

Neonatal Home-Care Practices of Mothers in Ihiala Local Government Area of Anambra State

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Abstract

This study investigated neonatal home-care practices of mothers in Ihiala Local Government Area of Anambra State. 398 nursing mothers participated in a longitudinal survey to evaluate the newborn home-care behaviors of mothers in Ihiala, Anambra State. For the study, newly delivered moms who gave their informed consent were progressively selected from communities in each town in Ihiala, L.G.A., Anambra State. Data was gathered from the women in their homes using a questionnaire that the researchers had devised, tested, and validated. Data collected were loaded into SPSS version 23. Data were analyzed and summarized in tables of frequencies and percentages. The study's findings demonstrated that, despite being below the specified level of 75% and above, the majority of moms received adequate cord and thermoregulatory care, with mean scores of 65.48 and 73.6%. There was still evidence of subpar neonatal care practices in the area, including the use of tooth paste (12.9%), shea butter (27.9%), and herbs (27.4%) on the cord, as well as the non-practice of exclusive breastfeeding (72.6%) and skin-to-skin care (75.6%). Neonatal practices are influenced by age, parity, education, occupation, and delivery location. Despite their high level of awareness, it was found that the mothers did not perform proper neonatal home care. To enhance neonatal care practices and empower moms to make educated decisions about their own and their child's health, it is advised that maternal education and women's empowerment be promoted.

Keywords: Neonatal umbilical cord, breastfeeding practices, hypothermia.

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INTRODUCTION

Giving birth to a new child is still a significant occasion that makes a family happy. The birth of a new child frequently places a new care obligation on the family because newborns need assistance to survive outside the womb and to get over any issues that may arise in an environment outside of the uterus. Neonatal care is described by the Oxford Medical Dictionary as the medical attention provided to a baby at any point during the first 28 days of life in order to maintain good health. It covers the treatment of the spinal cord, nursing, and avoiding hypothermia. Neonatal phase is defined by Goyal (2020) as the first four weeks of a child's life. This is the period of extreme rapid transformation. During this time, a number of important things can happen, including as the establishment of feeding patterns, the beginning of the parent-child bond, an increase in the risk of a potentially dangerous illness, and the initial detection of several birth or congenital problems. Because newborns are extremely delicate and unable to adjust on their own, they require complete support during this time. Neonates face difficulties in both acclimating to life outside of the

womb and modifying their bodily mechanisms. These issues could be related to the skin's inability to control body temperature, the immune system's susceptibility to infection, or the newborn's inability to thrive as a result of subpar care (Bamigboye, 2015). Unhygienic cord care, improper feeding, and inefficient heat regulation are examples of inadequate newborn care procedures that put a baby at risk for morbidity and death.

According to the World Health Organization (2020), the first month of life is the most vulnerable time for a child's survival. Global estimates indicate that 2.4 million neonates die before they turn one month old, accounting for nearly half (47%) of all deaths of children under five. Almost all of these neonatal deaths take place in developing nations. The chance of a child dying is approximately 15 times higher in the first month of life than it is at any other point in the first year of life, according to the World Health Organization (2020). An estimated 460 000 children per year in underdeveloped nations such as Nigeria pass away from bacterial illnesses, of which umbilical cord infections are a major antecedent (Ahmadpour-Kacho, Zahedpasha, Hajjian

and Teblian, 2011). The body of research demonstrates that, in contrast to industrialized nations (0.7%), umbilical cord infection has high prevalence rates in community-based studies (Ganatra and Zaidi, 2010), ranging from 55 to 197 per 1000 live births (Pallazi and Brandt, 2011). Bacteria from the environment, including the mother's vagina, skin flora, and caregivers' hands, colonize the umbilical cord stump (Association of Women Health, Obstetric and Neonatal Nurses [AWHONN], 2012).

Statement of the Problem

Infants are particularly vulnerable, and they struggle to recover from any associated health issues that may arise in the extrauterine environment. Due to inadequate neonatal care, 240,000 newborns in Nigeria lose their lives in the first month of life and 94,000 on the day of birth each year (DHS, 2013). According to Bamigboye (2015), there are a number of factors that contribute to infant mortality, such as poverty, ignorance, unorthodox beliefs, cultural customs, religion, and inadequate nutrition. The rising rate of mortality in relation to the period following delivery is caused by ineffective neonatal care methods brought on by the mother's ignorance (Kerber, 2016). Effective management of newborn health care is crucial to mitigate the issue of morbidity and death. In 2012, the World Health Organization declared that all newborns should receive basic care, which includes encouraging and supporting exclusive breastfeeding from birth, keeping the infant warm, increasing hand washing, providing hygienic care for the skin and umbilical cord, identifying conditions requiring further attention, and counseling on when to take a neonate to a medical facility. In Ihiala Local Government Area, the postpartum time is distinguished by customs that permit the just delivered mother to recuperate from the strain of giving birth. The older multiparous lady accepts the responsibility of raising the newborns, possibly because of the sociocultural norms and beliefs of the family. They frequently wait to treat conditions that need immediate medical attention since they usually only apply what they know locally.

Objectives of the Study

Specifically, the objective of the study sought to:

1. Determine the neonatal umbilical cord care practices by the mothers at home in Ihiala LGA, Anambra State.
2. Ascertain the breastfeeding practices for neonate by mothers at home in Ihiala LGA, Anambra State
3. Ascertain measures adopted by mothers in Ihiala LGA, to prevent hypothermia among neonates at home.

Research Questions

The following research questions guided the study.

1. What are the neonatal cord care practices of mother's at home in Ihiala LGA?

2. What are the breastfeeding patterns practiced on neonates by mother's at home in Ihiala LGA?
3. What are the measures adopted by mothers in Ihiala LGA to prevent hypothermia among their neonates at home?

