



بسم الله الرحمن الرحيم

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FACULTY OF POST GRADUATED STUDIES
AND SCINTIFIC RESEARCH



**ASSMENT OF NURSES KNOWLEDGE REGARDING DAILY
NEWBORN CARE AT ALRIBAT UNIVERSITY HOSPITAL**

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M.SC. Degree in Pediatric Nursing**

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الآية :

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Dedication :

To

My father

My mother

My Sisters and brothers

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List of abbreviations:

W H O	World Health Organization
ENC	Essential Newborn care
MDG-4	Millennium Development Goal 4
KMC	Kangaroo mother care
VKDB	Vitamin K deficiency bleeding
IM	intramuscular injection

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-2018 at 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 un covered .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 hypo thermia,64% knew signs of hypothermia, 67% knew complication of hypothermia. About 56% of responding nurses' aware about the bathing of the newborn should be at least after 6 hours. Only22 % 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 .

Conclusion:

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

ملخص الدراسة

مقدمة :

تحدث الاصابات والوفيات لحديثي الولادة بشكل كبير في معظم الدول النامية، وللتقليل من الوفيات و الاصابات قامت منظمة الصحة العالمية بوضع ممارسات اساسية متعلقة برعاية حديثي الولادة التي تستند على مقاييس التكلفة الفعالة لتحسين نتائج ممارسات الرعاية.

الاهداف:

تهدف الدراسة لتقييم المستوى المعرفي للمرضين عن اساسيات رعاية الطفل حديث الولادة. **طريقة البحث:** دراسة وصفية مقطعية أجريت في مستشفى الرباط الجامعي وقد شملت الدراسة عدد (50) من المرضين الذين تواجدوا خلال فترة الدراسة ووافقوا علي المشاركة في هذه الدراسة. وقد تم جمع البيانات بواسطة استبيان مقسم الي قسمين، الخصائص الديموغرافية ،ومعرفة المرضين بأساسيات رعاية الأطفال حديثي الولادة . وقد تم تحليل البيانات بواسطة الكمبيوتر وباستخدام برنامج التحليل الإحصائي الالي و تم عرض النتائج في شكل جداول وأشكال.

النتائج:

وجدت الدراسة ان حوالي 94 % من المرضين لديهم معرفة بان الحبل السري يجب ان يقطع بمشرط جديد ، و 52 % لديهم معرفه بأنه يترك من غير تغطيه. حوالي 56 % من المرضين لديهم معرفة بأنه يجب تأخير اول حمام للطفل علي الاقل لمدة 6 ساعات، ايضا لديهم معرفه جيده عن المحافظة علي الحرارة، نظافة ورعاية العين ، ولكن كانت معرفتهم سيئة عن اعطاء فايتمين (ك) وانه يمكن اعطاه عن طريق الفم والعضل.

CHAPTER ONE

Introduction

Justification

Objectives

Introduction :

1.1 Back ground:

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.(1) 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, the care takes place immediately following birth, in the transition period, and during the postnatal period.(4)(5) All newborns require 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.(6)

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)

1.2. Statement of the problem:

Although significant improvements have been made in child health globally, newborn mortality rates have changed little. Achievement of the Millennium Development Goal-4 (MDG-4) to reduce under-five mortality by two-thirds by the year 2015 will require substantial reduction in neonatal mortality. Child deaths are falling, but much more needs to be done in order to reach the development goal. The challenge for reducing neonatal deaths in any developing country requires solutions through research to inform program and action oriented policies designed to improve newborn health and increase their probability of survival (9).

1.3 Justification::

Majority of newborn deaths take place in developing countries. Sudanese children suffer from under-five deaths. Mortality rate of under-five is 89 deaths per 1000 live births; an infant mortality rate is 48 deaths per 1000 live births. And neonatal mortality rate is 30 deaths per 1000 live. (2) A descriptive study was done in Masindi, Uganda in 2014. About health care worker knowledge related essential newborn care. Sample of 183 health workers were interviewed, the study focusing mainly on newborn care, management of neonatal infections. Data was collected by inert views; the study was showed that the Knowledge regarding newborn care among healthcare workers in Masindi was Very low, the highest deficit of knowledge in management of neonatal Infection and in the basic principles of newborn cleanliness, early breast feeding, eye care and cord care (10). From this study it can be concluded that the awareness and knowledge among nurses regarding newborn care is immense important in order to achieve better neonatal outcome and prevent complications. Nurses have significant role to decrease and prevent neonatal deaths because they are the first provider of care to the neonate.

1-4 Objectives

1.4.1 General objective

To assess nurses knowledge regarding daily newborn care.

1.4.2 Specific objectives

To assess knowledge of nurses about cord care.

To assess nurses knowledge regarding thermal care.

To evaluate nurses knowledge in eye care.

To identify nurses knowledge in vitamin(k) administration.

CHAPTER TWO

Literature Review

2. Literature review

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 and exclusive breastfeeding; vitamin K administration, immunization and early detection of problems or danger signs. (7)

Daily newborn care is the care requires by all neonates whether they are born healthy, small or unwell. It includes appropriate preventive care, routine care, and resuscitation at birth if necessary, and care of sick and small babies. The success which mortality and morbidity are prevented will depend on to a large extend on the commitment and expertise of the health workers responsible for newborn care.(6)

The World Health Organization has come up with a set of simple, cost effective measures that can be used by both the healthcare worker and the primary caregiver to ensure improved neonatal outcome. Components of the WHO Essential Newborn Care include Basic preventive such as cord care, breastfeeding; provide warmth, eye care, immunization, vitamin K administration, and early recognition of danger signs. (3)

2.1 The key components of newborn care include:

2.2.1 Cord care

Clean cord care is one of the essential newborn care practices recommended by the World Health Organization to reduce morbidity and mortality amongst the World's newborns. Despite this, cord infections are still prevalent in developing countries because of the high rates of unhygienic cord care practices. (3)

Clean delivery and clean cord care ensure everywhere, in health facilities by polices and practice for prevent, detection, and control of nosocomial infections, washing hands before touching the newborn baby, and cut the umbilical cord with a clean blade, and keep the cord area clean and dry, and do not put anything on the cord .A complementary strategies to reduce neonatal tetanus is immunizing pregnant women with tetanus toxoid. (3)

The principles of cleanliness are essential in health facilities, in addition to hygiene during delivery –clean environment –equipment and supplies-also these principles include especial measure for newborn to prevent hospital infection –prevent of overcrowding, provision of clean water, also the hospital need to define method for prevention, detection of nosocomial infection.

The principle of cleanliness should apply on home delivery too. Infection acquired after birth need attention. It can be prevented by clean practice, in hospital where the mother and babies are separated, babies often kept on nurseries, where are share the equipment and supplies, they may expose to microorganism. (3)

To ensure a clean birth, WHO advocates the practice of ‘six cleans’:

- 1-Clean hands
- 2- Clean delivery surface
- 3- Clean perineum
- 4- Nothing unclean inserted into the vagina
- 5- Clean umbilical cord cutting tool
- 6- Clean cord care of the newborn

Clean cord care is one of the essential newborn care practices recommended by the World Health Organization to reduce morbidity and mortality amongst the World’s newborns. Despite this, cord infections are still prevalent in developing countries because of the high rates of unhygienic cord care practices. (3)

The umbilical cord connects the fetus and the placenta in utero. Babies receive nourishment and oxygen through the placenta by way of single vein and two arteries, which is connected to the inner wall of the mother’s uterus. The placenta is connected to the baby by the umbilical cord through an opening in the baby’s stomach; the umbilical cord is pretty big averaging about 50cm (20 inches) in length and 2cm (about 3-4inch) in diameter in full term baby. (11)

After the baby is born, the umbilical cord is clamped and cut close to the body (2-5cm) in a painless procedure, leaving an umbilical stump. The cord stump dries gradually, and falls off five to fifteen days after birth. The umbilical stump can be a source of entry for systemic infection if not properly cared. The umbilical stump must, therefore, be kept clean. Principles of clean cord stump care keep it dry and clean and don’t apply anything at the health facility and at home also. (11)

The stump will be dry and mummify if exposed to the air without any dressing, binding and bandages. It will remain clean if it is protected with clean cloths and is kept from urine and soiling. No antiseptics are needed for cleaning. If soiled, the cord can be washed with clean water and dried with clean cotton or gauze. (11)

Once the umbilical cord separates, minimal discharge is expected. Until the cord falls off, the area should be kept dry as much as is possible to promote separation and healing. The newborn's cord stump provides a good environment for bacterial growth until it dries up and separates usually 5-15 days after birth. Proper cutting and tying of the cord and hygienic care of the umbilicus until it is fully healed can prevent serious infection and even death. (3)

The danger signs of umbilical cord infection including:

- 1- Puss discharge
- 2-Reddening around umbilical stump and or the surrounding skin
- 3- Fever, lethargy and difficulty in breathing
- 4-Poor sucking (13)

Nursing intervention

Umbilical cord care started from birth until the cord full off.

1-Wash hands before and after contact with umbilical area

2-The umbilical cord should initially be cut with sterile instrument if a sterile instrument is not available, use a clean instrument such as a new razor blade

3-Put nothing on the stump and any agent used to clean infant skin or cord is single use

When promote skin to skin contact whit mother to promote colonization with non pathogenic normal flora and Fold diaper below stump

4-Keep cord stump loosely covered with clean clothes. If stump is soiled, wash it with clean water and soap. Dry it thoroughly with clean cloth, or if it becomes soiled with urine or feces.

5-Do not bandage the stump or abdomen.

6-Avoid touching the stump unnecessarily.

7-Umbilical stump must be inspected after 2-4 hours of clamping, bleeding may occur at this time due to shrinkage of cord and loosening of ligature. (12)

8-Instruct the mother on cord care, hand hygiene, and how to assess for signs of infection (13)

2.2.2 Thermal care

Thermal care is series of measure taken at birth and the first days of life to ensure that the newborn in the normal body temperature and to reduce the hypothermia risk. It includes practices such as drying and wrapping the newborn immediately after delivery and delaying the newborn's first bath for at least six hours or several days to reduce the hypothermia risk(3).

