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FEEDING PATTERN PRACTICES AND HEALTH CHALLENGE AMONG INFANTS IN NEMBE BAYELSA STATE

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ABSTRACT

The study aims to investigate feeding pattern practices and health challenges among infants in Nembe, Bayelsa State, Nigeria. The study examines exclusive breast feeding, predominate breast feeding, and prelacteal feeding. To guide the study, three research questions and hypotheses were formulated. Two sampling techniques were adopted; random sampling technique and purposive sampling technique which was used to select 365 respondents. The data for this study were gathered mainly via two methods; questionnaire and interview. The findings of the study revealed that mothers who involved in exclusive breastfeeding accounted for 17 percent (17%), that is, they feed their babies with breast milk only, which means that their babies did not experience, diarrhea, pneumonia, and weakness, Mothers who engage in predominant breast feeding accounted for 24 percent (24%) which shows that their babies experience body weakness. On prelacteal feeding on infant health indicates that 28 percent (28%) of mothers said that they gave Fanta water to their babies within the first three to five days after birth while 27 percent (27%) said their babies experience diarrhea. The findings also show that there is a strong relationship between exclusive breastfeeding, predominant breast feeding, and prelacteal feeding. It is recommended, among others that lactating mothers should strictly adhere to exclusive breast feeding as it enhances infants' growth and development as well as development of the brain and have lesser chance of becoming ill or dying from diarrhorea, pneumonia, meningitis, ear infections and other infections during the first six months of life.

Keywords: Feeding Patterns, Health Challenge, Infants, Nembe, Bayelsa State.

Introduction

Feeding patterns are categorized into exclusive breast feeding and non-exclusive breast, WHO (2008); Labbok and Krasovec (1990); (Sunil, Raina and Singh, 2012). Breast feeding is the preferred method of feeding for the infant in the first six months of birth. However, non-

exclusive breast feeding such as predominate breast feeding and prelacteal feeding is preferably adopted by many lactating mothers across the globe. Nonexclusive breast feeding is the practice of giving infants other foods or fluids in addition to the breast milk within the first six months of age. This and other feeding patterns constitute feeding practices.

Globally, sixty percent (60%) of the 10.9 million infants and young children death occur annually due to inappropriate infant feeding practices and infectious diseases where two – thirds of these deaths are attributed to suboptimal breastfeeding practices. No more than thirty-five percent (35%) of infants worldwide are exclusively breastfed during the first four months of life, and foods are often nutritionally inadequate and unsafe, (Ethiopia Demographic and Health Survey, 2011; UNICEF and World Health Organization, 2003).

From 0-6 months are critical period in infants' lives and this critical period requires adequate feeding for laying a sound, healthy foundation for optimal growth and development of a child. Normally a healthy infant doubles its birth weight by the 4th month and triples it by the end of the first year and is also critical for the development of the brain. Adequate feeding practices are therefore necessary for this to be achieved during this early life stage. To address this issue, the WHO in 2001 set out the recommendation that infants should receive breast milk exclusively for the first six months and subsequently, receive safe, appropriate, adequate complementary food and breast milk until 2 years and beyond. Initiation of breast feeding immediately at birth followed by appropriate introduction of complementary feeding is a key determinant influencing healthy growth and development of infants.

Furthermore, one of the reasons why mothers introduce prelacteal feeding pattern is because they lack breast milk after first five days of putting to birth. Other different factors affect pre-lacteal feeding practice, mainly related to home delivery, failure to attend ante-natal care (ANC), late breastfeeding initiation, and influence by friends. Birth order of index child, birth spacing less than 24 months, colostrum discarding, delivery by caesarean section and maternal belief on the purported advantage of pre-lacteal feeding were also factors affecting pre-lacteal feeding.

The next breast-feeding pattern which is predominant, occurs when the baby cries and the mothers feel the baby is not satisfied with the breast milk alone, couple with the urge that the baby might be tasty the mothers resort to giving the baby water hence the predominant pattern.

Scholars such as Agunbiade and Ogunleye (2012), Ukegbu, Ebenebe, Ukegbu and Onyeonoro (2011) and Ogbonna and Daboer (2007) have investigated different aspect of feeding pattern in different part of the country. Moreover, the rate of practicing exclusive breast feeding in Nigeria varies widely ranging between 19 – 70 %. Studies in different locations reported that 67 % of women practiced exclusive breastfeeding in Jos, Plateau State (Ogbonna and Daboer, 2007), 52.9 % in Lagos State, 37 % in Anambra State (Ukegbu, Ebenebe, Ukegbu and Onyeonoro, 2011). Another study reported 60 % in Calabar Cross River State and 56.8 % among rural women in Imo State. Some studies in South Western Nigeria reported much lower prevalence (19 %) of exclusive breastfeeding (Agunbiade, and Ogunleye, 2012).

