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Mothers' Attitudes toward Maintaining Breast Milk Flow during Their High-Risk Neonates Hospitalization

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Abstract

Background: Breastfeeding the optimal start for babies during first six months of life and most crucial preventive measure for saving children's lives because it enhances maternal and baby health as well as cognitive development in both developed and developing nations.

Objectives: to assess the mothers' attitudes toward breast milk flow when their high-risk newborns are in the hospital, and relationship between mothers' attitudes with their demographic data.

Methods: A descriptive study was conducted on mothers have high risk neonate in Holy Karbala city from the period of 26th September 2022 to 19th September 2023. The study was carried out in three hospitals includes Women's Obstetrics and Gynecology Hospital, Karbala Teaching Hospital for Children, and Alhusainia General Hospital.

Results: The study is found the age groups from (20-30) and (above 30) years represented (33%) respectively, most of them cannot read and write (22%), the majority of mothers were housewife(74), residency in urban area (60%), somewhat enough as economic status (58%), and with normal delivery birth, and have two to three births (41%). The mothers' attitude level towards breast milk flow when their high-risk newborns are hospitalized was negative, and the higher percentage that showed in the attitudes for a diet that keeps milk flow and the lower percentage that demonstrated in the attitudes for procedures that maintain milk flow. There is a statistically significant correlation (P 0.001) between mothers' attitudes and their age, level of education, the occupation, income status, and place of residency. It demonstrates that mothers' perspectives do not differ statistically substantially based on the number and type of births they have experienced (P>0.05).

Conclusion: A woman's level of education, income, place of residence, and profession influence her beliefs and thinking about successful breastfeeding, methods to maintain flowing their milk managing her child's condition at risk and choosing the best way to feed her child. The number of children and the type of birth are not influencing the mother's thinking about breastfeeding.

Keywords: *Attitudes, Breast milk flow, High risk.*

Introduction

Breastfeeding the optimal start for babies during first six months of life and most crucial preventive measure for saving children's lives because it enhances maternal and baby health as well as cognitive development in both developed and developing nations [1]. Because of its nutritional balance, immunological protection, and other growth-promoting

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elements, human milk is the recommended diet for infants and is considered as the "gold" standard for baby nutrition. Breastfeeding not only promotes overall growth, but it also promotes healthy craniofacial development by encouraging intense orofacial exercise, which promotes the development of the functions of breathing, swallowing, chewing, and phonation according to some schools of thought, is beneficial to the development of the oral cavity among them is improved hard palate contouring, which results in proper deciduous dentition alignment and fewer malocclusion concerns [2]. Premature babies who are fed their mother's own milk (MOM) have a decreased risk of developing necrotizing enterocolitis, septicemia, and retinopathy of prematurity than their formula-fed counterparts. Long-term exposure to MOM protects against metabolic syndrome and bronchopulmonary dysplasia. Breastfeeding has benefits for moms as well, including a decreased chance of developing breast and ovarian cancer, less postpartum bleeding, and an accelerated rate of uterine involution [3]. Consuming human milk is an effective way to maintain health over the course of a person's life and has a wide range of immediate and long-term advantages that are well established in the field of science. The milk of mothers is essential for helping at-risk newborns (NBs) survive and have a higher quality of life because human milk has a unique and complicated composition that acts as a customized meal, medicine, and protection [4]. Women who give birth prematurely are encouraged to breastfeed their babies because human milk helps babies in the NICU with things like immune system development, food absorption, bowel function, brain growth, and prevent the occurrence of necrotizing enterocolitis [5]. Low birth weight (LBW) is a major public health issue, particularly in poor countries, and is usually linked to child morbidity and mortality. (LBW) is a serious public health concern and one of the most powerful single risk factors for early newborn mortality and morbidity according to the World Health Organization (WHO), the prevalence of LBW is 15.5% worldwide, with poor nations accounting for 96.5% of LBW newborns [6]. Most preterm babies need care in a newborn unit and/or a neonatal intensive care unit (NICU) for a few days to several months. In this case, the mother's role and breastfeeding begin and grow in a medical setting that is new to them. It might take moms a while to figure out what their duties are as parents. They might also feel pressure, helplessness, worry about the baby's health, shame, or guilt because the baby was born early [7]. Preterm babies have greater rates of mortality and morbidity than term babies depending on gestational age, preterm babies have immature sucking habits; they have a weak suck and have trouble controlling their breathing and swallowing, which makes it harder for them to transition to exclusively breastfeeding. Preterm newborns, on the other hand, demonstrate early breastfeeding competence and can root, hold the areola effectively, and conduct brief sucking bursts as early as 29 weeks. They can also start achieving nutritive breastfeeding at 31 weeks [8].

