

# Mothers' Knowledge About Newborn Physiological Jaundice in Baghdad Pediatric Teaching Hospitals

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## ABSTRACT

From 1 February 2023 to 30 April 2023, mothers' understanding of infant physiological jaundice was the subject of a descriptive study using the Baghdad Pediatric Teaching Hospitals in Baghdad City. The purpose of the study is to evaluate the level of nursing care given to children who have suffered burn injuries in burn units. From the newborn wards of the teaching hospitals in Baghdad City, a non-random (purposive) sample of (55) mothers was chosen. The four main components of the study instruments were built specifically for the study. First portion of the questionnaire for mothers includes general questions about mothers, demographic information, and a second component with 20 questions. The data were gathered using a constructed questionnaire that has 20 items and was filled out using interview questions. The questionnaire was scored and rated using a two-level Likert scale, with a score of 2 denoting a yes response and a score of 1 denoting a no response. The data were analyzed using two statistical approaches: descriptive statistical analysis and inferential statistical analysis. 45% of mothers who were asked if they knew about infant physiological jaundice said no, according to data on mothers' understanding of the condition. However, 56% of moms said they did. It has been demonstrated that mothers' sociodemographic traits and their awareness of newborns with physiological jaundice are related. At the P 0.05 level, it was demonstrated that there is no correlation between mothers' sociodemographic variables (age, education level, occupation, residency, type of birth, infant sequence, Rh of mothers and Rh of fathers) and their understanding of newborn physiological jaundice. The study advised parents to call the doctor if their baby's jaundice doesn't go away and suggested that moms participate in educational and training programs about how to care for children with jaundice. To rule out other causes of jaundice in infants who have had it for longer than two weeks, additional testing is necessary. Among these are infections, problems with the liver or bile system, metabolic problems, and hereditary problems. The neighborhood should put more focus on monitoring children's educational progress by hiring more professional mothers with advanced degrees.

**Keywords:** Mothers, Knowledge, Children, Physiological Jaundice

## INTRODUCTION

Many newborn babies' skin will appear yellow due to birth jaundice. Jaundice in your newborn is brought on by an accumulation of bilirubin in the blood. It happens because their livers aren't developed enough to get rid of the bilirubin birth jaundice. Jaundice in your newborn is brought on by an accumulation of bilirubin in the blood. It happens because their livers aren't developed enough to get rid of the bilirubin. Jaundice is very common and usually goes away on its own. It is occasionally essential to treat neonates with phototherapy. Your body creates the yellow substance bilirubin when red blood cells break down. While you are pregnant, your liver removes bilirubin for the benefit of the unborn kid. However, following birth, your baby's liver must begin removing bilirubin. If your baby's liver is not fully developed, it could not be able to get rid of bilirubin. When too much bilirubin builds up, your baby's skin may seem yellow. Physiological jaundice is present (1). Physiological jaundice is the most prevalent form of jaundice in infants. Jaundice of this kind is typical. Most babies experience physiological jaundice by their second or third day of life. Your baby's liver will begin to eliminate extra bilirubin once it has grown. Physical jaundice typically resolves on its own in two weeks and isn't serious (2). Breastfed babies are more likely than formula-fed babies to develop jaundice. Breastfeeding within the first week of your baby's life can cause jaundice. It happens when your baby doesn't

get enough breast milk. If you're experiencing problems nursing or if your milk hasn't yet entered, it may occur. It could take longer for breastfeeding-related jaundice to go away. Jaundice from breast milk is different from that from breastfeeding. The chemicals in your breast milk may have an impact on your baby's liver's capacity to break down bilirubin. This can cause bilirubin to accumulate. Breast milk jaundice may appear after your baby's first week of life and linger for a month or longer before going away. If your child has a separate (3). Breastfed babies are more likely to develop jaundice than formula-fed babies. Breastfeeding can cause jaundice in the first week of your baby's life. It happens if you don't give your baby enough breast milk. It may occur if you are experiencing difficulty nursing or if your milk hasn't yet entered the baby's system. Breastfeeding-related jaundice may take longer to go away. Jaundice caused by breastfeeding differs from that caused by breast milk. Substances in your breast milk may affect your baby's liver's capacity to metabolize bilirubin. As a result, bilirubin may accumulate. Breast milk jaundice may appear after your baby's first week of life and linger for a month or more before going away. If your baby suffers from an unrelated (4).