The neonate infant cannot regulate its temperature as well as adult and therefore need to be protected; neonate is most sensitive to hypothermia may occur at any time if the environmental temperature is low and thermal protection inadequate. The newborn relatively have large surface area, small body mass to produce and conserve heat. According to The World Health Organization Hypothermia is defined it is as an axillary temperature below 36.5°C. The normal body temperature of the newborn is 36.5-37.5(97.7-99.5f) hypothermia occurs when the body temperature drop below 36.5c.(3)

Most cooling of the newborn occurs immediately at birth , Hypothermia can easy occur if a newborn infant is left wet and unprotected from cold while waiting for placenta to be delivered, hypothermia can occur after birth even at moderate environmental temperature when babies are not well protected or because a practice such as bathing the newborn.(3)

Besides the exposure to heat losses, the newborn is particularly at high risk of hypothermia because at birth the infant's ability to respond to cold by increased metabolism and heat production is not fully developed. However, this response will develop provided the baby is healthy and receives food. (3)

The ways that newborn lose the heat

The temperature inside mother's womb is 38c (100.4f), leaving the mother womb at birth, the wet newborn find itself in much Colden environment and immediately starts loosing heat ,the newborn can loses heat through conduction, convection, radiation and evaporation (3).

The principle for preventing hypothermia in newborn infants at birth

The Warm Chain

These are a set of 10 points derived by W.H.O to prevent hypothermia, most of which should be achievable. These should be considered for every baby and particularly those at risk. All health care providers involved in process of birth and care of the baby need to be adequately trained on principle and procedure of warm chain.

1. Warm delivery room ($> 25^{\circ}\text{C}$)
2. Warm resuscitation (Warm towels)
3. Immediate drying
4. Skin-to-skin contact between baby and the mother (Kangaroo Care)
5. Breastfeeding
6. Bathing and weighing postponed
7. Appropriate clothing and bedding to environment
8. Mother and baby together
9. Warm transportation – extra clothes outdoors.
10. Training-awareness of healthcare providers, in intuition where is the equipment is used (radiant- incubator), there is should be well trained staff to monitor the baby condition and temperature of the equipment, clean and maintain.

The mother must maintain the warm chain when she is at home, whether the delivery took place at home or in hospital. (3)

WHO recommends bathing after six hours of life and preferably on the second or third day of life. Bathing the newborn soon after birth causing a drop in the body temperature and is not necessary and For the low birth weight and premature infants who are at higher risk of hypothermia, extra measures need to be taken to ensure these babies remain warm includes use of radiant heaters and incubator care. Neonatal hypothermia has been shown to increase neonatal mortality and morbidity. Temperature can be assessed by using a thermometer or feeling the infant's skin and observing for other signs. Cold skin could indicate hypothermia and if the neonate skin is red and hot with a flushed face, hyperthermia may be present. (14).

Signs of hypothermia:

- 1- Less active, lethargic, hypotonic,
- 2-Suck poorly and the cry become weaker
- 3-Respiration becomes shallow and also the heart beat decrease, apnea(15)

Nursing Management of hypothermia

A hypothermic baby should be re-warmed straight away. Methods available to use are:

- 1-Skin-to-skin (kangaroo care) and a hat
- 2- A heated mattress
- 3- An overhead heater
- 4- Incubator (16).

Monitoring

The WHO recommendation is to check the temperature every 30 minutes until temperature reaches 36.5°C - ideally this should be done. When temperature reaches 36.5°C it should then be measured hourly for the next four hours to ensure there is no relapse. If there is a clinical concern about the baby a doctor's assessment should be sought immediately. (17).

It's very important to continue feeding the baby to provide calories and fluid to meet energy needs. It important to be aware hypothermia is sign of infection. Every hypothermic newborn should therefore reassess for the infection. (17)

The principles of maintaining normal temperature apply even after the baby is discharged from the hospital. All mothers should be explained about the importance of keeping their babies warm. They should be instructed to dress, wrap the baby in a dry clean cloth and to cover the head and feet with cap and socks respectively. They should be taught to assess the baby's temperature by touching the feet, if the feet are found to be cold, the baby should be kept in skin-to-skin contact position and be covered with a blanket. (14)

Nursing intervention to prevent hypothermia includes:

- 1- Health personnel must be aware of the problem and prevent it from developing.
- 2- Early diagnosis of hypothermia. Temperature should be taken routinely in all newborn babies
- 3- Rearing hypothermic babies and ensuring special thermal protection to babies at special risk of becoming hypothermic.
- 4- Ensure adequate thermal protection during internal transfer of the baby. (15)

Kangaroo mother care (KMC)

Kangaroo mother care is the early, prolonged, and continuous skin-to-skin contact between the mother and her baby, with support for positioning, feeding, and prevention and management of infections and breathing difficulties. Very sick babies needing special care, but all babies are eligible for KMC. All mothers can provide KMC, irrespective of age, parity, education, culture and religion. (17) (18)

KMC satisfies all five senses of the baby. The baby feels warmth of mother through skin-to-skin Contact (touch), she listens to mother's voice & heart beat (hearing), sucks on breast (taste) has Eye contact with mother (vision) and smells mother's odor (olfaction).(17)

The components of kangaroo mother care are:

1. Skin to skin contact: This component involves direct skin-to-skin contact of the newborn with the mother who should be early and continued for prolonged periods of time.
2. Exclusive breastfeeding. (17)

Benefits of KMC contact include:

- A. Effective thermal control
- B. Increased breastfeeding rates
- C. Early discharge, better weight gain
- D. Less morbidity such as apnea, infections
- E. Less stress
- F. Better infant bonding
- G. does not require additional staff compared to incubator care is acceptable to the mothers and the health-care staff working in the hospital. (19)

2.2.3 Eye care

Eye prophylaxis involves cleaning the eye at birth and applies either silver nitrate drops or tetracycline ointment with the first hour.

Thousands of infants suffered permanent blindness as a result of severe eye infection due to gonorrhea acquired from their mothers. Giving eye medications shortly after birth prevents almost all of these infections. (3)

Ophthalmicneonatorum refers to conjunctivitis occurring during the first two weeks of life. It

Typically appears 2-5 days after birth. Presents with most often both eyelids become red and swollen with purulent discharge. Corneal damage with ulceration, perforation, develops if there is no treatment or delay in treatment. (3)

Neisseria gonorrhea and Chlamydia is the two main Causes of ophthalmicneonatorum. However, Chlamydia eye infections are much less likely to be associated with serious eye complications. In the absence of systematic diagnosis and treatment of maternal genital infections before delivery the transmission rate for gonorrhea from infected mother to her newborn is 30-50%, so testing mothers early in pregnancy and treating them then if necessary is recommended to prevent the infection.(3)(20)

The newborn eye medications prevent infection that is picked up from the mother's cervix or vagina as the baby is born. Infection can be prevented by cleaning the eye immediately after birth and applying either 1% silver nitrate solution, 1% tetracycline or 0.5 erythromycin ointment or 2.5% providence-iodine drops to the eyes within one hour of delivery. Without treatment, ophthalmicneonatorum may lead to serious complications including blindness due to corneal ulceration and even death. (20)

Strategies to prevent and control eye infections:

WHO guidelines present five strategies to help prevent and control neonatal eye infections:

1. Primary prevention of STIs in the mother.
2. Screening and treatment of STIs during pregnancy.
3. Eye prophylaxis at birth.
4. Appropriate infection prevention practices during the care of the newborn.
5. Diagnosis and treatment of the disease after it occurs in newborns.

Advice to the mother to provide care at home (21)

Nursing intervention

1-Clean the baby's eyes immediately after birth by swabbing each eye separately with sterile swab. (22)

2-If prophylaxis is the policy, instill drops or ointment after cleaning and within one hour of birth. Do not touch eye with the dropper or tip of ointment tube. Health workers should know the national policy and drug to be used.(22)

3-Do not wash away the eye antimicrobial. (22)

4-Require frequent hand washing by any one handling the baby mother, relatives. (22)

5- Prevent cross infection in health facilities by frequent hand washing between handling infants.

Maintain cleanliness, and where feasible, sterilize equipment, follow correct medical techniques, and maintain general cleanliness of the environment are essential to preventing eye and other infections in newborns. (23)

6- Keep the baby with mother and avoid the practice of putting two babies in the same cot, which increases cross infection in general as well as eye infections.

7-Caregivers should be able to recognize eye infections and know what actions to take e.g. cleaning the eye. (23)

2.2.5 Vitamin K administration

Vitamin K dependent factor are lower in neonate then the adults, and it should be administered to all neonates at birth or immediately afterword. It is made naturally by the bacteria in the gut. It helps the blood to clot and stops bleeding. (27)

Vitamin K important

Newborn babies are born with very low levels of Vitamin K because from the mom is not easily shared with the developing baby during the pregnancy and they are not able to produce enough of their own because the intestine of the newborn baby has very little bacteria so they do not make enough vitamin K on their own, until they are about 6 months old. (27)

Due to this lack of Vitamin K in their bodies, some babies may bleed internally and this bleeding can be very serious and even life threatening. This is known as Vitamin K deficiency bleeding (VKDB) and this can be prevented by giving newborn babies Vitamin K at birth until they build up their own supplies. Premature and sick babies as well as babies born by instrumental births (i.e.ventouse - forceps) and-or long labors, also have an increased risk (27).

