

ORIGINAL ARTICLE

Neonatal Jaundice: Knowledge, Practice, And Attitude Among Primigravida Women

Yenidoğan Sarılığı: Primigravid Kadınlarda Bilgi, Uygulama ve Tutumlar

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ABSTRACT

Objective: Neonatal jaundice is characterized by a yellowish coloration of the skin and sclera of newborn infants and elevated serum bilirubin levels.

In this study, it was aimed to evaluate the knowledge, practices and attitudes of primigravidas in Diyala province of Iraq regarding neonatal jaundice.

Material and Methods: A questionnaire was applied to 165 women who were primigravidas between January 1, 2022 and March 31, 2022 in hospitals and health centers to evaluate their knowledge, practices and attitudes about neonatal jaundice.

Results: Although 71.4% of the women knew the two signs of neonatal jaundice, 78.8% of them did not know any of the dangerous signs of neonatal jaundice. 28.4% of women knew that there are two effective treatment methods for the treatment of neonatal jaundice. 57.6% of the women were not aware of any of the severe complications of neonatal jaundice.

Conclusion: Most of the primigravida in this study decided to visit physicians when their babies have jaundice without using traditional treatment.

Keywords: Neonatal jaundice, knowledge, practice, and attitudes

ÖZ

Amaç: Yenidoğan sarılığı, yenidoğan bebeklerin cilt ve skleralarının sarımsı bir renk alması ve serum bilirubin düzeylerinin yükselmesi ile karakterizedir.

Bu çalışmada Irak'ın Diyala ilindeki primigravidlerin yenidoğan sarılığı ile ilgili bilgi, uygulama ve tutumlarının değerlendirilmesi amaçlanmıştır.

Gereç ve Yöntemler: 1 Ocak 2022-31 Mart 2022 tarihleri arasında hastane ve sağlık ocaklarında primigravid 165 kadına yenidoğan sarılığı ile ilgili bilgi, uygulama ve tutumlarını değerlendirmek için anket uygulandı.

Bulgular: Kadınların %71.4'ü yenidoğan sarılığının iki belirtisini bilse de %78.8'i yenidoğan sarılığının tehlikeli belirtilerinden hiçbirini bilmiyordu. Kadınların %28.4'ü yenidoğan sarılığının tedavisi için iki etkili tedavi yöntemi olduğunu biliyordu. Kadınların %57.6'sı yenidoğan sarılığının ciddi komplikasyonlarından habersizdi.

Sonuç: Bu çalışmadaki primigravidlerin çoğu, bebekleri sarılık olduğunda geleneksel tedaviyi kullanmadan doktorları ziyaret etmeye karar verdi

Anahtar kelimeler: Yenidoğan sarılığı, bilgi, uygulama ve tutumlar

Introduction

Neonatal jaundice (NNJ) is a yellowish coloration of the skin and sclera of newborns, and it is mediated by the elevation of bilirubin in the blood (1).

The imbalance between production and excretion of bilirubin leads to increased bilirubin levels in the blood and discoloration of the skin and other membranes. (2,3)also have positive attitudes, and are not guided by outmoded socio-cultural beliefs and practices are more likely to seek early care and treatment for neonatal jaundice. Objective: This study investigated caregivers' knowledge, attitude and practices regarding neonatal jaundice in a tertiary health facility in the Volta region of Ghana. Methods: This was a descriptive cross-sectional study that employed a quantitative approach for data collection. A total of 202 caregivers from the Ho Teaching Hospital in the

Volta region of Ghana were sampled using a systematic random sampling strategy where quantitative data was collected using a questionnaire and analyzed with STATA version 14.0. Ordered logistic regression was used to determine the factors that were associated with caregivers' knowledge regarding neonatal jaundice and attitude after controlling for relevant covariates. Results: Less than half of the caregivers demonstrated good knowledge (45.5%).

Neonatal jaundice may be physiological due to the inability of the immature newborn's liver to convert unconjugated bilirubin for excretion. (4,5).

Pathological jaundice may be due to ABO and Rh incompatibility prematurity, infections, and septicemia (6,7). If a high level of neonatal bilirubin is not detected

and treated can result in lethargy, poor feeding, acute and chronic encephalopathy, and significant disability such as mental retardation and deafness (8,9).

Earlier studies showed that mothers have inadequate knowledge about causes, signs and symptoms, and prevention of NNJ complications. Approximately 35% of mothers identified jaundice from discoloration of skin and eyes (10). Another study found that approximately 70% of women with infants had moderate knowledge about NNJ. Approximately 30% of them consulted a physician after the onset of neonatal jaundice, while 14% of them used traditional medicines before seeking medical advice (11,12).

