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ASSESSMENT OF NURSES' / MIDWIFES' KNOWLEDGE ABOUT MANAGEMENTS OF BREASTFEEDING DISORDERS AMONG WOMEN DURING LACTATION IN HOLY KARBALA CITY

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Abstract

Objectives: To assess the nurses' / midwifes' knowledge about managements of breastfeeding disorders among women during lactation.

Methods: A cross-section design. The study was conducted in Holy Karbala City. A probability sample consisted of (54) nurses / Midwifes. The instrument validity was determined through content validity, by a panel of experts. Reliability of the instrument was determined through pilot study. Analysis of data was performed through the application of descriptive statistics) and inferential statistics.

Results: The results of the study indicated that the majority of nurses \ midwifes who participated in the study were between the ages of (35 - 41) years and accounted (74.1 %).In addition, the study sample had a higher percentage of married nurses\midwifes (74.1 %). There is no statistically significant difference between the study sample in terms of (age, marital status, residence, and level of education, Experience years, Training courses, self-education, and sources of self-education).

Conclusion: There is a significant relationship between nurses' and midwifes' knowledge about breastfeeding disorders and its management and their age group, marital status, education level, years of hospital experience, and source of self-education during the testing period.

INTRODUCTION

Breastfeeding is the natural way to nourish a child, and human milk has no replacement. Attachment parenting is an art form. The Baby - friendly hospital Initiative was established in 1991 by United Nations International Children's Emergency Fund. (UNICEF) / World Health Organization (WHO) in recognition of the critical role that breastfeeding plays in a child's healthy

development. Breastfeeding lowers the risk of illness and other medical complications. Feeding at the breast is a significant milestone in the development of a mother and child's relationship [1] .

Cancer of the breast is the leading cause of death worldwide. Postpartum complications, such bleeding, are less likely to occur when moms breastfeed. Children who are breastfed, especially those who receive colostrum and continue breastfeeding for the first six months of life, have a significantly lower risk of contracting an illness than children who are not. Breast engorgement, nipple discomfort, nipple infection, mastitis, breast abscess, lactation failure, low milk supply, and improper feeding practices are just a few of the most prevalent breastfeeding challenges[2,3,4,5] .

METHODOLOGY

A cross sectional design was conducted to assess the nurses' / midwifes' knowledge about managements of breastfeeding disorders among women during lactation. It was carried out in order to achieve the early stated objectives. The study took place in the Holy Karbala Governorate / the Karbala Health Directorate / Maternity & Delivery Teaching Hospital. The interview was conducted with the nurses / midwifes from (26th August 2021 to 21th February 2022), after obtaining official permission from the hospital director. A non-probability (Purposive) sample of (64) nurses who work in Maternity & Delivery Teaching Hospital were chosen based on the study's criteria and after obtaining their consent.Validity and Reliability: The content validity of the instrument was established through a panel of (10) experts, the reliability of the items were based on the internal consistency of the checklist was assessed by calculating Cronbach s' Alpha which as= 0.972. Statistical analysis: The statistical data analysis approach by using (SPSS-ver.24) is used in order to analyze and evaluate the data of the study. A descriptive statistical data analysis approach used to describe the study variables: Frequencies and Percentages. Inferential statistical data analysis approach: by used the One Way ANOVA test and independent sample T test[6,7,8,9,10].

RESULTS

Table (1): Distribution of the Demographical Characteristics of the sample

Variables	Groups	Freq.	%
Age	21 – 27	8	14.8
	28 – 34	3	5.6
	35 – 41	39	72.2
	42 – 48	3	5.6
	49 – 55	1	1.9
	Total	54	100.0
	Mean ± SD	38.93 ± 7.780	
Marital status	Single	15	27.8
	Married	38	70.4
	Divorcee	1	1.9

