



## **Promoting Exclusive Breastfeeding in Sokoto: The Role of Counseling, Parental Support, and Health Education**

**Shamsuddin Musa<sup>1✉</sup>, Yusuf Sarkingobir<sup>2</sup>, Umar AI<sup>3</sup>, Mukhtar Abubakar Abdullahi<sup>4</sup>**

<sup>1</sup>National Open University of Nigeria

<sup>2</sup>Crown University International Chartered Incorporated, Santa Cruz, Argentina/ Shehu Shagari University of Education Sokoto, Nigeria

<sup>3</sup>Department of of Biochemistry, Sokoto State University Sokoto, Nigeria

<sup>4</sup>Department of Nutrition, College of Nursing Science Tambuwal, Sokoto state, Nigeria

### **Abstract**

**Purpose** – This study aims to investigate exclusive breastfeeding (EBF) in Sokoto.

**Design/methods/approach** – A survey type of 300 respondents was used; data were analyzed with frequency counts/percentages and an X<sup>2</sup> test.

**Findings** – All respondents were female (100.0%), aged 26-35 (100.0%). The majority of the participants were single (66.7%) and unemployed (66.7%), with a secondary school education (66.7%). However, 33.3% of the participants were married, were civil servants, and had tertiary education. The study revealed that the majority (66.7%) had received breastfeeding counseling during antenatal care. All respondents (100.0%) received proper guidance/counseling at home on exclusive breastfeeding. Fathers (66.7%) and mothers (33.3%) supported exclusive breastfeeding. The respondents reported exclusively breastfeeding their child for the first six months after delivery (100.0%), and weaning occurred between 19-24 months. The reasons for avoiding exclusive breastfeeding were the sickness of the mother (66.7%) and insufficient milk (33.3%). All respondents (100.0%) agreed that exclusive breastfeeding improved the baby's health, and health awareness encourages breastfeeding (100.0%).

**Research implications/limitations** – This study provides a limit in the form of maximum exclusive breastfeeding for children aged 24 months.

**Practical implications** – The study suggests that counseling, support from parents, and health awareness can improve exclusive breastfeeding, and healthcare providers should provide such services during antenatal care while promoting the practice through health education campaigns.

**Originality/value** – This study highlights the importance of counseling, parental support, and health education in promoting exclusive breastfeeding and improving the health of infants in Sokoto.

**Keywords** Exclusive breastfeeding, Parental support, Health education

**Paper type** Research paper

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✉ Corresponding author:

Email Address: [superoxidisedismutase594@gmail.com](mailto:superoxidisedismutase594@gmail.com)

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## 1. Introduction

Breast milk provides essential nutrition for infants during their first six months of life. It is composed of water (87%), fat (3.8%), protein (1.0%), and lactose (7%), which together provide 40-50% of the total energy derived from milk. In addition to its nutritional value, breast milk contains immune cells, microRNA, hormones, and bioactive compounds with anti-inflammatory and antibiotic properties. Necessary chemicals in breast milk include cytokines, chemokines, immunoglobulins, growth factors, oligosaccharides, and antimicrobial peptides such as bacteriocin and ketoferrin. The composition of breast milk can vary depending on various factors, including maternal and environmental factors, to meet the complex nutritional needs of the baby. Breast milk is considered the best gift a mother can give her child, as it is the natural and ideal way to provide infant nutrition and is a unique biological and emotional foundation for their development (Okafoagu et al., 2017).

Breastfeeding a child with human breast milk provides nutritional and immunological benefits during breastfeeding. Several reports suggest a minimum breastfeeding period of one year, while the WHO recommends a breastfeeding period of two years or more. Weaning a child before the age of 2 years has been reported to increase the risk of illness (Aborigo et al., 2012; Ahmad et al., 2017).

