

Mothers' Knowledge Regarding Home Care Management of Neonatal Jaundice in Qaladze - Sulaymaniyah City

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ABSTRACT

Background and Objectives: Jaundice is the most common condition requiring medical attention in newborn babies. The mother has a significant role in reducing the effects. Early discharge of mothers and neonates from the hospitals increased the responsibility of mothers in recognizing jaundice has increased. This study aimed to assess the level of the mothers' knowledge regarding home care management of neonatal jaundice.

Methods: A quantitative, cross-sectional descriptive study was carried out in the Neonatal Intensive Care Unit at Shahidan Qaladze Teaching Hospital from the period of January 2021 to March 2022. Purposive (non-probability) sampling techniques were used to recruit participants. The study sample included 114 mothers. Data was collected using a questionnaire prepared by the investigator, and direct interviews were conducted. Descriptive statistics including, frequencies and percentages, and inferential statistical analysis of Chi-square was used to analyze the data.

Results: The results show that 34.2% of the mothers were between 26-32 years. Concerning occupation, more than three-quarters (86%) of the sample were housewives. The study demonstrated that the majority (64.9%) of mothers did not have enough information about jaundice. There was a statistically significant association between parents' relatives and the source of information regarding the mother's knowledge. The study showed a statistically significant association between mothers' knowledge and early initiation of breastfeeding. Factors associated with mother's knowledge include the mother's age, occupation, years of formal education, residency areas, received health education on neonate jaundice, and the source of information.

Conclusion and Recommendations: The study concluded that most mothers had a deficit of knowledge regarding home care management of neonatal jaundice. It is recommended to provide mothers with comprehensive health education about neonatal jaundice care to improve their knowledge and practice in caring for neonates with jaundice.

Keywords: Mothers; Neonatal; Intensive Care Units; Home Care Services.

Received: 04/01/2022

Accepted: 26/03/2022

Published: 30/11/2022

INTRODUCTION

Jaundice is a yellow coloring of the skin and/or the whites of the eyes, a common condition in babies. When bilirubin

accumulates in the skin of infants, the skin turns yellow. High bilirubin levels in the blood is a condition known as

hyperbilirubinemia [1]. About half of term and 80% of preterm babies get jaundice, which arises two to four days after birth and goes away on its own within one to two weeks without treatment [2]. The main symptom is a yellowish skin color that appears and extends to the face, chest, abdomen, legs, and soles of the feet. Clinical indicators of hyperbilirubinemia include hepatomegaly, poor weight gain, lethargy or irritability, poor breastfeeding or bottle-feeding, and visual jaundice (yellow of the sclera) [3]. Subtypes of neonatal jaundice include jaundice due to breastfeeding, jaundice due to breast milk, and hemolytic jaundice due to Rhesus factor (Rh) incompatibility, and ABO blood group incompatibility [4]. Poor feeding, high-pitched cries, convulsions, hearing loss, cerebral palsy, and mental retardation are all side effects of jaundice [5]. Kernicterus is a dangerous consequence connected with jaundice and can cause cerebral palsy and deafness if not appropriately treated [6]. A mother with blood group O or rhesus negative, rapid rise of total serum bilirubin (TSB), sepsis, lactation failure in exclusive breastfeeding, high pre-discharge bilirubin level, cephalohaematoma or bruises, babies of diabetic mothers [7]. Jaundice is a common reason for re-admission to the hospital after an early discharge of a newborn baby. "In a study conducted in the Iraqi-Kurdistan region, the neonatal mortality rate was 37 deaths per 1000 live births" [9]. In 2002, 18% of neonatal admissions at the National Hospital of Pediatrics (NHP) were admitted with hyperbilirubinemia [8]. Among Turkish infants, jaundice is seen in 10.5 % of term infants and 25.3 % of near-term infants [10]. A study confirmed that 75% of neonatal mortality occurs in though Asia and Sub Haran African, deaths occurring within the first 28 days, and add that more than third of neonatal death occurs in Ethiopia [11].

Neonatal jaundice is increased in infants of East Asian, American Indian, and Greek descent. African infants are affected less often than non-African infants [10]. Early detection and treatment of ureteric neonates may help to reduce difficulties [6]. In newborns, jaundice is the most prevalent ailment that necessitates medical treatment, such as jaundice presentation sites, danger signs, causes, complications, diagnosis ways, and effective treatments, are included with in mothers' awareness regarding home care management of neonatal jaundice [12]. According to the non-official census at Shahidan Qaladze there were 250 neonatal jaundices admitted to the hospital last year [13]. The goal of this study is to assess mothers' knowledge regarding home care management of neonatal jaundice.