African pregnant women have a high awareness of the signs and symptoms of NNJ while having poor knowledge of its causes and complications (13-16). This knowledge was different from one country to another, such as in Iran (77%), Iraq (80.2%), Ethiopia (63.5%), and Malaysia (70%) (11,14,16-18) yet preventable health problem, particularly in low-and middle-income countries (LMICs).

Several harmful practices are applied for the treatment of NNJ, such as cutting of post auricular area of an infant, using herbal treatment, exposure of neonate to sunshine, and giving glucose water to the infant (12,15-19). Therefore, this study aims to determine primigravida women's knowledge, practice, and attitude to neonatal jaundice in Diyala governorate.

Material and Methods

This is a descriptive-analytical hospital-based study to evaluate the knowledge background of primigravida women of reproductive age toward neonatal jaundice regarding causes, clinical manifestation, complications, mode of treatment, and other aspects, in addition to their practice and attitude regarding conventional medical approaches. From 1 January 2022 – to 31 March 2022, a sample of pregnant women attending AL- Batool Teaching hospital and five primary health care centers in Baqubah city/ Diyala Governorate/Iraq was selected randomly. At the end of the study, we collected information from 165 pregnant women. We included the following variables in the questionnaire: Demographic characteristics including age, residency, age of current pregnancy, education level, and occupation, knowledge domain included symptoms of jaundice, dangerous symptoms of jaundice, causes of neonatal jaundice, effective treatment, and the complications of severe jaundice. The practice and attitude domains included direct questions with yes or no responses. These questions were about using medical herbs, fluorescent use at home, using sunlight, referring to a physician, or referring to traditional healers. The ethics committee at the college of medicine /university of Diyala approved this study, and We took verbal consent from primigravida women involved in the study. The data were processed and analyzed using the Statistical Package for Social Sciences version 21 (SPSS Inc.,

Chicago, IL, USA. Multivariate logistic regression test was used to analyze risk factors. A p-value <0.05 was considered significant, and the confidence interval was set at 95%.

Results

Table 1 shows the maternal variables, where the common age of the respondents was 53.33% between 18-25 years old, and 69.09% were from urban areas. In comparison, the women in the second trimester of pregnancy constituted (n= 94, 56.96% of the respondents. About half of them (n= 84, 50.90%) have a secondary level of education.

Table 1. The characteristics of the study group

Variables	No.	(%)
Respondents' age (in years)		
18 – 25	88	53.33%
26 – 35	53	32.12%
36 – 45	24	14.54%
Total	165	100%
Age of present pregnancy		
First trimester	35	21.20%
Second trimester	94	57.00 %
Third trimester	36	21.80%
Total	165	100%
Levels of education		
Primary	46	27.90%
Secondary	84	50.90%
Tertiary (University, Institute)	35	21.20%
Total	165	100%
Kind of residency		
Rural	51	30.90%
Urban	114	69.10%
Total	165	100%
Employment		
Housewife	103	62.42%
Private sector employee	10	6.06%
Governmental sector	52	31.51%
Total	165	100%

Table (2) shows the frequency distribution of primigravida mothers according to the knowledge domain. Low education level of the mothers lead to knowledge level being insufficient by 2.01 folds in comparison to educated women (OR 2.1, 95% CI 1.3-3.4; p = 0.003). Primigravida women employed in public and private sectors were twice likelier to have a good attitude about jaundice than housewives [AOR = 2.07, (95%CI: 1.03-4.20), P = 0.041]. A high proportion of mothers knew two or more symptoms of jaundice 71.4%, and a few knew only one sign of jaundice 21.9%. Eleven women 6.7% said they know none of the symptoms of jaundice. About dangerous features of jaundice, 130 primigravidas 78.8 % know none of the symptoms, and a small proportion of them 21.2% especially those in the third trimester knew one sign. [AOR = 2.07, (95%CI: 1.03-4.20), P = 0.041]. Rural residence women had low level of knowledge

of jaundice in comparison to urban women (OR 2.1, 95% CI 1.3-3.4; $p = 0.004$). A high number of mothers do not know/ or had no information about the causes of neonatal jaundice ($n=74$), only 50 women could know a single cause, and 41 24.8% knew two or more causes of jaundice. A high number of mothers knew one effective mode of therapy 57%, 28.4 % knew two effective ways, and 14.6 % knew a non-effective therapy mode. Most participants knew nothing about complications of neonatal jaundice 57.6%. Women who know one complication accounted for 28.5%, while those who know two or more complications accounted for 13.9%.