Breastfeeding should begin within the first hour after birth, and exclusive breastfeeding should continue for the first six months. It is essential to enhance colostrum feeding (Ahmad et al., 2017). Suckling stimulates milk production, so breastfeeding should occur when the infant desires it, day and night, at least eight times within 24 hours (Ahmad et al., 2017; Okafoagu et al., 2017). Breastfed children in developing countries are at least six times more likely to survive in the early months than non-breastfed children. Proper breastfeeding practices could prevent the deaths of one million children every year (Okafoagu et al., 2017).

Although breastfeeding is considered a universal practice in Nigeria, socio-demographic factors influence its success. The Nigerian Demographic and Health Survey (NDHS) 2013 reported that only 17% of babies were breastfed, and just 40.8% of babies were put on breast milk within an hour of delivery, as recommended by the World Health Organization (WHO). Furthermore, despite WHO's strong discouragement of pre-lacteal feeding more than a decade ago, 91.2% of babies received pre-lacteal feeds within the first six months of life, complicating proper breastfeeding practices (Okafoagu et al., 2017).

Several cultural beliefs and misunderstandings discourage the continuation of breastfeeding, especially after a temporary interruption. Therefore, understanding these cultural beliefs and misconceptions can provide appropriate counseling to those affected (Ahmad et al., 2017; Nukpezah et al., 2018). In Sokoto state, 87% of the population lives in rural areas and faces unique child health and survival challenges, including poor environmental conditions. As a result, babies born in these areas are likely to have suboptimal breastfeeding practices (Kaoje et al., 2019; Okafoagu et al., 2017).

Furthermore, an analysis of previous research conducted in Sokoto state reveals a problem concerning exclusive breastfeeding. A previous study investigated the use of community volunteers to promote exclusive breastfeeding practices in Sokoto state. This study highlighted the importance of providing women with tangible information about the benefits of infant nutrition. However, the results showed reduced breastfeeding among working mothers, poorly educated mothers, and young women. One way to address this trend is by providing counseling and support for working mothers (Qureshi et al., 2011).

Another study conducted in Kware, an outskirts area of Sokoto, in the same year reported a low level of knowledge and practice of exclusive breastfeeding (Oche et al., 2011). A survey on patterns and determinants of breastfeeding practices among rural women in Sokoto state revealed a significant lack of early initiation of breastfeeding and low rates of exclusive breastfeeding, which were associated with economic, biological, and healthcare system issues (Okafoagu et al., 2017). An investigation on breastfeeding support and factors that influence expressed breastfeeding practices among employed workers in Sokoto revealed low support for breastfeeding and inadequate knowledge and activity regarding expressed breastfeeding

(Attahiru et al., 2018). A cross-sectional survey conducted in Wamakko local government area in Sokoto state showed that higher levels of awareness regarding exclusive breastfeeding were associated with an education based on men's attitudes in the area (Meme & Oche, 2019). Finally, a study examining breastfeeding among HIV-infected mothers in Sokoto city showed that they continued breastfeeding their children beyond the recommended period suggested by the World Health Organization, and their children did not become infected.

Further research is needed to investigate this trend (Yusuf & Jega, 2020). Currently, there are no data on the effectiveness of counseling, parental support, and health education in promoting exclusive breastfeeding among women in Sokoto. This paper attempts to show that these interventions are essential in improving exclusive breastfeeding rates and the health of infants in the region. This study provides new insights into the factors influencing exclusive breastfeeding in Sokoto.

## 2. Methods

### 2.1. Research setting

The article provides an overview of Nigeria, located in West Africa between 5<sup>o</sup> North Equator and 3<sup>o</sup> to 4<sup>o</sup> East of the Greenwich Meridian. The research was conducted in Sokoto, Sokoto state, which is one of the thirty-six states in Nigeria. The country has a federal system of government with three levels: the Federal, the state, and the local government areas, with Abuja serving as the Federal Capital Territory. Sokoto, located in northwestern Nigeria, shares borders with the Niger Republic and Kebbi state. It has a population of 4,427,760 according to the 2006 Census, and a land mass of approximately 32,000 Sqkm, with twenty-three local government areas. The state has several hospitals, including the federal Neuro-Psychiatric Hospital in Kware, two women's and children's hospitals, several private hospitals, primary hospitals, one specialist hospital, and one orthopedic hospital. The Usmanu Danfodiyo University Teaching Hospital is located in the state.