LITERATURE REVIEW

Umbilical cord care practices

The umbilical cord is a key area where germs colonize after birth. Bacterial colonization may result in cord stump infection (omphalitis), which can significantly raise infant morbidity and death rates in developing nations (AWHONN, 2012). Delays in cord detachment may raise the risk of bacterial infection because the umbilical cord vessel provides a direct entrance point for the infiltration of pathogenic microorganisms into the circulation of newborns. Following delivery, the umbilical chord is severed. The distal end of the cord, known as the cord stump, is abruptly deprived of blood and rapidly begins to dry out, turn back, and stiffen (dry gangrene) (Forbes, 2013).

At birth, the baby lacks protective flora, and within 24 hours, typical skin flora start to develop (WHO, 2009). Colonization, or the establishment of the pathogen at the proper portal of entrance, is the initial stage of microbial infection. Typically, host tissues that are in contact with the outside world are colonized by pathogens (Mullany *et al.*, 2011). In order to prevent infection, the tools used to cut through living tissue and vessels that are still attached to the baby's bloodstream must be sterile. Air exposure speeds up the cord's drying and separating process. According to Bremor and Uta (2014), the devitalized tissue of the cord might serve as a perfect medium for the growth of bacteria, particularly if it is kept moist and dirty materials are put to it. For a few days after birth, the umbilical artery remained open, allowing direct access to the lifeblood. Keeping the umbilical cord clean is essential if infection is to be avoided, as it is a common entrance point for systemic infections in newborns.

Before giving birth, clean cord care include washing hands with soap and water, tying and cutting the umbilical cord with a sterile tool, and then placing the newborn on a spotless surface. According to the World Health Organization (2012), the goal of hygienic cord care procedures is to avoid the negative effects of improper cord care, which can include umbilical cord infections and infant mortality. As a result, moms must follow the current cord care guidelines, which are founded on the asepsis concept and assist lower the risk of cord infection.

Burden of umbilical cord infection among neonate

According to Oestergaard and Inoue (2011), infections account for almost 30% of the 3.3 million newborn fatalities that occur globally each year (Mullany *et al.*, 2011a). A few of these illnesses begin as infections of the umbilical cord. In developing nations, infections

are a significant cause of infant mortality; most infections happen at home without medical intervention. Roughly 36% of infant deaths globally are caused by infections, with 99% of these cases happening in sub-Saharan African developing and low-income nations (Ahmadpour-Kacho, Zahedpasha, Hajiian and Telebian, 2011). The leading factor contributing to newborn mortality is infections. According to Ahmadpour-Kacho, Zahedpasha, Hajiian, and Telebian (2011), severe bacterial infections are thought to be the primary cause of 460,000 newborn deaths each year. One important precursor to these illnesses is umbilical cord infections. The majority of newborn deaths are caused by infections in the neonate, which may be directly caused by practices related to cord care. According to the WHO (2009), tetanus and other diseases are the main causes of newborn mortality. Neonatal infections are largely caused by cord infections. For example, an Indian study discovered that cord infection was the cause of 47% of infants hospitalized for sepsis and 21% of infants treated for other causes.

Incidence of umbilical cord infections

The existing statistics indicate the risk to range between 2 to 77 per 1000 live births in hospital settings, with death rates, between 1% and 15% depending on the criteria of omphalitis utilized. statistics on the incidence of omphalitis in low-income countries are often poor (Mir *et al.*, 2011). Infection rates are even higher according to community-based data. As an illustration, there are 105 live births per 1000 in Nepal (Mullany *et al.*, 2011b), 217 live births per 1000 in Pakistan, and roughly 197 live births per 1000 in India (Mir *et al.*, 2011). Surprisingly, there are currently no data available for the majority of African countries where infant mortality is still high and most deliveries still take place at home (Lawn, 2009).

According to Saunders (2010), there is a 1% to 12% chance of omphalitis in Pemba, Tanzania, based on moderate to severe redness with pus discharge and an offensive odor. Mullany *et al.*, (2011b) reported that the incidence in poor nations is reported to be 2–7 per 100 live births. In places where non-sterile home treatments are applied to the cord, the frequency is significantly higher. In Tanzania, 28% of newborn admissions were due to omphalitis, according to a research done on infants hospitalized to a general pediatric unit in Africa. According to hospital-based research conducted by Winani and Wood (2010), 2–54 newborns out of every 1000 births will suffer from omphalitis.

According to many hospital-based studies conducted in Nigeria, incidences of umbilical cord infection have been linked to 30–40% of neonatal deaths and account for between 10% and 19% of neonatal admissions (Afolaranmi *et al.*, 2018). In order to ascertain the cord care behaviors of 324 mothers of infants under 59 months, a cross-sectional study on the subject was carried out among them in two communities

in Plateu State, Nigeria. According to the study's findings, 61.7% of respondents showed a high degree of expertise (Susmita and Smita, 2017).

Determinants of umbilical cord infection

In order to avoid an infection, it is essential to understand its determinants. Three categories of factors are used to identify the determinants of umbilical cord infection: proximal, intermediate, and distal factors.

Proximal determinants

Prolonged rupture of the membranes, preterm labor, maternal pyrexia, unhygienic intrapartum and postnatal care, low birth weight, and prelacteal feeding of contaminated foods and fluids are proximate factors that significantly contribute to infections and should be addressed during antenatal care by the health care system (Edmond and Zaidi, 2010). According to Popowski *et al.*, (2020), prolonged rupture of the membrane (PROM) is defined as rupture of the membrane that occurs more than 18 hours before to labor and occurs in 8%–10% of pregnancies. It is a significant risk factor for preterm deliveries as well as early onset neonatal sepsis. According to Popowski *et al.*, (2020), premature rupture of the membrane is also linked to early labor and the ensuing preterm.

