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Original Article

Knowledge regarding neonatal cord care among postnatal mothers at Entebbe regional referral hospital. A cross-sectional study.

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ABSTRACT

Background:

The study aimed to identify the Knowledge regarding neonatal cord care among postnatal mothers at Entebbe regional referral hospital.

Methodology:

A quantitative descriptive cross-sectional study assessed neonatal cord care among postnatal mothers at Entebbe Regional Referral Hospital. Conducted at the postnatal clinic, the study involved consenting mothers aged 18 years and above. A sample of 44 participants was selected using convenience sampling. Data were collected using a semi-structured, interviewer-administered questionnaire that covered respondents' demographics, attitudes, and practices. Data were cleaned, coded, and analyzed using Microsoft Excel. Quality assurance included pretesting, and ethical approval, informed consent, confidentiality, and secure data management were ensured to improve the validity and reliability of findings and overall outcomes.

Results:

Employment status indicated 16 (36.4%) were employed, 15 (34.1%) housewives, and 13 (29.5%) self-employed. Monthly income was mainly 300,000-500,000 UGX among 26 (59.1%), with 14 (31.8%) earning below 500,000 and 4 (9.1%) above. Knowledge findings showed health workers as the main information source, 36 (81.8%). Clean boiled water was identified by 26 (59.1%) as the recommended cleaning method, while 14 (31.8%) mentioned herbs. Cord care was said to prevent infection by 31 (70.5%). Initiation immediately after birth was reported by 29 (65.9%). Cord detachment took 1-3 weeks for 18 (40.9%). A cord was preferred by 34.

Conclusion:

Postnatal mothers demonstrated generally good knowledge of neonatal cord care.

Recommendation:

The Ministry of Health should design a national training/refresher module for midwives and other health mothers on neonatal cord care.

Keywords: *cord care, postnatal mothers, Cord detachment, neonatal sepsis, dirty cord.*
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BACKGROUND OF THE STUDY

Safe neonatal cord care requires mothers to have accurate and comprehensive knowledge beyond general awareness of hygiene. Mothers need to know appropriate cleaning methods, substances to avoid, frequency of care, signs of infection, and the normal process of cord separation (Clampett, 2016). The umbilical cord stump is a potential entry point for microorganisms; therefore, proper hygiene is critical in preventing neonatal sepsis (Obeagu & Obeagu, 2024).

Evidence shows gaps between awareness and correct practice. At Kenyatta National Hospital, 99% of mothers recognized that a dirty cord could cause infection, yet only 26% followed WHO guidance on cleaning with water, and very few supported dry cord care, with most preferring surgical spirit (Asante, 2023). Similarly, Sulfianti and Ismawati (2021) reported that less than half of mothers understood the importance of keeping the cord dry, with many applying oils or powders. Antenatal education was strongly associated with correct practices, highlighting the role of health workers in countering misinformation and harmful cultural practices.

In Busigi village, Kisoro District, although 85% of mothers acknowledged the importance of cord care, only 4% knew when to initiate care, and only 8% understood its infection-prevention role (Niyonsenga, 2016). In Kasese District, 72.2% of mothers were aware of recommended practices, yet cultural beliefs led to continued use of local substances (Asimwe, 2017a). At Mutolere Hospital, 64% received information from relatives rather than health workers,

though 90% knew cord care prevents infection (Kyomugisha, 2017). While some studies report generally good knowledge and safe practices, persistent gaps in understanding and reliance on non-recommended sources remain (Nabwowe Kasule & Mncwabe, 2021). The study aimed to identify the Knowledge regarding neonatal cord care among postnatal mothers at Entebbe regional referral hospital.

METHODOLOGY

Study Design and Rationale

A quantitative descriptive cross-sectional study design was used to assess the neonatal cord care among the postnatal mothers at the postnatal clinic, ERRH. This design was selected because it enables having detailed information about the study in the shortest time possible from the respondents at one point in time.