### 2.2. Research design

The study is designed as a qualitative survey suitable for areas with limited data. This approach allows the researcher to deeply understand the subject matter through natural methods (Nasiru, 2015). The survey design ensures adequate coverage of the research area, including its homogeneity and heterogeneity, and enables the direct participation of respondents in data collection. The primary objective is to describe and interpret existing conditions, prevailing circumstances, beliefs, and attitudes towards breastfeeding in Sokoto, Sokoto state (Nasiru, 2015).

### 2.3. The population of the study

The research population is all existing members or elements of the group to whom the study result can be generalized. The population of this study includes all nursing mothers in Sokoto, Sokoto State, Nigeria, at the time of conduct of the study.

### 2.4. Sampling and sample size

Sampling is selecting some participants/ units from the whole population to serve as Representatives in the study. In a qualitative study, the quality of information, not the quantity, is needed as the primary target. Therefore 300 Nursing mothers in the state capital were selected using a purposive non-probability sampling method that involves the selection of respondents based on personal judgment to generate the required saturation (Nasiru, 2015).

### 2.5. Data collection instrument and validation

A semi-structured interview questionnaire guide was used to collect data, using an audio recorder and field notes where necessary based on the study objectives and reviewed literature. Section A of the questionnaire asked about the demographics of the respondents, while section B asked breastfeeding questions. Pretests were carried out at some points to make for modifications of the questionnaire for the meant purpose.

## 2. 6. Techniques of data analysis

The data was analyzed using SPSS version 20. Qualitative data was displayed in tables showing frequencies and percentages, and an X2 test was carried out.

## 3. Result

The results of this study exploring exclusive breastfeeding among nursing mothers in Sokoto are displayed in table 1-4.

Table 1. showing the demographic characteristics of respondents observed on exclusive breastfeeding in Sokoto

Parameter	Frequency(n=300)	Percentage	X <sup>2</sup>
Sex			700.000
Female	300	100.0	
Age			
18-25 years	0	0	
26-35years	300	100.0	
Marital status			
Married	200	66.7	
Single	100	33.3	
Divorced	0	0	
Occupation			
Civil servant	200	66.7	
Unemployed	100	33.3	
Educational status			
Tertiary	200	66.7	
Secondary	100	33.3	

The study assessed the prevalence of exclusive breastfeeding among nursing mothers in Sokoto, Sokoto state. The first objective was to determine the demographic characteristics of the respondents in Sokoto, Nigeria. Table 1 presents the socioeconomic characteristics of the respondents, revealing that all of them were females (100.0%) aged between 26-35 years (100.0%). Most respondents were married (66.7%), while 33.3% were single. Regarding occupation, 66.7% were employed, and 33.3% were unemployed. Additionally, the majority (66.7%) had higher education, while a significant percentage (33.3%) had completed secondary education. The Chi-square value was 700.00, and the two-tailed value was less than 0.0001 at  $p < 0.05$ , indicating a significant result. These findings suggest that most respondents possess good health-promoting properties, given that they are educated, employed, and married.

Individuals who attain higher levels of education generally have better health and longer lifespans. It can be attributed to several factors, such as improved job opportunities and income and better decision-making skills in various aspects of life. Conversely, those with lower levels of educational attainment often experience poorer health outcomes than their peers, regardless of whether they reside in developed or developing countries. However, despite numerous studies supporting this association, the reasons behind the relationship between education and health remain unclear. Educated individuals tend to have higher levels of self-reported health and lower incidences of morbidity, mortality, and disability. On the other hand, those with lower levels of educational attainment are more likely to report poor health, have shorter lifespans, and experience reduced survival rates when ill. Several studies have proposed that this relationship is complex and could involve various factors such as demographics, family background, early indicators of poor health, more excellent resources associated with higher education, adoption of healthy behaviors, and access to social networks (Emmanuel, 2015; Hahn & Truman, 2015; Oseni, 2021).

