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# Knowledge of the Third Year University of Namibia bachelor Degree Student Nurse Midwives Regarding the Immediate Care of the New Born

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**Abstract**

According to the World Health Organization (WHO) 2015 report 2.7 million neonates die in the world annually during the neonatal period and 75% of the deaths occur during the first week in the neonatal period. Care of the newborn baby after delivery is an essential aspect since healthy and sturdy babies are likely to evolve as physically and mentally strong adults with enhanced quality of human resource development. The purpose of this study sought to determine the knowledge of the third year University of Namibia (UNAM) Bachelor degree student nurse midwives regarding the immediate care of the new born. Quantitative, descriptive cross-sectional study design was utilized during this study. Data was collected with a self administrative questionnaire among 46 Bachelor degrees in nursing and midwifery science students and was analysed used SPSS version 25. The study found out that participants had adequate knowledge on the immediate care of the newborn after delivery. The researchers recommend further study to be conducted among other health care workers in the country to assess their knowledge and practices on the immediate care of the newborn.

**Keywords**: Knowledge, Immediate care, Newborn, Student Nurse Midwives

## Introduction

According to the 2013 Namibia Demographic and Health Surveys (NDHS), neonatal mortality rate was 20 deaths per 1,000 live births, while the perinatal mortality rate was 24 per 1,000 pregnancies ( Ministry of Health and Social Services , 2013). These figures are unacceptably higher. Pregnancy losses occurring after seven completed months of gestation (stillbirths) and deaths of live births within the first seven days of life (early neonatal deaths) are defined as perinatal deaths ( Ministry of Health and Social Services , 2013) .The most common causes of neonatal death among many others was low birth weight/ prematurity, Respiratory distress syndromes, Birth asphyxia, Sepsis, Congenital malformation and delay in receiving care (Indongo, 2014).The immediate care of the newborn is the important aspect that could contribute to the neonatal survival. The immediate care of the newborn baby is the health assessment and caring of the new born baby immediately after birth. The philosophy of caring health providers has always been that newborns should be handled as gently at birth as they are at other time (Pillitteri, 2007). According to Antipuesto (2009) the health statistic shows that about 4million new born babies worldwide dies each year due to causes related to poor care given during the first hour of life. Immediate care of the new born baby in the first hour of life is very crucial as it can determine whether the baby will remain healthy or not. It was reported that low levels of

Vol. 3, No. 01; 2019

ISSN: 2581-3366

knowledge among health workers regarding prenatal and newborn care is a major determinant of neonatal death (Waiswa , Kallander , Peterson , Tomson & Pariyo , 2010) .A study conducted in Uganda showed that 52% of deliveries take place at the health facility, but neonatal mortality was 29 per 1000 live birthsthat might be related to the immediate newborn care and obstetric care (Ministry of Health of Uganda , 2017)

Immediate newborn care aims at addressing poor care practices immediately following Delivery (Saaka and Iddrisu,2014 ) .New born babies have amazing abilities yet they are completely depending on others for every aspect of feeding warmth and comfort (Shinde,2015). To ensure the appropriate care of the newborn immediately after birth, the midwife is a unique position to aid the neonate in the stressful transition from a warm, dark, fluid filled environment to an outside world filled with light sound and novel tactile stimuli (Shinde,2015). In a clinical set-up newborn care is not easy as it sounds especially to first time and inexperienced nursing and midwifery students. As Blanco (2009) stated there's no denying that performing well in practical by students is a major challenge for just about all students. All nursing and midwifery students are obliged to undergo the assessment of the immediate care of the newborn care, in order to finish and comply with the training program. As stated by United Nations Children's Fund (UNICEF) (2015) there's gaps in immediate care of the newborn, that need to be tackled from the roots by equipping the upcoming nurse midwives with proper knowledge on this care.

A study conducted by Baluyot & Alquizar (2015) revealed that there was an insufficient knowledge among students regarding the immediate care of the newborn . Similary , Lutwama, Roos and Dolamo ,(2012) conducted a study in Uganda among health workerspractice with immediate newborn care that showed that appropriate implementation is dependent upon levels of knowledge. It is evident that if the health worker is not equipped with the proper knowledge of immediate care of the newborn, that person will not be able to provide quality care to the newborn.

