

# Assessment of Nurses Knowledge Regarding Daily Newborn Care at Alribat University Hospital Khartoum-Sudan

Eiman Ahmed Saad Mohmed<sup>1\*</sup>, Maram Mohammed Hamd<sup>1</sup>

<sup>1</sup> Pediatric Nursing Department, Sudan International University, Khartoum, Sudan

## Email Address

eimanshandi@gmail.com (Eiman Ahmed Saad), marammohd2020@gmail.com (Maram Mohammed Hmd)

\*Correspondence: eimanshandi @gmail.com

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## Abstract:

Background: Newborn morbidity and mortality occur significantly in most developing countries, E daily Newborn Care is simple, cost effective measures can improve neonatal outcome. Objective: To assess nurses' knowledge regarding daily newborn Care. Method: Descriptive cross-sectional hospital based study was conducted in march-2018at Al Ribat university hospital. The sample included (50) nurses who agreed to participate in this study. The data was collected using self-administered questionnaire in English language, questionnaire divided into two parts demographic characteristics, and nurses' knowledge regarding daily newborn care. Statistic data was analyzed by computer using SPSS program and presented in simple figures. Result: In this study, 60% of participants knew correctly newborn age. 94% knew instrument use for cord cutting, 88% knew material use to tie the cord, 72% knew the cord should be well tie, a and more than half nurses' 52% knew umbilical cord should be leaved uncovered. About 54% knew time of warped baby before delivery of placenta. The majority of participant knew the important of place new born on the mother chest. And 58% knew the benefit of kangaroo mother care, 58% knew it need for all babies. 72% correctly define hypothermia 64% knew signs of hypothermia, and 67% knew complication of hypothermia. About 56% of responding nurses' aware about the bathing of the newborn should be at least after 6 hours. Only 22 % of nurses was known that vitamin K at birth can be taken orally and intramuscularly, 82% knew it give to prevent bleeding, only 50% knew dose of vitamin K for term baby, 54% knew signs of vitamin K deficiency.

## Keywords:

Nurses, Knowledge, Daily, Newborn, Care

## 1. Introduction

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's often receives less than Optimum attention in maternal and child health programs. [1]

Despite a declining proportion of deaths among children less than five years of age, neonatal mortality remains high. Globally, every year, nearly 40% of all deaths in children under- five are among newborn infants, majority of neonatal deaths 75% occur in the first week, and 25% occurs within the first 24 hours and die in their first 24 hours. According to 2015 report an estimated of 2.7 million neonates die annually in the first 4 weeks of life Almost of these neonatal deaths occurred in low income and middle income countries with the highest rates occurring in sub-Saharan Africa (29 deaths per 1000 live births). [2]

Majority of the neonatal deaths that occur especially in developing countries are avoidable or Preventable causes. Three major causes account for more than 85% of newborn death namely: Complications of prematurity, intra- partum related neonatal deaths (including birth asphyxia) neonatal infections and hypothermia. [2]

To managed this problems the World Health Organization (WHO) has come up with a set of guideline about the, Essential Newborn care which are evidence based cost effective measures to improve neonatal outcomes. This guideline is to be used by all stakeholders who engaged with the neonate including the health care providers and mothers, and the community and government. These outlines of practices include clean delivery and clean cord care, thermal protection, early and exclusive breastfeeding, eye care, immunization at birth, extra care for the low birth weight newborn, early detection of problems or danger signs and management of newborn illness. [3]

Newborn care is very importance for the development and healthy life of a baby, thecae takes place immediately following birth, in the transition period, and during the postnatal period. [4,5] All newborns requires essential newborn care to minimize the risk of illness and maximize their growth and development. This care will also prevent many newborn emergencies. For example, the umbilical cord may be the most common source of neonatal sepsis and also of tetanus infection, and good cord care can reduce the risk s of these serious conditions. Exclusive breast feeding has a significant protective effect against infections. Early breast feeding and keeping the baby close to the mother reduce the risk of hypothermia and hypoglycemia. [7]

Promotion of essential newborn care is one strategy for improving newborn health outcomes [7] Nurses have a unique opportunity for providing care based on knowledge and preventing infections for the newborn. Because the newborn infant's helplessness, his needs must be met initially by nursing personnel. Nursing care does not stop with the newborn infant. Interaction with the parents is also important in the development of a family unit. [8]

## **2. Methodology**

### **2.1. Study Designs**

Descriptive cross-sectional hospital based study conducted to assess nurses' knowledge regarding daily newborns care at AL Ribat university hospital at March 2018.

