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Assessment for Knowledge and Attitude for Mother About Premature Babies Care

Mohammed Kadhim Saadoon[1], Esraa Shaker Saeed[1*], Karrar Kadhiam Obaid[2], Zainab Taliab Njam[2], and Wala Hadi Sabaa[3]

[1]Pediatric Nursing Branch, Faculty of Nursing, University of Karbala, Karbala, Iraq
[2]Nursein Al-Hashimiyah General Hospital, Karbala, Iraq
[3]Nures Ibn Saif Children's Hospital, Karbala, Iraq
* **israashaker199090@gmail.com**

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ABSTRACT

Background: Premature infants represent a vulnerable group of infants who require special care. Mothers play a crucial role in providing appropriate care for premature infants; therefore, their knowledge and attitudes are important factors influencing outcomes. **Objectives**: This study aimed to assess mothers' knowledge and attitudes regarding premature infant care and to determine the relationship between knowledge, attitudes, and selected demographic variables. **Methods**: A descriptive cross-sectional study was conducted at Karbala Teaching Hospital for Children from 26th November 2022 to 28th June 2023. A non-probability (convenience) sample of 112 mothers was selected. Data were collected using a structured questionnaire and analyzed using SPSS version 26. **Results**: The results showed that 54.5% of mothers had low knowledge, 38.4% had moderate knowledge, and 7.1% had high knowledge regarding premature infant care. Regarding attitude, 80.4% of mothers demonstrated a negative attitude, while 19.6% showed a positive attitude. A statistically significant relationship was found between mothers' knowledge and residence ($p = 0.015$) as well as mother's age ($p = 0.004$). No significant association was observed between mothers' attitudes and demographic variables ($p > 0.05$). **Conclusion:** The study concluded that most mothers had low knowledge and negative attitudes toward premature infant care. Educational programs are recommended to improve mothers' knowledge and promote positive attitudes.

Keywords: Mothers, Knowledge, Attitude, Premature infant Care, infants.

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1. Introduction

Premature birth refers to infants born before 37 weeks of gestation. These infants often suffer from incomplete development of vital organs such as the lungs, brain, and liver, which increases the risk of morbidity and mortality [1]. Preterm birth is considered a major global health problem and is one of the leading causes of death among children under five years of age. It also contributes significantly to neonatal mortality and long-term complications among survivors [2–4]. Child care is primarily the responsibility of mothers; therefore, the type and quality of care provided to premature infants depend largely on maternal knowledge and attitudes [5]. Adequate maternal awareness regarding premature infant care plays an essential role in preventing complications, reducing hospital readmission, and improving neonatal outcomes. However, several studies have reported insufficient maternal knowledge about the specific needs of preterm infants, highlighting the importance of educational support from healthcare providers [6]. Premature infants are at risk for various health problems, including respiratory distress, feeding difficulties, growth retardation, vision and hearing problems, and neurological impairment [7]. Many factors contribute to premature birth, such as previous history of preterm delivery, multiple pregnancies, short birth spacing, maternal chronic diseases, smoking, and uterine or placental problems [8, 9]. International efforts, including reports and recommendations issued by global health organizations, emphasize improving maternal education and neonatal care to reduce complications and enhance survival rates among premature infants [10–12]. Therefore, this study aims to assess mothers' knowledge and attitudes regarding premature infant care and to determine the relationship between mothers' knowledge and attitudes with selected demographic variables.

2.Methodology

Study Design: A cross-sectional, descriptive study was carried out between November 26, 2022, and June 28, 2023. The study was carried out 112 Mother attending to Karbala teaching hospital for children, to assess mothers' knowledge and attitudes about premature infant care

Study Sample: Non probability (convenience) sample of (112) mothers who attend the Karbala teaching hospital for children.

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Administrative Arrangements: The University of Kerbala's College of Nursing provided the study's protocol and formal approval. The Ethics Committee, which was established inside the College of Nursing, was provided with the title and the created questionnaire. After reviewing the study instruments (questionnaire), the committee decided to carry with the study and obtained consent from the mothers during the interview.

