



Traditional Variables and Umbilical Cord Management among Mothers in Calabar Education Zone, Cross River State, Nigeria

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Abstract

This study investigates the influence of traditional variables on umbilical cord management among nursing mothers in Calabar Education Zone, Cross River State. Two research questions were answered in the study. The survey design was adopted for this study. The sample size of 748 nursing mothers that delivered within six months, currently obtaining postnatal health care services was drawn from a population of 1,068 nursing mothers in the area of study. “Traditional Variables and Umbilical Cord Management Questionnaire (CVUCMQ)” was used for data collection. Cronbach Alpha method was used to analyse the data with reliability estimates for the variable ranging from .81 to .88. The first finding indicates that traditional beliefs affect neonatal umbilical cord management by nursing mothers. The second finding of this study shows the influence of traditional practices on neonatal umbilical cord management by nursing mothers in Southern Cross River State. Based on these findings, it was concluded that the impact of traditional beliefs and practices are the strong traditional variables that nursing mothers and health care workers must pay due attention to ensure effective delivery of quality patient care. The study recommended among others that there should be forums to address traditional rulers and their cabinets on the dangers of unhealthy traditional beliefs and practices surrounding umbilical cord management.

Keywords: Nursing mothers; Tradition; Umbilical cord management.

1. Introduction

It is logical when people believe and attribute causes of disease or death to supernatural powers (Osuchukwu, 2014) as they will be more likely to do something to keep it under control. An observation by Bassoumah and Adam (2018) revealed that the traditional practitioners performed both spiritual and medical roles during pregnancy and childbirth. This is what, in most cases cause mothers to use various forms of materials and concoctions for umbilical cord treatment and management in order to hasten cord separation and prevent neonatal deaths, as per traditional beliefs. This unfortunately may result in cord infection and even death, resulting from neonatal tetanus. Nursing mothers ideally are required to manage the umbilical cord of newborn until the stump detaches or falls off on its own. This normally happens within five to 15 days after birth. The essence of umbilical cord care or management is aimed at preventing any form infection. Good management should thus guarantee infection-free cord and the safety of lives of the newborn.

It can be observed that poor management of the umbilical cord of newborn in Cross River State has been a leading cause of death. Antai and Effiong (2009), disclose that infection is responsible for 49% of neonatal deaths in Cross River State. Another survey indicates that umbilical cord infection has contributed significantly to neonatal morbidity and mortality in developing countries, with an incidence rate as high as 63% in urban areas. Same source indicates a record of 46% deaths per 1000 live birth in rural areas (Ekwochi *et al.*, 2015). Similarly, Emeribe and Akah (2011) posit in a review on Neonatal Tetanus in African Children, that there is a high incidence of morbidity and mortality of neonates, due to poor hygiene and harmful traditional practices, superstition, among others. This high mortality rate among neonates is alarming and worrisome and begs for attention from all stakeholders. The researchers thus seek to investigate the influence of traditional variables on umbilical cord management in Calabar education zone of Cross River State.

Osuchukwu (2014), submit that traditional orientation could play a key role in individual beliefs and practices; this is why this study tries to find out whether traditional variables significantly influence the management of umbilical cord among mothers in Calabar Education Zone. It is pertinent to identify how key stakeholders perceive,

understand and react to newborn cord health issues and illness, to create effective health policy and programme. Qualitative research is needed to better understand the traditional or cultural context/beliefs of umbilical cord management, which may affect health positively or negatively. Be that as it may, [Otoo \(1999\)](#) observe that some traditional practices are not harmless but beneficial to the baby. Some people believe that all the life in the placenta must be transferred to the newborn otherwise the baby may die. [Coalter and Patterson \(2017\)](#), that potentially harmful cultural norms and traditions influence the sequence of thermal care practices (TCPs) in different contexts across Africa confirm this. Therefore, the cord is usually cut after cord pulsations stop or after the delivery of the placenta. In some areas, it is a believe that milking the cord, especially if the baby is not breathing, can bring back the baby's soul from the mother ([Hernayanti et al., 2018](#)).