Jaundice is brought on by a high bilirubin level in your infant's blood. In your body One of the most frequent clinical conditions is hyperbilirubinemia. A common clinic Physiological jaundice is the

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form that affects young children the most frequently. Jaundice of this kind is typical. The majority of babies already exhibit physiological jaundice by the second or third day of life. The liver will start to excrete more bilirubin as your child grows. Physical jaundice is rarely harmful and typically resolves on its own within two weeks (5).  
 You're body An very common clinical condition is hyperbilirubinemia. a regular clinic Physiological jaundice is the most prevalent kind in young children. Such instances of jaundice are typical. Most babies experience physiological jaundice by their second or third day of life. The liver will begin to excrete more bilirubin once your child reaches adulthood. Physical jaundice typically resolves on its own in two weeks and is not harmful (6).

Neonatal hyperbilirubinemia is present during the entire neonatal period, however it is most prevalent during the first week of life. Neonatal hyperbilirubinemia affects 8% to 11% of infants. According to ( Rahman, 2016). Hyperbilirubinemia during the first week of life occurs when the total serum bilirubin (TSB) rises above the age-specific 95th percentile (high-risk zone). Bilirubin is created as a result of the breakdown of aged red blood cells. The liver normally removes bilirubin from the blood. When you poop, your body gets rid of it.If your baby's liver isn't yet mature enough to properly clear bilirubin, it may start to build up. Your baby's skin turns yellow as a result of this bilirubin buildup. Babies frequently have jaundice in the first few days following birth. For the liver of your infant to grow and mature (7).

It is usual for between 60% and 80% of healthy babies to develop idiopathic neonatal jaundice. The yellowing of the skin and sclera caused by bilirubin in neonates is known as neonatal jaundice (8).

As a result, it might disturb the parents and the doctor. According to the National neonatal-Perinatal Database (NNPD), neonatal hyperbilirubinemia occurs in 3.3% of in-home live deliveries, although it caused 22.1% of extramural admissions due to morbidity. The dermal icterus in neonates first appears in the face when the bilirubin level rises, then it spreads to the body and finally the extremities. 50% to 60% of infants are affected by this condition during the first week of life (9).

**METHODOLOGY**

From 1 February 2023 to 30 April 2023, a descriptive study using a design with mothers' knowledge of newborn physiological jaundice was carried out in Baghdad pediatric teaching hospitals. Administrative Structure The college of nursing at Al-Bayan University submitted an official application for the study's permission. Following the college of nursing council's approval of the study, the researcher submitted a thorough description of the study. It took nearly two months from the 13th of February 2023 to the 20th of January 2023 to obtain official permission from the following sources: The ministry of health/ department of health planning and research at Baghdad medical teaching hospitals with a focus on the city of Baghdad.

**Setting of the Study:** The study is carried out at Baghdad City Teaching Hospitals which included (2) hospitals according to the Ministry of Health. A total of (2) hospitals which are selected for the purpose of the study. These hospitals included Children's Central Teaching Hospital which is located in AL-karkh side, Children's AL-Ealawia Hospital in AL-Russafa side. All these hospitals are Teaching Hospitals in Baghdad city.

