



Neonatal jaundice: knowledge, practice, and attitude among primigravida mothers

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Abstracts:

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

Methodology: A hospital-based study involved 165 primigravidas who were questioned from 1st January 2022 to 31st March 2022 about knowledge, practice, and attitude regarding neonatal jaundice. **Results:** High proportion of women knew two symptoms of jaundice (71.4%), while 130 primigravidas (78.8 %) know a none of dangerous symptoms of neonatal jaundice, (57%), 28.4 % of them knew two effective modes and 14.6 % of them knew a non-effective therapy mode.

Keywords; *Neonatal jaundice, knowledge, practice*

Introduction

Neonatal jaundice (NNJ) is a yellowish coloration of the skin and sclera of newborns and it is mediated by elevation of bilirubin in the blood (1). The production rate of bilirubin in neonates is more than twice that of the production rate in adults, due to the increased number of red blood cells in neonates (2). The imbalance between production and excretion of bilirubin leads to an increase in the level of bilirubin in the blood and discoloration of the skin and other membranes, which is defined as a total amount of serum bilirubin more than 1.5 mg/dl (3).

Neonatal jaundice may be physiological resulted from elevation of unconjugated bilirubin in the blood of neonates in third to forth days of life, due to inability of immature newborn's liver to convert unconjugated bilirubin for excretion. This NNJ develops due to high number of circulating red blood cell with shortness of its lifespan and lover plasma binding capacity (4)(5).

Pathological neonatal jaundice is manifested by high level of serum bilirubin more than 5mg/dL during the first 24 hours of life due to ABO and Rh incompatibility prematurity, infections, septicemia (6) (7). If high level of neonatal bilirubin is not detected and treated can result in lethargy, poor feeding, acute and chronic encephalopathy and major disability such as mental retardation and deafness (8)(9).

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

In Africa, high awareness among pregnant women about the sign and symptom of NNJ while have poor knowledge on causes and complication of it (13). This knowledge was different from country to other such as Ethiopia (63.5%) , and Turkey (46%)(14). a number of harmful practices were used for treatment of NNJ such as cutting of post-auricular area of an infant, using of herbal treatment, exposure of neonate to sunshine and giving of glucose water to infant [12,15,16]. Therefore, the purpose of this study is to determine the knowledge, practice and attitude of primigravida mother to neonatal jaundice in Diyala province.

Subjects and Methods

It is a hospital based study, in order to evaluate the knowledge background of primigravida mothers of reproductive age toward neonatal jaundice regarding causes, clinical manifestation, complications, mode of treatment and other aspects in addition to their attitude regarding conventional and traditional medical approach.

A sample of women was selected according to the duration of study. The available conventional sample was collected as 2 to 5 cases per day, 4 days a week. At the end of the study we were able to collect information from 165 women. The study was carried out in the AL Batool teaching hospital and five antenatal clinics in Baqubah city during the period from 1st January 2022 – 31st March 2022. The following variables were included in the questionnaire form: Demographic characteristics including age, residency, education level and occupation, knowledge domain included Symptoms of jaundice, dangerous symptoms of jaundice, causes of neonatal jaundice, effective treatment, complication of severe jaundice. Practice domain included direct questions with yes or no response. These questions were about using medical herbs, fluorescent use at home, using sun light, referring to physician and referring to traditional healers. This study was approved by **ethics committee** at the college of medicine /university of Diyala and consent was taken from primigravida mothers as it involves no harm to them. The results of this study was analyzed by graphs and tables and the software of SPSS 21 was used to analyze the results.

Results

In table (1) and figure (1), the frequency distribution of primigravida women according to knowledge domain is demonstrated. High proportion of women knew two symptoms of jaundice (71.4%), a few of them knew only one symptom of jaundice (21.9%). Eleven women (6.7%) were said that they know none of symptoms of jaundice. About dangerous symptoms of jaundice, 130 primigravidas (78.8 %) know a none of symptom and a small proportion of them (21.2%) knew one symptom. High number of women were unable to recognize the causes of neonatal jaundice (n=74), only 50 women were able to recognize a single cause, 41 of women know 2 causes of jaundice. High number of women knew one of effective

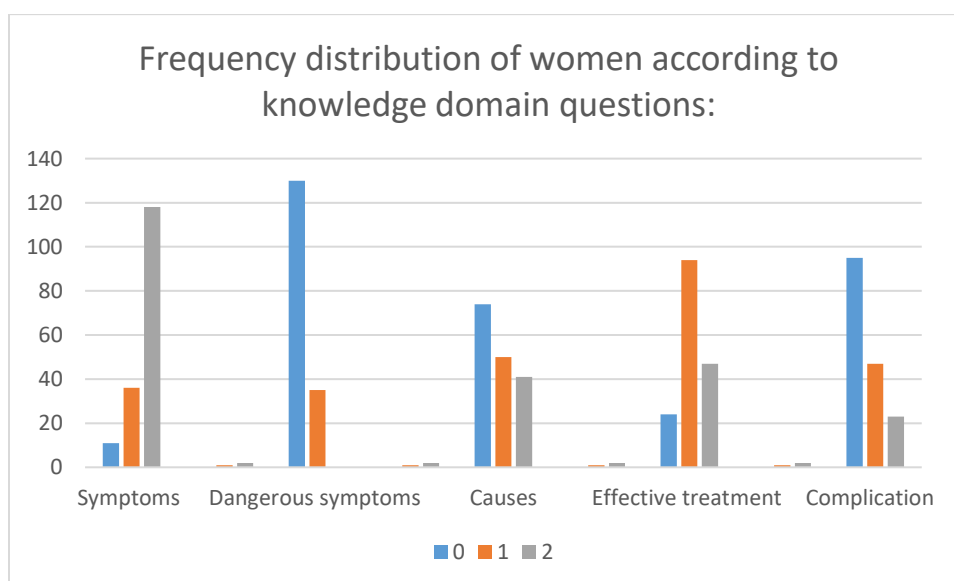
mode of therapy (57%), 28.4 % of them knew two effective modes and 14.6 % of them knew a non-effective therapy mode. Most of the participants knew nothing about complications of neonatal jaundice (57.6%). Women who know 1, 2 complications accounted for 28.5 %, 13.9%, respectively.

