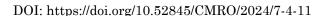
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Review Article





Assessment of Nurses Knowledge Regarding Blood Exchange Transfusion at Mosul Neonatal Care Units

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Abstract:

Background: Neonatal hyperbilirubinaemia is the most common clinical problem in the new born period Phototherapy has become the routine both for treatment of neonates with hyperbilirubinaemia and for prophylaxis in high risk patients such as preterm infants.

Objectives: To aim to assess of Nurses Knowledge Regarding Blood Exchange Transfusion at Mosul Neonatal Care Units

Methods: Purposive Sampling (Non-probability) to determine the assess of Nurses Knowledge Regarding Blood Exchange Transfusion at Mosul Neonatal Care Units. The sample was collected for the study in Mosul neonatal care units that they were)60) nurse who are works in neonatal care units. Data is analyzed by using Statistical Package for Social Science (SPSS) software for Windows (Version 26).

Results: The finding results refer to age of (31-35), with a percentage of about 33.33%. Likewise, women were more involved in the study 56.67%. While the highest cultural level was graduates of nursing institutes 43.34%, Sixty percent of the sample did not have any training course specializing in blood transfusion among newborns.

Conclusion: This study concluded that the knowledge of nurses who worked in pediatric care units regarding the blood transfusion process was very weak and poor, and the main reason is the lack of training courses dealing with this topic.

Keywords: Assessment, Nurses Knowledge, Blood Exchange Transfusion, Neonatal Care Units.

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Introduction:

Neonatal jaundice characterized by yellowish discoloration of the skin caused by hyperbilirubinemia affects up to 60% of term neonates and 80% of neonates with a gestational age of 35 weeks or more in the first two weeks after

birth Globally, neonatal jaundice accounted for 1309 deaths per 100 000 live births and 113 401 disability adjusted life years (DALYs) Severe hyperbilirubinemia, , serum bilirubin levels >20 mg/dL (342 μ mol/L) is a leading cause of

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hospitalization in the first week of life and accounts for up to 35% of hospital readmissions in the first month of life If treatment is delayed, mortality, acute bilirubin encephalopathy, and bilirubin induced neurological damage (BIND) with neurodevelopmental delay and disability can occur⁽¹⁾. In most of cases there is no specific underlying physiologic disorder. In other cases it results from red blood cell breakdown, liver disease, infection, hypothyroidism, or metabolic disorders (pathologic). A bilirubin level more than 34 µmol/L (2 mg/dL) may be visible. Concerns, in otherwise healthy babies, occur when levels are greater than 308 µmol/L (18 mg/dL), jaundice is noticed in the first day of life, there is a rapid rise in levels, jaundice lasts more than two weeks, or the baby appears unwell. In those with concerning findings further investigations to determine the underlying cause are recommended (2). Premature infants are more prone to bilirubin encephalopathy than their full-term counterparts and should be managed with thresholds adjusted accordingly. The baby with a serum bilirubin level approaching or above the exchange transfusion line is a neonatal The prompt use of multiple phototherapy and timely availability of blood for an urgent exchange transfusion will avoid chronic

neurological sequelae in the majority of cases. Symptomatic bilirubin encephalopathy remains an absolute indication for exchange transfusion (3,4,5,6,7). The aim of this study to assess of Nurses Knowledge Regarding Blood Exchange Transfusion at Mosul Neonatal Care Units.

Methodology:

Before beginning the research steps, a proposal was submitted to the Scientific and Ethical Committee for Graduate Studies at the College of the Nursing/University of Mosul to declare the title and steps of the research, after which formal approval for the research title was obtained by Order No.33 dated 12/29/2023. A non-randomized Purposive Sampling (Non-probability) determine the assess of Nurses Knowledge Regarding Blood Exchange Transfusion at Mosul Neonatal Care Units. The sample was collected for the study in Mosul neonatal care units that they were)60) nurse who are works in neonatal care units. Data is analyzed by using Statistical Package for Social Science (SPSS) software for Windows (Version 26).

Results:

Table (1): Distribution of the sample according to demographic date(N=60)

	Categories	number	Percentage
Age	20 -25	9	15%
	26- 30	12	20%
	31-35	20	33.33%
	36-40	14	23.33%
	≤41	5	8.34%
Gender	Male	26	43.33%
	Female	34	56.67%
Educational level	School nurse	10	16.66%
	Nursing Institute	26	43.34%
	College of Nursing	24	40%
Experience	1-5	13	21.66%
	6-10	71	28.34%
	11-15	15	25%
	16-20	15	25%
Have you participated in	Yes	24	40%
training courses	No	36	60%

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Table (1): Most of the nurses participating in the study were of the age of (35-31), with a percentage of about 33.33%. Likewise, women were more involved in the study 56.67%. While the highest

cultural level were graduates of nursing institutes 43.34%, Sixty percent of the sample did not have any training course specializing in blood transfusion among newborns.

Table (2): Nurses Knowledge Regarding Blood Exchange Transfusion in Neonatal Care Units

Type of knowledge	Total score average	Evaluation
Nurses knowledge about neonatal jaundice	3.233	Poor
Nurses knowledge about blood exchange transfusion	2.467	Poor
Nurses knowledge about nursing care during blood exchange transfusion	2.667	Poor

In this table (2) table show Nurses Knowledge Regarding Blood Exchange Transfusion in Neonatal Care Units was poor

Discussion:

These study show in table (1) the distribution the socio-demographic for research sample, The number of participants in this study is (60) nurses from the Mosul neonatal care units, Most of the nurses participating in the study were of the age of (31-35), with a percentage of about 33.33%. Likewise, women were more involved in the study 56.67%. While the highest cultural level were graduates of nursing institutes 43.34%, Sixty percent of the sample did not have any training course specializing in blood transfusion among newborns. This study agree with current study in Iran by (8) who stated that the female more than male in sample study. The second table was divided into 3 aspects for the purpose of testing the nurses' knowledge regarding each of the nurses' knowledge regarding jaundice, blood transfusion between newborns, and then their knowledge about nursing care. All of their knowledge was weak. The study conducted in India by (9). were agreement with this study Who stated that The findings of In experimental group mean post-test-1 Self-esteem score (16.10±1.85) was higher than that of mean pre-test score(14.57±2.09). Therefore, most nurses are under the pretext of conducting intensive training programs for the purpose of enhancing nurses' knowledge about congenital jaundice and

how to deal with this disease in newborns, and then improving their knowledge in the process of blood transfusion. In the event of a high percentage of bilirubin, the child needs a blood exchange operation. (10) Nurses must have sufficient knowledge about the blood transfusion process. Finally, the nursing role must be effective in all of the above operations because the nurse is the first or last responsible for caring for newborns and following up on all medical and nursing procedures during and after the blood transfusion process.

Conclusion:

This study concluded that the knowledge of nurses who worked in pediatric care units regarding the blood transfusion process was very weak and poor, and the main reason is the lack of training courses dealing with this topic.

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