The Study Instrument: The researcher created an evaluation instrument to gauge "Mother Knowledge and Attitudes about Premature infant Care in Karbala Teaching Hospital for Children. "Samples were collected at the Karbala Teaching Hospital for Children. A questionnaire format included five parts. The first part concerned the socio-demographic characteristics of the mothers (residence, level of education, age, mother's job, number of family members, and crowding index, which was calculated by dividing the number of family members by the number of rooms). The second part concerned the mother's gestational history; it included five questions. The three-part general information about premature infant sheet consisted of 5 questions. The fourth part of the questionnaire consisted of 18 items assessing mothers' knowledge regarding premature infant care, the five part of the questionnaire was consisted of 15 questions. was included Attitude about child care.

Validity of the Study: The instrument was submitted to a panel of eight experts in various domains connected to the research title in order to increase its validity. Those experts were asked to review the instruments of the study.

Reliability of the study: Reliability of the study instrument was assessed using Cronbach's alpha coefficient. The Cronbach's alpha value for the knowledge items was (0.82) and for attitude items was (0.79), indicating acceptable internal consistency.

Data collection: The researcher conducted in-person interviews with mothers of premature infants using a questionnaire. In the NICU of the Karbala Teaching Hospital for Children, the researcher collected the questionnaires. Each questionnaire has a consent form in front of it, asking mothers to voluntarily engage in the study and complete the form while at work. The questionnaire took 15 to 25 minutes to complete on average.

Data Analysis: Data were analyzed using SPSS version 26. Descriptive statistics (frequency, percentage, mean, and standard deviation) and inferential statistics (ANOVA test and correlation coefficient) were used to determine associations between variables.

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3.Result

Table (1) shows that 39.3% of the mothers live in the countryside, and 75% of the mothers work as housewives. And 29.5% of the mothers show their primary level of education. Also, it is show that 46.2% of the mothers are within age of (23-27). And the percentage of 47.3% of mothers is that the number of their family members ranges between (3-4).

Table 1. Mothers' Demographic Characteristic Distribution (n=112)

NO.	Variables	Valid	F.	%
1	Residence	Rural	44	39.3
		Urban	68	60.7
		Total	112	100
2	Mother Job's	Employee	25	22.3
		Housewife	84	75
		Free work	3	2.7
		Total	112	100
3	Level of Educational	NO read	14	12.5
		Read and write	11	9.8
		Primary	33	29.5
		Secondary	19	17
		Institute	14	12.5
		Bachelor	17	15.2
		Postgraduate	4	3.6
		Total	112	100
4	Mother Age	18-22	14	12.6
		23-27	52	46.2
		28-32	24	21.5
		33-37	19	17
		38-42	3	2.7
		Total	112	100

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5	Number of Family	3-4	53	47.3
		5-6	39	34.8
		7-8	19	17
		>9	1	0.9
		Total	112	100

f: Frequency, %: Percentage

Table (2) shows the mothers' knowledge about caring for a premature infant. The results indicate that most participants had a low level of knowledge, with 61 out of 112 mothers (54.5%). Table (3) presents the mothers' attitudes toward premature infant care, showing that 90 mothers (80.4%) demonstrated a negative attitude, while 22 mothers (19.6%) showed a positive attitude. Table (4) shows the relationship between knowledge and demographic characteristics, indicating that place of residence and mother's age were significantly associated with knowledge, while the other characteristics were not. Table (5) shows that, at $p > 0.05$, there was no statistically significant correlation between maternal attitudes and demographic variables.

Knowledge scores ranged from (0–18). Scores were categorized as:

Low (0–6), Moderate (7–12), High (13–18).

Table 2. The Total Knowledge for Mother about Premature infant Care (n=112)

Total Knowledge			
	Degree	*Frequency*	*Percentage %*
Level of knowledge	High	8	7.1
	Moderate	43	38.4
	Low	61	54.5
	Total	122	100

Attitude scores ranged from (15–30). Scores were categorized into negative and positive attitudes using mean cut-off point.