Vitamin K deficiency bleeding (VKDB)

Itis a condition that occurs when the baby does not have enough Vitamin K. (27)

There are three types of VKDB:

Early VKDB:

Occur in the first day of life in infants born to mothers who have received medications that may interfere with Vitamin K metabolism e.g. Anticonvulsants, anti TB medications or Vitamin K antagonist anticoagulants. (27)

Classical VKDB:

Occurs from 1-7 days after birth and is more common in infants who are unwell at birth. Bleeding is usually from the umbilicus (umbilical cord), the gut, surgical sites, or uncommonly in the brain. (27)

Late VKDB:

Occurs from 8 days to six months after birth and is usually due to an underlying medical condition. Babies are more at risk if they did not breastfeed at birth or have restricted access to breast milk in the days after birth and then go on to be breastfed. This is because colostrum, the first milk a mother produces and hind milk (milk at the end of a feed), contain high levels of Vitamin K. Babies that are fed infant milk formula will get Vitamin K from the formula.(27)

Signs of VKDB include obvious bleeding

- 1- From the umbilical stump
- 2- In the urine
- 3- From the skin and mucous membranes, for example the nose and gums
- 4- There is also a risk of internal bleeding, for example inside the head.
- 5- Black tarry stools after meconium has already been expelled
- 6- Black vomit (28).

Administration of vitamin K

For all newborn babies an injection of Vitamin K into the muscle or oral can be offered as an alternative but requires multiple doses to be effective. (29)

Vitamin K Injection

Inject of vitamin K into the thigh muscle shortly after birth. (29)

Vitamin K by mouth

It is possible to give vitamin K into baby mouth. Vitamin K is not absorbed well so 3 doses are needed; at birth, at 3-7 days and at 6 weeks. (29)

Vitamin K by mouth is not the recommended method for the following reason:

- 1- It is not absorbed well when given by mouth
- 2- The protection doesn't last as long as the injection
- 3- Babies don't always swallow or may vomit the oral dose.
- 4- The later doses are sometimes forgotten
- 5- Some babies have conditions that prevent absorption from the gut(29)

The dose

A single intramuscular injection of vitamin K remains the gold standard in the prevention of classic and late VKDB. (27)

Term Infants:

All healthy term infants should receive 1mg (0.1ml) Vitamin K (Konakion MM Pediatric) as soon as after birth within the first six hours of birth regardless of route of delivery. (29)

Preterm Infants:

All preterminfants should receive 0.5mg (0.05ml via a special syringe from pharmacy) Vitamin K (Konakion MM Pediatric) intra-muscularly. (29)

Oral Vitamin K

The oral administration of three doses of 2 mg, one on the first day and one on the 7th day and at 6 weeks of life has been shown to be almost as effective as one single dose of 1 mg intramuscular injection. (30)

Nursing intervention

1-Be aware about signs of VKBD

2-Ensure baby has indeed gotten the oral dose; therefore, if baby throws up within 60 minutes after the dose is given, it is suggested to repeat the dose.

3-Inform the parent Oral vitamin K is given in a series of doses, so they continue to taking the oral drops. (30)

Previous study:

1-A descriptive study was done in Masindi, Uganda in 2014. About primary health care worker knowledge related essential newborn care. sample of 183 health workers were interviewed, general nurses (39.3%), midwives (21.9%) and nursing assistants, the study focusing mainly on newborn care, management of neonatal infections and identifying ,stabilizing low birth weight LBW babies. Data was collected by inert views; the study was showed that the Knowledge regarding newborn care among primary healthcare workers in Masindi was Very low, this highest deficit of knowledge was in management of neonatal Infection and in the basic principles of newborn cleanliness, early breast feeding, eye care and cord care. Efforts are needed to orientate health workers regarding newborn care especially the offer of infection management among Newborns. (10)

2-A cross-sectional survey of nurses of secondary health care level in the South-Western geopolitical zone of Nigeria, conducted between February and March 2006. The participants were drawn from four hospitals using the random sampling technique. A total of 179 nurses were interviewed. Overall, 78.8% of the participants had adequate knowledge of Newborn care. (33)

3-cross-sectional study was done in Jimma Zone,Ethiopia,2016.about knowledge of essential newborn care among nurse working at health center in Jimma Zone. Sample of 279 study participant, include all qualified diploma and degree nurse who provide care service to new born at selected health center, use self-administeredquestionnaire.the study was show that despite participant had good knowledge in general, they had poor knowledge in some component of ENC : The study population had knowledge gap on vit K administration ,poor knowledge about cord clamping which lead to neonatal anemia .majority had good knowledge on thermal protection .need upgrade their educational level ,it is better if ministry of education incorporate all component of ENC in the curriculum for both diploma and degree program.(38)

CHAPTER THREE

Methodology

3. Methodology :

3.1 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.

3.2 Study area:

The descriptive study was carried out at AL Ribat university hospital which is located in Khartoum state. The nursery divided to room, septic room with one resuscitation, 4 cots, 5 incubators. A septic room with 2 cots, 2 resuscitation, 6 incubators. The total nurses work in (NICU) were 10 nurses divided by two, 4 nurses in morning shift and 6 nurses were changed within after noon night shift (3 group).

3.3 Study population

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

3.4. Sample size

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

3.5 Sample technique

Convenient sampling

3.6 Inclusion criteria

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

3.7 Exclusion criteria:

- 1- Nurses that refused to participate during study period
- 2- Nurses has less than one year of experiences.

3.8 Data collection technique and tool: Data was collected from participants by using self-administered questionnaire.

3.9 Variable of the study

3.9.1 Independent variable

Socio demographic data

3.9.2 Dependent variable

Knowledge of nurses' regarding daily newborn care

3.10 Statistic data analysis:

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

3.11 Ethical consideration:

Official letter from ShendiUniversity 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.

CHAPTER FOUR

Result

STATISTICAL ANALYSIS:

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

- 1 - Charts.
- 2 - Frequency distribution of the answers.
- 3 - Percentages.

Data analysis:

Figure (1): distribution of nurses according to **Years of experience** (N=50)

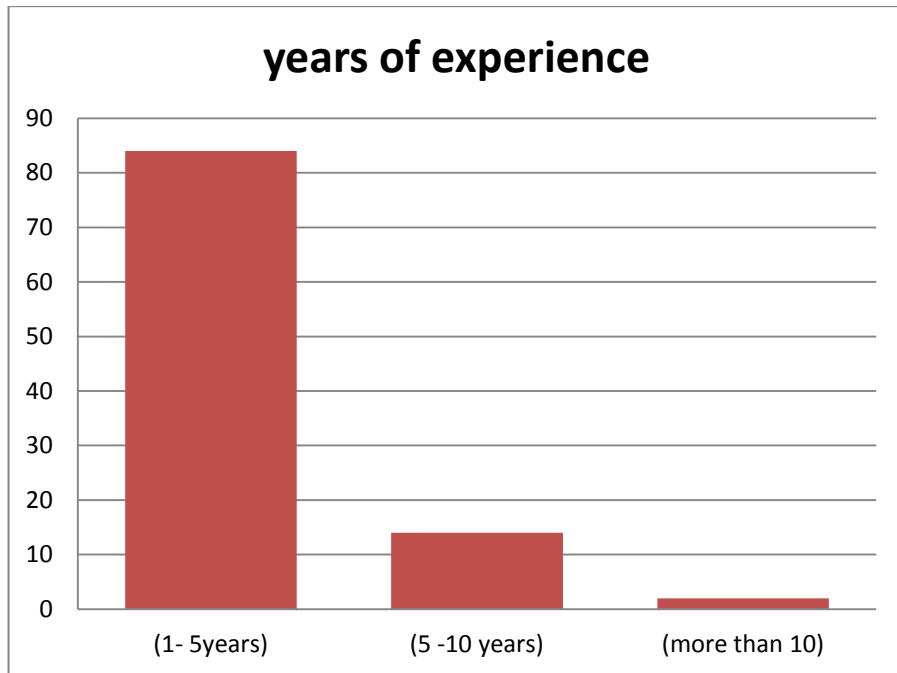


figure (1), showing that Distribution of nurses according **Years of experience**, 84% are (1-5 years) and 14% are (5-10 years), 2% are (more than 10).

Figure (2): distribution of nurses according to **Educational level** (N=50)

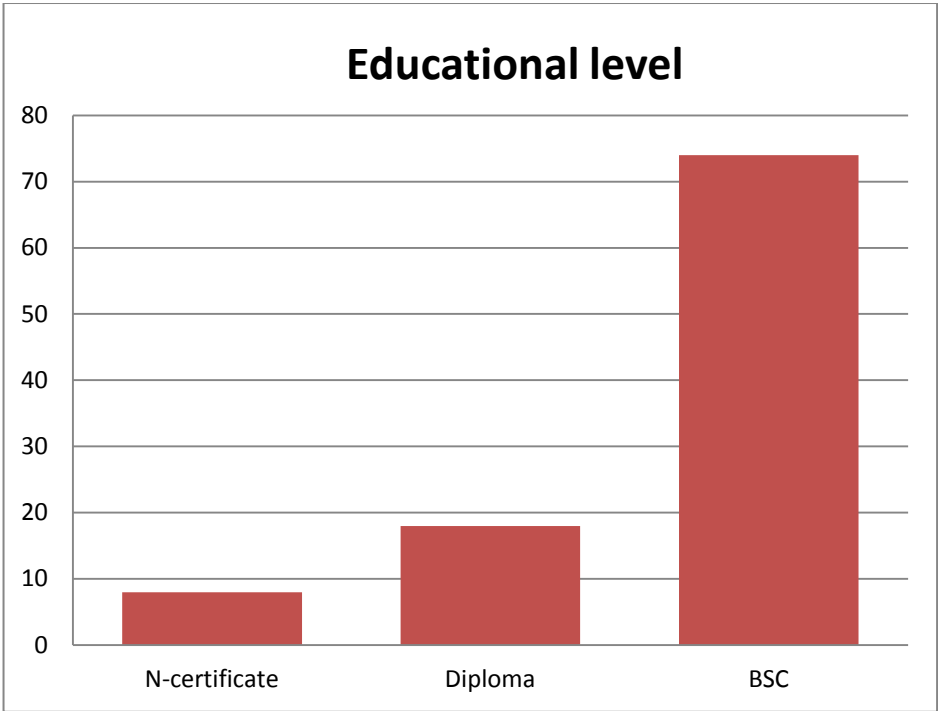


figure (2), showing that Distribution of nurses according **Educational level**, 8% are N-certificate and 18% are Diploma, 74% are BSC