Study Setting and Rationale

The study was conducted at Entebbe Regional Referral Hospital, formally referred to as Grade B hospital, which is a public hospital located approximately 44 kilometers southwest of Mulago National Referral Hospital. The hospital was constructed as a general hospital in 1904 and later, in 2016, was reconstructed as a referral hospital with a bed capacity of 250 and provides inpatient and outpatient services to both urban and semi-urban populations, with an average of 50 postnatal mothers reviewed weekly. The unit has 12 midwives and doctors allocated to the unit. The hospital was selected due to the increasing number of neonatal sepsis cases reported at the Pediatric ward at ERRH.

Study Population

The study population was composed of all the postnatal mothers attending the postnatal clinic at Entebbe RR Hospital who had consented to participate in the study.

Sample Size Determination

The study employed 44 post-natal mothers to provide information about the study. According to Krujcie and Morgan's sample size determination table.

Sampling Procedure

A convenience sampling method was used to identify participants who met the study criteria. All eligible participants who were available and willing at the time of data collection were included. During each of the four data collection days, 11 respondents were sampled per day to achieve a total sample size of 44 participants.

Inclusion Criteria

All the post-natal mothers, 18 years and above at Entebbe Hospital who had consented to participate in the study were enrolled and were able to read and write.

Exclusion criteria

All the post-natal mothers who were not available at the time of sampling.
All the mothers who withdrew from participating in the study.

Study Variables

Dependent Variable;

Neonatal cord care among the post-natal mothers at Entebbe RR hospital.

Independent Variables;

Knowledge regarding neonatal cord care among the postnatal mothers.

Research Instrument

The study used a semi-structured, interviewer-administered questionnaire containing both open- and closed-ended questions. The questionnaire had two sections: Section A captured the demographic data of the respondents, while Section B assessed knowledge regarding NCC. Respondents who had difficulty understanding the questionnaire were assisted with translation to ensure accurate responses.

Data Collection Procedure

An introductory letter from the school was obtained, and the postnatal mothers were introduced to the study by the clinic in charge. The purpose of the study and any potential risks were clearly explained, and informed consent was obtained from all participants. Questionnaires were administered, allowing each participant 15–20 minutes to complete them while maintaining focus. All completed questionnaires were carefully reviewed and checked for accuracy before analysis.

Data Management

Data from the study was first thoroughly checked and validated for completeness and then stored in a database established using Microsoft Excel. A password was used to prevent unauthorized access to the database. The data was also backed up on a flash and a hard disk before and after analysis. Data on the questionnaire was kept under lock and key, while electronically stored data was password-protected.

Data Analysis

The data was first cleaned, organized, and checked for any gaps, after which it was changed into codes and later transferred to Microsoft Excel 2017 for presentation of tables and figures. Responses for open-ended questions were summarized and given themes before tallying them for analysis.

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Quality Assurance

The questionnaire was first pre-tested on 15 post-natal mothers at Naguru hospital to check the strength of the questionnaire. This was because of the fact that Naguru and Entebbe are both referral hospitals serving almost a similar population that includes the VIP, middle, and low classes.

Ethical Considerations

After approval of the proposal by the School Research Committee, an introductory letter was issued to facilitate the conduct of the study. This letter was presented to the Hospital Director of ERRH to obtain permission. The study was then introduced to the respondents, explaining its purpose and objectives. Informed consent was obtained from all participants, and their identities were kept anonymous by using codes instead of names. Access to the completed study instruments was restricted to ensure confidentiality.

RESULTS

Sociodemographic data of the respondents

Table 1: Shows demographic characteristics of the postnatal mothers at ERRH, n=44

VARIABLES	RESPONSE	FREQUENCY (f)	PERCENTAGE (%)
Age group	26-35 years	24	54.5
	18-25 Years	11	25
	36-45 years	09	20.5
Number of Children	1-2 children	20	45.4
	3-4 children	19	43.2
	5 and above	05	11.4
Employment Status	Employment	16	36.4
	House wife	15	34.1
	Self employed	13	29.5
Monthly income	300000-500000	26	59.1
	Less than 500000	14	31.8
	More than 500000	04	9.1
Total		**44**	**100%**

Table 1 indicates that more than half, 24(54.5%), of the participants were aged between 26 and 35 years, while the least were 09(20.5%). Most 20 (45.5%) had 1-3 children, while the least 05(11.4%) had 3-5. Regarding employment, most 16(36.4%) were employed while the least 13(29.5%) were self-employed. Concerning income, most 26 (59.1%) were earning a monthly income of 300000-500000, while the least 04(9.1%) were earning more than 500000.