One of the best places for germs to colonize is the recently cut umbilical cord. The primary cause of omphalitis is colonization, which then progresses to create localized infection symptoms including pus discharge, redness, swelling, or an unpleasant smell. Studies conducted in hospitals in poor nations have revealed differing trends in the prevalence of anaerobic, Gram-negative, and Gram-positive bacteria, with the majority of the latter group being composed of *Escherichia coli* and *Klebsiella* species (Sawardekar, 2013).

Intermediate determinants

Hygiene-related behaviors are among the intermediate factors of omphalitis. These consist of the kind of birthing surface (Quddus, Luby, Rahbar, and Pervaiz, 2013), cord care (tying, cutting, topical applications) (Bennett and Adetunde, 2020), baby-bathing techniques, attendants' hand-washing techniques, skin-to-skin contact between the mother and the child, and newborn thermal care (Mullany *et al.*, 2011a)...

Prenatal care is linked to risk factors for neonatal tetanus incidence, such as inadequate prenatal care for pregnant women in a health facility, tetanus toxoid vaccination and home delivery, untrained individuals who neglect basic precautions like hand washing, cleaning the cord-cutting instrument, using several cord ties, using other materials, such as cow dung, and additional neonatal variables, such as preterm (Ilic *et al.*, 2010).

Distal determinants

Neonatal umbilical cord infection is linked to distal determinants such as caretaker literacy levels, sociodemographic, economical, and sociocultural characteristics (Mullany *et al.*, 2011b). Nia-Fraser and Brian (2013) identified several distal predictors of umbilical infection, including male sex, low birth weight (< 2500gm), and prematurity.

Knowledge, skills and practices of cord care among mothers

Mothers' awareness on the management of the umbilical chord was found to be lacking in a study conducted in five hospitals in the Puttalam area of Sri Lanka (Quddus, Luby, Rahbar and Pervaiz, 2013). In Sylhet District, Bangladesh, a study on infant skin and umbilical cord care as well as habits and knowledge was carried out. The three main methods of caring for an umbilical stump were bathing, massaging the skin with mustard oil, and applying heat to the stump itself. The study conducted by Quddus, Luby, Rahbar, and Pervaiz (2013) indicated that women were the primary caregivers for skin and cord care throughout the neonatal period. Therefore, it is crucial to provide them with appropriate knowledge to enable them to deliver the necessary practices. A study on the practices of umbilical cord care among mothers in North-Eastern Nigeria found that the mothers were not providing hygienic cord care and that more education was needed regarding hygienic practices related to topical cord care (Quddus, Luby, Rahbar and Pervaiz, 2013). According to research conducted in South India, there are several gaps in postnatal mothers' knowledge and attitudes on newborn care, including cord care, particularly among those from lower socioeconomic backgrounds (Mohamed and Vishnu, 2018).

According to Stewart and Benitz (2016), one of the biggest public health possibilities of the twenty-first century may be the infant mortality linked to bacterial contamination of the umbilical stump. The World Health Organization (2019) states that poor care practices by mothers can lead to cord infections, which are the cause of neonatal mortality. Lower-cost, lower-skill interventions, the majority of which are in policy but are not completely integrated and implemented by mothers and caregivers in rural communities, might rescue a significant proportion of these babies.

There are two layers to the best implementation strategy for preventing newborn sepsis (WHO, 2009); (1) at birth; cleaning hands with soap and water prior to delivery, placing the baby on a sterile surface, and using a sterile instrument to cut the cord; (2) post-natal; cleaning hands with soap and water both before and after care. If the cord stump becomes soiled, it should be cleaned with clean water (boiled and chilled in a closed container) and the napkin should be folded below the umbilicus. Otherwise, it should be kept dry, exposed to air, or loosely covered with clean garments.

Management of umbilical cord

Before giving birth, clean cord care include washing hands with soap and water, tying and cutting the umbilical cord with a sterile tool, and then placing the newborn on a spotless surface. The World Health Organization's guidelines for hygienic cord care practices aim to avoid the negative effects of improper cord care, such as infections of the umbilical cord and neonatal fatalities. As a result, moms should follow the current guidelines for cord care, which are founded on asepsis and assist to lower the risk of cord infections. As advised by the World Health Organization (2007), sterile plastic cord clamps, thin tapes, and textile threads can all be used to tie the umbilical cord. It is advised that the equipment used to cut the cord be sharp and sterile to prevent trauma and infection of the cord. While used appropriately, these materials, while sterile, will successfully prevent infection of the umbilical cord and death of the newborns.

According to Dore, Buch, and Tom (2011), the American Academy of Pediatrics opposes the application of topical antiseptics to the umbilical cord following childbirth. However, numerous recent studies indicate that the rate of pathogen colonization is too high in these situations, particularly in developing nations where most home births occur (Thompson, Udom, and Ugorji, 2011).

Factors influencing cord care practice Socio cultural and economic

The management of the umbilical cord is linked to a wide range of customs and beliefs. According to a study conducted in Egypt by Tedbabe, Amare, and Muligan (2014), cultural beliefs and practices related to neonatal care, such as cord care, do not always align with recommended standards. The study suggests that behavior change messages aimed at mothers, grandmothers, traditional birth attendants, other family members, and fathers should take into account the local perspective on neonatal care practices. Since it is widely held in many cultures that cord care should never get dry, treating the cord stump with substances tries to make the chord pliable so that it can separate and mend more quickly. Herlihy *et al.*, (2013) examined a study conducted in Zambia with a focus on group participants and reported on an antiquated custom of tying string with a fiber from the back of a tree that is no longer carried out. The type of cord care procedure that is usually determined by its cost. In a survey done in Zambia, almost all of the respondents mentioned using a razor blade as their tool of choice because of how affordable it is. Waiswa *et al.*, (2012) proposed that the expenses related to health facility deliveries, as stated by participants in a Ugandan survey, could potentially be a secondary source of cord care costs.