Immediate newborn care interventions are important part of essential newborn care used to protect against newborn morbidity and mortality by providing cord care, keeping the neonate warm including drying and wrapping of the newborn immediately after delivery and delaying the newborn's first bath for at least 24 hours , and initiation of breastfeeding within the first one hour of birth, management of immediate asphyxia and prevention and management of early sepsis ( The World Health Organization (WHO) , 2016).According to Sellers (2012) immediate care of the newborn include, the Apgar scoring, prevention of hypothermia, clearing of air passage, helping the baby breath, identifying the newborn and encouraging good psychological and physical contact between parents and the infant after delivery (Sellers,1993).

According to Finster, & Wood (2005) the Apgar score was devised in 1952 by Dr Apgar as a simple and repeatable method to quickly and summarily assess the health of new born children immediately after birth. Doctor Apgar was an anaesthesiologist who developed the score in order to ascertain in the effects of obstetric anaesthesia on babies. The Apgar score determined by evaluating the newborn baby on five simple criteria on a scale from zero to two then summing up the five values thus obtained. The resulting Apgar score ranges from zero to ten, the five criteria (Appearance/Colour, Pulse/ Heart rate, Muscle tone, Respiration, Response to stimuli) are used

Vol. 3, No. 01; 2019

ISSN: 2581-3366

as a mnemonic learning aid. While interpretation of scores was also stated, the test is generally done at one and five minutes after birth and may be repeated later if the score is low.

Antwi et al (2014), states that newborns regulate their body temperature much less efficiently than adult and they lose heat more easily especially from the head. In agreement with WHO( 2016), these authors therefore recommend that newborns should be thoroughly dried immediately after birth and kept warm, the newborn should be thoroughly dried with clean towel as soon as the head and body are delivered in order to prevent hypothermia.

Perinataldeaths have multi-factorial etiology, therefore, to address the high perinatal mortality there is a need for careful determine the knowledge of health care workers especially student nurse midwives in immediate care of the newborn. Recognising the importance of addressing the problem of neonatal and prenatal mortality, in 2014 the World Health Assembly endorsed the Every Newborn Action Plan(ENAP)—a road map for ending preventable newborn deaths and stillbirths—with a target for all countries to attain 12 or fewer neonatal deaths per 1000 live births by 2030 (WHO , 2014 )This target is included also in the Sustainable Development Goals Chou , Daelmans , Jolivet, 2013)Additionally, the ENAP's first two strategic objectives focus on strengthening and investing in quality of care around the time of birth as mechanisms to achieving the mortality target which include the focus of this current study .As Namibia is among those developing countries in Africa with higher neonatal mortality rate immediate newborn care is important in order to prevent neonatal death. However, no study of this kind was conducted in Namibia before. In this current study, the term student nurse midwiveis defined as a person who is being trained to be a nurse and midwife at the University of Namibia , school of nursing and is on the third year of the bachelor degree study.

## Objective

The objective of this study was to:

- Determine the knowledge of the third year bacheroldegree nurse midwive students regarding the immediate care of the new born.

## Methodology

A quantitative approach with a descriptive design was used to determine the knowledge of the third year student nurse midwives on the immediate care of the newborn. This design was suitable for this study because it described the variables and answered the research questions. In this study the participants were given a chance to describe their knowledge through the questionnaire in the form of Likert scale.

The target population for this study was the third year degree nurse midwives students at UNAM main campus who have passed Midwifery Science 2 the previous year where the immediate care of newborn after delivery is been taught. The total population of the third years was73 andthey where all included in the study using a census sampling method due to the limited

Vol. 3, No. 01; 2019

ISSN: 2581-3366

number. However, only 46 agreed to participate in the study. Therefore, data was collected among 46 student nurse midwives. Piloting of the questionnaire where conducted with 10 fourth year students nurse midwives who completed midwifery science modules and they were not part of the main study. Most of the questions were answered accordingly and only few amendments were done to the questionnaire especially the question regarding regard to the level of education question. All student nurse midwives who were not in the third year of their study at UNAM Windhoek campus main where excluded.

The data was collected in August 2017 by means of a self-reporting technique using a self-administered questionnaire. The self-administered questionnaire was used because the researchers are sure that all students were able to read, write and understand English.

During data collection period, the researcher explained the nature and aim of the study to the respondents and what was expected from them and respondents signed the informed consent before the completion of the questionnaire. The researchers personally delivered and distributed the questionnaires. The respondents were informed that participation in the study was voluntary and that they could withdraw from the study at any stage if they so wished.