However, non-exclusive breast feeding practice among lactating mothers still remains a public health concern in Nigeria as it affects children in the age group of 0-5 years particularly in Nembe Local Government Area of Bayelsa State. Statistics from various national surveys showed that the prevalence of stunting among infants 6-59 months old has remained the largest burden of malnutrition. Since 2013, stunting rates have been above 30 % with many states in the North West and North east recording over 40 % prevalence above the WHO critical levels NDHS (Nigeria Demographic and Health Survey) (2013); Multiple Indicator Cluster Survey (MICS), (2016/17); National Nutrition and Health Survey (NNHS), 2018). Most of the health challenges among infants are: diarrheal, pneumonia and obesity.

Diarrhea is commonly a sign of an infection in the intestinal tract that is caused by different bacteria, virus and parasitic entities. In low resource areas, Rotavirus and Escherichia coli bacteria cause the highest incidents of diarrhea (UNICEF, 2016). These microorganisms spread throughout unclean water and contaminated food or from one person to another, and are most widespread in settings with poor hygiene and absence of access to clean drinking water and sanitation. Diarrhea continues to be one of the leading causes of child mortality, mostly in children less than 5 years of age living in low and middle-income countries (Rosenberg, 2007); Daw, (2025).

Furthermore, WHO defines childhood pneumonia as the presence of cough and/or difficult breathing with an elevated respiratory rate (Spence et al., 2017). Globally pneumonia accounts for nearly one in five deaths among children less than 5 years of age (Phuong et al., 2017).

The data for this research are sourced from hospitals and primary Health Care Centres in the Local Government based on the identified feeding patterns which are equally taking by the health officers from the mothers during the ante-natal care. This study therefore, investigated the various feeding pattern practices such as exclusive breast feeding, predominant breast feeding, prelacteal breast feeding and their various health challenges. Other scholars that have toured the path of this research of this nature, done this through different means as regard method of data collection; some sourced their data from the general hospitals, medical centres and individual homes. This study is breaking a new ground as the research sourced its data from the primary health centres in the grassroots as a way of enlightening these mothers in relation to various breast feeding patterns. This is the gap this study tends to bridge with reference to Nembe Local Government Area of Bayelsa State. The study contributed to providing baseline information on infant and young child feeding practices and nutritional status of infants and young children in Nembe Local Government Area which can be used by Government and health agencies for nutrition advocacy and planning nutrition interventions.

Objectives

1. To determine the association between exclusive breast feeding and health challenges in infants of 0-6 months in Nembe Local Government Area.

2. To examine the relationship between predominant breast feeding and health challenges among infants of 0-6 month in Nembe Local Government Area.
3. To determine the association between prelacteal feeding and health challenges among infants of 0-6 months in Nembe Local Government Area.

To guide this study the following research questions were put forward:

1. What is the association between exclusive breast feeding and health challenges among infants of 0-6 months in Nembe Local Government Area?
2. What is the relationship between predominant breast feeding and health challenges among infants of 0-6 month in Nembe Local Government Area?
3. What is the association between prelacteal feeding and health challenges among infants of 0-6 months in Nembe Local Government Area?

The following hypotheses are postulated

1. There is no significant relationship between exclusive breast feeding and health challenges in infants of 0-6 month in Nembe Local Government Area.
2. There is no significant relationship between predominant breast feeding and health challenges among infants of 0-6 months in Nembe Local Government Area.
3. There is no significant relationship between prelacteal feeding and health challenges among infants of 0-6 months in Nembe Local Government Area.