Table 1: Frequency distribution of women according to knowledge domain questions:

Knowledge domain response	N	%
Symptoms of jaundice (Yellowish discoloration of the eyes , Irritability)		
0	11	6.7
1	36	21.9
2	118	71.4
Dangerous symptoms of jaundice(Refusal of feeds, fever and convulsion)		
0	130	78.8
1	35	21.2
2	0	
Causes of neonatal jaundice(infection, blood incompatibility and prematurity)		
0	74	44.8
1	50	30.4
2	41	24.8
Effective treatment (phototherapy, blood transfusion)		
0	24	14.6
1	94	57

2	47	28.4
Complication of severe jaundice (brain damage, deafness and death)		
0	95	57.6
1	47	28.5
2	23	13.9
P value	0.097158	

Figure 1: Frequency distribution of women according to knowledge domain questions:



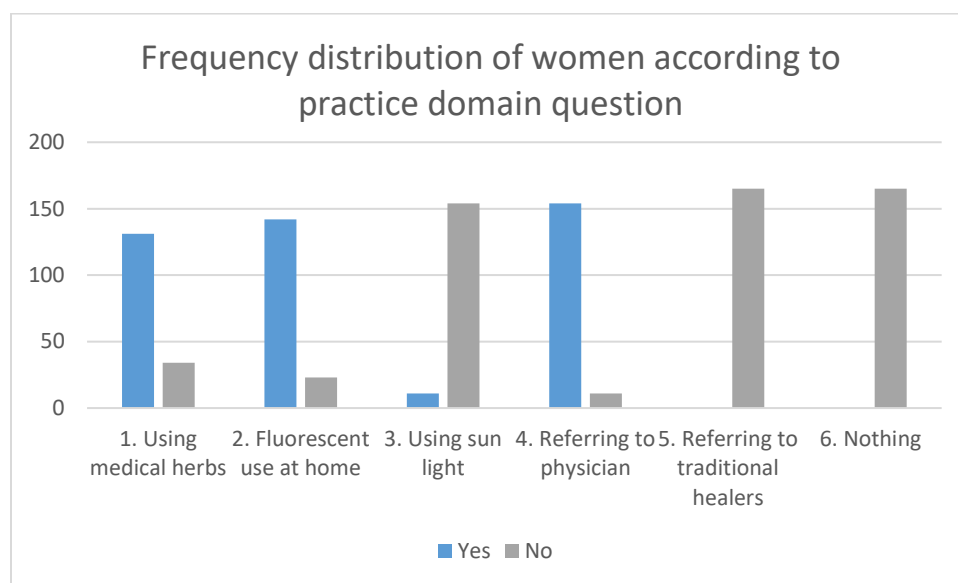
The frequency of women according to practice domain is demonstrated in **table 2 and figure (2)**. Regarding the first question “Using medical herbs”, yes response was 79.4 % and no response was 20.6 %. Regarding the second question “Fluorescent use at home”, yes response accounted for 86.1%, whereas, no response accounted for 13.9 %. Yes response regarding the third question “Using sun light” was 6.7 %, whereas, no response accounted for 93.3%. Regarding the fourth question “Referring to physician”, yes response accounted for 93.3%, whereas, no

response accounted for 6.7%. Regarding the fifth question “Referring to traditional healers”, yes response accounted for 0.0 %, whereas, no response accounted for 100.0

Table 2: Frequency distribution of women according to practice domain question

Question	Response			
	Yes		No	
	n	%	N	%
1. Using medical herbs	131	79.4	34	20.6
2. Fluorescent use at home	142	86.1	23	13.9
3. Using sun light	11	6.7	154	93.3
4. Referring to physician	154	93.3	11	6.7
5. Referring to traditional healers	0	0.0	165	100.0
6. Nothing	0	0.0	165	100.0
P value	0.385393			

Figure 2: Frequency distribution of women according to practice domain question



Discussion

In this study, the awareness of mothers about the symptom of neonatal jaundice is high, 71% of them were knew two symptoms and 21.9 % were knew on symptom. It is near to the rate reported by other study in Iraq (approximately 81% knew 2 symptoms of NNJ) (14). Despite the high knowledge of women about the symptoms of jaundice, the knowledge was low in many aspect such as the danger symptoms and complication of NNJ.

Most women knew nothing about dangerous symptoms and signs of jaundice and they accounted about 78.8 %, 21.2% knew one dangerous symptoms. Also 57.6% of women knew nothing about complications of severe jaundice. These finding indicates the fair knowledge of women in our community about dangerous symptoms and complication of severe neonatal jaundice. The finding of the current study is agreed with previous studies which revealed that using of traditional medicine for treatment of NNJ is common in underdeveloped countries [14,17,18].

Mothers in this study are more likely to use both useful practice such as referring to physician and ineffective practice such as fluorescent day, all participants in this study are attended to prevent traditional healers (n=165, 100%). The use of ineffective practice in this study has been reported in other study (12)

Conclusion: One of the good approach that were practiced by primigravida in this study was a positive response to visit physicians when facing problem with neonatal jaundice without using of traditional treatment.

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

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