**RESULTS OF STUDY**

**Table 1.** The distribution of the study sample according to their socio-demographic characteristics (No.=55(

No.	Characteristics	Freq.	%	
1	<b>Mothers' Age/years</b>	<b>Less than 20 years</b>	18	32.7
		<b>20-29</b>	<b>22</b>	<b>40.0</b>
		<b>30-39</b>	15	27.3
		<b>Total</b>	55	100.0
		<b>Mean ± SD</b>	<b>1.94 ± 0.77</b>	
2	<b>Infants' Age/Days</b>	<b>One day</b>	12	21.8
		<b>Two days</b>	11	20.0
		<b>Three days</b>	<b>14</b>	<b>25.5</b>
		<b>Four days</b>	7	12.7
		<b>Cont. tab.1.</b>		
		<b>Five days</b>	6	10.9
		<b>Six days</b>	3	5.5
3	<b>Level of education</b>	<b>Seven days</b>	2	3.6
		<b>Primary study</b>	<b>21</b>	<b>38.2</b>
		<b>Secondary study</b>	14	25.5
		<b>Preparatory study</b>	13	23.6
		<b>College</b>	7	12.7
4	<b>Mother's Occupation</b>	<b>Employee</b>	8	14.5
		<b>Student</b>	7	12.7
		<b>Housewife</b>	<b>40</b>	<b>72.7</b>
		<b>Rural</b>	19	34.5
5	<b>Residency</b>	<b>Urban</b>	<b>36</b>	<b>65.5</b>
		<b>Normal vaginal delivery</b>	16	29.1
6	<b>Delivery type</b>	<b>Cesarean section</b>	<b>39</b>	<b>70.9</b>
		<b>The first</b>	<b>25</b>	<b>45.5</b>
		<b>The second or third</b>	21	38.2
		<b>The fourth or fifth</b>	9	20.3
7	<b>Infant Sequence among brothers</b>	<b>Rh positive</b>	<b>31</b>	<b>56.4</b>
		<b>Rh negative</b>	24	43.6
8	<b>Mother's Rh</b>	<b>Rh positive</b>	<b>29</b>	<b>52.7</b>
		<b>Rh negative</b>	26	47.3
9	<b>Father's Rh</b>	<b>Rh positive</b>	26	47.3
		<b>Rh negative</b>	29	52.7

**F: Frequency, %: Percentage**

The socio-demographic characteristics of the present study in table (1) revealed that the age of study sample was about 40% at age group of 20-29 years old. A quarter of the infants' sample age (25.5 %) was those with three days of age. About 38% of mothers have primary school certification. Above two thirds of women who participated in the present study are housewives (73%). Nearly 66 % of the sample live in urban areas. Two thirds (71 %) of the mothers' delivery type was by cesarean section. A half of mothers' (46 %) have the first sequence for their infants among brothers. Mothers' Rh are positive at a ratio of about (56 %). Fathers' Rh are positive at a ratio of about (53 %).