Literature Review

Exclusive Breast Feeding and Health

Exclusive breastfeeding refers to a practice where infants receive only breast milk from their mother, or a wet nurse, or expressed breast milk without water, other liquids, tea, herbal preparations, or food during the first six months of life. Vitamins, mineral supplements, or medicines however, can be administered during this period. Exclusive breastfeeding for six months is essential for the well-being of both mother and child. As reported from an observational analysis in Belarus, infants who receive only breast milk exclusively for 6 months and beyond have a significant reduced risk of one or multiple episodes of gastro intestinal infections and acute respiratory infections. Previous studies on breast feeding showed that Children exclusively breast fed are less susceptible to diarrhoeal diseases and pneumonia, and are 14 times more likely to survive, compared with non- exclusively breast-fed infants (Black *et al*., 2008). Children fed with breast milk alone for six months have reduced risk of diarrhoea and acute respiratory illnesses compared with those fed for 3 and 4 months respectively. Reports have shown that with adequate breastfeeding technique, breast milk alone

provides the energy and nutrient needs of infants for the first 6 months of life. Healthy infants exclusively breastfed do not need additional water for the first 6 months because breast milk itself is 88 % water which is enough to satisfy a baby's thirst, therefore giving water and other fluids displace breast milk and reduces the overall intake (Butte, Lopez-Alarcon and Garza, 2002); Lopez-Alarcon, *et al.* (2002).

Exclusive breast-feeding rates in Nigeria is very poor. Several efforts have been made through community awareness on the benefits to help mothers practice it effectively (FMOH, 2004). The rate of practicing exclusive breast feeding in Nigeria varies widely ranging between 19 – 70 %. Studies in different locations reported that 67 % of women practiced exclusive breastfeeding in Jos, Plateau State (Ogbonna and Daboer, 2007; 52.9 % in Lagos State, 37 % in Anambra State (Ukegbu, Ebenebe, Ukegbu and Onyeonoro, 2011). Another study reported 60 % in Calabar Cross River State; 56.8 % among rural women in Imo State. Some studies in South Western Nigeria reported much lower prevalence (19 %) of exclusive breastfeeding. Another study however, reported a higher rate of 49.5 % among the study population compared to the national average of 15 % (Agunbiade, and Ogunleye, 2012).

Prelacteal feeding pattern

Prelacteal feeds are foods given to new-borns before breastfeeding is established or before breast milk “comes out,” usually on the first day of life (Sunil, Raina and Singh, 2012). Although Pre-lacteal feeding is a barrier for implementation of exclusive breastfeeding practices and increases the risk of neonatal illness and mortality, it is continued as a deep-rooted nutritional malpractice in developing countries. Exclusive breastfeeding is feeding of an infant with only breast milk and no additional food, water, or other liquids (with the exception of medicines and vitamins, if needed) during the first six months of life. Infants who are exclusively breastfeed have less chance of becoming ill or dying from diarrhea, pneumonia, meningitis, ear infections and other infections (Khanal, Adhikari, Sauer and Zhao, 2013); (Ahmed, Rahman and Alam, 1996).

In Africa, most of the mothers (10.8–75.2%) offer prelacteal feeds to their new-born. Although 52% of Ethiopian new-borns benefited from breastfeeding within one hour of birth, overall, nearly three children in every ten (27%) are given pre-lacteal feeds within the first three days of life. In Ethiopia a high prevalence of prelacteal feeding practices have been reported in different part of the country; Harari, (45.4%), Jimma, (17%), Sidama, (40.8%), and West Gojam (48.3%). Every day, three to four thousand infants died in developing world from diarrhea and acute respiratory infections. Even though pre lacteal feeding is not the direct cause of this death, it is one of the contributing causes of death as comorbidity with diarrhea and respiratory tract infection (Ahmed, Rahman and Alam, 1996). Pre-lacteal feeds increases the risk of illnesses such as diarrhea and other infections and allergies, particularly if they are given before the baby has had colostrum. Pre-lacteal feeds affect stimulation of breast milk production, suckling and mother-baby bonding. Children who exposed for pre-lacteal feeding

before six months of age were 16 times more likely to develop diarrhea or pneumonia (Mukuria, Kothari and Abderrahim, 2006).

Predominante feeding pattern practices

Similar research in the eastern and mid-western regions of Nepal revealed that there were 574 infants included in the study, all of which received at least some breastfeeding. Only 23.2% of infants were exclusively breastfed until 6 months, with 28.2% predominantly breastfed and 48.6% partially breastfed. Partial breastfeeding rate was 52.3% in the Mid-western region and 44.4% in the Eastern region. Breastfeeding was initiated within an hour from birth in 67.2% of infants. One-quarter of infants were given pre-lacteal feed, honey being the commonest. Knowledge of the recommended duration of exclusive breastfeeding was inadequate in 16, and 65% of mothers reported breastfeeding problems in the first 6 months. Firstborn and low birth weight infants had a significantly higher rate of partial breastfeeding. Partial breastfeeding was also higher when infants were not breastfed within 1 hour from birth, mothers reported having breastfeeding-related problems or had inadequate knowledge of the duration of exclusive breastfeeding, Butte*, et al*. 2002; Lopez – Alarcon, *et al.* (2002); (Labbok, Belsey and Coffin, 1997).