Objectives: To assess the mothers' attitudes toward breast milk flow when their high-risk newborns are in the hospital, and relationship between mothers' attitudes with their demographic data.

Materials and Methods:

A descriptive study was conducted on mothers have high risk neonate in Holy Karbala city from the period of 26th September 2022 to 19th September 2023. The study was carried out in three hospitals includes Women's Obstetrics and Gynecology Hospital, Karbala Teaching Hospital for Children, and Al-Hussaini General Hospital.

Ethical considerations:

The University of Kerbala's College of Nursing approved the research protocol and provided official clearance for the study, The College of Nursing's Ethics Committee assessed the study's instruments (questionnaire) and gave its approval after seeing the study's title and objectives at the date of: 2023/3/ 9 and number : ,and Karbala Health Directorate's (Training Department and Development) gave formal letter to Women's

Obstetrics and Gynecology Hospital, Karbala Teaching Hospital for Children, and Alhusainia general Hospital as the final stage in the administrative preparations.

Data collection:

After permission was arranged from all institutions and an agreement of mothers to participate, then the researcher explaining the purpose of the study in simple way. Data were obtained through distribute a questionnaire and fill it out by the mothers personally with some clarification in the event that some paragraphs were ambiguous. The period from (14th January to the 28th February 2023), interview was conducted with mothers who were attended to the women's obstetrics and gynecology hospital, Karbala Teaching Hospital. Every piece of information the mothers submitted was kept private and only used for this study. Each survey took, on average, 10 to 15 minutes to complete. The questionnaire was developed as an approach of data collection after a review of pertinent literature and studies. For study mothers' attitudes toward maintaining breast milk flow during hospitalization of their high-risk neonates. The questionnaire is based on the extensive review of related literature and previous studies in addition to the investigator experiences. The tool of the study consists of two parts:

Part I: Socio-Demographic characteristic of the mothers: Characteristics of the studied mothers such as age, place of residence, level education, occupation, economic situation, type of birth and number of children.

Part II: Maternal Attitudes about Maintaining Breast Milk Flow: First: This section includes (12) items which present General attitude about maintaining breast milk flow. Second: This section includes (7) items which present attitude for procedures that maintain milk flow. Third: This section includes (6) items which present attitude for a diet that keeps your milk flowing. The responses for these questions are rated and scored on (3 level type Likert Scale) as; Agree= 2, Disagree= 0, Neutral= 1, and the total attitudes scores of mothers were calculated by adding up the scores for each question in the test. The Validity of the Study Instrument: To make the instrument more valid, it was presented to a panel of (15) experts in the different fields related to the study tittle.

Data Analysis

The SPSS Version 25 software will be used to manage and analyze the data. In terms of normality, descriptive statistics such as number and percentage of frequency, mean and standard deviation, and inferential statistics proportional to the data distribution will be utilized. In addition, K-S is used to determine the normal distribution of data. Statistical methods, including the Pearson correlation test, the independent sample t-test, and analysis of variance are employed to examine the differences and correlations between variables. Moreover, if the data are not normally distributed, nonparametric equations such as the spearman correlation test, the Kruskal-Wallis test, and the Mann-Whitney test are utilized to estimate the relationship between variables.