According to [Gyasi et al. \(2018\)](#), most nursing mothers prefer traditional medicine to orthodox procedures. An explanation provided in the study of [Osuchukwu \(2014\)](#) showed that herbal preparation and traditional practices are preferred because, the cord falls within 3-4 days of application, the wound heals faster and there is quicker relief of pain. [Sitrin et al. \(2013\)](#), report that pregnancy and newborn care is surrounded by a lot of traditional beliefs, practices and norms that are detrimental to newborns; as such, neonatal mortality would continue as long as traditional beliefs continue influencing neonatal care practices. The scholars show that traditional accessibility is as important as social and physical accessibility to health services and utilization.

In 2018, [Hernayanti et al.](#) observe that the villagers believe that diarrhoea is associated with the appearance of the anterior fontanelle and teething. Some believe that every child has to experience one or two episodes of diarrhoea as a sign of survival. In such circumstance, most mothers may feel it is unnecessary to seek medical attention when such diarrhoea occurs. High rates of umbilical cord infection and sepsis can occur in areas free of tetanus, attributed to unhygienic delivery or immediate postpartum care practices that lead to contamination ([Mullany et al., 2006](#)). Because of the traditional belief, [Mersha et al. \(2018\)](#) report that the umbilical cord care practices was low among nursing mothers in Ethiopia.

[Herlihy et al. \(2013\)](#) observe that there is a belief in some regions in Turkey that children may not be dedicated to their families if their umbilical cords are thrown out. Some people bury their babies' umbilical cords in front of a mosque so that their babies are pious or leave them in the backyard of a school so that their babies have a good education. [Winch and Husein \(2000\)](#), note that mothers cover the umbilical cords of their babies with a hot mixture that contained mustard oil and garlic two times daily. This was similar to the report of an Asian study that Pakistani women use such as mustard oil and coconut oil, or several traditional mixtures such as ghee and Surma for umbilical cord care ([Fikree et al., 2005](#)). Another study report in Bangladesh indicate that mothers often cleanse the cord stump with dry gauze, cotton ball or topical application of antimicrobial agents ([Andrews and Dalal, 2011](#)).

Traditional practices must be taken into account when introducing clean cord care programmes, since a wide variety of traditional beliefs and practices are associated with the care of the umbilical cord in most communities across the globe, especially in developing countries. About two-thirds of births in developing countries take place outside health facilities and almost half of the women are delivered of their baby by untrained traditional birth attendants, family members or deliver on their own ([Muchow, 2021](#)). Good cord care practices will reduce the incidence of neonatal morbidity and mortality caused by neonatal infections and tetanus. While cord care practices vary from place to place, some can be harmful to the newborn. Also in Nepal, colostrum's, saliva or herbal preparations are applied to facilitate early cord separation and healing, but rather these practices constitute serious sources of neonatal infections ([Mullany et al., 2006](#)). [Bassoumah and Adam \(2018\)](#), discovered that the traditional/herbal medicine was administered under unhygienic conditions, thus both mothers and children are highly exposed to infections. As a result of traditional beliefs, the risk of febrile illness in the first month of life was reported to be higher in the new-borns (neonates) whose mother applied topical agents like toothpaste, oil, ash, or animal dung ([Ekwochi et al., 2015](#)).

In 2009, [Ambe](#) revealed that traditional practices of cord care in Bornu state, Nigeria include the application of hot fermentation, use of rag and lantern, use of Vaseline ash/charcoal, groundnut/palm, mangrove oil, use of powder, and red sand in descending order of preference. The practices are often harmful, because of the easy contamination of the substances with bacteria and spores, thus increasing the risk of infection ([Celik et al., 2021](#)). However, [Otoo \(1999\)](#) believed that some traditional practices are not only harmless but also beneficial to the baby. According to him, people believe that all life from the placenta must be transferred to the newborn otherwise, the baby may die.

