Knowledge, attitude, and practices of mothers towards essential newborn care in Butenga Health Centre IV, Bukomansimbi District: A cross-sectional study.

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Abstract

Background: Essential newborn care is necessary because the kind of care given during those first days predetermines the mortality of newborns. The purpose of this study was to assess the knowledge, attitude, and practices of mothers towards essential newborn care at Butenga Health Centre IV in Bukomansimbi District.

Methodology: A cross-sectional study design was used in which quantitative methods of data collection were employed to collect data from 50 mothers for the study. Simple sampling was used, and Kish Leslie's method was used in sample size determination. A self-administered questionnaire was used to collect data, with verbal translation by the author for those who didn't know English. Data were analysed using SPSS.

Results: The majority of the respondents (60%) belonged to the age group of 25-29 years, and the majority (80%) were married. 25% of the respondents knew the definition of essential newborn care, and 36% knew the recommended frequency of feeding. The majority of the participants (78%) felt comfortable caring for newborns; 68% agreed that essential newborn care is a big component of the survival of newborns; and 62% agreed that it is important to adhere to the essential newborn care package. Most of the participants (78%) first bathed their newborns after 2 hours; the majority (96%) fed their newborns by breastfeeding; and the majority (68%) cleaned the umbilical cord of their newborns using plain water.

Conclusion: The mothers had fair knowledge, good attitude, and good practices about essential newborn care.

Recommendation: Mothers should actively consult health workers, especially first-time mothers, and immediately bring the baby to the hospital if it presents with any danger signs.

Keywords: Essential neonatal care, Butenga Health Centre IV, Knowledge, Attitude and Practices.

Background of the study

According to WHO, essential newborn care is a comprehensive set of recommendations designed to improve newborn health through interventions soon after birth and in the postnatal period. (WHO, 2020). The package includes immediate skin-to-skin contact between the mother and the baby shortly after birth, creating a strong natural bond between the mother, as well as warmth recommended for not less than 90 minutes, and initiation of exclusive breastfeeding, where babies are provided with all essential nutrients, antibodies, and immune cells to protect them against diseases, coupled with immunization. (WHO, 2020).

Globally, essential newborn care is critical due to the high rate of neonatal mortality. According to the World Health Organization, approximately 2.5 million newborns died in the first month of life in 2018, with about a third of these deaths occurring within the first day after birth (Haimanot, 2021). This was due to a fault in the early detection and management of signs of danger; initially, 4 million newborns die every year before they reach the age of 1 month. Out of them, 1.5 million newborns die in four countries of South Asia. Approximately 3.4 million newborns die within the first week of life; of these deaths, 66% occur during the first 24 hours. Late death, that is, after 24 hours, occurs in the remaining 34%, which may be prevented if mothers have good knowledge about newborn care, including danger signs of newborns. (Leta, 2022)

In Africa, neonatal mortality rates are among the highest in the world. With 12 of 43 deaths per 1000 live births, over a million African babies are estimated to die in the first 4 weeks of life, but most die at home, uncounted and invisible to national and regional policies and programs. Therefore, the burden of neonatal death is still high in developing countries, yet most of the causes could be prevented. (Leta, 2022). A study in Ethiopia during the past 5-year period estimated neonatal mortality at 29 deaths per 1000 live births and 19 deaths per 1000 live births for post-neonatal

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mortality. Even though there has been improvement in the past 5 years, under-5 mortality rates were 67 deaths per 1000 live births in 2016 and 48 deaths per 1000 live births. Therefore, more intervention is needed to sustain the improvement of neonatal mortality. (Adsion, 2016)

In East Africa, findings revealed that while awareness of essential newborn care was average (54.2%), actual practice was suboptimal, with only 54% of mothers practicing essential newborn care for the first six months (Workie et. al., 2024). Cultural practices and lack of education significantly impact the knowledge, attitude, and practices of mothers regarding newborn care.