### **2.2. Study Area**

The descriptive study was carried out at ALRibat university hospital which is located in Khartoum state. The nursery divided to room, septic room with one resuscitation, 4 cots, and 5 incubators. A septic room with 2 cots, 2 resuscitation, 6

incubators. The total nurses work in (NICU) were 10 nurses divided by tow, 4 nurses in morning shift and 6 nurses were changed within after noon night shift (3 group).

### **2.3. Study Population**

Nurse who worked in (NICU) and who make rotation in( NICU)

### **2.4. Sample Size**

(50) Sample was taken during study period include available and agree participant.

### **2.5. Sample Technique**

Convenient sampling

### **2.6. Inclusion Criteria**

Nurses were working at Al Ribat university hospital and agree to participate.

### **2.7. Exclusion Criteria**

Nurses that refused to participate during study period

Nurses has less than one year of experiences.

### **2.8. Data Collection Technique And Tool**

Data was collected from participants by using self –administered questionnaire.

### **2.9. Variable of the Study**

#### **2.9.1. Independent Variable**

Socio demographic data

#### **2.9.2. Dependent Variable**

Knowledge of nurses' regarding daily newborn care

### **2.10. Statistic data Analysis**

The data was analysis by computer using statistical package for social sciences SPSS, and presented in simple figures.

### **2.11. Ethical Consideration**

Official letter from Shendi University was taken to manager of Al Ribat university hospital. For permission to carry out this research in their hospital, then the goal of research has been explain to responder and inform about the right and confidentiality and verbal approval from participants.

## **3. Results and Statistical Analysis**

To achieve the objectives of the study and to verify hypotheses, statistical methods were used the following:

a. Charts.

b. Frequency distribution of the answers.

c. Percentages.

Figure 1, showing that distribution of nurse's knowledge according Instruments used for cord cutting, 94% are New blade or scissor and 2% are Knife, 4% are Any scissor.

Figure 2, showing that frequencies of nurse's knowledge according materials used to tie the cord, 88% are New clamp must be used and 4% their answer plaster and 8% are Rope.

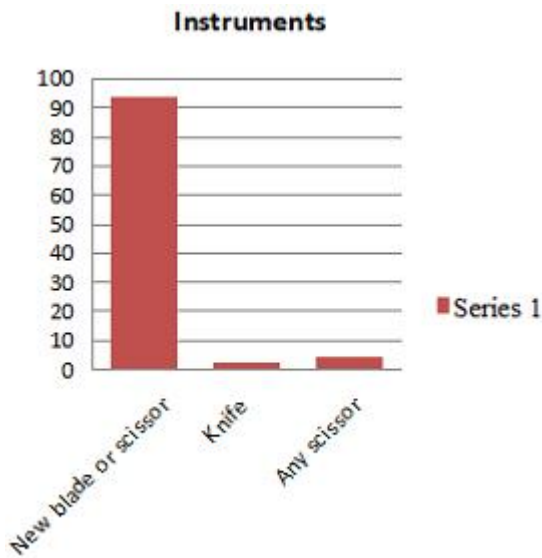


Figure 1. Instruments.

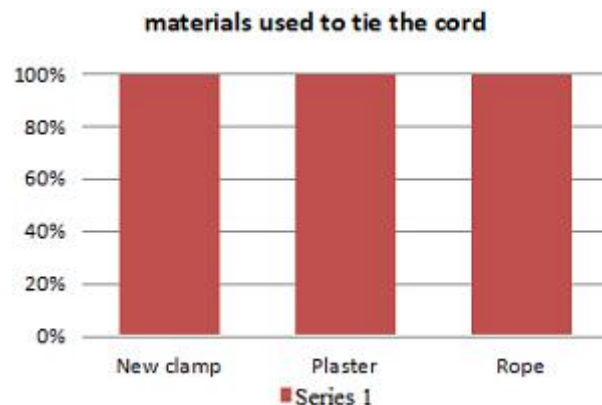


Figure 2. Materials used to tie the cord.

Figure 3, showing that distribution of nurse's knowledge according material applied to the umbilical stump, 8% are Cow dug and 2% are Fire, 90% are Spirit.

Figure 4, showing that distribution of nurse's knowledge according to time of wiped/dried and wrapped of newborn, 54% are before delivery of placenta and 10% are during delivery of placenta, 36% are after delivery of placenta.