Figure (3): show distribution of nurse's knowledge according to **Newborn age** (N=50)

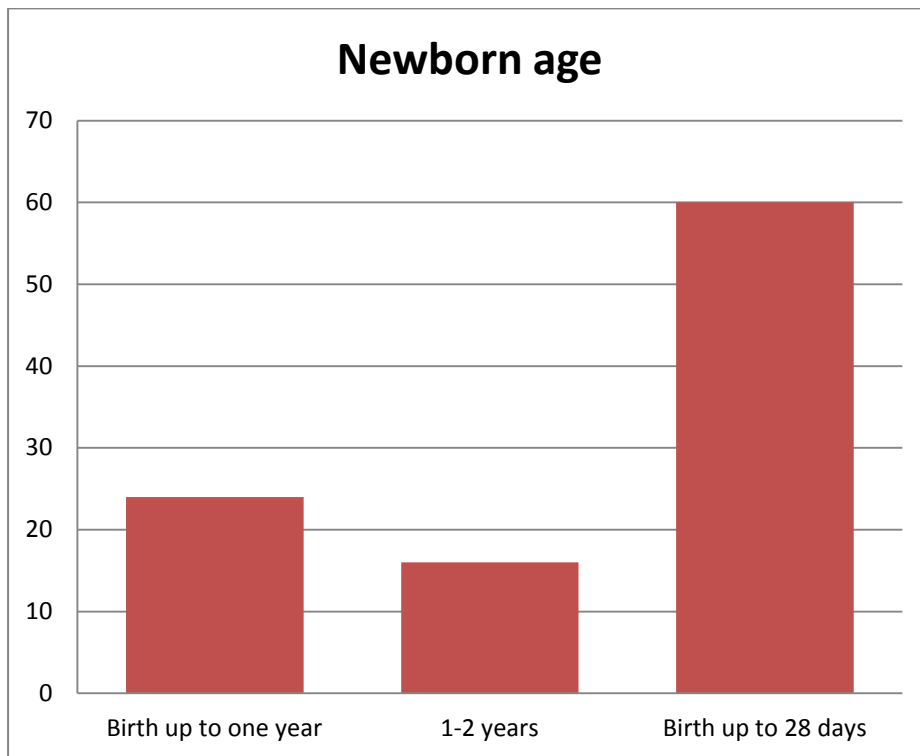


figure (3), showing that distribution of nurse's knowledge according **Newborn age is about**, 24% are Birth up to one year and 16% are 1-2 years, 60% are Birth up to 28 days.

Figure (4): distribution of nurses knowledge according to **Instruments used for cord cutting** (N=50)

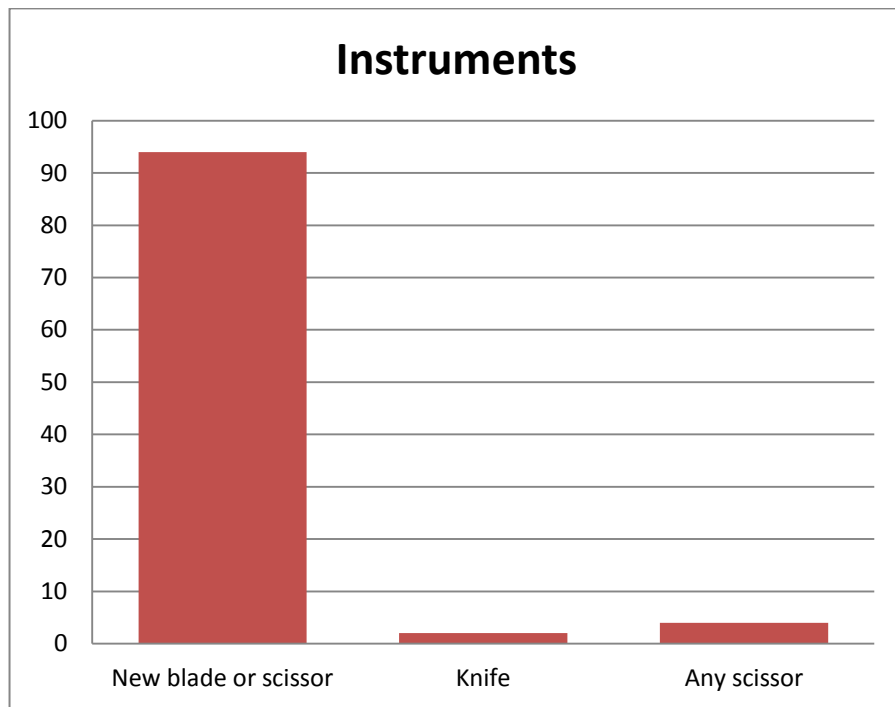


Figure (4), showing that distribution of nurse's knowledge according **Instruments used for cord cutting**, 94% are New blade or scissor and 2% are Knife, 4% are Any scissor.

Figure (5): distribution of nurse's knowledge according to **materials used to tie the cord** (N=50)

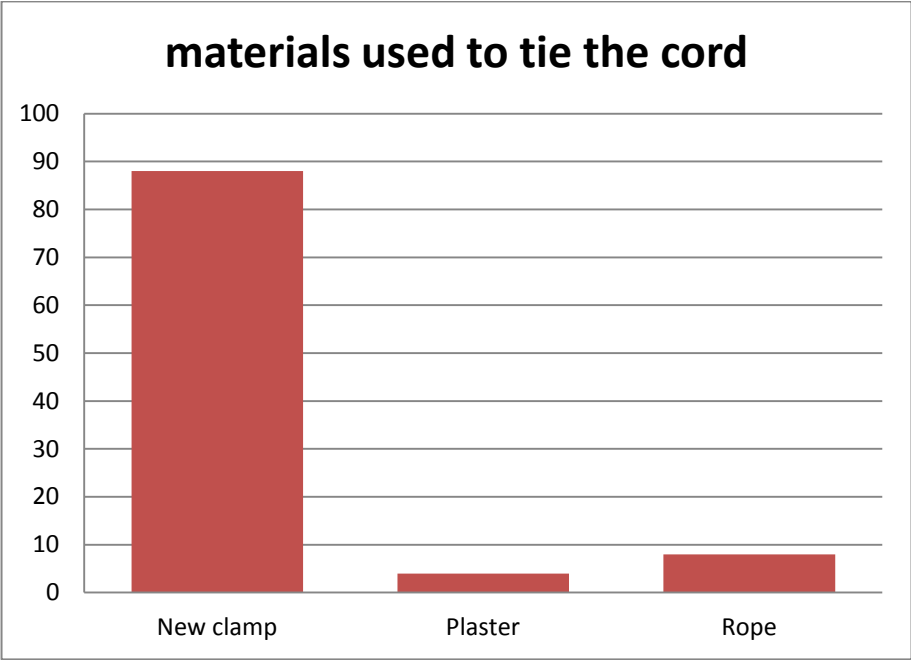


figure (5), showing that frequencies of nurse's knowledge according **materials used to tie the cord**, 88% are New clamp must be used and 4% their answer plaster and 8% are Rope.

Figure (6): distribution of nurses knowledge regard**the tie of cord should be** (N=50)

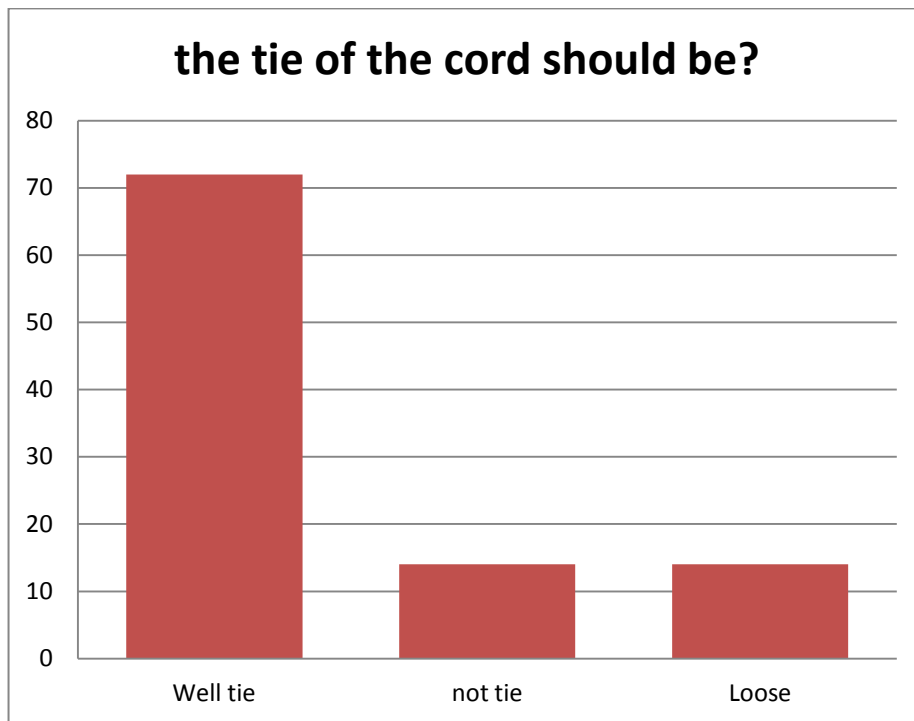
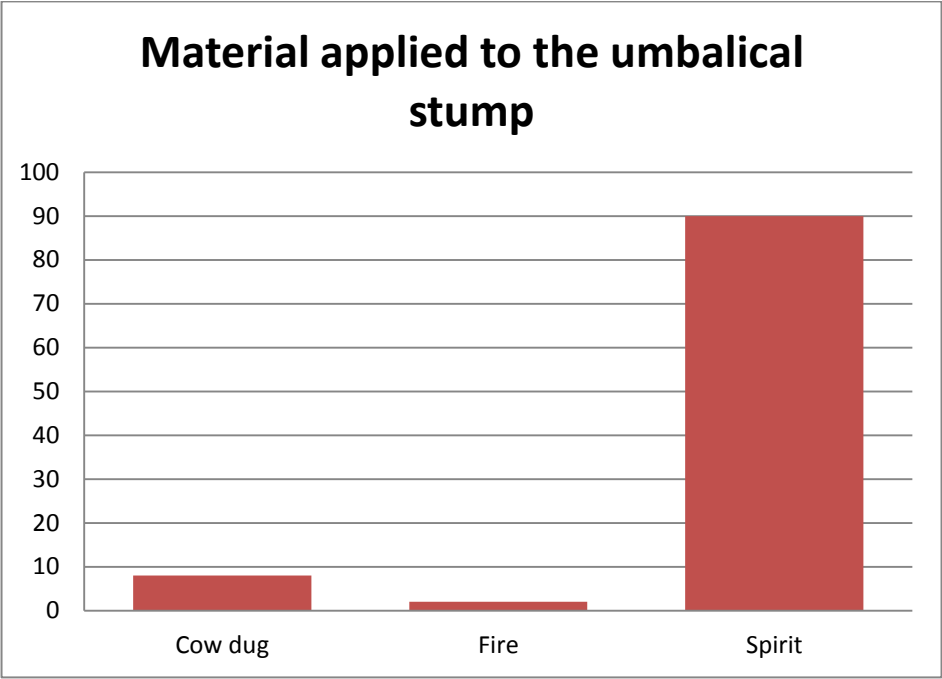