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Table 3. The Total Attitude for Mother about Premature infant Care (n=112)

Total Attitude			
	Degree	*Frequency*	*Percentage %*
Level of Attitude	Negative	90	80.4
	Positive	22	19.6
	Total	112	100

Table 4. Correlation between Mothers' Knowledge and Demographic Variables

NO	Variables		Sum of Squares	Df.	Mean Square	F.	Sig.
1	Residence	Between Groups	2.290	1	2.290	6.051	0.015 Sig
		Within Groups	41.630	110	0.378		
		Total	43.920	111			
2	Mother age	Between Groups	5.878	4	1.469	4.133	0.004 Sig
		Within Groups	38.042	107	0.356		
		Total	43.920	111			
3	No.Family	Between Groups	1.578	3	0.526	1.342	0.265NS
		Within Groups	42.341	108	0.392		
		Total	43.920	111			
4	Mother occupation	Between Groups	0.551	2	0.275	0.692	0.503 NS
		Within Groups	43.369	109	0.398		
		Total	43.920	111			
5	Level of educational	Between Groups	1.414	6	0.336	0.582	0.744 NS
		Within Groups	42.505	105	0.405		
		Total	43.920	111			

Df= Degrees of freedom, F= Frequency, Sig=Significant, NS=Non-Significant at P>0.05

Attitude was categorized as negative and positive and analyzed using Chi-square test.

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Table 5. Association Between Attitude and Demographic Characteristics

NO	Variables		Sum of Squares	Df.	Mean Square	F.	Sig.
1	Residence	Between Groups	0.005	1	0.005	0.030	0.863 NS
		Within Groups	17.674	110	0.161		
		Total	17.679	111			
2	Mother age	Between Groups	1.060	4	0.265	1.706	0.154NS
		Within Groups	16.619	107	0.155		
		Total	17.679	111			
3	No. Family	Between Groups	1.076	3	0.359	2.333	0.078 NS
		Within Groups	16.603	108	0.154		
		Total	17.679	111			
4	Mother occupation	Between Groups	0.229	2	0.115	0.715	0.491 NS
		Within Groups	17.450	109	0.160		
		Total	17.679	111			
5	Level of educational	Between Groups	0.576	6	0.096	0.589	0.738 NS
		Within Groups	17.103	105	0.163		
		Total	17.679	111			

Df= Degrees of freedom, F= Frequency, Sig=Significant NS, Non-Significant at P>0.05.

4. DISCUSSION

After analyzing the participants' socio-demographic characteristics, as shown in Table (1), the results indicate that 60.7% of the sample lived in urban areas. This finding is comparable to the result reported by Nigatu et al. (2015), who found that 54.8% of mothers lived in urban areas [13]. The analysis also shows that the majority of participants (75%) were housewives. This result agrees with studies conducted in Northeast Ethiopia (77.2%) [6] and in the Gaza Strip, Palestine (74%) [7], but differs from the study conducted in Kenya, where 55% of the respondents were female employees among medical students at the University of Nairobi [8].

Education: 33% of participants were graduated from primary school. This is in line with a study conducted in the University of Rwanda on students of nursing [8]. Nevertheless, it is not

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consistent with another study in Kenya where 26% of the sample were female employees and Northeast Ethiopia (23.7%) [13]. In terms of age group, most (46.2%) of the identified study subjects were in the range of 21–25 years old, which is consistent with similar research conducted in Northwest Ethiopia, Gaza Strip (Palestine), Rwanda, and Kenya [13–16].

Regarding family size, the present study showed that 47.3% of mothers had 3–4 family members. Family size may influence mothers' ability to provide adequate care for premature infants. Similar findings were reported by Abdullah and Hassan (2019), who found that moderate family size was common among mothers of preterm infants [17]. A comparable result (36.8%) was also reported by the International Journal of Africa Nursing Sciences (IJANS) in Northeast Ethiopia [13,18].

4.1. Mothers' Knowledge Regarding Premature Infant Care

As shown in Table (2), 54.5% of participants demonstrated a very low level of knowledge, while only 7.1% had a high level of knowledge. This result is close to that of a study in Northeast Ethiopia, which reported 15% of participants with a high level of knowledge [13], but it disagrees with findings from the University of Erbil, where 42.3% had a high level of knowledge [10]. Meanwhile, a study conducted among students of Mahidol University in Thailand showed that the dominant level of knowledge was moderate (55%) [19,20].