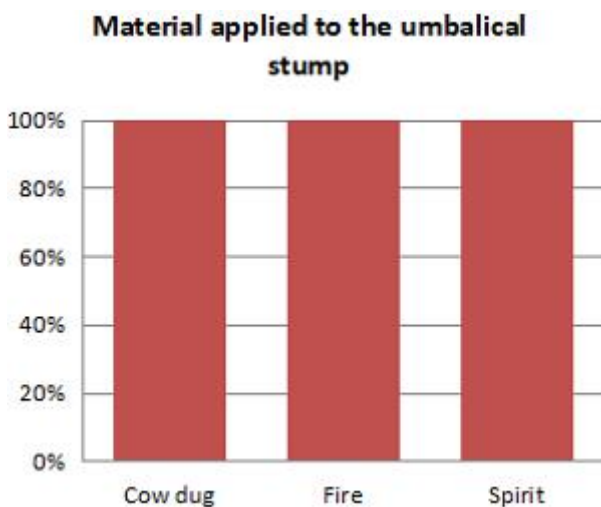


Figure 3. Material applied to the umbilical stump.

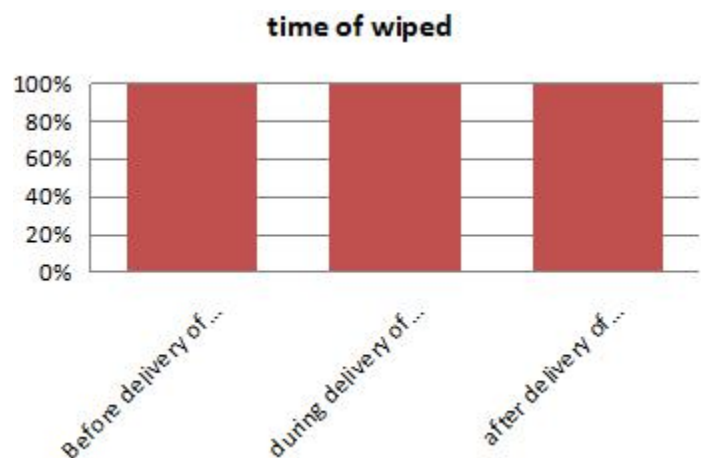
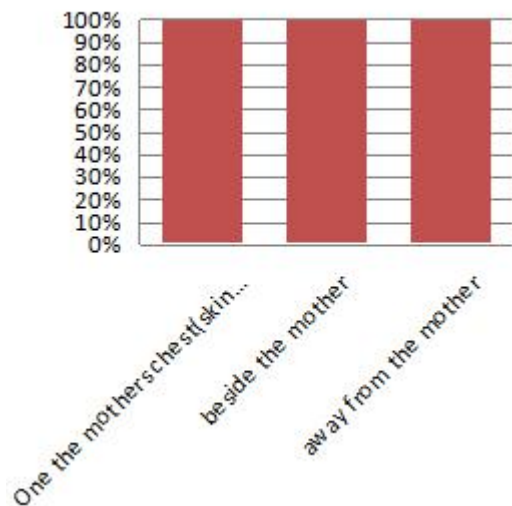


Figure 4. Time of wiped.

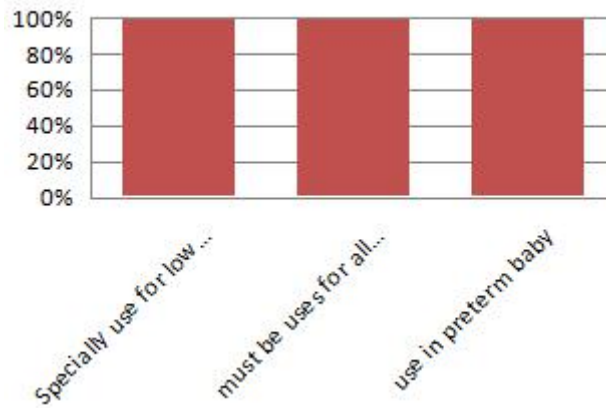
Figure 5, showing that distribution of nurse's knowledge according to place of the newborn after birth, 80% are One the mothers chest (skin to skin contact), and 14% are beside the mother, 6% are away from the mother.

**place of the newborn after birth**



**Figure 5.** Place of the newborn after birth.

**kangaroo mother care**

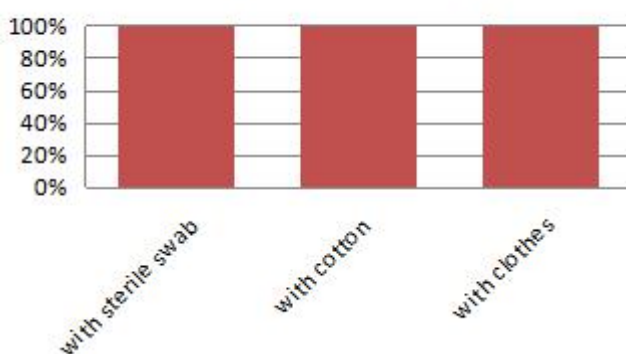


**Figure 6.** Kangaroo mother care.

Figure 6, showing that distribution of nurse's knowledge according to Kangaroo mother care, 18% are Specially use for low birth weight babies, and 58% are must be uses for all babies, 24% are use in preterm baby.