	Total	54	100.0
Residence	**Urban**	43	79.6
	Suburban	4	7.4
	Rural	7	13.0
	Total	54	100.0
Education level	**Graduated from nursing school or midwifery**	10	18.5
	Graduated from high school nursing or midwifery	10	18.5
	Graduated from nursing institute or midwifery	27	50.0
	Nursing college graduate or more	17	31.5
	Total	54	100.0
Experience years	**1 – 6 Years**	41	75.9
	7 – 12 Years	6	11.1
	13 – 18 Years	4	7.4
	≥ 19 Years	3	5.6
	Total	54	100.0
Training courses	**Yes**	11	20.4
	No	43	79.6
	Total	54	100.0

Variables	Groups	Freq.	%
Self-education	**Yes**	49	90.7
	No	5	9.3
	Total	54	100.0
Sources of self - education	**None**	5	9.3
	Internet & Social media	23	42.6
	Books & lectures	9	16.7
	Library	1	1.9
	All	3	5.6
	Total	54	100.0

Freq.: Frequencies, %: Percentages, ≥: more Than or Equal.

According to this Table, the majority of nurses / midwifes who participated in the sample were between the ages of (35 – 41) years (Mean ± SD 38.93 ± 7.780) and accounted for (72.2 %)

of the sample. In addition, the study sample had a higher percentage of married nurses (70.4%). In terms of residence, the majority of nurses in the sample lived in urban areas (79.6%). In terms of educational attainment, the higher percentage of nurses in the sample are (50.0%) Graduated from nursing or midwifery institute. The Experience years was within (1 - 6 years) interval for the vast majority of nurses in the sample (75.9%). In relation to Training courses most of nurses were have no training courses in the study sample (79.6%). Regarding self-education, the majority of the sample carry out the self-education process, and their percentage is (90.7%). Finally, with regard to sources of self-education, Internet & Social media was the majority of the answers for the study sample, and its percentages were (42.6%).

Table (2): Assessment of nurses' \ Midwifes' knowledge related to main domains of breastfeeding disorders during the lactation period for the study sample

No.	Main Domains Related to Nurses\midwifes' Knowledge about:	Study Sample *No=54		
		M.S	RII	Ass.
1.	General knowledge of nurses\midwifes or midwives about breastfeeding and its importance during the breastfeeding period	1.53	0.5049	L
2.	The knowledge of nurses\midwifes or midwives about the causes and symptoms of breastfeeding disorders	1.161	0.3831	L
3.	The knowledge of nurses\midwifes\midwives about prevention methods for the most important problems of breastfeeding	1.126	0.3715	L
Total mean		1.272		L.M.S

No.: Number of sample, M.S.: Mean score, L.M.S: low mean score (1 - 1.66), M M.S: moderate mean score (1.67 - 2.33), H.M.S: high mean score (2.34 – 3.00). RII: Relative Important Index, Ass.: assessment, , L: low (RII = 0% – 0.33%), M: moderate (RII= 0.34%-0.66%), H: high (RII= 0.67% – 1%).

According to Table (2), the mean score and Relative Important Index of nurses' / Midwifes' knowledge in all items for the study sample were low according to the mean score and moderate according to the Relative Important Index grades (low, moderate, high).

Table (3): Assessment of nurses \ midwives knowledge about measures for breastfeeding disorders during the lactation period of study sample as measured by mean score, standard deviation, and Relative Important Index (cutoff point 2).