METHODS

This study was a descriptive-analytic cross-sectional study using a quantitative design. The research was conducted between January 2021 and the end of March 2022. The sample was a non-probability (purposive) sample of 114 eligible mothers based on a formula devised by Yamane in 1967 [14], as follows $n = \frac{N}{1 + N(e)^2}$; (N= Total Number e= Alpha errors of 0.05). Eligibility criteria included mothers who were admitted with their neonate with jaundice. Mothers who attended Shahidan Qaladeze Teaching Hospital in Qladadeze sub-district in Sulaymaniyah city of the Iraqi Kurdistan region were recruited. Prior to the interview, an administrative agreement was taken from the Faculty of Nursing/Sulaymani University's scientific and ethical committee, and the Shahidan Qaladeze Teaching Hospital's scientific and ethical committee. Verbal consent was received from mothers who accepted to participate. Personal information, such as phone numbers, and

addresses, were not included in the tool, and the researcher agreed to keep the data secure for anonymity and confidentiality. The questionnaire consisted of two parts. Part 1 gathered information regarding participants' socio-demographic characteristics, and part 2 assessed mother's knowledge regarding home care management of neonatal jaundice. The knowledge items were rated on a two-point dichotomous scale (Know and Don't Know) and scored as 1 for correct and 0 for incorrect. Data was collected through direct (face-to-face) interviews for about 25 to 35 minutes. The validity of the study instrument was first determined by a panel of 20 experts from various fields. It assessed the consistency, precision, repeatability, and trustworthiness of research. It demonstrates the extent to which the survey instrument is free of bias and ensures consistent measurement throughout and across the various elements in the instruments [15]. Pearson correlation(r) was used to determine the reliability ($r=0.81$) and indicated that the scale is sufficiently trustworthy. A pilot study was conducted on 15 mothers. The data were processed using SPSS software version 25 for statistical analysis (frequency and percentage). The association between the variables was determined using inferential statistical analysis (Chi-square and regression). It is considered statistically significant if the p -value is equal and less than 0.05 and rejects the null hypothesis.

RESULTS

The socio-demographic characteristics of mothers are presented in Table 1. The results show that 34.2% of the mothers were between 26-32 years. Concerning occupation, more than three-quarters (86%) of the sample were housewives. The results showed that more than half (68.4%) of the sample are of middle level socioeconomic

status. Around half (57%) of the respondents were pregnant more than once (multigravida), and 43% had one child (primigravida). Sixty-four percent of mothers had no previous history of neonatal jaundice. Mothers breastfeeding exclusively accounted for 61.4% of the sample. The study revealed that 68.4% of mothers had received health education about neonatal jaundice and 18.4% received health education on neonatal jaundice from their relatives. A statistically significant association was found between mothers' knowledge of home care management and parameters such as source of information (p -value=0.030), and relative between parents (p -value=0.036) respectively (Table 2). Table 3 indicates a statistically significant link between mother's knowledge and the initiation of breastfeeding (colostrum). Table 4 shows a statistically significant relationship between mothers' knowledge of home care management and parameters such as source of information (p -value=0.00), occupation (p -value=0.04), and health education (p -value=0.05). The study found non-significant association between mothers' experiences of home care management and their age ($p=0.64$).

DISCUSSION

Part I: Socio demographic characteristics of mothers (Table 1) Most of the respondents were 26-32 years of age. This study is like a study carried out by an Iraqi researcher, who revealed that 43.2% of caregivers were aged between 26-31 [16]. In contrast, a study conducted in Nigeria revealed that most of respondents were aged 20-35 years [17]. The current study found that housewives made up the largest percentage of participants. This finding is consistent with a study conducted in Karbala which found that more than three quarters

(79.5%) of mothers providing home care were housewives [18]. In terms of the participants' economic status, the results suggest that 68.4% had a middle economic status. This is contradicted by a study conducted by researchers in Vietnam which found that the average household economy was middle level [8]. In Karbala, a study found that 60% of the mothers have a low socioeconomic status [18]. The current study showed that around half (57%) of mothers were pregnant more than once (multigravida), and 43% had one child (primigravida). Similar results were also found in a study in Ghana which mentioned that 55% of the sample were nulliparous and 45% were primigravida [19]. According to the type of feeding, 61.4% of mothers started exclusive breastfeeding. This finding is consistent with an Iraqi researcher which found that 65.2% of women exclusively breastfed their children [16]. According to the current study, less than a quarter of mothers (64.9%) have never heard of newborn hyperbilirubinemia, with relatives accounting for 18.4% of information and social media accounting for 14.0%. This contradicts the findings in Ghana which found that 82.7% of women had heard of neonatal jaundice. The primary source of knowledge concerning newborn jaundice was the school (34.6%), followed by friends (15.4%) [20].

