

Essential Newborns Nursing Care at Maternity and Pediatric Hospitals

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Abstract

Background: Newborn health and survival depend on the care given to the newborn, although newborn care is a very essential element in reducing child mortality; it is often receives less than Optimum attention in maternal and child health programmers.1

Objective: To assess Nurses' Knowledge Regarding Essential Newborn Care.

Method: Descriptive cross-sectional hospital based study was conducted from January 2021 – April 2021 at **Bint al-Huda Teaching Hospitals**. The sample included **35** nurses who agreed to participate in this study. The data was collected using self-administered questionnaire, questionnaire divided into two parts demographic characteristics, and midwives nurses' knowledge regarding essential newborn care. Statistic data was analyzed by computer using statistical package for social sciences SPSS19 program and presented in simple tables and figures

Result: In this research, **(82.86%)** of respondents interpreted newborn age correctly. is one of the components of worm chain. **(51.43%)** knew that the breast-feeding should be initiated within an hour and **60%** of nurses knew that breastfeeding should be on demand. About **(74.29%)** of nurses identified immunization that taken at birth. Only **(11.43%)** of nurses was known that vitamin **K** at birth can be taken orally and intramuscularly. Around **(25.72%)** of nurses are conscious of the value of applying eye ointment for conjunctivitis prevention.

Conclusions: At birth, infant immunization was **(74.29 %)**, breast-feeding **(55.42 %)**, cord care **(75.99 %)**, thermal care **(80.95 %)**, eye care **(58.09 %)** and vitamin K **(61.43 %)**. The overall awareness of nurses was strong, with **(70.88 %)**.

Key word: Essential Nursing Care, Newborn, Newborn Intensive Care Unite

Introduction

Health and survival of newborns depend on the treatment provided to the newborn, while care of newborns is a very important element in reducing infant mortality; in maternal and child health programmers, it often receives less than optimal attention.⁽¹⁾

The World Health Organization (WHO) has developed a set of protocols on essential newborn care, evidence-based cost-effective measures to improve newborn outcomes, to manage these issues. All stakeholders involved with the newborn, including

health care providers and mothers, as well as the community and government, should use this protocols. These practice outlines include clean delivery and clean cord care, thermal protection, early and exclusive breastfeeding, eye care, birth immunization, extra care for newborns with low birth weight, early detection of problems or hazard signs, and newborn illness management. ⁽³⁾ For the development and healthy life of a baby, newborn care is very important, care takes place immediately after birth, in the transition period, and during the postnatal period.^(4,5) All newborns need essential newborn care to minimize the risk of disease

and maximize their growth and development ⁽¹⁾

Globally, almost 40 % of all deaths in children under five are among newborn infants every year, 75 % of newborn deaths occur in the first week, and 25 % occur within the first 24 hours and die in the first 24 hours. Globally, almost 40 % of all deaths in children under five are among newborn infants every year, 75 % of newborn deaths occur in the first week, and 25 % occur within the first 24 hours and die in the first 24 hours.⁽¹⁾

Many newborn emergencies will also be prevent by this care. The umbilical cord, for example, may be the most common source of newborn sepsis and tetanus infection, and good treatment of the cord may reduce the risk of these serious conditions. There is a significant protective effect of exclusive breast-feeding against infections. Early breast-feeding and keeping the child near the mother decreases the risk of hypothermia and hypoglycemia. ⁽⁶⁾

One strategy for improving newborn health outcomes is the promotion of essential newborn care. Nurses have a unique opportunity which provide knowledge-based care and to prevent newborn infections. Due to the helplessness of the newborn infant, nursing staff must meet his needs initially. With a newborn infant, nursing care does not stop in the formation of a family unit; interaction with the parents is also important.⁸

Essential newborn care (ENC) is a holistic approach designed through interventions to enhance the health of newborns. It involves essential preventive newborn treatment such as control of temperature, care of the eyes and cords, and early and exclusive breastfeeding; administration of vitamin K, immunization, and early identification of problems or indications of risk. ⁽⁷⁾