No.	Domains and questions	M.S	S.D	Ass.
Part I: General knowledge of nurses \ midwives about breastfeeding disorders during the lactation period:				
1.	Hormones such as cortisol, insulin, growth factors and free amino acids are important compounds found in breast milk that positively affect Baby's digestive system.	**2.70**	**0.465**	**P**
2.	One of the benefits of immediate breastfeeding for the child is the presence of anti-inflammatories that reduce the risk of gastrointestinal infections, such as Necrotizing enterocolitis.	**2.15**	**0.770**	**P**
3.	The emotional bond between mother and child during breastfeeding and the presence of some substances in breast milk contribute to Relieve stress and calm the child.	**1.63**	**0.839**	**P**
4.	One of the benefits of breastfeeding for the mother after childbirth is the presence of the hormone oxytocin, which works on Shrink the uterus and speed up the healing process.	**1.26**	**0.447**	**F**
5.	Breastfeeding the mother Reduce the risk of mental disorders.	**1.19**	**0.396**	**F**
6.	The breast consists of glandular tissue and contains a number of lobes ranging from 15-20 lobes.	**1.11**	**0.320**	**F**
7.	Among the most important functions of the interlobular Cooper ligaments are Prevent the spread of infection between the lobes.	**1.22**	**0.506**	**F**
8.	The alveoli, which consist of milk secreting cells, stimulate these cells to produce milk by the action of a hormone prolactin.	**1.22**	**0.424**	**F**
9.	The hormone prolactin is secreted, which travels through the blood and stimulates the milk secretion cells to produce milk from The anterior part of the pituitary gland.	**1.30**	**0.542**	**F**
10.	A thick, yellow substance that is rich in fats, but contains less protein and glucose, called colostrum.	**1.59**	**0.844**	**P**
11.	The amount of milk produced is related and regulated by The amount that the child takes during the feeding and the frequency of the feedings.	**1.00**	**0.000**	**F**
12.	Oxytocin is secreted from The invisible part of the pituitary gland.	**1.04**	**0.192**	**F**
13.	Among the factors that contribute to the occurrence of the oxytocin reflex are baby voice.	**1.22**	**0.506**	**F**
14.	One of the signs of proper attachment to the infant during breast-feeding Most of the areola is inside the mouth	**1.00**	**0.000**	**F**
Part II: The knowledge of nurses \ midwives about the causes and symptoms of				

breastfeeding disorders:				
1.	When the breast becomes fuller than it should be, in addition to filling it with milk, it is filled with increased tissue fluids with blood This condition is called mastitis.	**1.70**	**0.542**	**F**
2.	Symptoms of swollen breasts edematous.	**1.11**	**0.320**	**F**
3.	Milk fever occurs because of Some substances in the milk pass into the mother's blood.	**1.11**	**0.320**	**F**
4.	One of the causes of breast engorgement An abundance of milk with a small number of feedings, which impedes the emptying of the breasts.	**1.04**	**0.192**	**F**
5.	One of the reasons for the poor emptying of milk sufficiently from part of the breast Compressing tight clothes and leaning on the breast while sleeping.	**1.04**	**0.192**	**F**
6.	Breast abscess is It is a purulent collection of part of the breast and appears to be filled with fluid.	**1.04**	**0.192**	**F**
7.	Cracked nipple sometimes results from injuries to the nipple as a result Improper nipple sucking.	**1.26**	**0.447**	**F**
8.	Candida infection is caused by Parasites that grow in the nipple and areola.	**1.19**	**0.396**	**F**
9.	Symptoms of candidiasis in the mother Feeling itchy or burning in the breasts during and after feeding.	**1.19**	**0.396**	**F**
10.	One of the causes of mastitis Milk duct obstruction and milk stagnation in the breast.	**1.33**	**0.555**	**F**
11.	Symptoms of mastitis fever, chills, and swelling (breast firmness).	**1.04**	**0.192**	**F**
Part III: The knowledge of nurses \ midwives about prevention methods for the problems of breastfeeding:				
A.	**Prevention of breast engorgement**			
1.	The mother should start breastfeeding the baby immediately after birth.	**1.11**	**0.320**	**F**

Continue…

No.	Domains and questions	M.S	S.D	Ass.
Part III: The knowledge of nurses \ midwives about prevention methods for the problems of breastfeeding:				
A.	**Prevention of breast engorgement**			
2.	The mother must ensure the quality of the infant's attachment to the breast.	**1.22**	**0.424**	**F**
3.	The mother should have frequent feedings.	**1.00**	**0.000**	**F**
4.	The mother should not limit the duration of breastfeeding.	**1.04**	**0.192**	**F**
B.	**Prevention of mastitis:**			