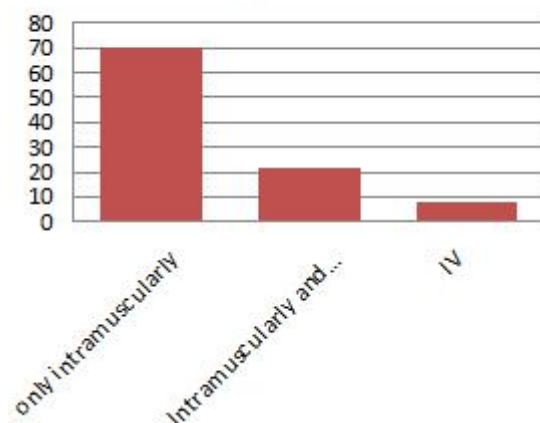
Figure 7, showing that distribution of nurse's knowledge according to clean of newborneyes, 58% are with sterile swab, and 40% are with cotton, 2% are with clothes.

**cleaning of the newborn eyes**



**Figure 7.** Cleaning of the newborn eyes.

**vitamin K1 given at birth**



**Figure 8.** Vitamin K1 given at birth.

Figure 8, showing the distribution of nurse's knowledge according to vitamin (K) given at birth, 70% are only intramuscularly, and 22% are intramuscularly and orally, 8% are IV.

## 4. Discussion

Daily newborn care is a comprehensive strategy designed to improve the health of newborns through interventions. It comprises: Basic preventive newborn care such as temperature maintenance, eye and cord care, and early vitamin K administration. [7]

In this study about demographic data of participants about 84% their years of experience between 1-5 years, 14% their years of experience between 5-10 years, 2% more than 10 years. And their qualification was 8% have N.certificate, 18% have diploma, 74% Bsc degree.

Regarding knowledge of nurses about daily newborn care, all nurses' response that they have information about essential newborn care, although all nurses responded they have information about essential newborn care about 60% knew correctly newborn age. [12]

In this study, only 52% of nurses knew that umbilical cord should be leaved uncovered more than 90% of nurses aware that umbilical cord should be cut with new blade or scissor, and 88% knew it must tied with new clamp, and 72% knew it should be well tie .A similar study was conducted at selected maternity hospital of Bagalkot, India 2011. This study reported that among 100 staff nurses, on an average of 72.73% had good knowledge regarding prevention of umbilical cord infection. [12]

Regarding thermal care about 54% of responding nurses knew that newborn should be wiped and/or dried before the delivery of placenta, and majority of responding nurses knew that the newborn placed immediately after birth on mother's chest. Also about 58% of nurses aware that kangaroo mother care is effective thermal control and more than half knew it needs for all babies. A similar study was conducted at Jimma Zone, Ethiopia, 2016 reported that the majority of participant had good knowledge about thermal care.

Highest percentage about 72% of participants defined hypothermia correctly, and 74% knew the signs of hypothermia, about 76% of nurses aware that hypothermia can cause death. 56% of responding nurses aware that bathing of the newborn should be at least after six hours. A review of research reports regarding knowledge of Neonatal Hypothermia in health professionals showed the result as about 51.8% of the subjects defined Neonatal Hypothermia correctly, Lethargy, refusal of feed and cold to touch was mentioned as common symptoms of hypothermia by 77.5% respectively. [13]

More than half of, nurses 58% aware that newborn eyes should be cleaned with sterile swab, and about 64% of nurses they knew correctly the method of cleaning the eye. [16]

In this study, only 11 % of nurses were knew that vitamin K can be taken at birth orally and intramuscularly, about 50% of nurses knew the correct dose of vitamin K for the of term newborn. Majority of participates 82% knew Vitamin K given to prevent bleeding, 54% knew signs of vitamin K deficiency. Similar study in Jimma zone Ethiopia, 2016 show that the majority of participant had knowledge gap in vitamin k administration. [14]

## 5. Conclusions

It depend on current result that the nurses had good knowledge about cord care, poor knowledge regard the cord should be uncover .Good knowledge about thermal care and eye care. And bad knowledge about vitamin K and rout of administration.

## 6. Recommendation

Frequent schedule training and courses about daily newborn care should be applied to the nurses at hospitals to refreshing and update their knowledge.

Coordinate and target information educational program, concentrating for knowledge about vitamin K.

Additional survey on factors associated with nurse's knowledge should be done by ministry of health.

## Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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