Obesity Disease and Health Challenges among Infants

In many countries of the world, only a minority of children are growing healthily. In Nigeria, Bangladesh, Democratic Republic of Congo, Ethiopia, and Pakistan, for example, the percentage of under – 5 children who are growing normally is less than 48 percent. Nigeria has also been classified as one of the countries not meeting the world health target for reduction in obesity rate. Although the country has been classified among countries making progress, for exclusive breastfeeding, the rate of progress is relatively slow and the nation is not meeting with the world health assembly target (Gungor, 2014).In order to prevent overweight and obesity in infants and young children, WHO recommends that there should be early initiation of breastfeeding within one hour of birth and exclusive breastfeeding for the first 6 months of life, the introduction of nutritionally-adequate and safe complementary (solid) foods at 6 months together with continued breastfeeding up to two years of age or beyond, Arens and Kries, (2009).

Pneumonia Disease and Health Challenges among Infants

Pneumonia is a form of acute lower respiratory tract infection that occurs when viruses, bacteria or other micro-organisms cause inflammation of the lungs. There are also a few non-infectious types of pneumonia that are caused by inhaling or aspirating foreign matter or toxic substances into the lungs. The WHO defines childhood pneumonia as the presence of cough and/or difficult breathing with an elevated respiratory rate (Spence et al., 2017). Globally pneumonia accounts for nearly one in five deaths among children less than 5 years of age (Phuong et al., 2017).

Pneumonia is caused by a foreign material, usually food or vomit getting into the lungs from the throat, which irritates the airways and lung tissue and increases chances of a bacterial infection. Streptococcus pneumonia is by far the most common bacterial pathogen in infants aged 1-3 months (CDC, 2016b).

Diarrheal Disease and Health Challenges among Infants

The world health organization (WHO) defines diarrhea as the passage of three or more loose or liquid stools per day in a period not exceeding 14 days (WHO, 2013). Diarrhea is commonly a sign of an infection in the intestinal tract that is caused by different bacteria, virus and parasitic entities. In low resource areas, Rotavirus and Escherichia coli bacteria cause the highest incidents of diarrhea (UNICIF, 2016).

Furthermore, each year, about two million children below 5 years of age die from diarrhea around the world; 80% of these deaths occur in the first two years of life. Although there has been a significant decline in childhood mortality rates from diarrhea, it still poses a major public health concern, especially in developing countries. Mortality is the most severe consequence of diarrheal disease, which also has long-term negative impacts in the first two years of life (Kramer, Guo, Platt, Sevkovskaya, Dzikovich, Collet, Shapiro, Chalmers, Hodnet and Vanilovich, 2003). The long-term impacts include growth failure, impaired physical fitness, decreased cognitive ability, and poor performance in school

Theoretical Framework

Multifactorial Theory

Sydenham (1644 - 1689) and Sir William Osler (1849 – 1919) are the major proponents of this theoretical approach. The work adopted multifactorial theory to buttress the health challenges peculiar to infants' breast-feeding pattern in Nembe, Bayelsa State. The concept of disease is not a single factor but due to multiple factors. As a result of advances in public health, chemotherapy, antibiotics and vector control, communicable diseases are reduced. This was replaced by many modern diseases namely lung cancer, coronary heart disease, mental illness, diabetes etc. which are not caused by any germs or can be cured or prevented by the traditional method of isolation, immunization or improvements in sanitation. This lead to the realization that single cause idea was an over simplification and there are other factors causing the disease viz.: Social, Economic, Cultural, Genetic, Psychological and Nutrition. For instance, tuberculosis occurs not only due to the contact with the agent tubercle bacilli but also due to other factors which includes poverty, overcrowding and malnutrition. Similarly, the diseases like coronary heart disease, cancer and diabetes occur due to excess consumption of fat, smoking, alcoholism, physical inactivity and obesity. Many of these are life style factors and human behaviour can be called as diseases of affluence. The epidemiology is a multifactorial causation. Multifactorial causation offers multiple approaches for the prevention or control of disease.