If they are born, well, small or unwell, critical newborn care is the care needed for all neonates. It

requires proper preventive treatment, routine care and, if appropriate, resuscitation at birth and care for sick and small babies. The efficacy of reducing mortality and morbidity would rely to a large degree on the engagement and skill of the health workers responsible for newborn care. ⁽⁶⁾

In order to ensure an improved newborn outcome, the World Health Organization has developed a series of simple, cost-effective interventions that can be use by both the health care worker and the primary caregiver. WHO Critical Newborn Care components include specific preventive measures such as cord care, breastfeeding, warmth, eye care, immunization, vitamin K administration, and early hazard identification signs⁽³⁾

Materials and Methods

Study designs: Descriptive cross-sectional hospital based study conducted to appraisal midwives nurses' knowledge regarding essential newborns care from January 2021 – April 2021 at Bint al-Huda Teaching Hospitals.

Study area: The study was carry at Bint al-Huda Teaching Hospitals. Which is located in Thi-Qar governorate. It contains a newborn intensive care unit (NICU), intensive care unit (ICU), delivery rooms, postnasal and privet word.

Study population: Nurses worked at Bint al-Huda Teaching Hospitals in newborn intensive care unit. During period of January to April 2021.

Sample size: 35 nurses working at Bint al-Huda Teaching Hospitals in newborn intensive care unit..

Statistic and Analysis: The data was analysis by computer using statistical package for social sciences SPSS, the method is descriptive using mean stander deviation and using frequency and %age.

Result

Table (1) Distribution of Midwife nurses overall nurses' knowledge (N=35)

Items of knowledge	Items		F.	P.	k.
1. ENC and Newborn age	Newborn age	Is from birth up to one year	9	25.71%	74.29%
		Is from birth up to 28 days	28	74.29%	
2.Umbilical cord care	Instruments used for cutting the cord	New blade or Scissor	32	91.4%	75.99%
		Any Scissor	3	8.6%	
	Materials used to tie the cord	New clamp	33	94.28%	
		Rope	2	4.72%	
	The tie of the cord should be	Well tie	34	97.15%	
		loose	1	2.85%	
	Materials applied to the cord	Nothing applied	22	62.85%	
		Sprit	13	37.15%	
	Umbilical cord should be	Cover	12	34.29%	
		UN cover	23	65.71%	
3.Thermal care	Time of wiped / dried and wrapped of newborn	before delivery of placenta	28	80%	80.95%
		after delivery of placenta	7	20%	
	Place of the newborn after birth	(skin to skin contact) the mother's chest	32	91.43%	
		beside the mother	3	8.57%	
	Benefit of skin to skin contact (kangaroo mother)	Effective thermal control	29	82.85%	
		Interfere with breastfeeding	6	17.15%	
	Mother care (Kangaroo)	Especially use for low birth weight	21	60%	
		Must be uses for all babies	14	40%	
	Know about worm chain	Yes	27	77.15%	
		No	8	22.85%	
4.Hypothermia care	Hypothermia occurs when the body temperature become below 36.5o	YES	33	94.28%	86.56%
		NO	2	5.72%	
	Signs of hypothermia	Lethargic, Suck poorly	34	97.14%	
		Vomiting, red eyes	1	2.86%	
	Can Hypothermia as complication lead to death	Yes	33	94.28%	
		No	2	5.72%	
	Newborn first wash/bath.	within one hour	14	40%	
		At least 24 after birth	21	60%	

Cont... Table (1) Distribution of Midwife nurses overall nurses' knowledge (N=35)