Institutional factors influencing cord care practices

According to the World Health Organization (2013), in some circumstances, applying 4% chlorhexidine to the cord stump may be considered as an

alternative to dangerous traditional treatments such as applying cow dung. Applying methylated spirit on the cord stump once a day is thought to be advantageous. Since health care providers have a duty to educate mothers and other caregivers about the post-natal care of newborns, their knowledge may have an impact on the practice of cord care. Additionally, medical professionals at healthcare facilities typically start cord care by tying, cutting, and applying substances to the umbilical cord. According to a study conducted in Zambia by Herlihy *et al.*, (2013), the WHO and MOH Zambia appear to be aware of dry cord as a current clinical guideline. Nonetheless, mothers' worries regarding the care of the newborn cord include bleeding during the separation process and cord infection, and these worries persist even after the mothers are released from the hospital (Forbes, 2013). The mother should be instructed by the midwife to keep the cord clean and dry, avoid routine cleaning as it can delay separation and cause infection (Afolaranmi *et al.*, 2018), keep it above the diaper to allow it to dry naturally, and wash it with water if it becomes contaminated. Mothers should be encouraged to report any evidence of natural separation to a health professional if necessary, and these signs should be discussed.

Feeding practices among infants

The life, growth, and development of children depend critically on optimal feeding habits. The foundation for survival, growth, and development is laid during the first two years of life by what, when, and how young children are fed. Breastfeeding should begin as soon as possible after birth, last for the first six months of the baby's life, and continue for at least two years. Breastfeeding should begin at six months along with age- and safety-appropriate solid, semi-solid, and soft food feeding.

In order to evaluate breastfeeding practices for infants and young children during this crucial period from birth to up to two years of age, UNICEF and the WHO released an updated set of indicators in 2021. These indicators include early breastfeeding initiation at birth, exclusive breastfeeding for the first six months of life, the introduction of solid, semi-solid, or soft food at six to eight months of age, and continued breastfeeding (12–23 months).

Breastfeeding practices

Breastmilk is the only food that babies should be fed from birth to six months of age since it is the most nutrient-dense, safe, hygienic, and readily available for them to eat wherever they may dwell. Early initiation of breastfeeding, or placing a newborn to the breast within the first hour of life, is essential for both long-term breastfeeding establishment and neonatal survival. Delaying nursing after delivery can have potentially fatal consequences; the longer a newborn is breastfed, the higher the chance of mortality. All other forms of feeding, however, run the risk of delaying the time when

a newborn makes contact with their mother and complicating the process of breastfeeding.

Although a large percentage of newborns globally are nursed, there are significant differences in the length of breastfeeding, with the majority of nations still using subpar breastfeeding techniques (Takahashi, Ganchmeg, Ota, Voge, Souza, and Laopaiboon, 2017). Breastfeeding babies from an early age can lower their mortality rate. In many settings with limited resources, the prevalence of early breastfeeding beginning is only approximately 50% (Takahshi *et al.*, 2017). All neonates should receive basic care that includes encouraging and supporting exclusive breastfeeding from birth, keeping the infant warm, increasing hand washing, and giving sanitary skin and umbilical cord care, recognizing ailments that call for additional attention and providing advice on when to bring a newborn to a medical facility. Breast milk is abused in certain cultures where it is prescribed for a variety of ailments, including conjunctivitis, other eye and ear conditions, and other conditions. The baby must be the only recipient of the milk. The majority of moms choose not to breastfeed because they worry about their breasts changing shape.

Benefits of exclusive breastfeeding

According to Oche (2011), breastfeeding continues to be the most straightforward, cost-effective, and healthiest feeding technique for almost all babies that meets their demands. Both developed and developing countries' public health can benefit from the many advantages of breastfeeding. According to Kramar and Kakuma (2014), exclusive breastfeeding is better than non-exclusive breastfeeding and has a protective impact against both morbidity and mortality. Exclusive breastfeeding calls for delivering breast milk exclusively and consuming no other liquids, with the exception of drops or syrups containing vitamins, mineral supplements, or medications. For newborns, exclusive nursing offers complete nutrition at a minimal cost. It increases birth spacing by shielding the babies from illnesses like newborn diarrhea and prolonging breastfeeding amenorrhea. One natural and replenishable resource is breast milk. It has the advantage of not requiring the addition of sanitary water, unlike infant formula, in areas where access to or safety from water supplies is compromised.

METHODOLOGY

The research design employed in this study to evaluate the practices of women providing newborn care in Ihiala Local Government Area (LGA) in Anambra State was a descriptive, non-experimental, longitudinal survey. All recently delivered women and their newborns in Ihiala LGA, Anambra State, make up the study's population. The study employed both basic random sample and selective sampling techniques. The researcher reaches out to people she believes are qualified to provide her with the data she needs using the purposive sampling method, and she then chooses them.