In Uganda, neonatal mortality remains a significant challenge. A study conducted in various regions highlighted that many mothers lack adequate knowledge about essential newborn care practices. Factors such as educational level, access to healthcare services, and cultural beliefs play a crucial role in shaping these practices (BMC, 2019).

In Bukomansimbi district, similar trends are observed. Mothers often rely on traditional practices, which may not always align with recommended newborn care practices. Efforts to improve maternal education and healthcare access are ongoing to address these gaps (BMC, 2019).

At Butenga Health Centre IV, localized studies indicate that while healthcare providers are knowledgeable about essential newborn care, there is a need for continuous community education to ensure that mothers adopt these practices. Therefore, the purpose of this study was to determine the knowledge, attitude, and practices of mothers towards essential newborn care at Butenga Health Centre IV in Bukomansimbi District.

Methodology

Study design

A descriptive cross-sectional study design was used to collect quantitative data. Cross-sectional studies allowed conclusions to be drawn about the general population through enrolling the study population at a certain point in time. Data were collected at a particular point in time over a period of two months, and findings were generalized to the entire population.

Study area

This study was conducted at Butenga Health Centre IV in Bukomansimbi District in the Central Region of Uganda. The area has a suitable sample population for my research data collection.

Study population

The study focused on mothers with infants less than 28 days attending the post-natal clinic at Butenga Health Centre IV in Bukomansimbi District who were first consented to participate during the study.

Sample size determination

The sample size was determined using Kish Leslie's formula (1965) as stated below.

$$n = \frac{z^2 p(1-p)}{d^2}$$

Where:

n= sample size required z= 1.96 at 95% confidence level; p = estimated;

d is the estimated margin of error that occurred; the normal range is 0.01 to 0.1= 0.085. Therefore: z=1.96,

p=0.3,

d=12.7%

$$n = \frac{0.95^2 \times 0.3(1-0.3)}{12.7\%^2}$$

n=50 mothers

Therefore, the sample size was 50 respondents.

Therefore, a total of 50 mothers with infants less than 28 days were selected for data collection, generalized to the whole population.

Sampling technique

A systematic sampling procedure was used. This sampling procedure involved giving mothers an equal chance to be included in the sample. This was significantly important in the elimination of bias during data collection.

Sampling procedure

The respondents were selected using random sampling, where a list of all admitted post-natal mothers at Butenga Health Centre IV in Bukomansimbi District with infants less than one year. Patient numbers were obtained, noted on

papers and, folded, placed in a container, shaken, and papers were selected at random without replacing the selected paper basis each day, 10 mothers per day until 50 respondents were reached. Then I distributed self–administered questionnaires and questionnaire guides for those who could read and write and the illiterate, respectively.

Data collection method.

The relevant data for this study were obtained using a self-administered questionnaire; the sample respondents were given questions in English. For those who were not well convenient with English, I verbally translated the questions, which enabled me to obtain the relevant information as stated in the objectives.

Data collection tools.

The questionnaire was used to collect information designed in English and translated during data collection for those who do not understand English.

Data collection procedure.

Permission was sought from the hospital administration with an introductory letter from the International Paramedical Institute research committee. I then went to the administration of hospital that granted permission to carry out the study. I explained the purpose and procedure of data collection to the respondents, who signed a consent form. Every mother filled the questionnaire recorded until 50 respondents were interviewed, with clarification where she didn't understand. The process of data collection took a week.

Study variables

Dependent variables

The dependent variable for this study was essential newborn care among mothers.

Independent variable

The independent variable for this study was the knowledge, attitudes, and practices of mothers.

Quality control

The questionnaire was pre-tested to establish the validity and reliability of the collected data. This was done with about 10 mothers before the real collection of data from the study area for the validity of the tools and their reliability. Ample time was given for data collection to ensure the accuracy of the information collected from the respondents. Questionnaires were checked at the end of every session to ensure completeness and consistency.