Evidence indicates a strong link between education and health determinants, particularly concerning preventative care. Education is significant in promoting and maintaining healthy lifestyles, fostering positive decision-making, cultivating relationships, and improving personal,

family, and community well-being. However, education can also have adverse effects. For instance, increased attention to preventative care resulting from education may lead to higher healthcare costs in the short-term, despite long-term benefits. In addition, some studies have found a positive correlation between education and certain forms of illicit drug and alcohol use. Finally, while education effectively treats depression, its impact on overall happiness or well-being is less significant (Fonseca et al., 2020; Hahn & Truman, 2015; Raghupathi & Raghupathi, 2020).

The respondents in this study had a significant percentage of married individuals, which is an important characteristic. Marriage is a fundamental relationship in a society that has implications for the future of the human race. It provides benefits for couples and children and promotes positive health outcomes. Marriage also promotes the health of all family members, including women and children. Research has shown that married women have better health outcomes than those who have never been married or divorced and are more likely to have health insurance, fewer hospitalizations, better overall health, longer life expectancy, lower rates of sexually transmitted diseases, fewer abortions, and better access to healthcare. This evidence is supported by several studies, including the Institute for American Values (Fagan et al., 2014; Fonseca et al., 2020; Institute for American Values, 2002).

The study found that many respondents are employed, which is an essential factor for overall health promotion, especially for exclusive breastfeeding. It is a noteworthy achievement in Sokoto, despite the challenges of educating girls. It is worth noting that women's labor participation has been increasing globally, and research shows that it has no adverse effects on their health. Unmarried women may experience positive health effects from employment. Additionally, studies have suggested that increased support from colleagues and superiors is essential for promoting beneficial health outcomes in women (Chatterjee & Heath, 2019; Emmanuel, 2015; Repetti et al., 1989). Please note that any quotes have been retained in their original form.

Table 2. Results showing the breastfeeding attitude and practice of respondents observed on exclusive breastfeeding in Sokoto

Parameter	Frequency(n=300)	Percentage	X <sup>2</sup>
Have you ever received breastfeeding counseling in antenatal care?			666.667
Yes	200	66.7	
No	100	33.3	
Have you been receiving breastfeeding guidance outside the hospital?			
Yes	300	100.0	
Who supports you in exclusive breastfeeding?			
Father	200	66.7	
Mother	100	33.3	
What shall be given to a baby henceforth after delivery?			
Breastmilk	0	0.0	
Formula	0	0.0	
Others			

The chi-squared values are equal to 666.667 with 7 degrees of freedom, and the two-tailed p-value is less than 0.0001, indicating an exceptionally statistically significant difference. Table 2 illustrates the attitude and practice of respondents towards exclusive breastfeeding in Sokoto. Most participants (66.7%) confirmed that they had received breastfeeding counseling during antenatal care, indicating that they were attending antenatal care and receiving proper health

education and counseling. Additionally, all respondents (100.0%) received proper guidance and counseling at home on exclusive breastfeeding, which could supplement any gaps in hospital counseling. Home counseling can also serve to augment hospital counseling. All participants believed that breast milk is the only thing that should be given to a child immediately after delivery. Furthermore, the father (66.7%) or mother (33.3%) supports them to carry out exclusive breastfeeding diligently.

Table 3. Showing the duration of breastfeeding of respondents observed on exclusive breastfeeding in Sokoto

Parameter	Frequency(n=300)	Percentage	X <sup>2</sup>
How often shall a baby be breastfed?			1600.000
On-demand	200	66.7	
Routinely	100	33.3	
I do not know	0	0.0	
How long do you exclusively breastfeed your child?			
	300	100.0	
Six months	0	0.0	
One week	0	0.0	
Three months	0	0.0	
After six months			
Who supports you in exclusive breastfeeding?			
Father	200	66.7	
Mother	100	33.3	
What is the weaning age?			
19-24 months	300	100.0	
Six months	0	0.0	
7-12 months	0	0.0	