For the study, a simple random selection method was employed to choose the communities. This is a result of the substantial and widely dispersed maternal population in Ihiala LGA. Ten towns make up Ihiala LGA; a list of the villages was created, and one village was chosen from each town. The ten villages listed below were selected using a basic random sample technique (without replacement): Ubahuekem, Uhuobo, Umuoma, Umuokpara, Isiokwe, Ihueke, Isu-mbosi, Umudi, Akwa, and Ndamé. The study involved 398 moms in total who agreed to participate and met the inclusion criteria. A pretested questionnaire created by the researcher was used to gather data; it was designed to elicit relevant information needed for the investigation. There were four sections on the questionnaire: A, B, C, and D. Information on sociodemographic traits including mother age, parity, education level, marital status,

employment, religious affiliation, and delivery location was included in Section A. There were four items in section B, eight in section C, fifteen in section D, and a total of thirty-five items in section D that represented study factors. The reasons for the kind of care moms offer their newborn, as well as practices related to nursing, thermoregulation, and cord care, were all considered variables. Significant variations in the mean score were found using analysis of variance. Bonferoni post hoc analysis was used to identify particular regions of notable variation in care practices. To address the research topics, descriptive statistics were provided as percentages and frequency tables. A p-value of 0.05 was used to evaluate statistical significance.

DATA ANALYSIS AND RESULTS

Table 1: Demographic of Mother, (n = 365)

Demographic characteristics	Options	Frequency	%
Age range	18 – 25 years	37	10.1
	26 – 33 years	224	61.4
	34 – 41 years	84	23.0
	42 years and above	20	5.5
Total		365	100
Marital status	Single	49	13.4
	Married	235	64.4
	Divorced	47	12.9
	Widowed	34	9.3
Total		365	100
Occupation	Farming	108	29.6
	Trading	156	42.7
	Civil servant	101	27.7
Total		365	100
Highest Educational qualification	No formal education	74	20.3
	Primary	55	15.1
	Secondary education	175	48.1
	Tertiary education	60	16.5
Total		365	100
Religion	Christianity	267	73.2
	Traditional	50	13.7
	Islam	48	13.1
Total		365	100

Result in table 1 indicates that out of 365 samples, most (61.4%) of the respondents were within the age of 26-33 years; greatest percentage (64.4%) are

married; highest percentage (42.7%) were traders; greatest percentage (48.1%) had secondary education and majority (73.2%) were Christians.

Table 2: Obstetric History of the Mothers (n = 365)

Obstetric history	Options	Frequency	%
Parity (number of children)	1 – 2 Children	78	21.3
	3 – 4 Children	223	61.1
	5 and above	63	17.3
	Missing	1	0.3
Total		365	100
Place of delivery	Maternity home	90	24.7
	Health centre	112	30.7
	Hospital	162	44.4
	Others	1	0.3

Obstetric history	Options	Frequency	%
Total		365	100
Reasons for choice of place of delivery	Husband's decision	160	43.8
	Financial constraints	66	18.1
	Distance	127	34.8
	Others	12	3.3
Total		365	100

Result in table in table 2 shows that greater number of the mother's have three to four children (61.1%) meanwhile 44.4% of the mothers had their previous delivery at hospital and 43.8% of the mothers claim that husband decision influenced their choice of place of delivery.

Research Question 1: What are the neonatal cord care practices of mothers at home? Item 9, 10, 11, and 12 were used to answer this research question.

Table 4a: Cord Care Practice of Mothers (n=365)

ord Care	Option	Frequency	%
Mother's Knowledge about umbilical cord care			
Had information about care of the cord stump	Yes	346	94.8
	No	19	5.2
Total		365	100
Source of information	Elderly women around	119	32.6
	Nurses	204	55.9
	Doctors	6	1.6
	Books	6	1.6
	friends and media	1	0.3
	Others	24	6.6
	Missing	5	1.4
Total		365	100
	Missed data	1	0.3
Material Used to cut cord	Scissors	197	54.0
	Surgical blade	14	3.8
	Razor blade	52	14.2
	Don't know	100	27.4
Total		365	100
Care of the cord			
Hand washing with detergent before and after handling the cord	Yes	327	89.6
	No	38	10.4
Total		365	100
Check cord for bleeding and redness regularly	Yes	195	53.4
	No	170	46.6
Total		365	100
Wash area around cord stump with water when bathing	Yes	356	97.5
	No	9	2.5
Total		365	100
Expose cord to air	Yes	223	61.1
	No	142	38.9
Total		365	100
Substances used for cleansing			
Methylated spirit	Yes	279	76.4
	No	86	23.6
Total		365	100
Hot water	Yes	190	52.1
	No	175	47.9
Total		365	100

Result in the table 4a revealed, 94.8 indicate that they were taught cord care. 55.9% of the respondents

were taught by the nurses while 32.6% claimed elderly women to be their source of information on care of the

cord stump. 54.0% of the respondent said that scissors was used to cut their baby's cord. 89.6% of the respondent indicated that they wash their hands with detergents before and after handling the cord, 53.4% checked their neonate cord stump regularly for bleeding and redness. Over ninety-seven percent of the

respondents wash the area around the cord with water when bathing. About 61.1% exposes the cord to air for quick drying and early separation. Substances used for cleaning the cord were: methylated spirit (76.4%) and hot water (52.1%).

Table 3b: Cord Care Practice of Mothers (n= 365)

Cord Care	Option	Frequency	%
Substances applied to the cord after cleaning for healing			
Application of herb	Yes	100	27.4
	No	265	72.6
Total		365	100
Apply gentian violet(GV)	Yes	48	13.2
	No	317	86.8
Total		365	100
Petroleum jelly/ Vaseline ointment	Yes	55	15.1
	No	310	84.9
Total		365	100
Hot balm	Yes	21	5.8
	No	344	94.2
Total		365	100
Toothpaste	Yes	47	12.9
	No	318	87.1
Total		365	100
Hot wet piece of cloth	Yes	25	6.8
	No	340	93.2
Total		365	100
Shea butter	Yes	102	27.9
	No	262	71.8
	Missing	1	0.3
Total		365	100
Antibiotic	Yes	0	0.0
	No	365	100
Total		365	100
Frequency of the cord cleaning			
Once daily	Yes	233	63.8
	No	132	36.2
Total		365	100
After bathing baby	Yes	339	92.9
	No	26	7.1
Total		365	100
After change of napkin	Yes	141	38.6
	No	222	60.8
	Missing	2	0.5
Total		365	100

Result in table 3b shows that 27.4% of the respondents apply herbs to their neonate's cord to make it fall faster, other substances applied to the cord stump are: gentian violet (13.2%), petroleum jelly (15.1%), hot balm (5.8%), tooth paste (12.9%), hot wet piece of cloth

(6.8%), and shea butter (27.9%). Over sixty-three percent of the respondents clean their baby's cord once daily, 92.9% clean the cord after bathing the baby while 60.8% clean the cord after changing of napkin.