[Shamaki and Buang \(2017\)](#) and [Takaeb \(2020\)](#) observe that unattended labour and delivery, low level of education, hot-bath (Wankan jego) during new birth, use of herbs, forced marriage, early marriage, child spacing, female genital mutilation, and traditional gender discrimination, all play a role in maternal health and are thought to account for the high maternal mortality rates of children, neonates. [Shamaki and Buang's](#) study further reveal that these factors significantly and negatively influence the mortality rate of new borns in Sokoto, Nigeria.

From the foregoing, it has been observed that some traditional practices have come to stay and cannot be challenged regardless of new developments in health in the field of health. Some strictly adhere to them and others do not. However, some established cultures abound in some places including Calabar Education Zone. The above has been identified as a challenge or problem and frantic efforts has been made in research and other allied areas to address such dangerous traditions dangerous to child and maternal health. Such traditions has been identified as a bad development due to its far-reaching effect on infants, nursing mothers and the general public. The above premise provoked the present researchers to opt for this study to find out what influence traditional and cultural practices have on the management of umbilical cord among nursing mothers.

This study may serve as a corrective measure as well as enable nursing mothers to adopt safe practices of cord care that will prevent neonatal infections, protect and preserve the lives of babies. This will in turn reduce the rate of

maternal and child morbidity as well as mortality. The study may give a sense of direction to explore more into other areas of cord management and mother/child care that are detrimental to maternal and child health. In addition, the study may provide information for better planning of maternal and child health care services; which could lead to reduced morbidity and mortality, especially in the area of the study.

1.1. Objectives of the Study

The purpose of this study is to investigate the influence of traditional variables and umbilical cord management among Mothers in Calabar education zone, Cross River State, Nigeria. specifically, the objectives of the study are to investigate the influence of:

- i. Traditional beliefs on neonatal umbilical cord management by nursing mothers in Calabar education zone, and
- ii. Traditional practices on neonatal umbilical cord management by nursing mothers in Calabar education zone.

2. Research Questions

The following research questions were posed to guide the study.

- i. To what extent do traditional beliefs influence neonatal umbilical cord management?
- ii. How do traditional practices influence neonatal umbilical cord management?

3. Methodology

The survey design was adopted for this study. Kerlinger, cited by [Isangedighi et al. \(2004\)](#), described survey design which is directed towards determining the nature of the situation as it exists at the time of investigation, using part of the population. This design was chosen for this study because it is useful in describing the characteristics of a large population, providing a more accurate and broader sample to gather targeted results. The population for this study was 1,068 nursing mothers. The source was Ministry of Health, Cross River State, 2018 statistics of nursing mothers. The sample size of 748 nursing mothers that delivered within six months, currently obtaining post-natal health care services including routine immunization was drawn from the population.

Due to the broadness of the study area, a multi-stage sampling procedure was employed for this study. First, a stratified sampling technique was employed to group the respondents (nursing mothers) into the seven (7) Local Government Areas (LGAs) within the Calabar Education Zone used for this study. Each LGA was further stratified into political wards using the stratified sampling technique, making a total of 76 wards in all. Using a convenient sampling technique, 20% from the (76) wards in the seven LGAs were randomly selected which amounted to 14 wards in all for proportionate data collection. Subsequently, purposive sampling was employed to get the 748 nursing mothers used for the study.

The instrument used for the study was a structured questionnaire designed for the purpose of this study titled: Traditional Variables and Umbilical Cord Management Questionnaire (TVUCMQ). The instrument has 11 item statements placed on a modified four-point Likert scale. Response options ranged from Strongly Agree to Strongly Disagree. All the items were generated from personal experiences, observations and reviewed literatures. For validity, five experts (two from Measurement and Evaluation and three from Human Kinetics and Health Education) subjected the instrument to face and content assessment. Their inputs and corrections were implemented by the researchers resulting in the final draft of the instrument. For the reliability, a trial test performed using 36 respondents who are part of the population but not the sample. The Cronbach's alpha method was used to analyse the data obtained from the respondents. The result of the reliability estimates for the variable ranged from .83 to .88. This co-efficient justified that the items and the entire instrument were reliable. Copies of the instrument were administered to the respondents with the support of seven research assistants. Collected data were analysed using simple percentage and frequency counts.