Results

The study is found the age groups from (20-30) and (above 30) years represented (33%) respectively, most of them cannot read and write (22%), the majority of mothers were housewife (74), residency in urban area (60%), somewhat enough as economic status (58%), and with normal delivery birth, and have two to three births (41%). The mothers' attitude level towards breast milk flow when their high-risk newborns are hospitalized was negative, and the higher percentage that showed in the attitudes for a diet that keeps milk flow and the lower percentage that demonstrated in the attitudes for procedures that maintain milk flow. There is a statistically significant correlation (P 0.001) between mothers' attitudes and their age, level of education, the occupation, income status, and

place of residency. It demonstrates that mothers' perspectives do not differ statistically substantially based on the number and type of births they have experienced (P>0.05).

Table 1: Distribution of the mothers according to their socio demographic data:

Demographic Characteristics	**Subgroup**	**f.**	**%**
Age group	≤ 20	10	10.0
	20-25	33	**33.0**
	26-30	24	24.0
	> 30	33	**33.0**
	Total	100	100.0
	Mean ± SD 27.87 ± 5.9.25 Min- Max 17-41 years		
Educational level	Cannot reading and writing	22	**22.0**
	Reading and writing	16	16.0
	Primary schools	19	19.0
	Middle schools	12	12.0
	Secondary schools	10	10.0
	Diploma	7	7.0
	College and above	14	14.0
	Total	100	100.0
Occupation	Working	17	17.0
	Housewife	74	**74.0**
	Free business	0	0.0
	Student	9	9.0
	Total	100	100.0
Place of residences	Urban	60	**60.0**
	Rural	40	40.0
	Total	100	100.0
Economic status	Insufficient	27	27.0
	Barely enough	58	58.0
	sufficient	15	15.0
	Total	100	100.0
Birth type	Normal delivery	63	**63.0**
	Cesarean birth	37	37.0
	Total	100	100.0
Number of births	1 birth	31	31.0
	2-3 births	41	**41.0**
	4-5 births	23	23.0
	6-7 birth	5	5.0
	Total	100	100.0

	Mean ± SD 2.64 ± 1.580 Min- Max 1-7

Table (1) shows that the age of (100) mothers from age group (20-30) years and (above 30) years of old represented (33%) respectively. Regarding the educational level, the most study sample cannot read and write represented (22%), and most mothers were housewife represented (74%). According to the place of residences the most the study samples from the urban area represented (60%). The results also shown that the economic status was somewhat enough represented (58%). According to the birth type the results showed 63% study sample were normal delivery, and finally (41%) of study sample have (2-3) births.

Table (2): Assess mothers' Attitude toward breast milk flow when their high-risk newborns are in the hospital:

Domains	**Items**	**M**	**SD**	**Ass.**
General attitudes about maintaining breast milk flow	Breastfeeding the baby immediately after birth is important for the continuation of the milk flow	1.72	.494	**P**
	Feeding the baby from both breasts alternately works to maintain the flow of milk	1.58	.606	**P**
	Frequent feedings increase the flow of milk	1.45	.783	**N**
	Giving bottle feeding with breastfeeding a baby works to reduce the flow of milk	1.00	.888	**N**
	Breast size is not an important factor in increasing milk flow	1.00	.791	**N**
	Wearing tight clothes (bras) reduces milk flow	.88	.795	**N**
	Spacing births does not increase milk flow	.89	.790	**N**
	Overall domain 1	1.22	.428	**N**
Attitudes for procedures that maintain milk flow breast milk	Putting a baby in contact with the skin works on the flow of milk	1.25	.770	**N**
	Putting the baby in the cradle position influences the flow of milk	1.19	.787	**N**
	The baby latches on to the breast in a way that applies his mouth to the nipple and most of the areola surrounding it influences the flow of milk	1.29	.795	**N**
	Holding the breast between the thumb and forefinger or between the forefinger and the rest of the fingers when breastfeeding that effect the flow of milk	1.35	.821	**N**
	Breast massage before feeding increases the flow of milk	1.13	.861	**N**
	Massaging the breasts before expressing the milk works to increase the flow of milk	1.04	.803	**N**
	Warm compresses increase the flow of milk	.97	.784	**N**
	Using a breast milk pump between feedings	1.03	.784	**N**