These findings show that the majority of women in the current research knew very little about caring for preterm infants. The possible explanations include a lack of health education provided by medical staff in neonatal wards and insufficient activation of the nurse's educational role. Also, low level of education status as the majority of the study subjects only completed elementary grade and were housewives .Mothers should be targeted with educational programs and training as seen in OIC-Africa [2] initiatives and the Karkh Health Authority in Baghdad. More efforts should also be directed towards increasing knowledge among mothers currently residing with their infants in Karbala Teaching Hospital for Children to enhance the outcome of neonatal care.

4.2. Mothers' Attitudes Toward Premature Infant Care

The findings also show that more participants (80.4%) were found to have negative attitudes than those with positive attitudes. This result is in contrary to that of Northeast Ethiopia, where 45% had negative attitude [13]. This may indicate that negative attitudes exist toward premature

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infant care among a large portion of the mothers in this study .There may be several reasons for this that include lack of knowledge, inadequate information, inexperience and influence of traditional misbeliefs. These practices are indicative of poor health knowledge and confirm the necessity to organize information campaigns.Since such sick infants need a very sensitive touch, it is important that the educational and counseling roles of nurses be enhanced and supported by hospital administrators [21,22]. However, and optionally even the mothers to a certain extent holds some responsibility as they have an affirmative action in seeking real information, reading books/ articles and avoiding traditional harmful practices. This study was only done on mothers of premature infants admitted to Karbala Teaching Hospital for Children.

4.3. Relationship Between Mothers' Knowledge and Socio-Demographic Variables

The findings also indicate there is a statistically significant association between mothers' awareness and their place of residence ($p = 0.015$, $p \leq 0.05$). This result is consistent with a study done in College of Nursing, University of Rwanda [15] in which was also found to have an association between mothers' knowledge and socio- economic factors such as place of residence and age. Knowledge of mothers about ALRI, was significantly associated with age of the mothers ($p = 0.004$, $p \leq 0.05$). But it contradicts with the study in Northeast Ethiopia this study who found no significant association between knowledge and age [16].In contrast, we found no significant association between mothers' knowledge and the number of family member ($p = 0.265$, $p \leq 0.05$) which is consistent with findings reported from Gaza strip in Palestine [15,23]. Another research from Palestine [14,24], which found significant association between mothers' occupation and knowledge is not consistent with this finding, $p = 0503$, $p \leq .05$ respectively . Additionally, no statistically significant association was observed on mothers' level of education and knowledge ($p = 0.582$, $p \leq 0.05$), similar to that noted in the Northeast Ethiopia study [13].

4.4. Relationship Between Mothers' Attitudes and Socio-Demographic Variables

The results indicate that there is no significant correlation between mothers' opinions and the number of family members ($p = 0.078$, $p \leq 0.05$), age ($p = 0.154$, $p \leq 0.05$), or place of residence ($p = 0.863$, $p \leq 0.05$). Similarly, there was no significant correlation ($p = 0.491$, $p < 0.05$) between mothers' opinions and their profession. Furthermore, mothers' opinions and educational attainment did not significantly correlate ($p = 0.738$, $p < 0.05$). These findings are consistent with

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[12], who also reported a non-significant relationship between attitude and educational level.

5. Conclusions

The study concludes that most mothers have low of level knowledge. had the study finding show that most mothers have negative level of Attitude, there is no significant association between total level of health care worker's knowledge with their other demographic characteristics exclude Residence and Mother's age. The mother's overall level of education and their other demographic traits do not significantly correlate.

6. Recommendations

In order to raise mothers' awareness of premature infant care, a training program should be established. created posters highlighting the significance of early infant care, turn on the motivating and monitoring system, doing more research with a variety of healthcare professionals to get more experience. and instructing the mother to access the materials pertaining to the care of children in general and preterm infants in particular.

7. Acknowledgment

Based on the findings of the study, educational programs should be implemented to improve mothers' knowledge regarding premature infant care. Health education sessions should be provided for mothers in neonatal intensive care units. Nurses should play an active role in educating mothers about feeding, hygiene, and follow-up care of premature infants. Further studies are recommended with larger sample sizes in different settings.

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