Part II: Association between sociodemographic characteristics and mother's knowledge regarding neonatal jaundice (Table 2)

Our study found no statistically significant relationship between mothers' knowledge of newborn jaundice and their age, level of education, or socioeconomic status. This contradicts the findings in Karbala which found that the mothers' knowledge was substantially related to their age, degree of education, and socioeconomic status at a p-value of 0.05 [18]. No significant association between occupational and residential status

of mothers was found at a p-value of 0.05. Furthermore, our findings contradict the findings of a study carried out in Egypt which found that mother's knowledge was influenced greatly by the degree of education, age, parity, and past history [12]. Another study found that knowledge was substantially connected with a history of neonatal jaundice, a child's birth rank, and the mother's age [20]. This contradicted the findings of the present investigation, which found no statistically significant link between mother's knowledge, mother's age, and previous history of jaundice. Also, the findings of the present study disagree with a study conducted in Iraq which found that older women's knowledge, attitude, and behavior about several aspects of neonatal jaundice were considerably better than younger women's [21]. In contrast to the earlier study was carried out in Egypt [22], our study found that occupation and residency had no effect on mothers' knowledge. Working mothers and those who live in cities had much higher levels of knowledge than other mothers. Similar findings were observed in an Indian study by Gopalakrishnan et al., [23]. The respondents' degree of education, as well as the number of prior babies that had neonatal jaundice, were found to have a substantial impact on their understanding of the condition in this study. However, there was no correlation between the mother's age and their expertise ($p=0.005$). The current study found a statistically significant relationship between maternal education and awareness of neonatal jaundice ($p=0.020$), as well as the number of previous babies who had experienced neonatal jaundice and respondents' knowledge of neonatal jaundice ($p=0.0001$). A study discovered in Baghdad shows a statistically significant relationship between mother's knowledge and mother's age ($p=0.001$) [24] and an Iraqi researcher found

a statistically significant relationship between mothers' level of education and their practices [25]. According to our findings, there is a statistically significant link between parents' relatives and the source of information on the mother's expertise. Our findings contradict with a study conducted in Nigeria which found no influence of source of information and mother's knowledge on neonatal jaundice, and no relationship between a relative of parents and mother's knowledge on neonatal jaundice [26].

Part III- Association between biographical information of neonatal jaundice and mother's knowledge (Table 3) There was no statistical link between mothers' educational levels and the age of their newborns. A similar study in Karbala found no significant link between mothers' knowledge and neonatal age ($p=0.016$). The current study found a statistically significant link between mother's knowledge and biographical information of newborns related breastfeeding (colostrum) initiation which is consistent with a study conducted in Karbala which found a link between mothers' knowledge and colostrum in terms of socio-demographic variables [27].

Part V: Identify the factors associated with mothers' knowledge regarding home care management (Table 4) Our result reveals a statistically significant relationship between mothers' knowledge of home care management and parameters like source of information, occupation, and health education, years of schooling, and residential area, with p-values of 0.00 and 0.05, 0.010, and 0.034, respectively. A study in Mosul, Iraq discovered a statistically significant relationship between the age of the care, level of education, occupation, and residential areas, and homecare management of neonatal jaundice babies [24]. A study conducted in Ghana reported that health education should emphasize phototherapy as the main treatment plan,

and the need to seek early hospital care when neonatal jaundice is detected [28-29].

CONCLUSION

The study found that most mothers lacked knowledge and procedures for managing newborn jaundice care at home. It was suggested that mothers of children with newborn jaundice receive comprehensive health education regarding neonatal jaundice care to improve their knowledge and practice.

Acknowledgment

The authors acknowledge the mothers who participated in the study and Qaladeze Shahida Hospital for their support and participation.

Ethical considerations

Ethical approval was obtained from the scientific and ethical committee at the Faculty of Nursing/ Sulaymani University, and Shahidan Qaladeze Teaching Hospital. Verbal permission was taken from the mothers before conducting the interviews. The tool did not consist of personal information such as personal phone number, address, personal information, and the researcher promised to keep the data for confidentiality and anonymity

CONFLICT OF INTEREST

The authors (s) report no conflict of interest.

FUNDING

The authors (s) report no funding support.

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