1.	The mother should make sure that the child's mouth is fully attached to the breast during feeding.	**1.33**	**0.480**	**F**
2.	The mother should change positions while breastfeeding to ensure that each breast is completely emptied.	**1.15**	**0.362**	**F**
3.	The mother must make sure that the child empties the first breast completely before moving to the second breast.	**1.00**	**0.000**	**F**
4.	The mother should have frequent feedings, and the feedings should not be spaced apart for long periods.	**1.07**	**0.267**	**F**
5.	To help empty the breasts, the mother should put a warm compress or take a warm bath before starting to breastfeed.	**1.19**	**0.483**	**F**
C.	**To prevent cracked and sore nipples:**			
1.	Pushing the entire nipple into the baby's mouth	**1.07**	**0.267**	**F**
2.	Do not allow the infant to play with the nipple after being full.	**1.22**	**0.424**	**F**
3.	Avoid frequent nipple washing.	**1.04**	**0.192**	**F**
4.	Keep it dry between feedings.	**1.56**	**0.506**	**F**
5.	The nipple should be exposed to air or dry heat.	**1.00**	**0.000**	**F**
6.	Do not wear a breast pad lined with plastic materials.	**1.04**	**0.192**	**F**
7.	Do not wash nipple with soap or wipe it with alcohol or perfumed creams.	**1.22**	**0.506**	**F**
8.	Put the baby to the breast in the comfortable position for the mother.	**1.00**	**0.000**	**F**
D.	**Candidiasis prevention**			
1.	Note if the child has signs of thrush in the mouth, which increases the risk of fungal transmission, a woman should always keep the breast dry, because moisture in this place facilitates the spread of fungi.	**1.26**	**0.447**	**F**
2.	To keep the nipple dry at all times during the feeding period, a nursing pad suitable for breastfeeding should be used inside the bra every day, especially for those who had a previous infection	**1.19**	**0.396**	**F**
3.	If the breast is leaking milk, the mother should breastfeed the baby immediately or remove the excess milk by manual withdrawal or while taking a warm bath. This milk can be stored and frozen for future use	**1.19**	**0.396**	**F**
E.	**Prevention of obstruction of the milk ducts**			
1.	Proper attachment to the breast (the largest part of the areola should be inside the mouth)	**1.00**	**0.000**	**F**
2.	About tight clothes on the chest area, especially if they are worn during the night to reduce pressure on the breast when sleeping	**1.04**	**0.192**	**F**
3.	Observing the position of the mother's fingers during breastfeeding and whether she is holding the breast areola in a way that can prevent the flow of milk, such as the position of scissors	**1.22**	**0.506**	**F**

4.	It should be noted if the mother has large and sagging breasts (if this is the case it is suggested that she raise her breast more during breastfeeding to help improve the emptying of the lower part of the breast)	**1.00**	**0.000**	**F**

MS: mean score, S.D. = Standard deviation, Ass: assessment, P: pass. F: fail.

This table shows that the respondent's knowledge toward measures for breastfeeding disorders during the lactation period. The results indicate that the study sample were poor level score and most participant fail in test.

DSCUSSION

5.1. Discussing the Demographic Characteristics of the Study sample.

The study's findings in Table (4.1) indicated that the majority of the study sample was between the ages of (30– 39) years. And they account for (72.2 %). This finding is consistent with a study conducted by [11] who found that that majority of the respondents (54.4%) were within the age group (30-39) years. This finding also corroborates a study conducted by AL-Nuaimi K, et al (2019) which indicated that (25.6%) of them were between the ages of 31 and 35 years[12] .

Another study of ElenaAntoñanzas-, et al (2020) found that More than 80% of the participants were older than 36 years[13] . According to study done by Stephen Dajaan Dubik, et al., (2021).The nurses and midwives had a mean (SD) age of 30.3 (7.3) years[14] . According to the researcher, these findings indicate that the age of nurses is critical in terms of enhancing their knowledge and practice. Younger nurses are more ambitious, put in more effort, are in better physical health, and are more creative in their approach to nursing performance. On the other hand, older nurses with more years of work have more experience related to the subject of study[15,16,17]

The table (1) also shows that the majority of nurses are Graduated from nursing institute or midwifery. this finding contradicts a study conducted by AL-Nuaimi K, et al (2019) who found that (63.4%) of staff nurses held a Bachelor, (18.75%) of nurses, and 25.6% held a Diploma degree in nursing.