Inclusion criteria

The study involved only mothers at Butenga Health Centre IV in Bukomansimbi District with newborn babies at the time of data collection and have consented to the study and were included in the study.

Exclusion criteria

Mothers with children above 28 days of age and mothers who refused to consent were excluded from the study.

Data analysis

The researcher analysed the data using descriptive statistics such as measures of the central tendency, frequency, and percentages. In addition, a computer package, SPSS, was used in analysing information and reporting data. The researcher used pie-charts and graphs in representing data.

Ethical considerations

Ethical clearance was administratively obtained, where an introductory letter was obtained from the research committee of the International Paramedical Institution (IPI)- Maya was presented to Butenga Health Centre IV in the office of the facility director together with a copy of a signed research proposal to seek permission to conduct the study where the research participants were obtained.

All participants were given written informed consent prior to their participation in the study. The participants retained the absolute right and freedom to decline to participate or withdraw from the study at any time with no consequences to them. They were assured that opting out would not compromise the quality of care they received from the postnatal ward.

The aim and importance of the study were always made clear to the participants before taking part in the study. The mothers were given enough time to read and understand the consent form. This was provided in English

Results

Socio-demographics.

Table 1: showing the socio-demographic data of the respondents.

Variables	Categories	Frequency N=50	Percentages (%)
AGE	15-20	6	12
	21-24	10	20
	25-29	30	60
	30-35	3	6
	>35	1	2
RELIGION	Anglicans	26	52
	Muslims	14	28
	Catholics	6	12
	Others	4	8
MARITAL STATUS	Single	7	14
	Married	40	80
	Divorced	3	6

From Table 1, the majority of the respondents who were interviewed, 30(60%), belonged to the age group of 25-29 years, while the minority, 2%, were found to be above 35years. Most of the respondents who were interviewed were Catholics, 26 (52%), while the minority, 4(8%), were of other different beliefs. The majority of the respondents, 40 (80%), were married, while 6 (12%) were divorced.

Knowledge of the participants

Table 2: Knowledge about essential newborn care among mothers.

Parameter	Response	Frequency	Percentage (%)
Recommended frequency of feeding	Every 2 hours	14	28
	Every 3 hours	18	36
	Every 4 hours	11	22
	Every 5 hours	7	14
Substance to use in umbilical cord cleaning	Plain Water	15	30
	Soap and water	17	34
	Dung	12	24
	Chlorhexidine	6	12
Purpose of skin-to-skin contact	Regulate body temperature	22	44
	Promote bonding	17	34
	Improve breastfeeding	8	16
	Prevent infection	3	6

According to Table 2, the majority of the respondents recommended a frequency of feeding of every 3 hours (18, 36%), while the least rated their knowledge about the frequency of breast feeding as 5hourly 7(14%.

Based on the frequency of umbilical cleaning, the majority, 14(28%), recommended daily cleaning, while a minority, 7(14%), recommended monthly.

The majority of mothers understood the purpose of skin-to-skin contact was 22(44%), as being to regulate temperature, while the minority, 8(16%), understood it to improve breastfeeding.

According to the table, the majority of mothers understood the signs of hunger in the infant as crying, which were 44(88%), while the minority, 6(12%), understood it as sucking the thumb, and none as smiling.

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Figure1: Showing whether respondents knew the definition of essential newborn care.

