38.9
Multiparity	44	61.1
Total	**72**	**100**
Visiting primary health care center during antenatal period	**F**	**%**
Regular	46	63.9
Irregular	26	36.1
Total	**72**	**100**
Health education regarding breastfeeding during antenatal period	**Frequency**	**Percent**
Available	29	40.3
Unavailable	43	59.7
Total	**72**	**100**

Table 2. Knowledge of the subjects (72 mothers) concerning breastfeeding

List	Items	Correct answers		Incorrect answers	
		Frequency	Percent	Frequency	Percent
1.	Best food for newborn baby	71	98.6	1	1.4
2.	Starting breastfeeding for the baby	20	27.8	52	72.2
3.	Concept of colostrum	71	98.6	1	1.4
4.	Benefits of colostrum	50	69.4	22	30.6
5.	Best method of infant feeding	69	95.8	3	4.2
6.	Complications of malnourished infants	69	95.8	3	4.2
7.	The best position for mother while feeding	69	95.8	3	4.2
8.	Infants needs during first six months	47	65.3	25	34.7
9.	What will be done after feeding the baby?	54	75	18	25
10.	Benefits of breastfeeding for both baby and mother	19	26.4	53	73.6
11.	Duration of breastfeeding	26	36.1	46	63.9
12.	Breastfeeding of infant with diarrhea	39	54.2	33	45.8
13.	Smoking during breastfeeding	21	29.2	51	70.8
14.	Frequency of breastfeeding during day time	29	40.3	43	59.7
15.	Prevention of sore and cracked nipples	55	76.4	17	23.6
16.	Breastfeeding develops a strong bond between mother and baby	67	93.1	5	6.9
17.	Breastfeeding during pregnancy	60	83	12	17
18.	Breastfeeding during tuberculosis	42	58.3	30	41.7
19.	Preparations before breastfeeding	49	68.1	23	31.9
20.	Methods to improve secretion of breast milk	27	37.5	45	62.5

Table 3. Association between levels of knowledge of breastfeeding of the sample (72 mothers) with their age group in Kirkuk governorate

Age group	Knowled eastfeeding				Total
	Correct answer		Incorrect answer		
	Frequency	Percent	Frequency	Percent	
18-25	28	66.7	14	33.3	42
26-30	8	66.7	4	33.3	12
31-35	5	63	3	37	8
≤ 36	7	70	3	30	10
Total	**48**	66.7	**24**	33.3	**72**
χ^2 obs = 0.112	**df =3**	**χ^2 crit = 7.815**		**P ≤ 0.05**	

df = degree of freedom; χ^2 obs = chi square observed; χ^2 crit = chi square critical, P= Level of Probability

Table 4. Association between levels of knowledge of breastfeeding of the sample (72 mothers) with their educational level in Kirkuk governorate

Educational level	Knowledge of breastfeeding				Total
	Correct answer		Incorrect answer		
	Frequency	Percent	Frequency	Percent	
Illiterate	10	62.5	6	37.5	16
Read and write	3	75	1	25	4
Primary school	22	66.7	11	33.3	33
Secondary school	5	62.5	3	37.5	8
Institute graduate	4	66.7	2	33.3	6
College graduate	4	80	1	20	5
Total	**48**	66.7	**24**	33.3	**72**
χ^2 obs = 0.712	**df = 5**	**χ^2 crit = 11.07**		**P ≤ 0.05**	

df = degree of freedom; χ^2 obs = chi square observed; χ^2 crit = chi square critical, P= Level of Probability

Table 5. Association between levels of knowledge of breastfeeding of the sample (72 mothers) with their occupational status in Kirkuk governorate

Occupational status	Knowledge of breastfeeding				Total
	Correct answer		Incorrect answer		
	Frequency	Percent	Frequency	Percent	
Housewife	40	65.7	21	34.3	61
Employee	8	72.8	3	27.2	11
Total	**48**	66.7	**24**	33.3	**72**
χ^2 obs = 0.215	**df = 1**	**χ^2 crit = 3.841**		**P ≤ 0.05**	

df = degree of freedom; χ^2 obs = chi square observed; χ^2 crit = chi square critical, P= Level of Probability