Questionnaires were checkedfor completeness, consistency, accuracy. The questionnaires were coded before data entry and collected data was analyzed using SPSS version 25. Frequencies of all responses were calculated in percentages and the result was illustrated using pie charts, frequency tables and bar graphs. The researcher used descriptive statistics approach as the strategy of choice for analyzing the data and mean & mode was used as a measure of central tendency.

**Ethics**

The researchers were provided with the approval to conduct the study from the Ministry of Health and Social Services and from UNAM research ethical committee before conducting the study. Written consents were obtained from the participants and proper information was given to them about the study. Participants were informed about their right to take part in the study or to opt out. Information was kept confidential and no identities of the participants were used during the study.

Participants were informed about their right to exercise their autonomy and the right to withdraw from the study at any given time or refuse to give information and to ask clarification about the purpose of the study. The researcher protected all participants from discomfort and harm by structuring the questions and monitored all participants for signs of distress as they were completing the questionnaire. No harm was affiliated to participants and they were all asked to sign consent as a proof of agreement to participate in the study. The participants had air selection and they were all treated equally, as the researchers selected the study population in general with fairness and respected their rights to privacy.

**Result**

Vol. 3, No. 01; 2019

ISSN: 2581-3366

**Demographic characteristics of the respondents**

A sample size (n= 46) participant participated in the study. The demographic data consisted of the following variable: sex of the respondents, the age group and educational background. Out of forty six responded, n= 39 (85% ) were female and 15% (n=7) were male. This indicates that high proportion of respond were female. Participant's age range was between 18 to 40 years. The majority of the participants 40 (86.9% ) were aged between 21 to 30 years followed by those aged 18 to 20 years at 5(10.8 %). Age category of 31 to 40 years were less represented by 1(2.3%) . Regarding the highest level of education that respondents had attained93% ( n43) of the respondents had attained grade 12 or matric 7% ( n=3 ) had tertiary education or attained certificate in nursing. The respondents were also asked to indicate their marital status were by 96% of the respondents were single and 4% were married.

**Level of knowledge about the immediate care of the newborn**

The respondents were requested to rate themselves on the level of their knowledge on the care of the newborn. Respondents were required to rate themselves from the scale of 1-5, were 1 represented as improvement needed, 2 as poor, 3 good , 4 satisfactory and 5 as very satisfactory. Most of the respondents 61% were very satisfied to carry out the immediate care of the newborn, 12% were satisfied, 23% rated good, 2% as poor and 2% rated themselves as needed improvement. The results are displayed in table 1.

| VARIABLE | VERY SATISFACTORY | SATISFACTORY | GOOD | POOR | IMPROVEMENT NEEDED |
|---|---|---|---|---|---|
| 5.2.1Clear and establish airway with correct use of the suction penguin (n=46) | 23 ( 50% ) | 5 (11%) | 15 ( 33%) | 0 (0%) | 3 ( 6%) |
| 5.2.2 Perform the first APGAR scoring correctly (n=46) | 27 (58%) | 5 (11%) | 10 (22%) | 2 ( 4.5%) | 2 ( 4.5%) |
| 5.2.3 Care of the eyes and give prophylaxis correctly (n=46) | 30 (65 % ) | 4 (9 %) | 10 (22 %) | 2 (4% ) | 0 (0% ) |
| 5.2.4Give a proper attention to the umbilical | 27 (59% ) | 8(17%) | 9 (20 % ) | 2 ( 4% ) | 0 ( 0 % ) |

Vol. 3, No. 01; 2019

ISSN: 2581-3366

| | | | | | |
|---|---|---|---|---|---|
| cord aseptically (n=46) | | | | | |
| 5.2.5 Perform the second APGAR scoring correctly (n=46) | 27( 59%) | 8 (17%) | 10 (22%) | 1 ( 2%) | 0 (0%) |
| 5.2.6 Weighs the baby correctly (n=46) | 35 (76 %) | 2 (4 %) | 9 (20%) | 0 ( 0%) | 0 (0%) |
| 5.2.7 Measures the head circumference with a tape measure correctly (n=46) | 31 ( 67% ) | 5 (11 % ) | 9 (20 %) | 1 (2%) | 0 ( 0%) |
| 5.2.8 Measure the length of the baby appropriately (n=46) | 26 ( 57 %) | 7 ( 15% ) | 11 ( 24 % ) | 0 ( 0% ) | 2 ( 4% ) |
| 5.2.9 Prevent hypothermia appropriately (n=46) | 27 ( 59% ) | 5 (11 %) | 12 ( 26 %) | 2 ( 4%) | 0 ( 0%) |
| 5.2.10 Administer 1mg of vitamin K (IMI) in vastus lateralis correctly (n=46) | 29 ( 63 %) | 5 (11%) | 10 ( 22%) | 2 (4%) | 0 (0% ) |