Table 4: Proportion of mothers that practiced appropriate neonatal umbilical care

Neonatal umbilical care practices	Yes 1	No 0	Total
Hand washing with detergent before and after handling the cord	328(89.9)	37(10.1)	365(100)
Check cord for bleeding and redness regularly	195	170	365(100)
Wash area around cord stump with water when bathing	356	9	365(100)

Neonatal umbilical care practices	Yes 1	No 0	Total
Expose cord to air	223	142	365(100)
Methylated spirit	279	86	365(100)
Gentian violet	48	317	365(100)
Mean score for appropriate neonatal umbilical care	65.48		

$$\text{Score (\%)} = (\text{n/target}) \times 100 \text{ (maximum 100)}$$

Table 4 shows that mean score mothers umbilical care practices was 65.48%

*75% and above = Good practice; Below 75% = poor practice

Research Question 2: What are the breastfeeding patterns practiced on neonates by mothers at home?

Table 5: Breastfeeding Patterns of Mothers at (n-365)

Breastfeeding patterns	Option	Frequency	%
Feed immediately after birth	Plain water with spoon	78	21.4
	Infant formula only	17	4.7
	Glucose water	68	18.6
	Breast milk and water	145	39.8
	Breast milk only	57	15.7
Total		365	100
Awareness of EBF	Yes	245	94.5
	No	20	5.5
Total		365	100
Sources of information about EBF	Mother in-in-law	67	18.4
	Nurses	245	67.1
	Doctors	7	1.9
	Book, media and friends	2	0.6
Total		365	100
Time of initiation of breastfeeding	Immediately after birth	123	33.7
	2 – 24 hours after delivery	126	34.5
	2 days after deliver	27	7.4
	when the baby start crying for food	89	24.4
Total		365	100
Do you practice exclusive breastfeeding	Yes	100	27.4
	No	265	72.6
Total		365	100
Introduction to other type of feed	Immediately after birth	25	6.8
	1 – 3 weeks after childbirth	135	37.0
	4 – 6 weeks after childbirth	111	30.4
	4 – 6 months	94	25.7
Total		365	100
What mothers use to stimulate increase flow of breast milk	Increase water intake	159	43.6
	Take Palm wine	89	24.5
	Take Hot tea or pap	81	22.3
	Take Concoctions from herb	36	9.9
Total		365	100

Table 5's results indicate that the majority of respondents (39.8%) give their newborns breast milk and water right away. More than 94% of those surveyed knew about exclusive breastfeeding. The respondents stated that their mother-in-law (18.4%) and nurses (67.1%) were their primary information sources. The majority of responders (34.5%) nursed their newborns for two to four hours following delivery. Of the women, about 27.4% exclusively breastfed their children. Within

one to three weeks after giving birth, 37 percent of respondents introduce a different type of feed, and 43.6% of respondents increase their water intake to increase the secretion of breast milk. More than 24% of respondents said they would use palm wine to encourage more breast milk to flow, whilst 9.9% said they would use mixtures. **Research question 3:** What are the measures adopted by mothers to prevent hypothermia among their neonate at home?

Table 6: Measures Adopted by Mothers to Prevent Hypothermia at Home (n = 365)

Prevention of hypothermia	Option	Frequency	%
Did you bath your baby immediately after delivery?	Yes	44	11.0
	No	321	89.0
Total		365	100
Did you bath your baby with cold water?	Yes	25	6.8
	No	340	93.2
Total		365	100
Did you practice skin-to-skin contact with your baby?	Yes	89	24.4
	No	276	75.6
Total		365	100
Did you do room-in your baby?	Yes	340	93.1
	No	25	6.9
Total		365	100
Did you cut your baby's hair within the first week of life?	Yes	30	8.1
	No	335	91.9
Total		365	100
Did you use cap and socks to cover the baby?	Yes	320	87.7
	No	45	12.3
Total		365	100
Did you put on the fan or air conditioner for your baby?	Yes	112	30.7
	No	253	69.3
Total		365	100
Did you delay bathing your baby for more than six hours after delivery?	Yes	317	86.8
	No	48	13.2
Total		365	100

Table 6's results showed that 11% of the respondents bathed their newborn as soon as possible. More than 6% of participants acknowledged giving their infants a cold water bath. A higher proportion of participants (75.6%) reported not engaging in skin-to-skin contact. More than 93% of the moms stay in their rooms with their infants. A smaller proportion of respondents (8.1%) acknowledged trimming their baby's hair in the first week of life. A higher proportion of moms (87.7%) protect their babies with socks and a cap. Thirty-nine percent (30.9%) of the mothers acknowledged setting up an air conditioner or fan for their child. Over eighty-six percent (86.8%) of the respondents delayed bathing their babies for more than six hours after delivery.