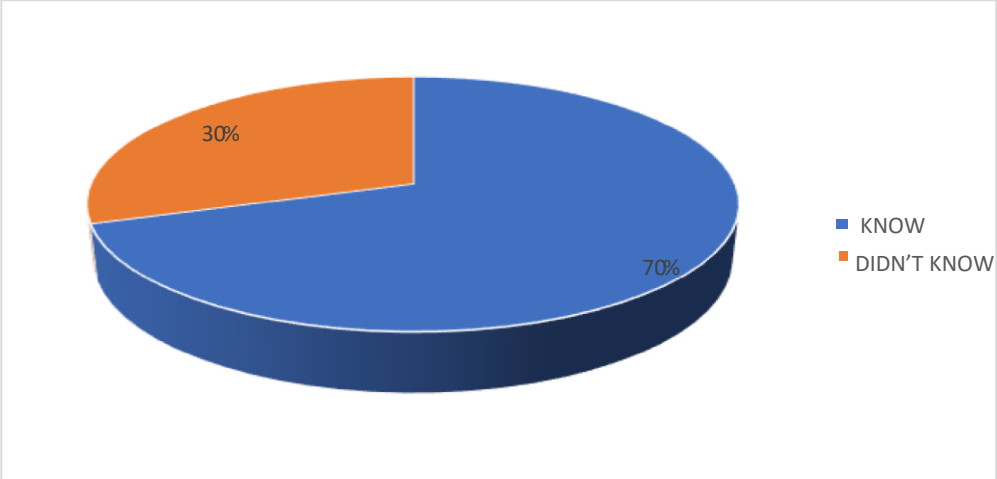


Figure 1 shows that most, 31(61%), of the respondents mentioned the definition of ENBC, whereas the least, 19(39%), mentioned that they did not know.

Attitude towards newborn care

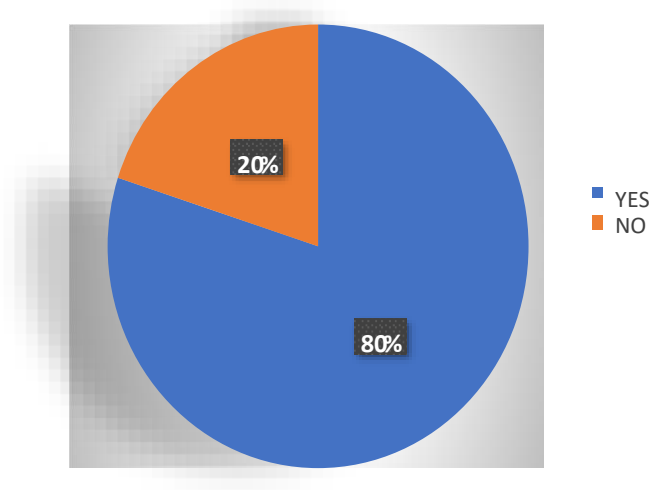
Table 3: showing the attitude of mothers towards essential newborn care.

Parameter	Response	Frequency	Percentage
Feeling of caring for newborn	comfortable	39	78
	Tiresome	1	2
	uncomfortable	10	20
Essential newborn care is a big component of the survival of newborns	Agree	34	68
	Not sure	11	22
	Disagree	5	10
It is important to adhere to the essential newborn package	Agree	31	62
	Not sure	15	30
	disagree	4	8

Based on Table 3, mothers' feelings of caring for newborns were 39(78%) comfortable, while 1(2%) were tired. Furthermore, 34(68%) agreed that essential newborn care is a big component of the survival of newborns, whereas 5(10%) disagreed. Lastly, regarding adherence to the essential newborn care package, 31(62%) agreed, while the minority, 4(8%), disagreed.

Figure 2: Showing the mothers' interest in carrying out essential newborn care.

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From Figure 2, more than half 80% of the participants showed interest in participating in essential newborn care programs, while the least 20% of the participants didn't show interest in carrying out essential newborn care practices.

Practices

Table 4: showing the respondents' practices towards caring for the newborn

Variables	Categories	Frequency N=50	Percentages (%)
First bath of a newborn.	Immediately after birth	4	22
	At 2 hours	46	78
Ways of feeding your newborn child	By breastfeeding	48	96
	By bottle-feeding	2	4
Substance used while cleaning the umbilical cord	Plain water	34	68
	Water and soap	6	12
	Alcohol	0	0
	Never clean it	10	20

Based on Table 4, participants that bathe their babies immediately were 4(22%), while those that bath at 2 hours were 39(78%).