figure (6), showing that distribution of nurse's knowledge according to**the tie of cord should be**, 72% are Well tie and 14% are not tie, 14% are Loose.

Figure (7): distribution of nurse's knowledge according to **material applied to the umbilical stump** (N=50)



F figure (7), 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 (8): distribution of nurse's knowledge according to **umbilical cord should be** (N=50)

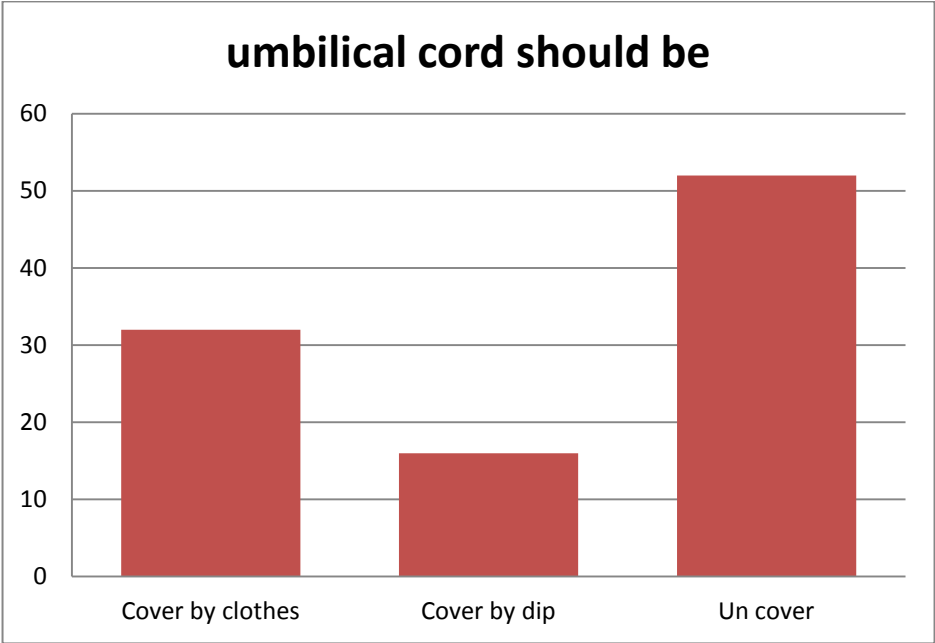


figure (8), showing that distribution of nurses knowledge according to **umbilical cord should be**, 32% are Cover by clothes and 16% are Cover by dip, 52% are Un cover.

Figure (9): distribution of nurses knowledge according to **time of wiped/dried and wrapped of newborn** (N=50)

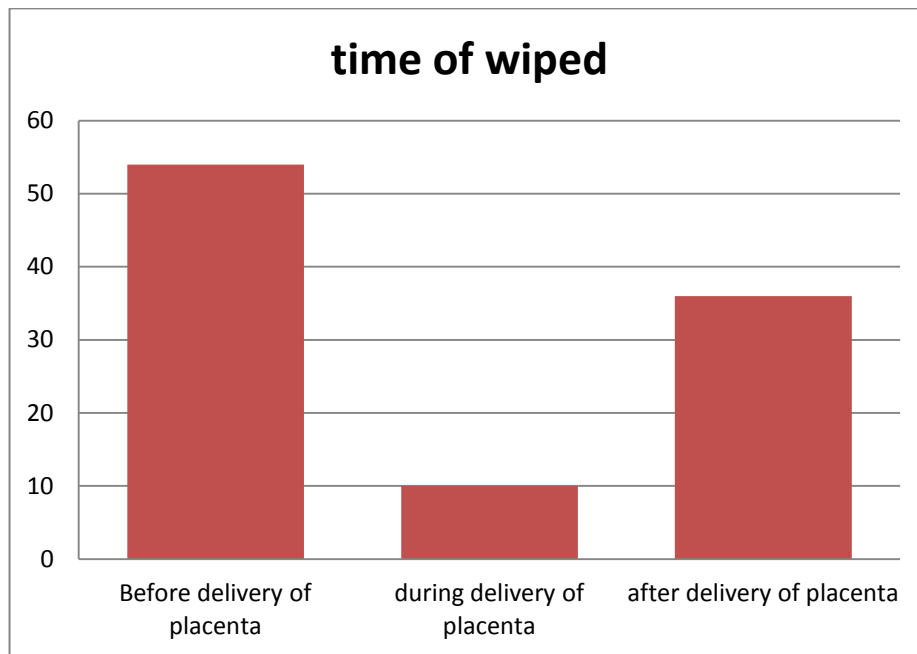


figure (9), showing that distribution of nurse's knowledge according to **time of wiped/dried and wrapped of newborn**, 54% are before delivery of placenta and 10% are during delivery of placenta, 36% are after delivery of placenta.

Figure (10): distribution of nurse's knowledge according to **place of the newborn after birth** (N=50)

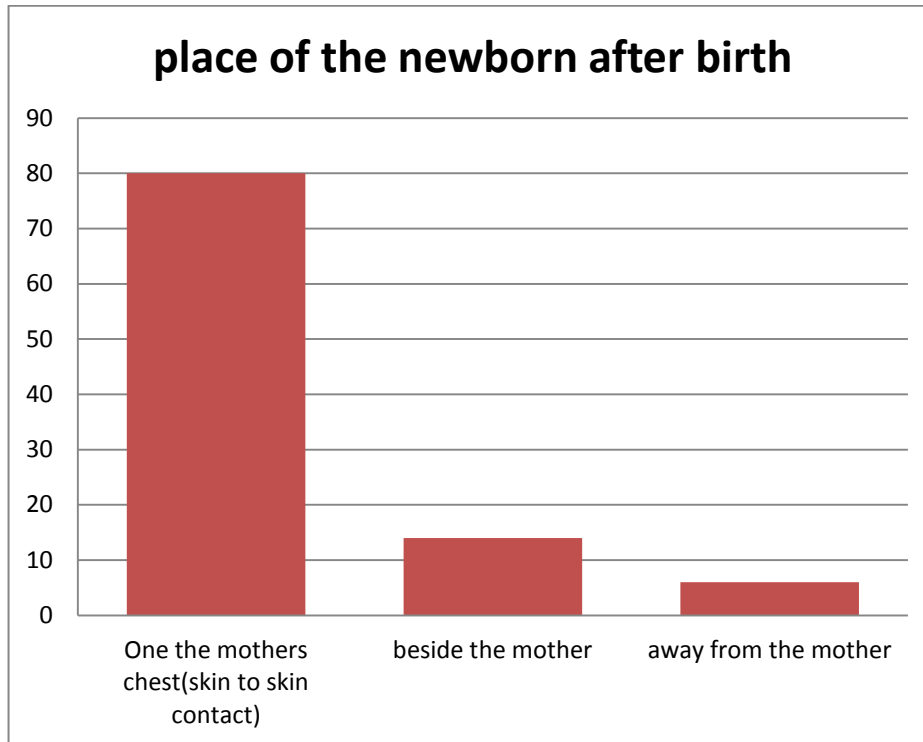
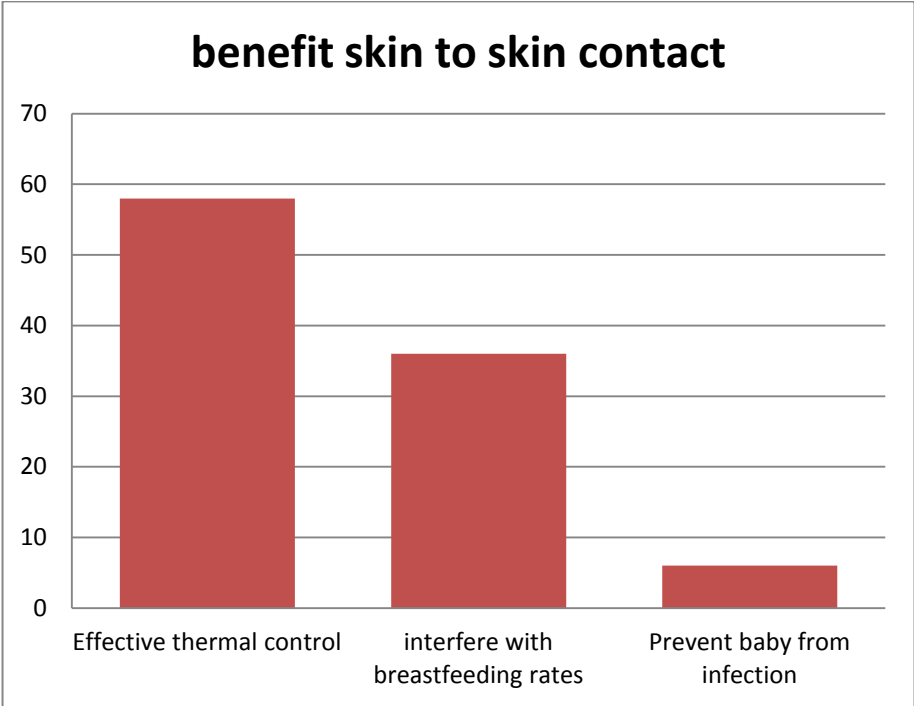


Figure (10), showing that distribution of nurse's knowledge according to **place of the newborn after birth**, 80% are One the mothers chest(skin to skin contact) ,and 14% are beside the mother, 6% are away from the mother.