	increases milk flow			
	Using a breast milk pump every time you skip breastfeeding increases your milk flow	1.05	.796	**N**
	Placing gems (beads) and notching does not affect the continuation of the flow of milk	.84	.762	**N**
	Eating the herbs prescribed by the apothecary does not affect the continuation of the flow of milk	.83	.726	**N**
	Overall domain 2	1.09	.417	**N**
Attitudes for a diet that keeps your milk flowing	A balanced diet for the mother works on the continuity of milk flow	1.60	.682	**P**
	The quality of food is important in maintaining the flow of milk	1.21	.820	**N**
	Water and fluids affect the flow of milk	1.14	.841	**N**
	Dates increase the flow of milk	1.81	.419	**P**
	Good food along with adequate sleep increases the flow of milk	1.77	.489	**P**
	Overall domain 3	1.51	.397	**P**
Overall mothers Attitude		**1.27**	**.338**	**N**

M = Mean of score, S.D = Standard Deviation, Ass = Assessment level, N = negative (0 – 1.50), P = positive (1.51-2).

The results in table (2) showed mothers' attitude level toward breast milk flow when their high-risk newborns are in the hospital were negative and the higher percentage that showed in the attitudes for a diet that keeps your milk flowing and the lower percentage that showed in the attitudes for procedures that maintain milk flow breast milk.

Table (3): The relationship between mothers' attitudes with their demographic variables:

Demographic Characteristics	**Subgroup**	**Attitudes**			
		M	SD	Analysis	p. value
Age group	≤ 20	.86	.205	Cc=.466**	.000
	20-25	1.18	.288		
	26-30	1.33	.321		
	> 30	1.44	.300		
Educational level	Cannot read and write	1.11	.283	F= 7.076	.000
	Read and write	1.16	.316		
	Primary	1.25	.330		
	Middle	1.13	.294		
	Secondary	1.29	.315		
	Diploma	1.69	.102		
	College and above	1.57	.237		

Occupation status	Working	1.65	.194	F= 17.072	.000
	Housewife	1.20	.304		
	Student	1.12	.360		
Place of residences	Urban	1.35	.344	t=2.835	.006
	Rural	1.16	.298		
Economic status	Not enough	1.04	.271	F= 12.009	.000
	Somewhat enough	1.32	.337		
	It is enough	1.49	.225		
Birth type	Normal delivery	1.30	.342	t=1.041	.301
	Cesarean birth	1.22	.331		
Number of births	1 birth	1.14	.376	Cc=.188	.062
	2-3 births	1.31	.314		
	4-5 births	1.37	.267		
	6-7 birth	1.31	.421		

According to the findings in table (3), there is a highly significant statistical relationship (P 0.001) between mothers' attitudes and their age, level of education, occupation, economic status, and place of residence. It demonstrates that mothers' views do not alter statistically significantly according to their number of births and the type of birth (P>0.05).

Discussion of Study:

1. Discussion of Distribution of mothers by their demographic characteristics

According to Table (1), the major mothers participants in the study from age groups (20-30) years and (above 30) years of old represented (33%) respectively. due to the fact that this age group is regarded as the age of output, this matches a study conducted by [9] whose showed most mothers in the study from age group (20-35). Regarding the educational level, the most study sample cannot read and write represented (22%), Because most of the mothers in the study got married at school age and could not complete their studies. These findings agree with [10]in their study who revealed that more than half of participants were uneducated. Due to the fact that the majority of the study's participating mothers did not finish their education most mothers were housewife represented (74%), The current study agrees with [11], whose founded that almost all mothers were housewives represented (70.3%) from all number (N=178) of study sample. For the reason the study covered two hospitals in the city that most the of study samples from the urban area represented (60%) these results support the research by [12], disclosed more data in her study, noting that the majority of mothers (233) 64.0% came from urban areas. In terms of economic status, more than half of the people in the study sample had enough income (58%). This is because monthly income is linked to occupation, and since most of the people in the study sample are housewives, they do not have enough monthly income. This study agrees with the results of [13], Whose funding shows that most of the mothers in the study had a modest income. According to the birth type the results showed (63%) study sample were normal delivery, because caesarean sections are only performed under specific circumstances and are not generally advised by medical professionals. the current study agrees with results of the study which had been done by [14], The study founded about (118) of the sample were vaginal delivery represented (59%) and only (82) Caesarean delivery represented (41%), and finally (41%)

of study sample have (2-3) births. the current study supports the findings of [15], Who founded over half of the women had (1-3) children which represented (54.1%).

2. Discussion mothers' attitudes toward breast milk flow when their high-risk newborns are in the hospital:

The results present study showed mothers' attitude level toward breast milk flow when their high-risk newborns are in the hospital were negative, this indicates that mothers do not have sufficient ideas about continuation of milk flow for their children, due the level of education most of the mothers not read and write. Because the majority of the moms in the research come from cities, they are familiar with meals that promote milk flow the higher percentage that showed in the attitudes for a diet that keeps your milk flowing and the lower percentage that showed in the attitudes for procedures that maintain breast milk flow, because the majority of the participating women were stay-at-home moms, they had no one to challenge their beliefs about what promoted milk flow. The present research confirms the findings of [16], who evaluated attitudes and impediments to breastfeeding among women in their study at Princess Nourah Bint Abdulrahman University in Riyadh, Kingdom of Saudi Arabia. According to the study, most moms had unfavorable sentiments of breastfeeding. Also, this finding is consistent with [17], whose mentioned that the most mother the idea that a mother's food directly affected her breast milk flow. Mothers felt that a poor diet would result in poor breast milk flow and that healthy eating was necessary to produce breast milk that was nutrient-rich.

3. Discussion the relationship between mothers' attitudes with their demographic variables

Tables (3) show a statistically significant relationship between mothers' attitudes and their age (P=0.001), which is due to older moms having more knowledges and experiences than younger mothers. As well as highly significant statistical differences (P 0.001) between mothers' attitudes and their educational level, socioeconomic status, and occupation, as well as a significant statistical difference (P 0.05) between mothers' attitudes and their residence, due of the relationship between the mother's monthly income, her work, and her education, educated mothers who have a job and therefore have sufficient financial income per month have a more positive thinking regarding the success and continuation of the milk flow than illiterate mothers. These outcomes agree with those of [18], whose founded that statistically significant relationship between mothers' attitude of breastfeeding with socioeconomic status, mothers age, and the first feed given to the newborn after birth.

Conclusion:

At the end of a preterm baby's hospital stay, parents often worry about whether or not the baby is ready to be fed by mouth. This only gets a lot of attention after other big health problems have been solved or made easier to deal with. because there aren't many studies on adults who were born preterm many mothers are unaware of the consequences of not breastfeeding their high-risk babies.

A woman's age, level of education, income, place of residence, and economic statues influence her beliefs and thinking about successful breastfeeding, methods to maintain flowing their milk managing her child's condition at risk and choosing the best way to feed her child. The number of children and the type of birth are not influencing the mother's thinking about breastfeeding.

The study shows that mothers have negative attitudes toward maintaining breast milk flow. Also revealed that there's significant relationship between the mothers' attitudes and their demographic data included age, level education, occupation, place of residences, and economic status.

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Nil.

Conflicts of interest

There are no conflicts of interest.

Data availability statements

The data are original and available online.

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