According to the table, the majority of the participants that breast feed the children were 48(96%), while the minority who used bottle feeding were 2(4%).

Furthermore, the majority of the participant that clean the newborn cords with plain water were 34(68%), while the minority that considered water with soap were 6(12%).

Figure 3: Showing the percentage of mother's response towards feeding of their newborns.

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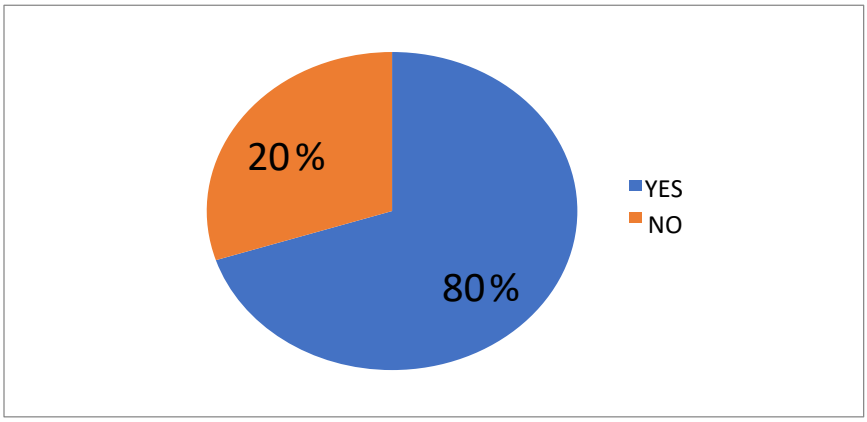


Figure 3 shows that the mothers who breastfeed more than 5 times a day are 40 (80%) and those who didn't breastfeed them are10 (20%).

Discussion

Socio-demographic characteristics of respondents regarding essential newborn care amongst mothers

Most of the newborn mothers were in the age group of 25-29, with a percentage of 60%, because these women are in their reproductive age; most of them were Anglicans with a percentage of 52%because it is an Anglican community, and the majority were married, whose percentage was 80% because they were capable of taking care of the children.

Knowledge towards essential newborn care amongst mothers.

The section to assess the knowledge among mothers towards essential new-born care and the results revealed that majority of the respondents recommended frequency of feeding was every 3hours 18(36%) because that was after they see the babies crying and uncomfortable and this indicated fair knowledge because the largest frequency is close to recommended frequency, a contrary study by (Lydia, 2022) and most were 360(98.4%) of the mothers knew the frequency of breastfeeding being 2 hourly.

In addition, the study on the knowledge of the umbilical cleaning majority used plain water because it was recommended by the health workers, with a percentage of 17(34%). In contrast, a study by (Amare, 2014), cord care practices immediately after delivery play a major role in reducing neonatal morbidities and mortalities. Some communities in Pakistan use cow dung on the umbilical cord, and others in Ethiopia use butter, petroleum jelly, and hair lotion to promote healing. This indicated that, despite the fact that they endeavoured, there was a bit lacking.

Furthermore, the finding showed that the largest number of respondents, being 44%, mentioned that the purpose of skin-to-skin contact was to regulate body temperature. This indicated fair knowledge about EBNC; it is probably because of the effort of the health workers during childbirth, which measures promote adherence to for survival of the newborn. Similar to the research finding by (Macaden, 2023), the knowledge score of mothers was slightly above average; 57.7% on KMC initiation and maintenance support at the health facility were 45.0% due to ignorance.

Attitudes towards essential newborn care amongst mothers.

The study findings showed that table mothers feeling of caring for new born were 39(78%) were comfortable because it is a natural instinct to take care of their young ones. A study by (Akoth, 2022) revealed that the majority, 369(99.2%), of the mothers had a positive attitude.