Knowledge regarding neonatal cord care among the post-natal mothers at ERRH

Table 2: Shows the Knowledge regarding neonatal cord care among the post-natal mothers at ERRH, n=44

VARIABLES	RESPONSE	FREQUENCY (f)	PERCENTAGE (%)
What is the Source of information on cord care	Health workers	36	81.8
	Friends and Family	08	18.2
What is the recommended method of cleaning the cord base	With clean boiled water	26	59.1
	With herbs	14	31.8
	With chlorhexidine	04	9.1
What is the purpose of cord care	prevent infection	31	70.5
	Makes the cord fall off faster	13	29.5
When do you begin cord care	Immediately after birth	29	65.9
	After the baby is bathed	15	34.1
Total		44	100%

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Table 2 indicates that the majority, 36(81.8%) of the participants mentioned health workers as their source of information about cord care, while the remaining 8(18.2%) mentioned friends and family. Most 26(59.1%) said clean boiled water is the recommended method of cleaning the cord base, while the least 4(9.1%) mentioned chlorhexidine. Regarding purpose, the majority, 31(70.5%), said cord care prevents infections, while the remaining 13(29.5%) said it makes the cord fall off faster. Most 29(65.9%) said that cord care is begun immediately after birth, while the remaining 15(34.1%) said after the baby is born.