Though many diseases are infectious, other causative factors such as Genetic, Nutritional, Immunological, Metabolic, Cytological factors were identified as the cause for specific diseases. The essence of this theory is the nutritional aspects (exclusive breast feeding, predominate breast feeding, and prelacteal feeding) it identifies as the factors that causes health challenges to the infants with regards to feeding patterns.

Method

In this study, the researcher employed descriptive research design. Kothari (2004) asserts that research design is the conceptual structure within which research is conducted. It constitutes the blueprint for the collection, measurement and analysis of data.

A total of 355 respondents constituted the study sample. The sample size was determined using Aloysius (1998) technique. It is stated below;

$$S = \frac{Z^2 \times p\,(1-p)}{E^2}$$

Where:

S = required sample size

Z = confidence level at 95% (standard value of 1.96)

P = estimated prevalence of malnutrition in the area

E = margin of error at 5% (standard value of 0.05).

Figures for malnutrition as reported by 2014 NDHS (Nigeria Demographic and Health Survey) National Population Commission (NPC) and Macro (International) ICF, 2014) malnutrition indicators: in Nigeria are as follows: stunting = 37 %, severely wasted = 21% and underweight = 18 %. Taking data for severely wasted and underweight, the formula above is used to calculate the sample size.

S=?

$Z^2 = 1.96^2$

P= 0.21 +0.18 =0.39

$E^2 = 0.05^2$

$$S = \frac{1.96^2 \times 0.39\,(1-0.39)}{0.05^2}$$

$$S = \frac{3.8416 \times 0.39 (1-0.39)}{0.25}$$

$$S = \frac{1.498224 (1-0.39)}{0.25}$$

$$S = \frac{(1.498224-0.61)}{0.25}$$

$$S = \frac{0.888224}{0.25}$$

S = 355

Out of the 27 health institutions in the Local Government, 25 was randomly selected. Random selection was adopted because correlation has the following assumption;

The sample must be randomly selected.

The balloting process was adopted where the names of all the primary health care institutions in Nembe LGA were written, wrapped and put into one polythene bag and were shaken thoroughly to allow for a clear mix up of all the pieces of paper, after which a piece of paper was picked from the polythene bag where the twenty five primary health cares were selected randomly. A sample size of 355 respondents were purposively selected from the randomly selected health care institutions, the selected respondents were administered with the questionnaires. Lactating mothers whose baby's age fall between 0 – 6 months were administered the questionnaire of the twenty five sampled health care.

The data was coded, entered and analysed using Statistical Package for Social Sciences (SPSS VERSION 25). Frequency and simple percentage were used to present the demographic characteristic of the respondents. The Pearson Product Moment Correlation (PPMC) was used to test the hypotheses. The level of significance ranges from – 1 to +1 and closer the r value to +1, the stronger the relationship between the variable under study. Strength and direction of Pearson (r) value of interpretation and relationship is as follows:

Between 0.0 and ± .25 - zero to weak relationship

Between ±26 and ± 50 moderately weak relationship

Between ±51 and ± 75 moderately strong relationship

Between ±76 and ±1.0 strong to perfect relationship.

The substantive issues of the questionnaire is validated by Medical Sociology and Demography unit under Sociology Department. The internal consistency of the instrument was established by Cronbach Alpha reliability. A pilot study was conducted on 28 respondents outside as a trial who are not expected to be part of the main study. The data collected was subjected to Cronbach's reliability analysis and reliability coefficient at 0.81 which confirm the reliability of the instrument.

Results

Research Question I What is the association between exclusive breast feeding and health challenges in infants of 0-6 months in Nembe Local Government Area?

Respondents' response on the association between exclusive breastfeeding and infant health

Table 1: Effects of exclusive breast feeding on infants

Parameter	Yes	No	%
I feed my baby with breast milk only	59	293	17
My baby loose watery stools that occur more frequently than usual	295	57	84
My baby poo worm at the period of 0 – 6 months	295	57	84
My baby had nausea, vomit, headache, fatigue and muscle cramps	293	59	83

Source: Field work 2026

In table 1 it is shown that 17% percent (17%) respondents say they feed their babies with breast milk only, 84 percent (84%) says their baby experience loose watery stools, another 84 percent (84%) says their baby poo worm at the period of 0-6 months, and 83 percent (83%) say their baby experience weakness of the body. Qualitative information from the 17 respondents comments state that their baby are healthy and that they have never experienced any health challenges while practicing exclusive breast feeding.