Furthermore, 34(78%) agreed that essential newborn care is a big component of the survival of newborns. This could be because it was emphasized by health workers to adhere to it for the survival of the babies, and adherence to the essential newborn care package was high (62%) because it is advocated by health workers. Similarly, in the study, all (100%) the respondents agreed that it is important to breastfeed as one of the packages of the essential newborn care package, but they were not well conversant with the importance (Hossain, 2023).

In addition, the study demonstrated that essential newborn care is important, with the largest percentage of 62%. This shows a positive attitude towards adherence to essential newborn care, with a few gaps in relation to the attitude, contrary to another study by (Akoth, 2022) only 4(1.1%) had a negative attitude towards nursing the baby in the same room, skin-to-skin contact, and providing warm clothing. The majority (332(90.7%) had a positive attitude towards skin-to-skin contact and providing warm clothing to the neonate. The majority, 356(97.8%), of the mothers had a

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positive attitude towards cord care, agreeing that a dirty cord could be a source of infection. Mothers had divergent attitudes on the other aspects of essential newborn care.

Practices of essential newborn care amongst mothers.

The analysed data from this study revealed that participants that bathe at 2hours use warm were 39(78%) because they were dirty with meconium; otherwise, they would delay the first bathe did not want to keep the babies in the cold at any one moment. In contrast, this study conducted by (Okedo, 2022) found that most respondents (52.3%) gave the baby their first bath within 24 hours.

Additionally, the study revealed that 68% of the respondents mentioned that they use plain water because this was readily available and equally effective in promoting healing of the cord.

This indicated fairly well. In contrast, a study made by (Akoth, 2022) findings demonstrated that majority (67.8%) of the respondents mentioned that they were involved in practices that would endanger the newborn, exposing them to mortality.

On the other hand, 96% of respondents fed the babies on breast milk because they knew it was nutritious for the baby and it is readily available for consumption. This indicated good practice, similar to a study by (Nieuwoudt, 2019) on practices towards essential newborn care; the findings indicated that most participants in the study were breastfeeding more than 8 times per day (51.1%).

Conclusion.

The knowledge of mothers towards essential newborn care was moderate. The study established that the greater proportion of the mother to be house wives, low-income earners, with high non- education levels, and others were unemployed, for which all these consequently led to poverty. This greatly contributed to inadequate knowledge of feeding frequency, cord care, and thermal care, which leads to infant mortality. Therefore, these findings confirm that essential newborn care is still of public health significance and is completely attached to maternal awareness, requiring targeted interventions like improving the frequency of attendance of maternal check-ups and health advice, which would lower neonatal mortality.

Study limitations.

The researcher faced inadequate time for data collection due to other school responsibilities and schedules. The researcher also faced inadequate funding for the smooth running of the entire research process.

Recommendation

The government should increase women's awareness programmes, especially for women in the childbearing age, and establish income-generating activities to earn money, which will improve the health care services obtained.

The Ministry of Health should organize public health education through the media and medical workers providing information to the mothers on how to look after their newborn children to eliminate newborn mortality.

The mothers should endeavour to attend antenatal care where these health talks are held for awareness. The health workers of Butenga-Health Centre IV should organize public health education by providing interventions that will integrate health and essential newborn care education to emphasize the Importance of the health of newborns.

Acknowledgment

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Abbreviations and acronyms

WHO: World Health Organization
UNICEF: United Nations Children's Fund
ENBC: Essential Newborn Care
KMC: Kangaroo Mother Care

Source of funding

The study received no external funding.

Conflict of interest
The authors declared no conflict of interest.

Author contribution
Jolly Kaweesi developed the proposal, obtained ethical and administrative clearance, collected and analysed data, and wrote the report. Joseph Kiwa supervised the whole research process.

Data availability
Data are available upon request from the corresponding author.

Author biography
Jolly Kaweesi is a student of International Paramedical Institute-Maya pursuing a diploma in Clinical Medicine and Community Health;
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