**Knowledge of the respondents regarding the types of infant cries**

As displayed in table 2 the analysis shows that 62% of the participants knew about the abnormal cries in a baby while 38% of the respondents did not know the abnormal cries of the newborn.

| VARIABLE | TRUE | FALSE |
|---|---|---|
| 5.3.1 The normal infant cry is loud and husky (n=46) | 36 (78%) | 10 (22%) |
| 5.3.2.2 High pitched cry indicates hypoglycemia or increased intracranial pressure (n=46) | 7 (15% ) | 39 ( 85%) |

Vol. 3, No. 01; 2019

ISSN: 2581-3366

| | | |
|---|---|---|
| 5.3,33 Weak cry is a sign of prematurity(n=46) | 26 ( 57 %) | 20 ( 43% ) |
| 5.3.4 Hoarse cry is a sign of laryngeal stridor (n=46) | 36 ( 78 % ) | 10 ( 22% ) |
| 5.3.5 Oral mucous may cause the newborn to choke (n=46) | 39 ( 85%) | 7 ( 15%) |

Table 2 : Response on types of infant cries

**Knowledge of the danger signs in a newborn baby**

The respondent's knowledge was also assessed on the danger signs in a newborn, were respondents were required to state agree or disagree. In this regard, 83% (n=38) agreed on the baby breathing less than thirty or more than or equal to sixty breaths per minute as a danger sign, while 17% (n=8) disagreed. On baby unable to suck or sucking poorly, 93% (n=43) agreed while 7% (n=3) disagree. Regarding bleeding in a newborn, 89% (n=41) of the respondents agreed while 11% (n=5) disagreed. Furthermore ,91%(n=42) of the respondents agreed on baby feels cold on touch or temperature less than thirty five degrees Celsius as a danger sign, while 9% (n=4) disagreed. Lastly 80% (n=37) of respondents agreed that it's a danger sign when baby feels hot on touch or temperature of equal to or greater than thirty seven point degreecelcius, while 20% (n=9) disagreed.

| VARIABLE | AGREE | DISAGREE |
|---|---|---|
| 5.4 .1 Baby breathing less than 30 or more than or equal 60 breaths per minute with blue lips and tongue (n=46) | 38 (83%) | 8 (17%) |
| 5.4.2 Unable to suck or sucking poorly (n=46) | 43 (93%) | 3 (7%) |
| 5.4.3 Bleeding (n=46) | 41 ( 89% ) | 5 (11% ) |
| 5.4..4 Feels cold to touch or axillary temperature less than 35◦C (n=46) | 42 (91%) | 4 ( 9 % ) |
| 5.4.5 Feels hot to touch or axillary temperature equal to or greater than 37 degree centigrade (n=46 | 37 ( 80 % ) | 9 ( 20% ) |

Vol. 3, No. 01; 2019

ISSN: 2581-3366

Table 3 : Responses on different types of infant cries

**Competency of the respondents**

The respondents were also asked their perception about their competency in caring out the immediate care of the newborn, were by89% (n=41) of the respondents indicated that they felt competed enough while 11% (n=4) felt that they still need more practice and the findings are shown below in figure 4.3.4.

