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KNOWLEDGE, PRACTICE AND TECHNIQUES OF UMBILICAL CORD CARE AMONG MOTHERS IN NWEZENYI, EBONYI STATE, NIGERIA

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ABSTRACT

***Background**: Umbilical cord care is the handling of the umbilical stump of new-born after delivery. Hygienic umbilical cord care is important for the well-being of the new born infant. The study was to assess the knowledge, practice and techniques of umbilical cord care among mothers in Primary Health Care centre in Nwezenyi, Ebonyi State, Nigeria .*

***Methodology**: The study was cross-sectional descriptive in design. Systematic sampling method was used to select 222 participants. Data were collected with semi-structured interviewer administered questionnaire and analyzed using Statistical Package for Social Sciences version 22.*

***Results**: The study showed high (83.3%) awareness of umbilical cord care and low (11.7%) knowledge of proper material (chlorhexidine) for umbilical cord care , poor (8.1%) practice of the use of correct material. Factors influencing the choice of material used are cost (16.7%), availability (17.1%), convenience (10.4%), "works faster" (20.7%) and "type respondent is aware of" (35.1%).*

***Conclusion**: High awareness of umbilical cord care management in this study did not commensurately translate to use of correct materials for its care. Thus, there was high risk of neonatal infection including neonatal tetanus. Focused health education to mothers will help improve their knowledge, practice and the use of correct material in umbilical cord care to reduce neonatal morbidity and mortality.*

***Key words:** Knowledge, Practice, Umbilical cord care, Nigeria.*

INTRODUCTION

Methods of care of the umbilical cord in various institutions and cultures vary.[1,2] While some orthodox health institutions advocate the use of alcohol, others prefer the use of antiseptics such as chlorhexidine, yet some advise no treatment at all but keeping the cord clean and dry. A particular health facility may advocate change in practice over time.[1] In contrast to the teachings and practices of orthodox health facilities are the traditional /cultural practices of umbilical cord care particularly in developing countries.[3] These practices involve the application of harmful substances such as sand, salt, native chalk, petroleum jelly, menthol – containing balm, herbs and hot foments on the umbilical cord stump. The wide options available in umbilical cord care practice as advocated by health facilities as well as the cultural practices which abound do confuse

nursing mothers.[4]

Methods of umbilical cord care vary widely among communities depending on their cultural and religious beliefs, level of education and resources. In developing countries, even babies delivered in hospitals may be affected by traditional practices after discharge which most times lead to umbilical cord infection and neonatal deaths.[5] Where proper umbilical cord care is not practiced, the umbilical cord is readily infected. Mothers who adopt proper umbilical cord care will by implication contribute to the survival of the neonate and prevent neonatal death from infections such as omphalitis, neonatal tetanus and septicemia.[2,6,7]

Globally, about 130 million babies are delivered annually and four million (3.1%) die within the first four weeks of life. Twenty five percent of these deaths are as a result of umbilical cord infection.[8] In developing countries, most of the umbilical cord care is home-based since two-third of births take place at home.[9] There, umbilical cord infections constitute a major cause of neonatal morbidity and pose significant risk of mortality. Umbilical cord management introduced to mothers in both developed and developing countries to reduce its exposure to infections include clean cord cutting, hygienic cleaning and washing of hands before and after umbilical cord care.[10] The aim of the study was to determine the knowledge, practice and technique of umbilical cord care among mothers in Nwezenyi, Ebonyi State Nigeria.

METHODOLOGY

Izzi Local Government Area (LGA) is one of the 13 LGAs in Ebonyi State, Southeastern Nigeria. It is a rural community of Igbo tribe dominance with trading and farming as their major occupations and are predominantly Christians with a few traditionalists. Both the traditional and orthodox health care services co-exist in the LGA. There are seven health facilities in Izzi LGA. This study was a cross-sectional descriptive survey to determine the knowledge, practice and techniques of umbilical cord care among mothers with infants aged one to twelve months. Nwezenyi health centre was selected from other health facilities in Izzi LGA by balloting. Systematic sampling technique was used to select 222 participants from 520 women who attended the health facility using a sampling interval of 2. The sample size of 222 was determined by using the formula for estimating a single finite proportion.[11] All mothers aged 15-49 years with infants one to twelve months resident in the community who consented were selected for the study. A semi-structured interviewer-administered questionnaire adopted from previous studies [12, 13] was used to collect the data. Data analysis was done using computer software programme, SPSS version 22. Ethical clearance was obtained from Federal Teaching Hospital Abakaliki Research and Ethics Committee. Informed written consent was obtained from participants before the data collection tools were administered. The respondents were also assured of confidentiality.

RESULTS

As shown in Table 1 majority (62.1%) of the respondents were aged 21-30 years. Respondents were predominantly Christians (95.5%), 89.6% were married and only 8.6% attained tertiary level of education.