4. Results

4.1. Research Question One

How do traditional beliefs influence neonatal umbilical cord management? [Table 1](#) shows the opinions of the respondents on the traditional beliefs and neonatal umbilical cord management by nursing mothers. Out of 748 respondents sampled for the study, 329 (44.0 per cent) strongly agreed the belief that using of hot water to press the umbilical stump promotes healing and helps to prevent cord infection; 162 (21.7 per cent) agreed to it; 51 (6.8 per cent) disagreed to it and 33 (4.4per cent) strongly disagreed to it. Consequently, the majority of the respondents, 271 (36.2per cent) agreed in the efficacy of the belief that applying breast milk to the umbilical stump helps the cord to heal fast. 288 (38.5per cent) strongly agreed in the belief that the tying of the umbilical cord area with a piece of cloth will prevent the baby from having big painful navel. 220 (29.4 per cent) strongly agreed to the belief that a baby can have tetanus as a result of a visit by a woman who had lost her young baby in the past. 271 (36.2 per cent) strongly agreed to the belief that if the blood from the placenta is not well milked into the newborn child, the baby may die; and 235 (31.4 per cent) strongly disagreed to the belief that milking the cord stump in a baby who is not breathing can bring back a baby's soul from the mother.

Table-1. Traditional beliefs and neonatal umbilical cord management by nursing mothers

Variable	Response				
	SA	A	D	SD	Total
	f (%)	f (%)	f (%)	f (%)	f (%)
In my tradition, we believe that: The use of hot water to press the umbilical stump promotes healing and helps to prevent cord infection.	329 (44.0)	162 (21.7)	51 (6.8)	33 (4.4)	748 (100)
Applying breast milk on the umbilical stump helps the cord to heal fast.	271 (36.2)	83 (11.1)	165 (22.1)	229 (30.6)	748 (100)
Tying the umbilical cord area with a piece of cloth will prevent the baby from having a big painful navel.	288 (38.5)	95 (12.7)	271 (36.2)	94 (12.6)	748 (100)
A baby can have tetanus because of a visit by a woman who had lost her young baby in the past.	181 (24.2)	220 (29.4)	157 (21.0)	190 (25.4)	748 (100)
If the blood from the placenta is not well milked into the newborn child, the baby may die.	271 (36.2)	83 (11.1)	165 (22.1)	229 (30.6)	748 (100)
Milking the cord stump in a baby who is not breathing can bring back the baby's soul from the mother.	199 (26.6)	128 (17.1)	186 (24.9)	235 (31.4)	748 (100)

4.2. Research Question Two

To what extent do traditional practices influence neonatal umbilical cord management? Table 2 shows the opinions of the respondents on the traditional beliefs and neonatal umbilical cord management by nursing mothers. Out of 748 respondents, 244 (32.6per cent) strongly agreed that in their community they apply some herbal leaves on the umbilical stump so that it can fall off in few days; 328 (43.8per cent) agreed to it; 59 (7.9per cent) disagreed to it, and 117 (15.6 per cent) strongly disagreed to it. Higher percentage of the respondents, 263 (35.2per cent) strongly agreed that they use cow dung on their baby's umbilical stump to make it fall off in few days. 321 (42.9 per cent) strongly agreed that in their tribe, they do not cut off the cord as soon the placenta is delivered to allow time for mother's blood to enter the baby. 304 (40.6 per cent) strongly agreed that the use of razor blade to cut the baby's cord is a common practice in their tradition. While 401 (53.6 per cent) strongly agreed that the tying of the cord stump with hair thread is a common practice in their tradition/community.