Research Question II. What is the relationship between predominant breast feeding and health challenges among infants of 0-6 month in Nembe Local Government Area?

Table 2: Effect of Predominate Breastfeeding on infant

Parameter	Yes	No	%
I fed my baby with breast milk and water	87	265	24.7
My baby had nausea, vomit, headache, fatigue and muscle cramps	40	312	11

Source: Field work 2026

Table 2 indicates that 25 percent (25%) of mothers feed their babies with breast milk and water while only 11 percent (11%) experience weakness of the body among their babies. Qualitative information from the respondents shows that 87 respondents said YES that they feed their babies with breast milk and water, while some mothers (40) said YES that their babies experienced vomiting, headache, fatigue and muscle cramps. Therefore, this form of feeding pattern is dangerous to the babies' health.

Research Question III: What is the association between prelacteal feeding and health challenges among infants of 0-6 months in Nembe Local Government Area?

Table 3: Effect of prelacteal feeding on infant

Parameter	Yes	No	%
I gave Fanta water to my baby within the first three to five days after birth	99	253	28
My baby loose watery stools that occur more frequently than usual	95	257	27

Source: Field work 2026

Table 3 indicates that 28 percent (28%) of mothers said that they gave Fanta water to their babies within the first three to five days after birth while 27 percent (27%) said their babies experience watery stool. The qualitative information is in tandem with the data collected through the questionnaire method, indicates that a wholesome number of the respondents said YES that:

"My baby loose watery stools that occur more frequently than usual".

In the light of the above, prelacteal feeding is not healthy for the infants' health.

Hypothesis one: There is no significant relationship between exclusive breast feeding and health challenges in infants of 0-6 month in Nembe Local Government Area.

Statistics: Inferential statistics used is Pearson Product Moment Correlation (PPMC)

Formula:

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{[n\sum X^2 - (\sum X)^2][n\sum Y^2 - (\sum Y)^2]}}$$

Pearson's correlation matrix showing relationship between exclusive breastfeeding and infant health.

Contingency Table: 1

		I feed my baby with breast milk only	infant health challenges
I feed my baby with breast milk only	Pearson Correlation	1	-1.000**
	Sig. (2-tailed)		.000
	N	352	352
infant health challenges	Pearson Correlation	-1.000**	1
	Sig. (2-tailed)	.000	
	N	352	352

**. Correlation is significant at the 0.01 level (2-tailed).

Result r = - 1.00

p = 0.01

As can be observed in table 1 data analysis indicates a significant relationship between exclusive breast feeding and infant of 0.6 months' health in Nembe Local Government Area (r = - 1.00; 0.01) at 0.5 level of significance. Since p – value was at 0.01 lower than 0.05 level of significance the null hypothesis was rejected, leading to the alternative hypothesis being accepted and the correlation coefficient of 1.00 implies that there is a strong to perfect relationship between the two variables. By interpretation, the more lactating mothers engage in exclusive breast feeding, the more the infant become free from illness or dying from diarrhea or pneumonia.

Hypothesis two: there is no significant relationship between predominant breast feeding and health challenges among infants of 0-6 months in Nembe Local Government Area.

Table 2: Pearson's correlation matrix showing relationship between predominant breast feeding and infants health.

Contingency Table: 2

		i fed my baby with breast milk and water	My baby had nausea, vomit, headache, fatigue and muscle cramps
i fed my baby with breast milk and water	Pearson Correlation	1	.609**
	Sig. (2-tailed)		.000
	N	352	352
My baby had nausea, vomit, headache, fatigue and muscle cramps	Pearson Correlation	.609**	1
	Sig. (2-tailed)	.000	
	N	252	252

**. Correlation is significant at the 0.01 level (2-tailed).

Result r = - 609**

p = 0.01

As can be observed in table 2 data analysis indicates a significant relationship between predominant breast feeding and infant of 0.6 months' health in Nembe Local Government Area (r = - 609**; 0.01) at 0.5 level of significance. Since p – value was at 0.01 lower than 0.05 level of significance the null hypothesis was rejected, leading to the alternative hypothesis being accepted and the correlation coefficient of 609** implies that there is a moderately strong relationship between the two variables. By interpretation, the more lactating mothers engage in predominant breast feeding, the more the infant become susceptible to weakness as a result of excess water in the infant body.

Hypothesis three: There is no significant relationship between prelacteal feeding and health challenges among infants of 0-6 months in Nembe Local Government Area.