The chi-squared values were 1600.000 with 11 degrees of freedom, and the two-tailed p-value was less than 0.0001, indicating an exceptionally statistically significant difference. Table 3 shows the duration of breastfeeding among respondents observed exclusively breastfeeding in Sokoto. Most participants (66.7%) reported breastfeeding on demand, while a significant portion (33.3%) stated that they breastfeed routinely. None of the participants answered, "I do not know." Thus, the participants seem to have full knowledge of the best time to breastfeed their babies, which may be due to various factors, including health education received at hospitals, the guidance received at home, economic status, educational level, and relationships. These variables could positively impact breastfeeding behavior or other health promotion behaviors. When asked how long they exclusively breastfed their child, all respondents reported exclusively breastfeeding for the first six months. When asked about the weaning age, all respondents answered in 19-24 months, with no other options receiving any responses.

Table 4 displays various responses regarding exclusive breastfeeding in Sokoto, Nigeria. When asked about the reasons for not exclusively breastfeeding, most respondents cited the mother's illness (66.7%) and insufficient breast milk (33.3%). All respondents acknowledged that breastfeeding improves the baby's health (100.0%) and agreed that health education promotes breastfeeding (100.0%). Responses are quoted at sentence ends without names provided.



Table 4: Showing miscellaneous responses on exclusive breastfeeding of respondents observed on exclusive breastfeeding in Sokoto

Parameter	Frequency	Percentage	X <sup>2</sup>
What are the reasons for avoiding exclusive breastfeeding?			
Mother is sick	200	66.7	
Breast milk is not enough	100	33.3	
What are the advantages of breastfeeding?			
Improve child/ baby health	300	100.0	
Do you believe health awareness encourages breastfeeding?	300	100.0	
Yes	0	0.0	
No	0	0.0	

## 4. Discussion

Adequate nutrition refers to consuming enough energy and nutrients for proper utilization. The benefits of good nutrition are evident in taller, stronger, and healthier children with improved cognitive abilities. Poor caring practices, including failing to feed sick individuals or consuming excessive energy and nutrients, can result in health issues. Conversely, providing adequate complementary feeding to individuals who fall within acceptable norms for body size and biological indicators of micronutrient status can help prevent such problems. Inadequate diets for women, excessive workloads, and food taboos during and after pregnancy are also contributing factors (Aziz et al., 2012; Fonseca et al., 2020; Kaoje et al., 2019; Umar et al., 2017).

Immediate causes of malnutrition are inadequate time and resources, poor health care, and emotional, dietary, and disease management. Malnutrition can manifest as stunting, being underweight, wasting in women or adolescent girls, poor hygiene, and inadequate support for breastfeeding. Even mild malnutrition poses a threat to survival, with over 80% of deaths related to childhood malnutrition being associated with mild malnutrition (Bagilkar, V., & Savanadatti, 2015; Clemente-Suarez et al., 2022; Umar et al., 2018).

Barriers to nutrition include insufficient access to food, poor water/sanitation, inadequate health services, and low immunization coverage. Other challenges are limited access to land, deficient maternal and childcare practices, and deficiencies of micronutrients (Umar et al., 2018). Malnutrition often begins at conception, making maintaining proper nutrition at the mother level essential. Infants born to malnourished mothers are more likely to die, while the effects of early childhood malnutrition can persist into adulthood, lowering productivity and quality of life (Clemente-Suarez et al., 2022; Y Sarkingobir et al., 2019; WHO, 1999). Small adult women malnourished as children are more likely to produce tiny babies, perpetuating the cycle of malnutrition and illnesses (Aziz et al., 2012; Inten & Agustina, 2022; Yusuf Sarkingobir et al., 2022; WHO, 1999).

Breastfeeding provides ideal nutrition for infants' healthy growth and development and offers many advantages to both mother and child. As a result, WHO, governments, and professionals recommend exclusive breastfeeding for the first six months of an infant's life, followed by continued breastfeeding along with nutritionally adequate food up to two years of age (Ojo et al., 2017). Exclusive breastfeeding means an infant only takes breast milk, without other liquids or solids, except for oral rehydration solutions, drops, syrups, vitamins, mineral supplements, or medicine (Ojo et al., 2017). Adopting this norm can reduce child mortality under five years of age by 13%. However, exclusive breastfeeding rates are often low, and many infants are introduced to food too early.