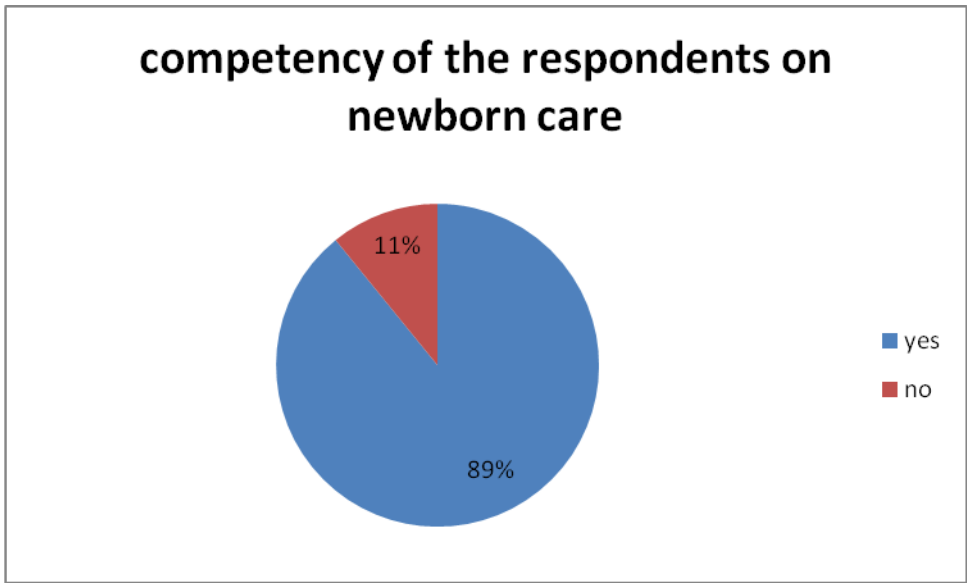


Figure 1 Perception of respondents on competency on newborn care

**Discussions**

The study determined the knowledge of third year student nurse midwives at UNAM regarding the immediate care of the newborn. Majority of the respondents were female aged between 21-30 . This is confirming nursing and midwifery is mostly female profession although males are increasingly joining this profession. In this study no assessments were done in regard to the respondent's age and care. With reference to the study done by (Ayiasi, Criel, Nabiwemba, & Kolsteren, 2011) it has been stated that there was no statistical significance indicating relationship between the respondent's age and their ability to render care to the newborns. The respondents with certificate in nursing were only 7% but had a high level of knowledge as most of the questions were answered correctly compare to the 93% with grade 12 level of education. The findings concurred with a study done by (Ayiasi et al., 2011) were it found that respondents with less number of years in nursing school had low level of knowledge in immediate care than the ones who had more years of training in nursing school. This means that less exposure/ experience in the field less or low knowledge the respondent has.Out of the total number of 46

Vol. 3, No. 01; 2019

ISSN: 2581-3366

respondents ,89% stated that their competent enough to carry out the immediate care of the newborn while 11% of the respondents still felt not to be competent enough. Number of low level of competency among the respondent is very little but it still needs to be addressed to avoid flows in the healthcare sector. This finding is supported by the study done by (Ayiasi et all., 2011) in Uganda which stated that low level of knowledge was found among the general nurses. This means that flows can be found even in already qualified nurses when there's less exposure to certain units in the sector.

In this study the researcher found out that majority of the respondent had adequate knowledge on immediate care of the newborn as demonstrated by the respondent rate and most of the questions were answered correctly. The study found more than half of the respondents indicated that they were very satisfied to render immediate care of the new born, as the results were derived from the ten questions that was posed on the level of performance in rendering immediate care of newborn. The study still found out that more than half of the respondents were to identify the different cries of the infants. The findings also revealed that majority of the respondents were able to pick up the danger signs on the newborn. Furthermore, majority of the respondents indicated that they perceive themselves to be competent to perform the immediate care of the newborn. As supported by the study done by Baluyot & Alquizar (2014) high level of knowledge was found among students regarding the immediate care of the newborn. The current study finding shows that majority of the students were well equipped with the knowledge while few others needed improvements in some areas of care.

## Conclusion

The researchers concluded the study outcome based on the results of the study. This study concluded that participant has adequate level of knowledge regarding the immediate care of the newborn. Only little emphasis should be made to expand on their knowledge on immediate care of the newborn by few participants. The study revealed that few numbers of students were not competent enough to care for newborns. The researcher suggested that in order to improve the students' knowledge on immediate care of the newborn, the University of Namibia has to strengthen the teaching and training contents regarding the immediate care of the newborn. Students should be educated and supervised regularly by the clinical instructor s, preceptors, lecturers and well trained nurse midwives during their clinical practice to ensure proper newborn care. The present study also implicated that the same study can be repeated with the bigger sample indifferent regions as well as other categories of health care workers such as nurse midwives or doctors to compare the results, and also for result generalization.

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Vol. 3, No. 01; 2019

ISSN: 2581-3366

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