Table 3: Correlation analysis of relationship between prelacteal feeding and infants' Health

Contingency Table: 3

		I feed my baby with fanta water after birth	my baby loose watery stool more frequent
i feed my baby with fanta water after birth	Pearson Correlation	1	.972**
	Sig. (2-tailed)		.000
	N	352	352
my baby loose watery stool more than frequent	Pearson Correlation	.972**	1
	Sig. (2-tailed)	.000	
	N	352	352

**. Correlation is significant at the 0.01 level (2-tailed).

Result r = - .972**

p = 0.01

As can be observed in table 3 data analysis indicates a significant relationship between prelacteal feeding and infant of 0.6 months' health in Nembe Local Government Area (r = - .972**; 0.01) at 0.5 level of significance. Since p – value was at 0.01 lower than 0.05 level of significance the null hypothesis was rejected, leading to the alternative hypothesis being accepted and the correlation coefficient of .972** implies that there is a strong to perfect relationship between the two variables. By interpretation, the more lactating mothers engage in prelacteal breast feeding, the more the infant become susceptible to diarrhea and respiratory infection.

Discussion of Findings

The first hypothesis: There is no significant relationship between exclusive breast feeding and infants of 0-6 months' health in Nembe LGA.

The result of the test confirms that there is a significant relationship between exclusive breast feeding and infants' health. The result of the Pearson's correlation matrix, verified the hypothesis. The findings revealed that the more lactating mothers engage in exclusive breast feeding, the more the infant become free from illness or dying from diarrhea or pneumonia. This corroborates Khanal, Adhikari, Sauer and Zhao (2013) study that says "Infants who are exclusively breastfeed have less chance of becoming ill or dying from diarrhea, pneumonia, meningitis, ear infections and other infections". It also corroborates Butte, Lopez-Alarcon and

Garza, (2002); Lopez – Alarcon, Villalpando and Fajardo, (2002) study opines that "healthy infants exclusively breastfed do not need additional water for the first 6 months because breast milk itself is 88 % water which is enough to satisfy a baby's thirst, therefore giving water and other fluids displace breast milk and reduces the overall intake".

The second hypothesis: There is no significant relationship between predominate breast feeding and infants of 0-6 months' health in Nembe LGA.

The result of the test confirms that there is a significant relationship between predominate breast feeding and infants' health. The result of the Pearson's correlation matrix, verified the hypothesis. The findings revealed that the more lactating mothers engage in predominant breast feeding, the more the infant become prone to fatigue because of excess water ingestion. This also corroborates Butte, Lopez-Alarcon and Garza, 2002; Lopez – Alarcon, Villalpando and Fajardo (2002) study that opines that "healthy infants exclusively breastfed do not need additional water for the first 6 months because breast milk itself is 88 % water which is enough to satisfy a baby's thirst, therefore giving water and other fluids displace breast milk and reduces the overall intake".

The third hypothesis: There is no significant relationship between prelacteal feeding and infants' health of 0-6 months in Nembe LGA.

The result of the test confirm that there is a significant relationship between prelacteal feeding and infants' health. The result of the Pearson's correlation matrix, verified the hypothesis

The findings revealed that when nursing mothers engage in prelacteal feeding, the infants tend to be prone to diarrhea and respiratory infection. This is in tandem with Ahmed, Rahman and Alam (1996) study that says "Every day, three to four thousand infants died in developing world from diarrhea and acute respiratory infections". Even though pre lacteal feeding is not the direct cause of this death, it is one of the contributing causes of death as comorbidity with diarrhea and respiratory tract infection. Pre-lacteal feeds increases the risk of illnesses such as diarrhea and other infections and allergies, particularly if they are given before the baby has had colostrum.

Recommendations

1. Lactating mothers should strictly adhere to initiate breast feeding within one hour of birth (the golden hour) and exclusive breast feeding as it enhances infants' growth and development as well as development of the brain and have lesser chance of becoming ill or dying from diarrhorea, pneumonia, meningitis, ear infections and other infections during the first six months of life.
2. Nursing mothers should disengage the practice of predominate breast feeding as it causes weakness to the infants as a result of excess water in the infants body because breast milk alone contains 88 percent of water.

3. Prelacteal feeding be avoided among nursing mothers because it is a contributing cause to infants death of about three to four thousand in developing world as a result of diarrhea and acute respiratory infections.

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