5. Eye care	Cleaning of the newborn eyes	With sterile swab	25	71.42%	58.09%
		With cotton	10	28.58%	
	Method of eyes cleaning	from inner to outer	27	77.15%	
		from outer inner	8	22.85%	
	Preventing conjunctivitis by applying eye ointment within one hour of birth:	Yes	9	25.72%	
		No	26	74.28%	
6. Breast feeding	Breast Feeding initiation	within 1-2 hours	17	48.58%	55.42%
		within an hour	18	51.43%	
	The sign of good latching or attachment of newborn when breast feed is	Nipple and areola within the newborn mouth	20	57.15%	
		only the nipple	15	42.85%	
	The frequency of newborn feeding per day	On demand	21	60%	
		6-10 times every day	14	40%	
7. Vitamin K	Vitamin k given at birth	Intramuscularly	31	88.57%	61.43%
		Intramuscularly and orally	4	11.43%	
	Vitamin K given to prevent	Infection	12	34.29%	
		bleeding	23	65.71%	
	Vitamin K at birth given as	prophylaxis	31	88.57%	
		therapeutic	4	11.43%	
	Dose of vitamin K for term newborn	0.5 mg	12	34.29%	
		1.0 mg	23	65.71%	
8. Immunization at birth	At Birth	BCG,HBV,OPV	26	74.29%	74.29%
		DTP,BCG,OPV	9	25.71%	
overall total nurses' knowledge					70.88%

ENC = Essential Newborn Care F = Frequency P = %age k = Knowledge

In the research, all nurses indicated that they had knowledge about critical care for newborns. Approximately 74.29% of nurses were correctly informed of the newborn 91.4% of responding nurses are aware of recent blade or scissor cutting of the umbilical cord. The correct answers concerning umbilical cord tying were stated by (94.82%). In addition, 97.15 % remembered that the tie was meant to be a fair tie. 62.85 % mentioned the correct response to the material added to the heart. Of the total respondents, 65.71 % of nurses must be

left expose without any dressing to correctly respond to umbilical stump. The average overall awareness is 75.99 %. The nurses (80 %) stated the correct response from the nurses about the wiped/dried and wrapped time of the newborn. Around 91.43% of the responding nurses replied correctly with respect to the immediate placement of the newborn. The correct response to kangaroo mother treatment was referred to by (82.85 %). 77.15 % of responding nurses said that they knew

about the worm chain. 94.28 % of the responding nurses gave a correct response to the concept of hypothermia; the correct answer to the signs of hypothermia was state by the (97.14 %). The correct response to hypothermia complications was stated by (94.28 %). 60 % suggested the right response for newborns to the first bath. Total awareness is 86.56%. 71.42 % of responding nurses reported the correct response about the cleaning of newborn eyes. Around 77.15 % of nurses correctly referred to the eye cleaning process. Around 25.72 % of responding nurses answer correctly that it should avoid the application of eye ointment within one hour of birth can prevent. The average overall knowledge is 58.09%. Around 48.58 % of responding nurses respond correctly to the time of initiation of breast-feeding.

Although 57.15 % of responding nurses gave, a right response about the breast-feeding sign of successful latching. 60%age of nurses listed the frequency of breast-feeding per day as the correct response. Total knowledge is 55.42%. 10.4% of nurses discussed the method in which vitamin K should be given at birth as the correct answer. Approximately 65.9 % of nurses responding gave the correct response about the reason that vitamin K was provided. The vitamin K given as prophylaxis at birth is correctly mentioned by about 89.6 % of nurses. Regarding the term vitamin K dosage, about 65.2 % of nurses reported the correct response for newborns. The total knowledge average was 77.5 %. 74.29 % of the responding nurses mentioned the right immunization response.

Table (2): Distributions of participants according to their years of experience& qualification (no=35)

Item		Frequency	%age
years of experience	years of experience between (1-5years)	29	82.86%
	years of experience more than five years	6	17.14%
qualifications	Diploma	25	71.43%
	B.Sc.	9	25.72%
	M.Sc. and above	1	2.85%

This table showed that about 82.86% of participants have years of experience between (1-5years) and 17.14% more than five years. Majority had diploma (71.43%), while (25.72%) carried B.Sc., and 2.85% post graduate.

Discussion

The answer of all nurses that they have information about essential newborn care; while all nurses answered that about 28 (74.29 %) that understood correctly newborn age had information about essential newborn care.