Figure (11): distribution of nurses' knowledge according to **benefit of skin to skin contact (Kangaroo mother care)**(N=50)



Figure(11), showing that distribution of nurse's knowledge according to **place of the newborn after birth**, 58% are Effective thermal control, and 36% are interfere with breastfeeding rates, 6% are Prevent baby from infection.

Figure (12): distribution of nurse's knowledge according to **Kangaroo mother care** (N=50)

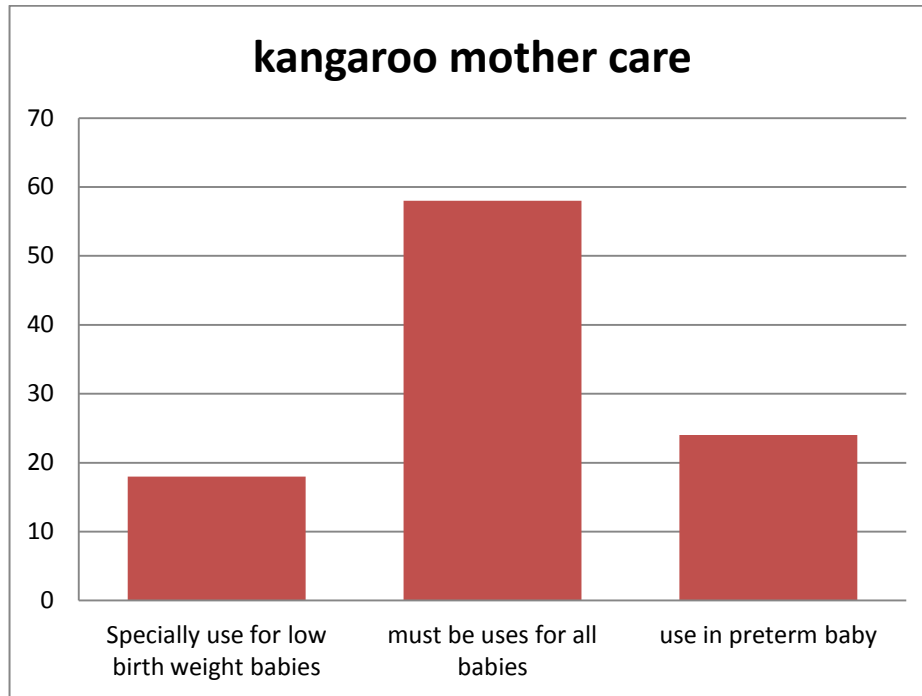


Figure (12), showing that distribution of nurse's knowledge according to **Kangaroo mother care**, 18% are Specially use for low birth weight babies, and 58% are must be uses for all babies, 24% are use in preterm baby

Figure (13): distribution of nurse's knowledge according to **hypothermia occurs when the body temperature is**(N=50)

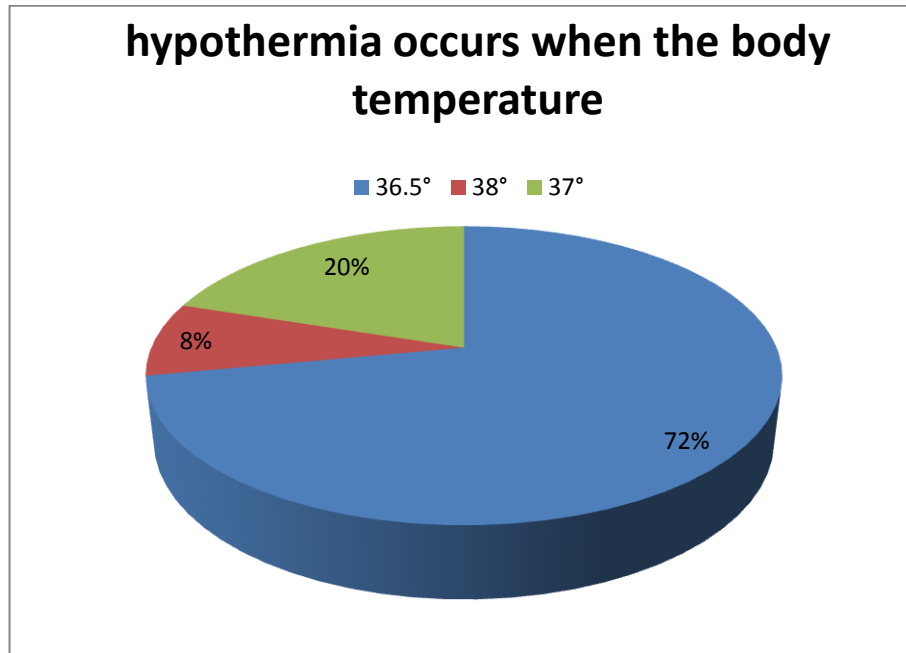


figure (13), showing that distribution of nurse's knowledge according to **hypothermia occurs when the body temperature is**, 72% are 36.5° , and 8% are 38°, 20% are 37°

Figure (14): distribution of nurses knowledge according to **signs of hypothermia is** (N=50)

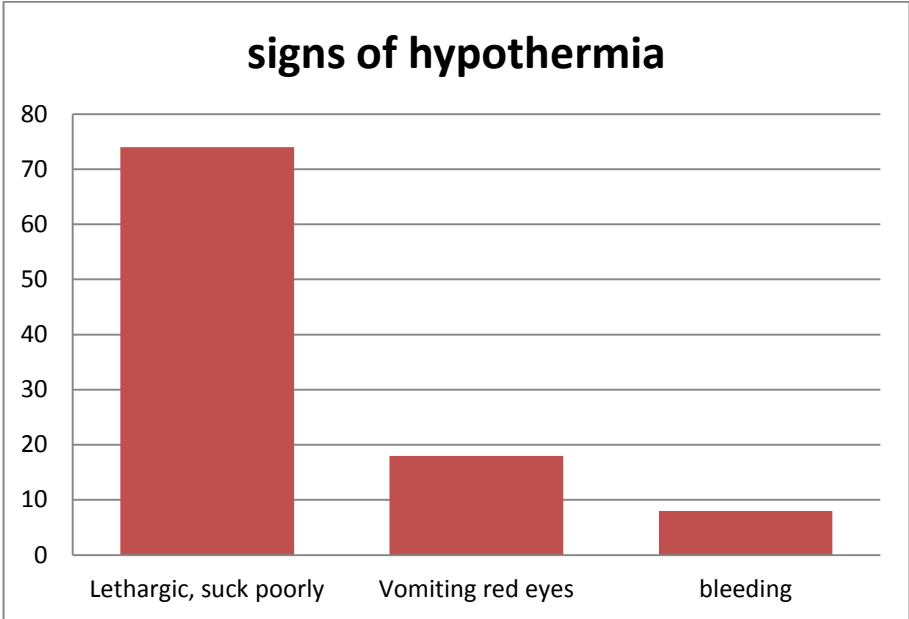


figure (14), showing that distribution of nurse’s knowledge according to **signs of hypothermia**, 74% are Lethargic, suck poorly, and 18% are Vomiting red eyes, 8% are bleeding

Figure (15): distribution of nurses knowledge according to **hypothermia as complication** (N=50)

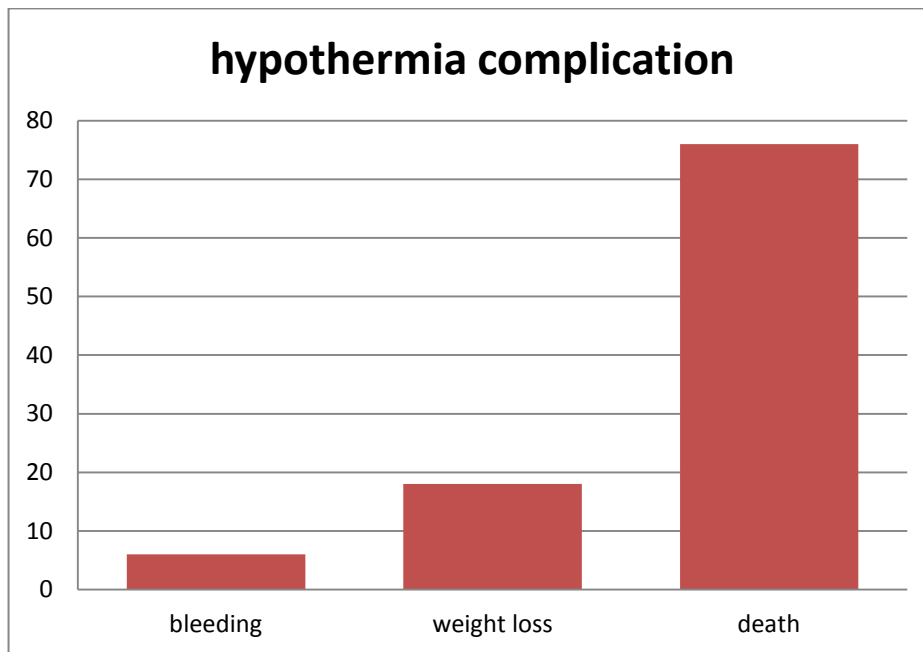


Figure (15), showing that distribution of nurse's knowledge according to **signs of hypothermia**, 74% are Lethargic, suck poorly, and 18% are Vomiting red eyes, 8% are bleeding