Table-2. Traditional practices and neonatal umbilical cord management by nursing mothers

Variable	Response				
	SA	A	D	SD	Total
	f (%)	f (%)	f (%)	f (%)	f (%)
In my community, we apply some herbal leaves on the umbilical stump so that it can fall off in few days.	244 (32.6)	328 (43.8)	59 (7.9)	117 (15.6)	748 (100)
In my community, we use cow dung on baby's umbilical stump to make it fall off in few days.	263 (35.2)	279 (37.3)	152 (20.3)	54 (7.2)	748 (100)
In my tribe, we do not cut off the cord as soon as the baby is delivered to allow time for the mother's blood to enter the baby.	73 (9.8)	138 (18.5)	216 (28.9)	321 (42.9)	748 (100)
The use of a razor blade to cut the baby's cord is common practice my tradition.	304 (40.6)	75 (23.4)	192 (25.7)	77 (10.3)	748 (100)
Tying of the cord stump with hair thread is a common practice in my tradition/community.	401 (53.6)	183 (24.5)	71 (9.5)	93 (12.4)	748 (100)

5. Discussion of Findings

The first finding of this study indicates an influence of traditional beliefs on neonatal umbilical cord management by nursing mothers in Southern Cross River State. It was also shown that 29.4per cent of the respondents agreed concerning a baby having tetanus as a result of a visit by a woman who had lost her young baby some time ago. This finding is in line with that of Winch and Husein (2000) who reported that in Turkey babies are not taken out after birth, and that charms with words from the Koran are used to protect neonates, and their mothers against jealous people and malevolent spirits thought to cause diseases. Furthermore, Rouf et al. (2018) reported that 77.1% of mothers in India believe in cord care and its association with neonatal tetanus, so they protect the cord of their children from women who had lost theirs to neonatal tetanus. This study has established that traditional

beliefs have influence on neonatal umbilical cord management by nursing mothers in southern educational zone in Cross River State.

The second finding of this study indicates that traditional practices affect neonatal umbilical cord management by nursing mothers. This study revealed that 43.8 per cent of the respondents agreed that in their community, some herbal leaves are applied on the umbilical stump so that it can fall off in few days. This can be very harmful to the baby. These findings support the observation of [Tasneem et al. \(2010\)](#) in which he observe many harmful neonatal practices common among nursing mothers such as sprinkling of powder on the baby (94%), removal of vernix caseosa (81%), pre-lacteal feeding (79%), unhygienic cord practices (74%), and application of contaminated Surma (73%). Also, [Ambe et al. \(2009\)](#) reported that traditional practices of cord care in this area include application of hot fermentation (31.5%), use of rag and lantern (19.5%), use of Vaseline (9.5%), ash/charcoal (9.3%), groundnut/palm, mangrove oil (8.3%) use of powder (6.5%) and red sand (3.5%).

The study was limited to only Calabar Education Zone, Cross River State. Further research may consider expanding the scope of their study to give room for a broader generalisation. It is suggested that a similar study be carried out on variables not previously investigated, e.g., place of delivery.

6. Conclusion

It was concluded that traditional belief and traditional practices influences umbilical cord management among nursing mothers in Calabar Education Zone. The impact of traditional beliefs and practices are all the major cultural factors to which nursing mothers and health care workers must pay due to attention to ensure effective delivery of quality patient care. Based on the conclusion, it is recommended that:

- i. Traditional birth attendants (TBA's) need to be trained and re-trained by health workers on the management of the umbilical cord.
- ii. Government and NGOs should intensify public campaign against harmful traditional beliefs and practices that are injurious to child and maternal health.
- iii. There should be a forum to address each traditional rulers and their cabinets on the place of traditional beliefs and traditional practices and umbilical cord management.
- iv. Umbilical cord care should given a prominent space in the ante natal and post natal programme for expectant and nursing mothers in health facilities during their visits.

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