**Table 2:** Assessment Mothers' Knowledge About Infants' Physiological Jaundice

No.	Items	Yes		No	
		F.	%	F.	%
<b>1.</b>	<b>Laboratory tests</b>				
1.1	Blood tests for neonate	51	92.7	4	7.3
	<b>Cont.tab.2.</b>				
1.2	Urine test for neonate	5	9.1	50	90.9
<b>2.</b>	<b>Bilirubin normal ratio</b>				
2.1	From 0.1 to 0.2 mg/dl	35	63.6	20	36.4
2.2	From 0.3 to 0.4 mg/dl	19	34.5	36	65.5
<b>3.</b>	<b>Do you have children with jaundice in past</b>	24	43.6	31	56.4
<b>4.</b>	<b>Is there compatibility in blood group between the couple</b>	31	56.4	24	43.6
<b>5.</b>	<b>Is weight lack in infants considered as a main cause of jaundice</b>	49	89.1	6	10.9
<b>6.</b>	<b>Is early birth considered as a main cause of jaundice</b>	49	89.1	6	10.9
<b>7.</b>	<b>Is the genetics considered as a main cause of jaundice</b>	51	92.7	4	7.3
<b>8.</b>	<b>Is a congenital jaundice considered as infectious</b>	26	47.3	29	52.7
<b>9.</b>	<b>Congenital Jaundice identification</b>				
9.1	Congenital Jaundice identified through face/hand	39	70.9	16	29.1
9.2	Congenital Jaundice identified through the nose	4	7.3	51	92.7
9.3	Congenital Jaundice identified through the head hair	13	23.6	42	76.4
<b>10.</b>	<b>Jaundice Complications</b>				
10.1	Spasms	5	9.1	50	90.9
10.2	Mental retardation	26	47.3	29	52.7
10.3	Increased the body temperature	24	43.6	31	56.4
<b>11.</b>	<b>Does infant need a phototherapy in case of jaundice</b>	49	89.1	6	10.9
<b>12.</b>	<b>Is a frequent bathing restores the health state to the baby</b>	39	70.9	16	29.1
<b>13.</b>	<b>The hygiene considered to be an important part in treating infant with jaundice</b>	52	94.5	3	5.5
<b>14.</b>	<b>The herbal medicine considered as better than pharmaceutical medicine</b>	24	43.6	31	56.4
<b>15.</b>	<b>The health education by health care providers for mothers important for the baby care</b>	54	98.2	1	1.8
	<b>Cont.tab.2.</b>				
<b>16.</b>	<b>Is the health education about investigations for mothers necessary</b>	54	98.2	1	1.8
<b>17.</b>	<b>Frequency of feeding daily</b>				
17.1	Once/daily	2	3.6	53	96.4
17.2	Twice/daily	34	61.8	21	38.2
17.3	More than four times/daily	21	38.2	34	61.8
<b>18.</b>	<b>Jaundice Treatment Methods</b>				
18.1	Exposure to light	40	72.7	15	27.3
18.2	Using the head compresses	15	27.3	40	72.7
<b>19.</b>	<b>Hyperbilirubinemia more than 20 mg, he needs</b>				
19.1	Blood transfusion	38	69.1	17	30.9
19.2	Blood giving	17	30.9	38	69.1
<b>20.</b>	<b>Is impermissible to use traditional therapy (giving molasses to an infant) without consulting a doctor</b>	28	50.9	26	47.3
	<b>Total of yes and no answers percentage</b>		<b>55.63%</b>		<b>44.37%</b>

No: Number, F.: frequency

The table (2) presented mothers' knowledge about newborn' physiological jaundice which revealed that above a half of them answered with yes (56 %), while about (45 %) of them answered with no.

## DISCUSSION OF THE FINDINGS

The Teaching Hospital in Baghdad City provided the sample for the study, which included (55) mothers. According to table 1, the majority of the mothers in the sample (40%) were between the ages of 20 and 29. This result is consistent with what was found in his study, "Assessment of Nurses Knowledge toward Children with Guillain-Barre Syndrome at Pediatric Hospital in Baghdad City," which found that (40%) of the mothers in this sample are under 30. This is in agreement with the current study, but not with the study sample, which is in the third age

range (26 to 30 years old). According to the findings, (31%) of the mothers have completed an intermediate school. In terms of occupation, 60% of people have a low socioeconomic position. Two thirds (71 %) of Three-day-old babies made up 25.5% of the neonates in the sample. This data contradicts (4), who found that 83% of newborns in the first age group (1-7 days old) were alive. In terms of gender, the study's findings show that 68% of the sample's neonates are male. And More than two thirds (73%) of the women who took part in the study were housewives. This survey disagrees with (Hassan, 2016), which

**Table 3:** Association Between Mothers' Socio-demographic Characteristics and Their Knowledge About Infants' Physiological Jaundice

Variables		Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	3.836	10	.384	.582	.8 20 N.S.
	Within Groups	29.000	44	.659		
	Total	32.836	54			
Education level	Between Groups	15.409	10	1.541	1.476	.1 81 N.S.
	Within Groups	45.937	44	1.044		
	Total	61.345	54			
Occupation	Between Groups	2.981	10	.298	.497	.8 83 N.S.
	Within Groups	26.401	44	.600		
	Total	29.382	54			
<b>Cont.tab.3.</b>						
Residency	Between Groups	2.417	10	.242	1.061	.4 11 N.S.
	Within Groups	10.020	44	.228		
	Total	12.436	54			
Type of birth	Between Groups	2.500	10	.250	1.244	.2 91 N.S.
	Within Groups	8.845	44	.201		
	<b>Total</b>	11.345	54			
Infant Sequence among brothers	Between Groups	5.798	10	.580	.515	.8 71 N.S.
	Within Groups	49.583	44	1.127		
	<b>Total</b>	55.382	54			
Mother's Rh	Between Groups	1.563	10	.156	.575	.8 25 N.S.
	<b>Cont.tab.3.</b>					
	Within Groups	11.964	44	.272		
	<b>Total</b>	13.527	54			
Father's Rh	Between Groups	2.439	10	.244	.952	.4 97 N.S.
	Within Groups	11.270	44	.256		
	<b>Total</b>	13.709	54			