DISCUSSION OF FINDING

The results of this study demonstrated that mothers in Ihiala L.G.A., Anambra State, had a high level of awareness (94.8%) on appropriate practices for cord care. The bulk of cord cutting (53.9%) was done using scissors, according to the study, which suggests appropriate cord management techniques. The bulk of the mothers gave birth in hospitals, where clean cord care is standard procedure, which could explain these results. While razor blades (14.3%) and surgical blades (3.9%) are among the additional materials used to cut the cord, 27.8% of moms are unaware of what was used to cut their child's cord. This runs counter to the conclusions of Opara, Jaja, and Okari (2011), who conducted a cross-sectional study on the practices of newborn cord care among women who came to the University of

Portharcourt Teaching Hospital's pediatric outpatient and infant welfare clinic with children aged 0 to 6 months. It was shown that 36.2% of moms were unaware of the instrument used to cut their baby's umbilical chord.

It is significant to notice that several of the respondents included "tooth paste" among the materials they used to control their cords. Despite the tiny percentage, this is highly significant for neonatal health because there is no research on it. To avoid any negative effects and poor newborn outcomes, it is essential to evaluate the active ingredient in tooth paste in relation to neonatal umbilical care and neonatal health in general. The majority of respondents cleaned the cord once a day on average when it came to cord maintenance. This was consistent with the World Health Organization's (2012) opinion that, while cord cleaning should be done once a day, in situations when hygienic conditions are inadequate, topical antibiotic administration should be used.

A slight majority of women (65.48%) had a higher cord care practice, according to the overall umbilical cord care practice score. Comparable to research conducted in Nigeria, which revealed that 73.8% of mothers possessed sufficient information about umbilical cords (Afolaranmi *et al.*, 2018), and research conducted in Kenya, which demonstrated that 66% of respondents had good practices (Luka 2011). However, a Kavrepalanchok district research found that 33% of mothers used risky practices when caring for their newborn cords, and 78% of mothers had insufficient

understanding (Susmita and Smita, 2017). The variation may be due to distinct features of the research population and environment. The results of this study also demonstrated that parity was a factor influencing cord care practices, as primi-para individuals were less likely than multipara individuals to get instruction on umbilical cord care. This could be explained by the fact that multipara have acquired knowledge about cord care from prior births. Similar results showing that primipara women practiced good cord care compared to multipara women were reported by Asiegbe *et al.*, in Nigeria. This, however, runs counter to a research by Chizom *et al.*, that found that as the number of children increased, the quality of cord care practices improved. This conflicting result implies that additional research is necessary to validate the significance of parity status in the practice of cord care.

One of a newborn's basic needs is to be breastfed, and exclusive breastfeeding is a crucial part of providing newborn care. According to the study's findings, the majority of respondents (94.8%) were well-informed on exclusive breastfeeding. This could be because the respondents gave birth in a medical facility and received education about the value of exclusive breastfeeding during their visits. This is comparable to a study conducted in Kaduna, Nigeria, where it was found that 86.6% of participants knew a decent deal about exclusive breastfeeding (Yakubu *et al.*, 2023). The results of this study demonstrated that, despite the well-established advantages of breastfeeding, fewer than half of the mothers—33.6% of whom started in the first hour after giving birth, and 25.3% of whom exclusively breastfed—practiced these practices. This research was comparable to that conducted by Barrow, Arora, and Ekholuenetale (2022). They conducted a cross-sectional study on breastfeeding and skin-to-skin contact in Nigeria. Age ($p=0.48$) and parity (0.036), two sociodemographic factors linked to awareness of exclusive breastfeeding, were found to have a substantial impact on that awareness. Comparing moms over 41 years old, those between the ages of 26–33 (85.9%) and 34–41 (90.5%) are more likely to have a higher level of awareness. This runs counter to a study conducted in Kaduna, Nigeria, which found that young moms were more likely to continue to practice exclusive breastfeeding and have a high level of awareness of it (Yakubu *et al.*, 2023). This study was comparable to one conducted in Uganda, where 60% of the moms neglected to bathe their infants during the first twenty-four hours of life (Kayom, Kakuru and Kinguli, 2015). It is possible to take advantage of the positive attitudes shown by the mothers in this study, since they are likely to be open to educational programs aimed at increasing their understanding of newborn thermoregulation.

CONCLUSION

In the research area, potentially dangerous practices persisted despite considerable awareness of newborn care. Neonatal home-care practices are

significantly impacted by a few sociodemographic characteristics. In order to attain good newborn home care practices, education and follow-up care after hospital discharge should receive more attention. This is crucial to ensuring that women use what they have learned on their own, independent of other important people.

RECOMMENDATIONS

Programs for educating the public about optimal newborn care, such as exclusive breastfeeding, cord cutting, skin-to-skin contact, etc., are carried out through the use of the media, health lectures in medical facilities, advertisements, and postnatal health talks in places of worship. This will educate men, older women, and adolescents in different communities in addition to childbearing women, inspiring them to assist and encourage their mothers in making sure their newborns engage in healthy activities. Every state and local government ought to create a newborn package based on science, with consistent guidelines for the time and frequency of care. It is important to support women's, families', and community members' empowerment about healthy home care for mothers and newborns. Health care clinicians should follow up with contacts to make sure mothers are genuinely implementing the values that were instilled in them during the prenatal session.