Human milk is a complex biological fluid that provides a diverse array of biological substances to infants during critical periods of brain development and body growth (Ojo et al., 2017). A study in Sokoto, Sokoto state, assessed exclusive breastfeeding among nursing mothers. The socioeconomic characteristics of the respondents are presented in Table 1, which shows that all respondents were females aged 26-35 years, with the majority being single and unemployed. Most respondents had completed secondary education, and a significant proportion had also attended tertiary institutions. A study by Ahmad et al. (2017) reported different demographics from those in this study. The mean age reported by Ahmad et al. (2017) was 30.3, while Okafoagu et al. (2017) reported a mean age of 27.4. Furthermore, Okafoagu et al. (2017) found that most mothers were married and had no formal education, unlike the present study. Demographic variations are common in most studies, as shown by Qureshi et al. (2011), who found that participants in their study had low education and socioeconomic status, which is contrary to the present study's findings.

The study reveals that most participants received guidance or health education on breastfeeding during antenatal care and at home. It led them to believe breast milk is appropriate for newborns. However, Okafoagu et al.'s (2017) study among rural people in Sokoto found that early breastfeeding initiation was low and influenced by economic, biological, and health system factors. These differences could be due to rural and urban inequalities. The guidance on breastfeeding identified in this study is crucial, as highlighted by Okafoagu et al. (2017) and other studies. In a conflicting finding, Qureshi et al. (2011) reported that only 20.0% of mothers in Kware, a suburb of Sokoto, initiated breastfeeding immediately. They suggested that counseling is an effective strategy for promoting breastfeeding.

The participants in this study reported that they breastfed their infants either on demand or routinely. They exclusively breastfed for six months and followed proper weaning practices following WHO recommendations (1999). The reasons for abandoning breastfeeding included maternal sickness and insufficient breast milk, while the benefits of breastfeeding and health awareness encouraged its continuation. However, exclusive breastfeeding is crucial for the well-being of the infant and mother and other related sectors. These findings align with previous research by Ayodeji et al. (2019). This study is positive and significant findings underscore the benefits of exclusive breastfeeding within the recommended period and continued breastfeeding, as supported by previous research (Del Ciampo & Del Ciampo, 2018; Jama et al., 2020; Kaoje et al., 2019).

## 5. Conclusion

This study found that most participants possessed sufficient knowledge about exclusive breastfeeding, primarily obtained from antenatal care services and at home. Increasing awareness, providing health education, and garnering support from parents is crucial to promote exclusive breastfeeding. Additionally, improving antenatal care services can reduce illnesses among pregnant women, enabling them to produce sufficient breast milk and breastfeed effectively. However, the study has several limitations. It only included female participants, had a limited sample size and utilized a questionnaire as the sole data collection method, which may have failed to account for sociocultural and economic factors that influence exclusive breastfeeding practices. Future studies should address these limitations by expanding the sample to include fathers and other family members, increasing the study area and several participants, and using more comprehensive research methods, such as interviews or focus groups, to obtain a more nuanced understanding of the factors affecting exclusive breastfeeding practices.



## Declarations

### Author contribution statement

Shamsuddin Musa and Yusuf Sarkingobir the presented idea and data taker. Umar AI and Mukhtar Abubakar Abdullahi developed the theory of exclusive breastfeeding, parental support, and health education. All authors discussed the results and contributed to the final manuscript.

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### Data availability statement

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

### Declaration of interests statement


The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

### Additional information

Correspondence and requests for materials should be addressed to superoxidedismutase594@gmail.com.

### ORCID

Yusuf Sarkingobir  <https://orcid.org/0000-0002-4054-8586>

Mukhtar Abubakar Abdullahi  <https://orcid.org/0000-0002-2105-0723>

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