*D.f* = Degree of freedom (*n*-1), *F* = Frequency, *N.S.* = Non-significant

Table (3) shows the association between mothers' socio-demographic characteristics and their knowledge about infants' physiological jaundice. It showed that there is no significant association between mothers' sociodemographic characteristics of (age, education level, occupation, residency, type of birth, infant sequence, Rh of mothers and Rh of fathers) and their knowledge about newborn physiological jaundice at  $P \leq 0.05$  level. .

found that (80%) of mothers are housewives in terms of educational attainment. In addition, the majority of the moms (38%) had completed elementary school. Almost 66% of the sample's residents reside in cities. This finding is consistent with (13) which found that 65% of mothers were still alive the mothers' delivery type was by cesarean section. A half of mothers' (46 %) have the first sequence for their infants among brothers. Mothers' Rh are positive at a ratio of about (56 %). Fathers' Rh are positive at a ratio of about (53). Furthermore, this table shows the father's job, which indicated that (64%) of them were free job, while (52%) of them were from urban area. (11). According to the survey, parents of anemic children did not complete their elementary education. This is comparable to what was discovered in the current study, where there was a substantial correlation between the anemic children and the mother's lack of employment and low educational attainment. The current research supports this research. .

Table 2's information on mothers' understanding of infant physiological jaundice showed that more than half of them (56%), compared to roughly half (45%), replied "yes." This result is in disagreement with According to the study's findings, there is a strong significant correlation between mothers' knowledge and their age, level of education, and socioeconomic status at a p-value of 0.05; however, no significant correlation is found between mothers' occupation and place of residence. (10) The family wealth index was one of the key indicators of anemia in preschoolers. Our study demonstrated a strong correlation between low wealth index and anemia, which is consistent with other research. Table 3 demonstrates the relationship between mothers' sociodemographic traits and their awareness of newborns

with physiological jaundice. According to the study (11), 39.2% of mothers in northern Ethiopia had a general understanding of newborn jaundice and the factors that contribute to it. Positive attitude and mother's knowledge were substantially correlated. It demonstrated that, at the  $P 0.05$  level, there is no significant relationship between mothers' sociodemographic variables (age, education level, occupation, residency, kind of birth, infant sequence, Rh of mothers and Rh of dads) and their awareness of infants' physiological jaundice.

(12) World Health Organization The study concurs with this study's assertions regarding the significance of the parental roles as demonstrated by the mother's level of education, but it differs with those regarding age and place. Poor socioeconomic status may result from a low degree of education and unemployment. The study refutes (13) There was a correlation between anemia and the hospitalization. In children with respiratory tract illnesses, gastrointestinal disorders, other forms of infections, and non-infectious conditions, anemia was most prevalent. Maternal education has been linked to better healthcare awareness and a higher level of education regarding newborns with hyperbilirubinemia, which may be related to a lower degree of physiological jaundice among family members. Furthermore, because mothers are the main caregivers, it is thought that the mother's education degree is a crucial determinant in terms of feeding habits for children.

## RECOMMENDATIONS

**According to the study, women should participate in an educational and training program on physiological jaundice that covers its**

**clinical signs, causes, and treatment. With more professional mothers handling these cases of babies in the community, there should be more emphasis on follow-up neonates with physiological jaundice and improving the mother's educational levels. .**

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**Competing Interest:** None

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