Table 6. Association between levels of knowledge of breastfeeding of the sample (72 mothers) with their Residential area in Kirkuk governorate

Residential area	Knowledge of breastfeeding				Total
	Correct answer		Incorrect answer		
	Frequency	Percent	Frequency	Percent	
Urban	18	64	10	36	28
Rural	30	68	14	32	44
Total	**48**	66.7	**24**	33.3	**72**
χ^2 obs = 0.117	**df = 1**	**χ^2 crit = 3.841**		**P ≤ 0.05**	

df = degree of freedom; χ^2 obs = chi square observed; χ^2 crit = chi square critical, P= Level of Probability

Table 7. Association between levels of knowledge of breastfeeding of the sample (72 mothers) with their parity in Kirkuk governorate

Parity	Knowledge of breastfeeding				Total
	Correct answer		Incorrect answer		
	Frequency	Percent	Frequency	Percent	
Primiparity	18	64	10	36	28
Multyparity	30	68	14	32	44
Total	**48**	66.7	**24**	33.3	**72**
χ^2 obs = 0.117	**df = 1**	**χ^2 crit = 3.841**		**P ≤ 0.05**	

df = degree of freedom; χ^2 obs = chi square observed; χ^2 crit = chi square critical, P= Level of Probability

Table 8. Association between levels of knowledge of breastfeeding of the sample (72 mothers) with their receiving health education regarding breastfeeding in Kirkuk governorate

Health education	Knowledge of breastfeeding				Total
	Correct answer		Incorrect answer		
	Frequency	Percent	Frequency	Percent	
Available	27	93	2	7	29
Unavailable	21	48.8	22	51.2	43
Total	**48**	66.7	**24**	33.3	**72**
χ^2 obs = 15.3	**df = 1**	**χ^2 crit = 3.841**		**P ≤ 0.05**	

df = degree of freedom; χ^2 obs = chi square observed; χ^2 crit = chi square critical, P= Level of Probability

Discussion

The results of the (table 1) revealed that more than half (58.3%) of mother belong to (18-25) years of age group, (45.8%) of them had completed primary school. More than two-third (84.7%) of them were housewife mothers, (61.1%) of them have lived inside Kirkuk City, also (61.1) of mothers have more than one child. Although (63.9%) of the mothers were regularly visited primary health care center (PHCC) during their antenatal period. While only (40.3%) of them have received antenatal orientation about breastfeeding. Breastfeeding education during pregnancy is often offered in PHCC. Classes are typically offered by a professional trained in breastfeeding or lactation management who is an effective teacher with groups of adults. Antenatal curricula most often provide guidance for mothers about anticipated situations and signs of effective breastfeeding or breastfeeding problems; the benefits of breastfeeding to mother, baby, and society [16].

The level of mother's knowledge regarding breastfeeding was measured through (20) questions, marking true or false for each question (table 2). When they asked which food is best for newborn baby, fortunately, all of them unless one (98.6%) knew that breast milk is the best one, because breast milk contains all the nutrients that an infant needs in the first 6 months of life, including fat, carbohydrates, proteins, vitamins, minerals and water [17]. Breastfeeding for the baby should be started after 30 minutes of delivery [3], because in the half hour after birth, the baby's suckling reflex is strongest, and the baby is more alert, so that it is the ideal time to start breastfeeding [18]. Unfortunately, in the current study more than two-third (72.2%) of mothers did not identify that; these mothers should be more educated and more aware about early starting of breastfeeding.