Approximately 23 (65.71 %) of nurses in this study knew that umbilical cord should be exposed without applying any substance in the cord 32 (91.4 %) of nurses knew that umbilical cord should be cut with new blade or

scissor and bound with new clamp, and the bond should be well tied. The chosen maternity hospital in Bagalkot, India, conducted a similar study in 2011. This study showed that, on average, 72.73 % of 100 staff nurses had strong knowledge about umbilical cord infection prevention.

With regard to thermal treatment, about 28(80%) of responding nurses knew that newborns should be cleaned and/or dried before placenta delivery, and about 32(91.43%) of responding nurses knew that the newborn was put on the mother's chest immediately after birth. Around 82.85 % of nurses are also conscious that efficient thermal management is kangaroo mother treatment. Nurses out of response 21 Nurses out of response 21 (60 %), Wear mentioned they knew about the worm

chain, and about 27(77.15%) of nurses know that breast-feeding is one of the worm chain's components.

The Ultimate Personage Approximately 33 (94.28 %) of participants correctly described hypothermia, and 34 (94.18 %) know the symptoms of hypothermia, and about 33 (94.28 %) of nurses are aware that death can be caused by hypothermia. The overall level of awareness was 86.42 % of 21 (60 %) of responding nurses aware that bathing of the newborn should be at least after 24 hours and favored on the second day.

A review of research reports regarding knowledge of Newborn Hypothermia in health professionals showed the result as about **51.8%** of the subjects defined Newborn Hypothermia correctly, Lethargy, refusal of feed and cold to touch was mentioned as common symptoms of hypothermia by **77.5%**.

More than half of **71.42 %** of nurses knew that newborn eyes should be washed with sterile swab, and about **25 (77.15%)** of nurses knew the method of cleaning the eyes correctly, but only **9 (25.72 %)** of responding nurses knew the value of applying eye ointment to avoid conjunctivitis, the overall awareness level was **58.09 %**.³⁴

More than half of participants in breast-feeding 17 (48.57%) understood that breast-feeding should start within one hour, as suggested by the WHO, and about 20 (57.15 %) of responding nurses were aware of the sign of a successful breast-feeding latch. 21(60%) of nurses recognized that breast-feeding should be on demand, with a total awareness level of 55.42%. Similarly, a cross-sectional descriptive survey was done in obstetric units in Cape Town; a random sample of **45** nursing staff was drawn working in the obstetrics department. The results showed that the level of knowledge on exclusive breastfeeding among nurses was **62.4%**.⁽³⁵⁾

In this research, only 4 (11.43 %) of nurses knew that vitamin K can be taken orally and intramuscularly at birth, and about 31 (88.57 %) of nurses knew the correct dose of vitamin K for the term newborn. 31 (88.57 %) knew that vitamin K was administered as prophylaxis at birth, while 23 (65.71 %) knew that vitamin K was

given to avoid bleeding. Total levels of knowledge was **61.43%**.

Elevated %age 74.29% of nurses involved in the study are aware of the immunization provided at birth. A survey was conduct in Riyadh City to determine the knowledge of childhood immunization; the study stated that 94.3% of the health care providers' knowledge of immunization at the primary health care centers in Riyadh City was strong.⁽³⁶⁾

Conclusions

The knowledge of the midwives nurse is about components of Immunization. Was immunization of the newborn at birth 74.29%, breast-feeding 55.42%, cord care 75.99% , thermal care 80.95%, eye care 58.09% and vitamin K 61.43%.The overall total nurses' knowledge was a good knowledge, which scored for 70.88%

Recommendation

1. To review and update their expertise, regular and scheduled training courses on essential and critical newborn care should be applied to nurses at hospitals.

2. Coordinate and prioritize knowledge education program to improve nurse actions to:

- Stop adding something to the cord stump
- Additional studies on variables correlated with the expertise of nurses must be performed.

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Conflict of Interest: None to declare.

Ethical Clearance: "All experimental protocols were approved under the Pediatrics Nursing Department, College of Nursing were carried out in accordance with approved guidelines".

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