The table (4.1) also shows that the most of the nurses have years of experience ranging between (1-6) years, and formed a ratio (75.9%). According to study done by Elena Antoñanzas-, et al (2020) found that Most of them (79%) had more than 5 years of experience working with BF women and this agree with study of AL-Nuaimi K, et al (2019) that most of them had ≤5 years of experience. Another study done by Stephen Dajaan Dubik, et al., (2021) found that Work experience more than 4 years. In the researcher's view, these results suggest that the fact that there is frequent rotation from one unit to another within the hospital may explain the few years of nursing experience in units where breastfeeding problems exist. On the other hand, when nurses are young, the score shown will have a greater willingness to improve their skills compared to

other nurses in the higher age group.

The table (1) also shows that the results indicated that the majority of the study sample lacked training courses, accounting for (79.6 %) of the study sample. This finding is consistent with a study conducted by Stephen Dajaan Dubik, et al., (2021) who discovered that more than half of the study sample (64.4%) have no service training experience.

5.2. Discussion of the assessment of nurses' \ Midwifes' knowledge related to main domains of breastfeeding disorders during the lactation period for the study sample.

While Table (2) indicated that the studied nurses had an unsatisfactory level of knowledge regarding all items of knowledge related to main domains of breastfeeding disorders during the lactation period, the mean score and Relative Important Index of nurses' \ Midwifes' knowledge for all items for the sample were moderate. This result agrees with AL-Nuaimi K, et al (2019) use Independent samples t-tests were used to compare knowledge before and after the workshop, and to compare this between groups. The results showed the control group (n=40; M=8.98; SD= 2.31) at baseline (t=-1.79; P>0.05), which indicates homogeneity of variance. The results showed a significantly higher mean and standard deviation in the intervention group (M=11.73; SD=2.6) compared to the control group (M=8.38; SD=2.59) after the workshop (P=<0.001), indicating that the workshop was beneficial in improving participants' knowledge of breastfeeding.

5.3. Discussion of Assessment of nurses' knowledge related to all questions of fluid and electrolyte imbalance for hemodialysis patients as measured by mean score, standard deviation, and Relative Important Index (cutoff point 2):

While Table (3) indicated This table indicates that most of the answers to the questions were at a low level and did not pass the tests, and this indicates the nurses' \ Midwifes' knowledge related to breastfeeding disorders during the lactation period are inadequate. This conclusion is backed up by AL-Nuaimi K, et al (2019) who showed that most nurses and midwifes did not have adequate knowledge of breastfeeding and who dealing with its problem thus, training courses need to be developed and implemented in order to enhance competencies and skills for the prevention and management of breastfeeding problem.

CONCLUSIONS:

1. The study presented that the majority of nurses / midwifes who participated in the sample were between the ages of (35 – 41) years old. Having (1-6) years of experience hospital and have not attended any training session regarding Breastfeeding which established by hospitals, or establish in inside or outside Iraq. Also the study presented that the most of the nurses who participated in the study were married, urban residence, and doing self-education depending on Internet &social media.

2. The nurses' / midwifes' level of knowledge toward breastfeeding disorders during the lactation period for the study sample, was poor. The most of the participant fail in answer of main domain questions.
3. There is a significant relationship between nurses' knowledge about breastfeeding disorders during the lactation period and their age group, marital status, level of education, years of hospital experience, and source of self-education.

RECOMMENDATIONS:

1. Through a course that covers everything connected to breastfeeding, increase the awareness and understanding of nurses and midwives working in maternity hospitals with regard to breastfeeding, the proper ways for its success, and how to deal with its complications.
2. Providing and distributing a pamphlet on breastfeeding and how to avoid and address breastfeeding issues to employees in the women's halls.
3. Making scientific publications accessible and highlighting how crucial it is to inspire nurses to learn how to handle breastfeeding issues and instruct moms on how to prevent and avoid them while they are lactating.
4. More investigation into the adoption of educational programs that instruct nurses and midwives in proper breastfeeding knowledge and techniques.

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