Table 1: Socio-demographic characteristics of respondents

Variables	Freq. (%) n =222
Age group (in years)	
≤ 20	21(9.5)
21-30	138(62.1)
31-40	58(26.1)
> 40	5(2.3)
Level of education	
No formal education	28(12.6)
Primary	79(35.6)
Secondary	96(43.2)
Tertiary	19(8.6)
Religion	
Christianity	212(95.5)
Islam	4(1.8)
Traditional	4(1.8)
Others	2(0.9)
Marital status	
Single	15(6.8)
Married	199(89.6)
Divorced	4(1.8)
Widowed	4(1.8)

Table 2 shows that 83.3% of the study participants were aware of umbilical cord care while 56.7% got information on umbilical cord care from health workers.

Table 2: Respondents' awareness of umbilical cord care

Statement	Freq. % n=222
Aware of umbilical cord care	
Yes	185(83.3)
No	37(16.7)
Source of Information	
Family member	71(32.0)
Neighbor	15(6.7)
Health worker	126(56.7)
Friends	4(1.8)
Television	2(0.9)
Radio	33(1.4)
Church	1(0.5)

Table 3 shows that a small percentage (11.7%) of the respondents knew that chlorhexidine was the best material for cleaning the umbilical cord.

Table 3: Respondents' knowledge of umbilical cord care

Response	Freq. % n=222
Material for cleaning umbilical cord	
Chlorhexidine	30(13.5)
Methylated Spirit	135(60.8)
Tooth paste	51(23.0)
Cow dung	2(0.9)
Mud	2(0.9)
Kerosene	2(0.9)
Best material for umbilical cord cleaning	
Chlorhexidine	26(11.7)
Spirit	162(22.9)
Tooth paste	32(14.4)
Cow dung	1(0.5)
Mud	1(0.5)

In Table 4, 96.4% of the respondents practiced umbilical cord care while only 8.1% of them used the correct material (chlorhexidine). The factors found to influence choice of material used were cost (16.7%), availability (17.1%), convenience (10.4%), works faster (20.7%), and the types respondent was aware of (35.1%).

Table 4: Practice and Technique of umbilical cord care

Statement	Freq. % n=222
Cleaning of umbilicus	
Yes	214(96.4)
No	8(3.6)
Materials used	
Chlorhexidine	18(8.1)
Spirit	168(75.7)
Toothpaste	35(15.7)
Cow dung	1(0.5)
Care of the umbilical cord	
Covered with cloth	211(95.0)
Covered with bandage	10(4.5)
Exposed to air	1(0.5)
Reasons for choice of material used	
Cost	37(16.7)
Availability	38(17.1)
Convenience	23(10.4)
Works faster	46(20.7)
That's the type I know	78(35.1)

DISCUSSION

This study found a high level (83.3%) of awareness of umbilical cord care. The source of information was mainly from health workers (56.7%) and family members (32%). It contrasts findings of a study among mothers in South Western Nigeria, where the source of information on cord care were mainly from fellow mothers (53.3%) and traditional birth attendants (29.6%).[15] This high level of awareness of umbilical cord care and mainly from health workers may imply accessibility or acceptability level of health services at Primary Health Care Centre of Federal Teaching Hospital Nwezenyi Annex. The findings were consistent with a study in slum area in Nairobi Kenya where 71% of mothers knew the need for hygiene practice of umbilical cord.[14]

Only 11.7% of respondents in this study had the knowledge that an antiseptic such as chlorhexidine is the best material for cleaning umbilical cord stump. A related study on knowledge of umbilical cord care among mothers in South West zone of Nigeria showed that only 11.9% reported knowledge of umbilical cord care during ante natal visits.[15]A similar study also reported that lack of knowledge of standard umbilical cord care is an important factor underlying unhygienic umbilical cord management among mothers.[16] It was added that mothers who are knowledgeable of standard umbilical cord care and the possible risk of or non-adherence are more likely to employ standard umbilical cord management. Lack of knowledge of standard umbilical cord care affects mother's ability to make independent decision on its care especially among the primips thereby exposing the new born to infections. It was noted that the neonatal health outcome could be improved significantly by strengthening information, education and communication among mothers on umbilical cord management.

This study shows that 96.4% of the respondents practiced umbilical cord care with only 8.1% using the correct material (chlorhexidine) and 0.5% used cow dung. In a similar study carried out in Borno State, Nigeria, the traditional practices of umbilical cord care included the use of rag and lantern (19.5%), ash or charcoal (9.3%), powder (6.5%) and red sand (3.5%).[17] The use of cow dung and other wrong practices for care of umbilical cord in this study are harmful because they are contaminated and increase the risk of infection including neonatal tetanus. Focused health education is necessary to discourage the use of these harmful substances and to enlighten mothers on the correct material for the cleaning of umbilical cord.

The factors influencing the choice of material used in umbilical cord care in this study include cost, availability, convenience, fast method and type respondent was aware of. It has been reported that socio-economic barriers could cause delay in decision thereby increasing the risk of complication resulting from cord infection and deaths among the neonates.[1]

CONCLUSION

Though there was high awareness of umbilical cord care among the study group, the use of correct material was found to be low.≥ The study shows a high risk of neonatal infection including neonatal tetanus among the study group. Focused health education to mothers will help improve their knowledge, practice and the use of correct material in umbilical cord care to reduce neonatal morbidity and mortality.

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