Figure (16): distribution of nurse's knowledge according to **newborn first wash/bath** (N=50)

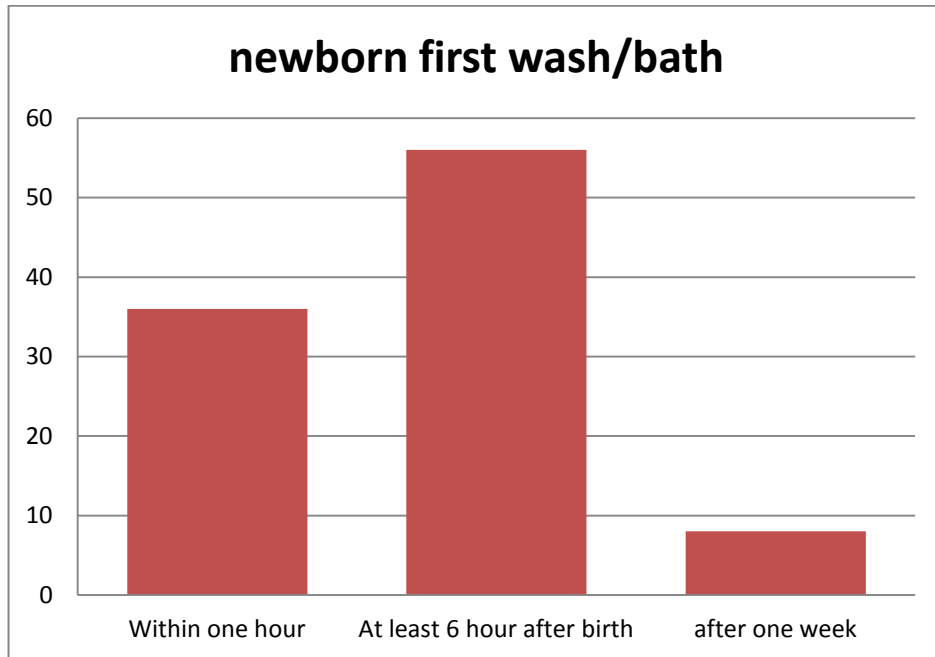
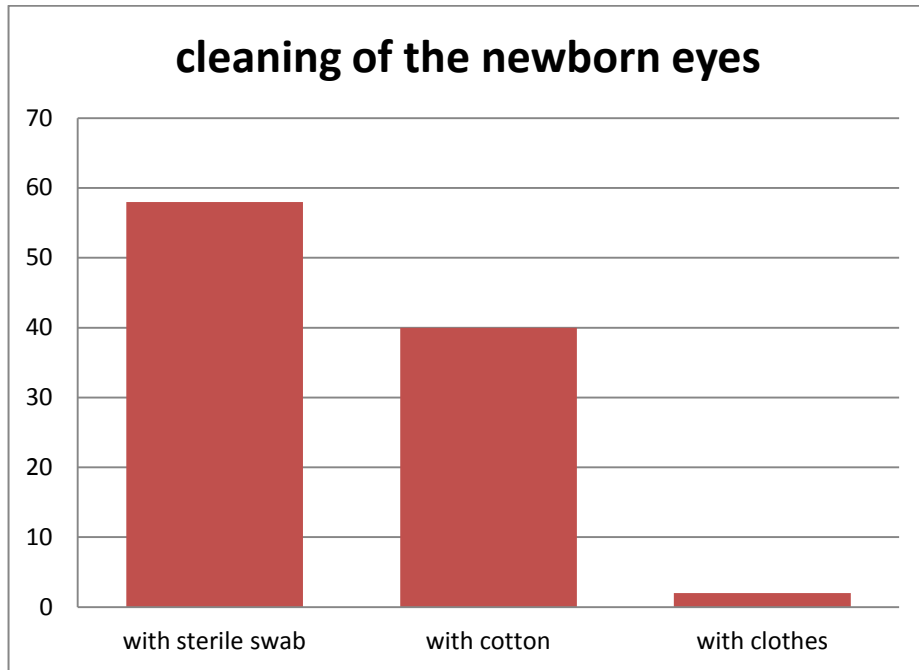


Figure (16), showing that distribution of nurse's knowledge according to **newborn first wash/bath**, 36% are Within one hour, and 56% are At least 6 hour after birth, 8% are after one week.

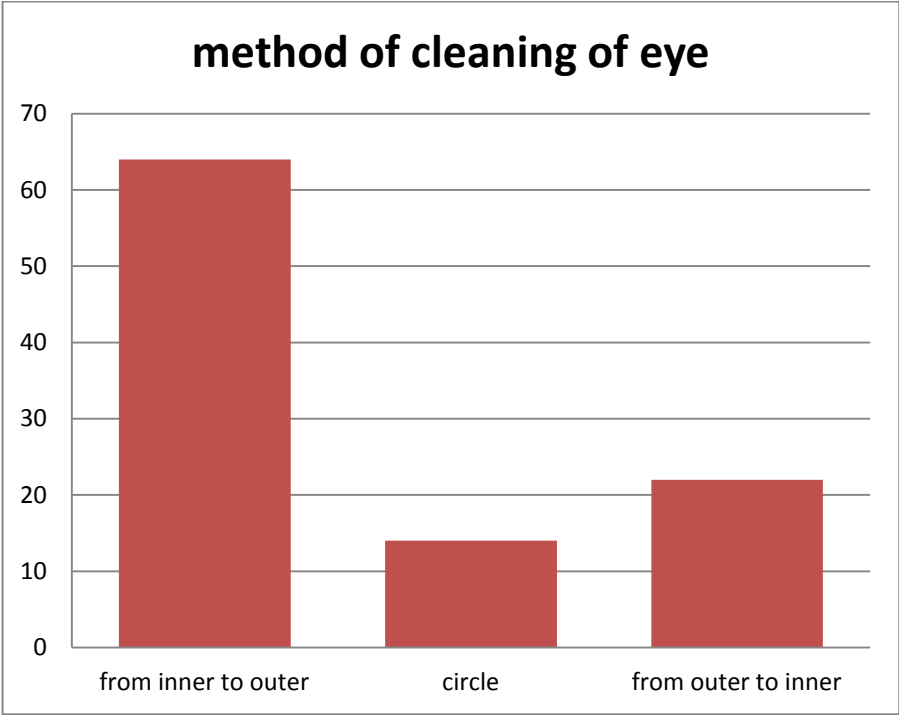
Figure (17): distribution of nurse's knowledge according to **cleaning of newborn eyes** (N=50)



Figure(17), showing that distribution of nurse's knowledge according to **clean of newborn eyes**, 58% are with sterile swab, and 40% are with cotton, 2% are with clothes

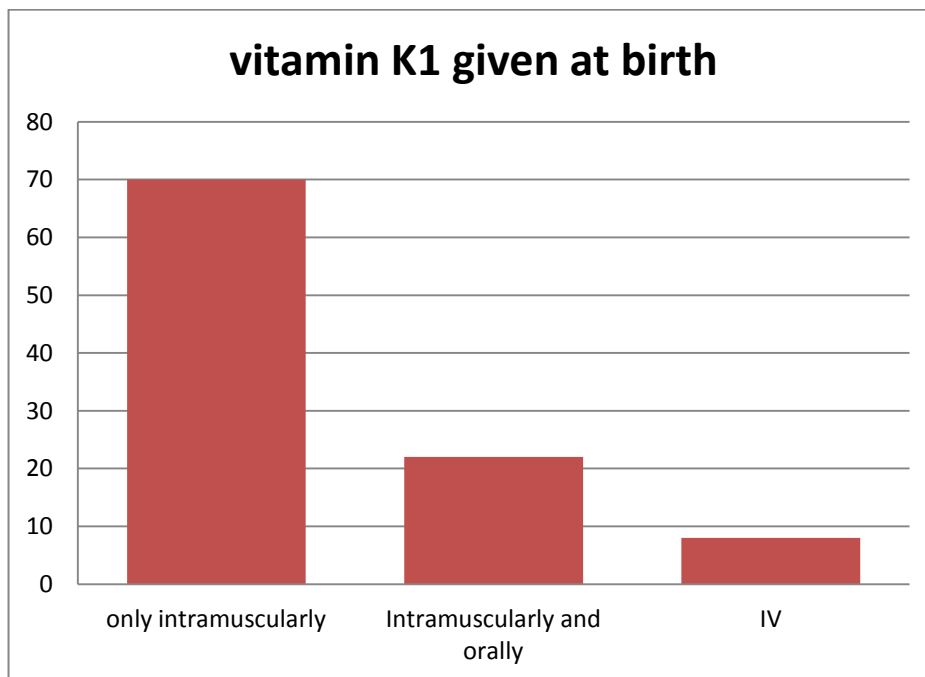
SSSSSS

Figure (18): distribution of nurses knowledge according to **method of cleaning eye** (N=50)