Table 2: Frequency distribution of the study group according to knowledge domain questions:

Knowledge domain response	No.	%	P value
Symptoms of jaundice (Yellowish discoloration of the eyes, skin, other membranes and Pallor)			
0	11	6.7	
1	36	21.9	
≥ 2	118	71.4	0.0451
Dangerous features of jaundice (Refusal of feeds, fever, lethargy, and convulsion)			
0	130	78.8	0.0532
1	35	21.2	
≥ 2	0	----	
Causes of neonatal jaundice (infection, blood incompatibility, and prematurity)			
0	74	44.8	0.0894
1	50	30.4	
≥ 2	41	24.8	
Effective treatment (phototherapy, blood transfusion)			
0	24	14.6	
1	94	57	0.05
2	47	28.4	
The complication of severe jaundice (brain damage, deafness, mental handicap, and death)			
0	95	57.6	
1	47	28.5	
≥ 2	23	13.9	0.097158

The frequency of mothers according to practice domain is demonstrated in table 3. Regarding the first question, "Using medical herbs," the yes response was 79.4 %, and the no response was 20.6 %. Regarding the second question, "Fluorescent use at home," the yes answer accounted for 86.1%, whereas the no response accounted for 13.9 %. Yes, the response regarding the third question, "Using sunlight," was 6.7 %, whereas no response accounted for 93.3%. Regarding the fourth question, "Referring to physician," a yes response accounted for 93.3%, whereas a no response accounted for 6.7%. Regarding the fifth question, "Referring to traditional healers," a yes response accounted for 0.0 %, whereas a no response accounted for 100%.

Table 3: Frequency distribution of the study group according to practice & attitude domains questions

Question	Response				P value
	Yes		No		
	No.	%	No.	%	
1. Using medical herbs	131	79.4	34	20.6	0.0895
2. Fluorescent use at home	142	86.1	23	13.9	0.05
3. Using sunlight	11	6.7	154	93.3	0.045
4. Referring to the physician	154	93.3	11	6.7	0.035
5. Referring to traditional healers	0	0.0	165	100.0	0.001
6. Nothing	0	0.0	165	100.0	0.001

Discussion

This study reveals that participants have some knowledge of various aspects of neonatal jaundice. More than half (53.03%) of the primigravida women were aged between 18-25 years old. Pregnant women in the third trimester were two times more likely to have a good attitude about jaundice than those in the first and second trimesters, which is similar to Ethiopian and Ghana studies (16,20) this may be related that women in third trimester have more chance and time to learn about jaundice etiology and complications from other people or their families. Women in the rural residence had low knowledge level by 2.1 folds in comparison to urban women, as well as low education level of the mothers lead to knowledge level being insufficient by 2.01 folds in comparison to educated women which is similar to other studies (17,19,21). Primigravida women employed in public and private sectors were twice likelier to have a good attitude about jaundice than housewives which may be related to increased awareness about NNJ from other women in the field of work. In this study, mothers' awareness of neonatal jaundice symptoms is high; 71% knew two signs, while 21.9% knew one symptom. It is near the rate reported by an earlier study in Iraq, where 81% knew two symptoms of NNJ [14 yet preventable health problem, particularly in low-and middle-income countries (LMICs)]. Despite the high knowledge of women about the symptoms of jaundice, the knowledge was low in many aspects, such as the dangerous features and complications of NNJ. Most women knew nothing about dangerous features of jaundice; they accounted for about 78.8 %, and 21.2% knew one perilous symptom. Also 57.6% of women knew nothing about complications of severe jaundice. This finding indicates the proper knowledge of women in our community about dangerous symptoms and complications of severe NNJ is low. This study agrees with former studies, (14, 17,19,21). More than half of mothers in this study know one or more causes of NNJ while 44.8% did not know any possible cause of NNJ, however, 24.8% of them know more than two possible causes of NNJ, which is a promising result, these findings are similar to a previous study

(14). Many mothers in this study are more likely to use good practices such as referring to a physician and use of fluorescent light; at home. The use of traditional medicine to treat NNJ is common in underdeveloped countries (14,17-19). All participants in this study did not attend traditional healers (that =165, 100%). Using medical herbs is a common practice in our community to treat NNJ, however we found 20.6% dislike using such herbs. While using sunlight is an uncommon practice in this study, 93.3% said it is an ineffective practice to treat NNJ, however 85.4% of studied women know two effective modes of treating NNJ (phototherapy and blood transfusion), similar results were obtained in previous studies (12,13,20).

Conclusion

One of the promising approaches practiced by primigravida in this study was a positive response to visit physicians when facing problems with neonatal jaundice without using traditional treatment. Maternal education level and urban residence are essential factors affecting mothers' knowledge about neonatal jaundice.

Recommendations: to change malpractices with NNJ in the community, the level of education of women in the community should be increased, especially in primary health centers, and invested in social media to correct how to deal with neonatal jaundice.

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