Colostrum is the special milk that is secreted in the first 2–3 days after delivery. It is produced in small amounts, about 40–50 ml on the first day [19], fortunately, all of them unless one (98.6%) knew that in the present study. Nevertheless, (69.4%) of participants identified the benefit of colostrum as the first immunization for the baby [17]. Respectively, (95.8%) of mothers had mentioned that breastfeeding is the best method for baby's feeding; a malnourished infant and young child has more episodes of diarrhea [20]; and sitting position is the best position for mother while feeding their baby [3]; these suggest high knowledge of mothers. Regarding mother understands on Infants needs during first six months, (65.3%) of them understood that exclusive breastfeeding should be giving during first six months; it is moderate knowledge that had shown among mothers, these mothers should be well educated and informed about Infants needs during first six months, because World Health Organization recommend that all infants be breastfed exclusively for the first six months of life [21]. When the mothers asking what they will do after feeding their babies, three-quarter of them described burping the baby as correct answer [22], because babies are particularly subject to accumulation of gas in the stomach while feeding, and this can cause considerable agitation and/or discomfort unless the child is burped.

Breast feeding is an important component in the lives of both mother and child [23]. But, in the present study only (26.4%) of mothers knew that and more than tow-third of them could not identify that; this may be attributed to their disorientation about breastfeeding benefits. The World Health Organization recommends breastfeeding for up to two years [3]. While in the present study (63.9%) of the mothers did not know that. According to breastfeeding of babies with diarrhea, (54.2%) of mothers said that they would breastfeed their child if they involved with diarrhea. Although the rate is better than a study conducted in Australia (45.4%) [24]. It is still a matter of concern that dietary patterns during acute diarrheal illness is not known to many mothers in the present study, as it has a major influence on recovery from diarrhea [25]. Mothers had low knowledge regarding breast feeding during smoking because only (29.2%) of them knew that they would continue to breastfeed their babies even if they smoke. Mothers who smoke are encouraged to quit, however, breast milk remains the recommended food for a baby even if the mother smokes. Although nicotine may be present in the milk of a mother who smokes, there are no reports of adverse effects on the infant due to breastfeeding [26].

However, low knowledge about the frequency of breastfeeding during day time was seen among the mothers in the present study. Taking into account the absence of breastfeeding orientation for most mothers during antenatal period. It is a very essential element, which needs to be taught to the mothers by health care workers. A mother can prevent sore and cracked nipples by correctly positioning and attaching her baby at the breast [20], it is cited by (76.4%) of mothers in the present study because suckling with poor attachment may be uncomfortable or painful for the mother, and may damage the skin of the nipple and areola, causing sore nipples and cracks[3]. Majority of the mothers (93.1%) knew that breastfeeding develops a strong bond between mother and baby, nearly the same rate (89%) was reported by Amal et al [27]. Most of mothers (83%) mentioned that breastfeeding should be continued during pregnancy. Indeed, Breastfeeding is possible throughout pregnancy, but generally milk production will be reduced at some point [28]. Mothers with active tuberculosis

should not breastfeed their infants [23], in the present study only (58.3%) of the mothers knew that; it is low knowledge compared to the severity of the problem. (68.1%) of the mothers gave correct answer as washing the breast with water before giving breastfeeding. To improve secretion of breast milk, one cup of milk or juice or any liquid food should be taken before breastfeeding[29]; it is identified only by (37.5%) of the mother. Overall, (66.7%) of the mothers correctly answered all questions; the same finding was reported in Najaf by Kafi [30].

The study findings had depicted no significant relationship between mother's knowledge of breastfeeding with age group, educational level, occupational status, residential area, and parity (tables 3, 4, 5, 6, and 7) respectively. While highly positive relationship had depicted between mother's knowledge of breastfeeding with health education on breastfeeding during antenatal period (table 8). The Similar finding has been reported in many other studies [31, 32] in which they found that instructions and number of prenatal consultations influence the knowledge level on breastfeeding.

Conclusion

The study findings demonstrated a moderate knowledge level about breastfeeding issues. It is attributed to inadequate prenatal health education on breastfeeding because mothers who have received antenatal education about breastfeeding were more knowledgeable than who have not.

Recommendations

1. Reinforces the need for antenatal period promotion and educative approaches throughout appropriate intervention programmes regarding breastfeeding issues.
2. Advice the pregnant women to comply with recommended visits during pregnancy period.

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