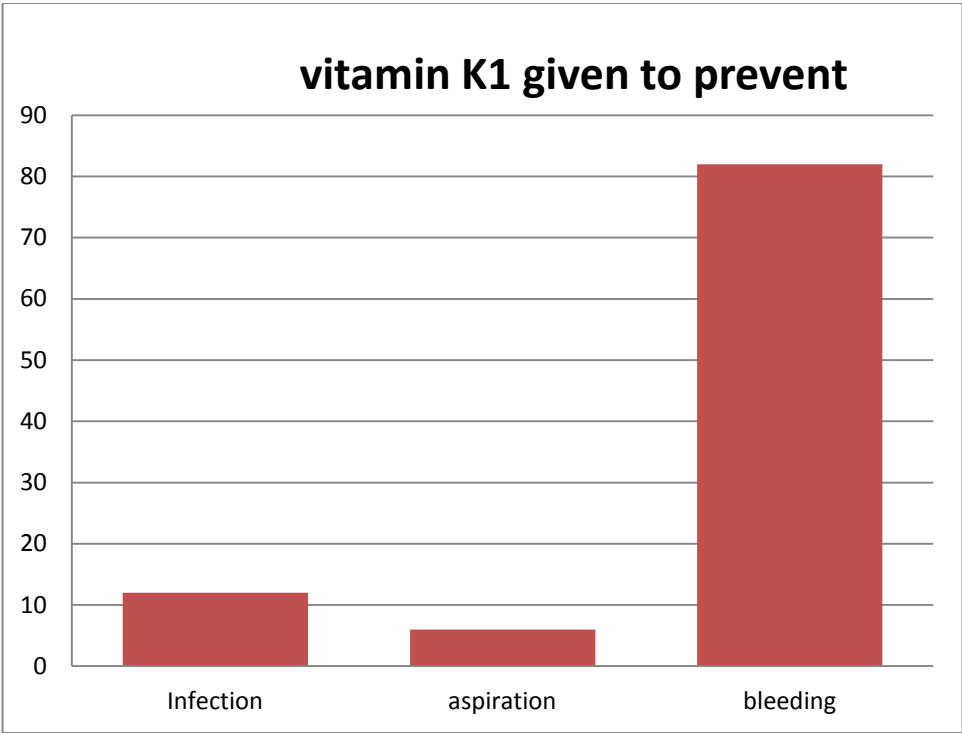
Figure(18), showing that distribution of nurses knowledge according to **method of cleaning of eye**, 64% are from inner to outer, and 14% are circle, 22% are from outer to inner

Figure (19): distribution of nurse's knowledge according to **vitamin K1 given at birth**



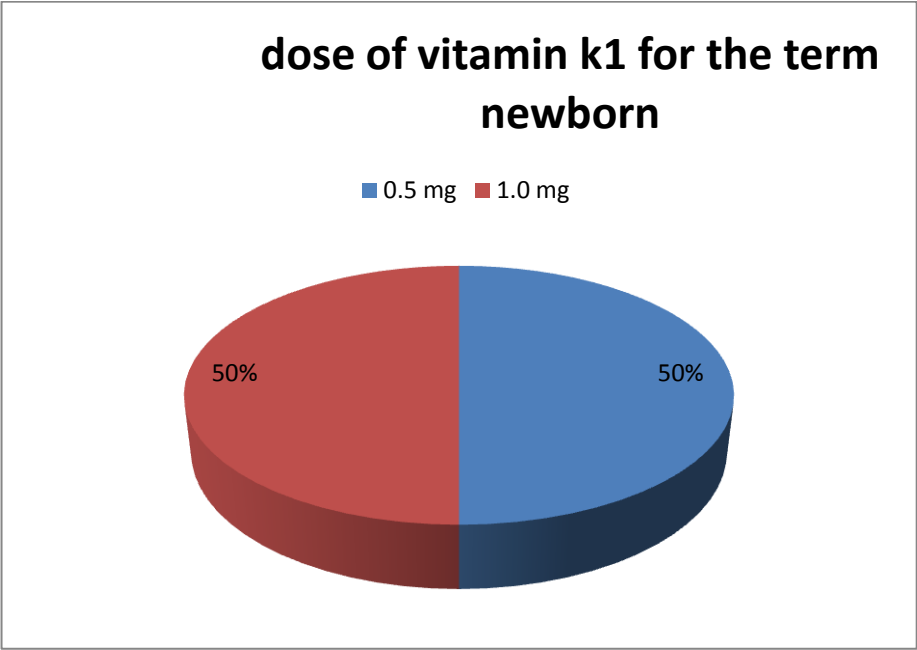
Figure(19), showing the distribution of nurse's knowledge according to **vitamin (K) given at birth**, 70% are only intramuscularly, and 22% are intramuscularly and orally, 8% are IV.

Figure (20): distribution of nurses knowledge according to **vitamin (K) given to prevent**



Figure(20), showing the distribution of nurse's knowledge according to **vitamin K given to prevent**, 12% are Infection, and 6% are aspiration, 82% are bleeding.

Figure (21): distribution of nurse's knowledge according to **dose of vitamin K for the term newborn is**



Figure(21), showing the distribution of nurse’s knowledge according to **dose of vitamin K for the term newborn is**, 50% are 0.5 mg, and 50% are 1.0 mg, 0% are 2mg.

Figure (22): distribution of nurses knowledge according to **signs of vitamin (k) deficiency include bleeding from**

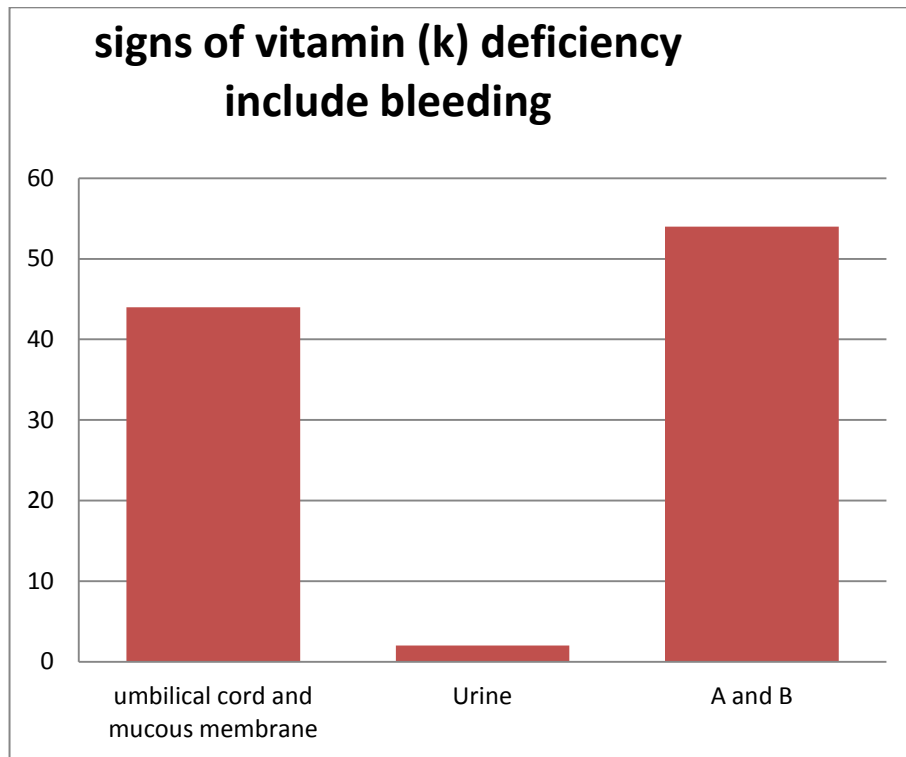


Figure (22), show distribution of nurse's knowledge according to **signs of vitamin (k) deficiency include bleeding from**, 44% are umbilical cord and mucous membrane, and 2% are Urine, 54% are A and B.

CHAPTER FIVE

Discussion

Conclusion

Recommendation

References

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 were 8% have N.certificate, 18%have diploma, 74% Bscdegree..

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.

In this study, only52% of nursesknew 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 regardingprevention of umbilical cord infection. (34)

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. (35)

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.

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 (38)

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.

Recommendation :

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

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

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

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Appendices

Questionnaire

Shendi University

FACULTY OF POST GRADUATED STUDIES AND SCINTIFIC RESEARCH

Questionnaire:

Nurses knowledge regarding Essential newborn Care at ALRibat universityhospital:

Serial NO

Socio Demographic data:

1-Years of experience

A- 1-5year B-5-10year C-more than

2- Educational level

A- N-certificate B-diploma C- BSC

3-Newborn age is about?

A-Birth up to one year B-1-2years C- Birth up to 28da days

4- Instruments used for cord cutting

A-New blade or scissor B-Knife C-Any Scissor

5- Materials used to tie the cord is

A- New clamp B-plaster C-Rope

6-The tie of the cord should be?

A-Well tie B-not tie C- loose

7-Material applied to the umbilical stump

A-cow dug B-fire C-spirit

8- Umbilical cord should be?

A-Cover by clothes B-cover with dipper C-un cover

9- Time of wiped / dried and wrapped of newborn

A-Before delivery of placenta B- during delivery of placenta C-after delivery of placenta

10-Place of the newborn after birth

A-on the mother's chest (skin to skin contact) B- beside the mother
C-away from mother

11- Benefit Skin to skin contact (Kangaroo mother care) is

A. Effective thermal control B- increase with breastfeeding rates
C-prevent baby from infection

12-Kangaroo mother care

A- Specially use for low birth weight babies B- must be uses for all babies
C-use in preterm baby

13-Hypothermia occurs when the body temperature become below

A -36.5 B-38 C-37

14- Signs of hypothermia are

A-Lethargic, Suck poorly B-Vomiting, red eyes C-bleeding

15- Hypothermia as complication lead to

A-bleeding B-weight loss C-death

16-Newborn first wash/bath

A-Within one hour B- At least 6 hours after birth
C-after one week

17-Cleaning of the newborn eyes

A- With sterile swab B- cotton C-with cloth

18- Method of cleaning of the eye

A-From inner to outer B-circle C- from outer to inner

19-Vitamin K1 given at birth

A- Only intramuscularly B- muscularly and orally
C-IV

20- Vitamin K1 given to prevent?

A-Infection B-aspiration C- bleeding

21- Dose of vitamin K1 for the term newborn is

A-0.5 mg B- 1.0 mg C-2mg

22-signs of vitamin (k) deficiency include bleeding from:

A-umbilical cord and mucous membrane B-urine C-A and B