REFERENCES

- Adejuyigbe, E., Bee, M., Amare, Y., Omotara, B., Ignatus, R., & Manzi, F. (2015). Thermal care beliefs and practices in four African sites. *Biomedical Journal of Pediatric*, 15(1), 156. doi:10.1186/s/2887-015-0470-0.
- Ademuyiwa, A. O., Soande, O. A., Ijaduola, T. K., & Adejuyigbe, O. (2014). Determinants of mortality: in neonatal intestinal obstruction in Ile- Ife, Nigeria. *African journal of Pediatric Surgery*, 6(1), 11-13.
- Adamu, A., Isezu, K. O., Ali, M., Abubakar, F. I., Jiya, F. B., Ango, U. M., Yunusa, E. U., & Bello, M. M. (2022). Prevalence and factors influencing exclusive breastfeeding practice among nursing mothers: A prospective study in North-Western Nigeria. *Niger J Basic Clin Sci*, 19, 139-144.
- Asiegbe, U. V., Asiegbe, O. G., Ezeonu, C. T., Ezeanosike, O. B., & Onyire, B. N. (2019). Determinants of cord care practices among mothers in Abakaliki, Ebonyi State, South East, Nigeria. *Open Journal of Preventive Medicine*, 9(05), 43-50.
- Afolaranmi, T. O., Hassan, T. I., Akinyemi, O. O., Sule, S., Maleté, M. U., Choji, C. P., Bello, D. A. (2018). Cord care practices: A perspective of contemporary African setting. *Front Public Health*, 6, 10. doi: 10.3389/fpubh.00010
- Ahmed, O., & Verber, N. (2021). Home delivery and newborn care among women in delivery and newborn care among women in Nigeria. *Global Journal of Medical Science*, 9(7), 204-209.

- Ahmadpour- Kacho, M., Zahedpasha, Y, Hajjian, K., Javadi, G., & Tebian, H. (2011). The effect of topical application of human milk, ethyl alcohol 96%, and silver sulfadiazine on umbilical cord separation time in newborn. *Achieves of Iranian Medicine*, 9(1), 33-38.
- Akuse, R. M., & Obiya, E. A. (2013). Why health care workers give prelacteal feed. *European Journal of Clinical Nutrition*, 56, 729-734.
- Alam, M. A., Ali, N. A., Sultana, N., Mullany, L. C., Teela, K. C., Khan, N. U. Z., ... & Winch, P. J. (2008). Newborn umbilical cord and skin care in Sylhet District, Bangladesh: implications for the promotion of umbilical cord cleansing with topical chlorhexidine. *Journal of perinatology*, 28(2), S61-S68.
- Ambe, J., Bello, M., Yahaya, S., & Omotara, B. (2014). Umbilical cord practices in Kodunga Local Government Area of Bornu State, North- Eastern Nigeria. *Journal of Tropical Medicine*, 9(6), 87-92.
- Ashimika, M. (2013). An assessment of the breastfeeding practices and infant feeding pattern among mothers in Mauritius. *Journal of Nutrition and Metabolism*, 1-8.
- Association of Women's Health, Obstetric and Neonatal Nurses. (2012). Evidence- based clinical practice guideline: Cord care. *Neonatal Skin Care: Evidence-Based Clinical Practice Guideline (2nd Edu.)*. Washington D.C.
- Bamigboye, A. (2016). High infant mortality rate in Nigeria. Retrieved from www.pharmatimes.com.ng on June, 20 2019.
- Basil, T., Kayode, S., Mark, S., & Mbe, T. (2013). Neonatal tetanus: A continuum challenges, Risk factors, clinical features and prognostic factors. *Global Journal of Medical Sciences*, 6(4), 20-28.
- Basse, U., Thompson, W., & Udia, T. (2009). Role of antimicrobial application to the umbilical cord in neonates: A review of the evidence. *American Academy of Pediatrics*, 12(2), 50-56.
- Blencowe, H., Lawn, J., Vandelaer, J., Roper, M., & Cousens, S. (2010). Tetanus toxoid: Immunization to reduce mortality from neonatal tetanus. *International Journal of Epidemiology*, 39(1), 102-109.
- Bennett, J., & Adetunde, T. (2020). Influence of Native Customs on Newborn Care in Nigeria. *International Journal of Epidemiology*, 25(4), 879-884.
- Bremor, F., & Uta, D. (2014). Saving newborn lives in Nigeria: Integrated health strategy. *Global Journal*, 74(6), 21-26.
- Brown, K., Dewey, K., & Allen, L. (2008). Complementary feeding of young children in developing countries: A review of current scientific knowledge, World Health Organization. *Geneva, Switzerland*, 1-6. Retrieved from <https://www.goo.gl/CvBJV> on January, 18 2018.
- Bergstrom, A., Byaruhanga, R., & Okong, P. (2015). The impact of newborn bathing on prevalence of neonatal hypothermia in Uganda: A randomized control trial. *Acta Paediatrica*, 94(5), 1462-1467. doi:10.1080/08035205100366750.
- Bekele, k., Bekele, F., Meknnen, M., Jemal, K., & Fekadu, G. (2022). Neonatal care practice and associated factors among mothers of infant 0-6 months old in North Shewa zone, Oromia region, Ethiopia. *Scientific Reports*, 12, 10709.dio: 10.1038/41598-022-14895-3
- Bhatt, B., Malik, J. S., Jindal, H. Sahoo, S., & Sangwan, K. (2015). Cord care practices among mothers of newborn in urban areas of Rohtak Haryana. *International Journal of Basic and Applied Medical Sciences*, 5(1), 55-60.
- Brown, K. H., & Dewey, K. G. (2014). Update on technical issues concerning complementary feeding of young children in developing countries and implication for intervention programs. *Food Nutrition Bull.*
- Chizoma, M. N., Fisayo, O., & Abimbola, O. O. (2020). Umbilical cord care knowledge and practices of mothers attending selected primary health care centres in Ibadan, Nigeria. *Int J Caring Sci*, 13, 143-151.
- Coffey, P. S., & Brown, S. C. (2017). Umbilical cord care practices in low-and middle-income countries: a systemic review. *Biomed Central Pregnancy and Childbirth*, 17(1), 68.