Figure 1: Shows how long it takes the cord to detach , n=44

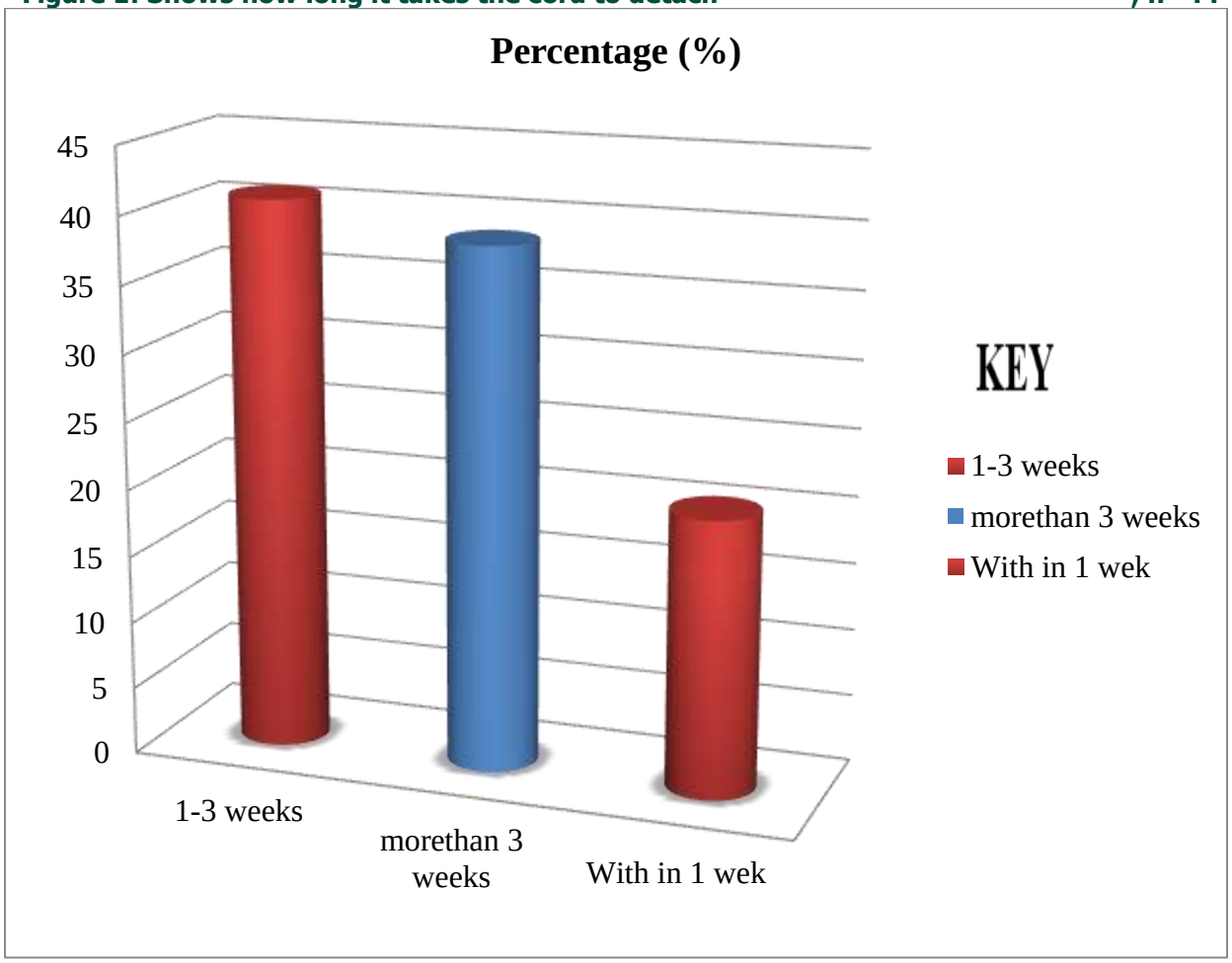

Figure 1 indicates that 18(40.9%) of the respondents said it takes 1-3 weeks for the umbilical cord to detach, while the least 9(20.5%) said it detaches within 1 week after birth.

Table 3: Shows the recommended practice for keeping the cord n=44

Recommended practice	respondents	Percentage (%)
Clean and dry	34	**77**
Wrapped with a cloth	10	**23**

Table 3 shows that the majority, 34(77%) of the participants said that a clean and dry cord is the recommended practice for keeping a cord whiles the remaining 10(23%) said wrapping in a cloth.

DISCUSSION

This study revealed that the majority (81.8%) of the respondents obtained information about cord care from health workers, and 70.5% correctly identified prevention of infection as the main purpose of cord care. This demonstrates a good level of awareness among the mothers,

consistent with findings of Nabwowe Kasule and Mncwabe (2021), who also reported that most mothers possessed adequate knowledge on safe cord care, mainly sourced from healthcare professionals. Furthermore, most respondents (59.1%) reported using clean boiled water for cord cleaning, and 77% recognized that the cord should be kept clean and dry. This finding supports WHO recommendations and aligns with Asante (2023), who reported that a small proportion of Kenyan mothers adhered to WHO guidelines, suggesting improved adherence at ERRH. Similarly, Kyomugisha (2017) found that 90% of mothers in Mutolere Hospital understood that cord care prevents infection, echoing the present findings. In addition, 40.9% believed that the cord takes 1-3 weeks to detach, which contrasts with findings from Kyomugisha (2017), where most mothers reported 4–7 days. This indicates some gaps in specific knowledge areas, such as the normal detachment period. The findings above showed that the post-natal mothers were knowledgeable about neonatal cord care.

CONCLUSION

The findings of this study indicated that postnatal mothers demonstrated generally good knowledge of neonatal cord care.

RECOMMENDATION

The ministry of health should design a national training/refresher module for midwives and other health mothers on neonatal cord care like the clean/dry care, when to refer and monitoring stump, to incorporate routine supportive supervision and audits of cord-care practices in postnatal wards like percentage of newborns with clean/dry cord care and the percentage of mothers counselled as part of the quality of care indicators and also partnering with community health workers to follow-up mothers postnatally in their homes to reinforce correct cord-care practices.

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LIST OF ABBREVIATIONS

ERRH : Entebbe Regional Referral Hospital
NCC : Neonatal Cord Care
VIP : Very Important People
WHO : World Health Organization

SOURCE OF FUNDING

The study had no funding.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY

Data is available upon request from the author.

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AUTHOR CONTRIBUTIONS

JN: collected the data.
JN: supervised the study.
IM: supervised the study.
JFN: supervised the study.
FS: supervised the study.
HN: supervised the study.

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