

## **A Recent Statistical Survey of Socioeconomic Factors Affecting Knowledge and Practice of Exclusive Breastfeeding among Nursing Mothers in Ife East, South-West, Nigeria.**

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### **Abstract.**

The purpose of this research is to examine some socioeconomic and other factors affecting knowledge and practice of exclusive breastfeeding among nursing mothers in South-Western Nigeria. We attempt an exploratory study specifically designed to examine the knowledge and practice of exclusive breastfeeding among nursing mothers in selected Comprehensive Health Centers in Ife East Local Government, South-West, Nigeria. The study was conducted in three selected Primary Health Centers in Ife East Local Government. The target population is the Nursing Mothers attending the Comprehensive Health Centers in Ife East Local Government. Random sampling technique will be used to select three Comprehensive Health Centers and two hundred respondents will be randomly selected. The data collected was sorted, coded and analyzed with SPSS using descriptive statistics technique which includes frequency distribution, percentages and Chi-square tests.

**Key Words:** Socioeconomic Variables, Statistical Analysis, Breastfeeding, Hypothesis.

## 1.0 INTRODUCTION

Malnutrition, Infant and young children illnesses and mortality still remain problems of public health importance in many developing countries including Nigeria. Results of recent Health and Nutrition surveys in Nigeria consistently show very poor indices of nutritional status. The latest National Demographic and Health Survey 2003, reveals that 40% of children aged 0-59 months are chronically malnourished (i.e. stunted), 9% suffer from acute malnutrition (i.e. wasted) and 29 % are underweight (Nigeria Demographic and Health Survey, 2003 as cited in Assessment of National Practices, Policies and Programmes in Nigeria, 2008). Infants and young children are among the most vulnerable groups. Interruption of breastfeeding and inappropriate complementary feeding increase the risks of malnutrition, illness and mortality.

Exclusive breast-feeding is recommended for infant nutrition during the first 6 months after birth. Nonetheless, this practice has not yet improved in Africa despite this recommendation. Breast-feeding is considered the most complete nutritional source for infants because breast milk contains the essential fats, carbohydrates, proteins, and immunological factors needed for infants to thrive and resist infection in the formative first year of life Cadwellin Barry(2004) and Jones *et al.*(2003) in an analysis of child survival strategies identified exclusive breastfeeding (EBF) in the first 6 months of life and continue breastfeeding from 6 to 11 months as the single most effective preventive intervention in reducing child mortality, with the potential of saving 1.3 million lives annually. Similarly, Leon-Cava *et al.* (2002) have observed that improved breastfeeding practices are crucial for child growth and development. However, advocates of breastfeeding have noticed there has been a global decline in the behavior among nursing mothers. This is particularly more pronounced in developing countries. Wagner *et al.* (2005) have also observed that despite all the recommendations by experts regard infant breastfeeding for the first 6 months of life, a significant percentage of mothers chose not to breastfeed (as cited in Pakistan Journal of Nutrition 7 (1): 165-171, 2008).

Exclusive breastfeeding, which means adequate feeding of the new baby with nothing other than the mother's breast milk for at least the first six months, is identified by medical science to be the healthiest way to feed the baby. The current WHO recommendation for mothers is to practice exclusive breastfeeding from birth of the baby to six months of age with no supplemental liquid or solid foods other than medications or vitamins. After that safe, appropriate and adequate complementary foods may be introduced but on-demand breastfeeding

should continue until the baby is two years of age or beyond (Pan American Health Organization, 2001 as cited in Pellegrini L, Sguassero Y. Support for breastfeeding mothers: World Health Organization.). Despite efforts by international agencies like UNICEF and national government agencies like NAFDAC, too many babies are still suffering malnutrition and even dying in many cases because they're not being exclusively breast fed. According to researches, exclusive breastfeeding for the first six months - with continued breastfeeding for the first year - could save 1.3 million lives every year, well over 3,000 lives each day. It is further computed that if breastfeeding is continued alongside appropriate complementary feeding until at least age two, the world could be saving 5,500 additional lives daily.

The struggle to inculcate the culture of exclusive breastfeeding in Nigeria has been fraught with restrictive realities, such as the difficulty of career mothers who have to spend an average of nine hours in office, almost invariably away from the newborn baby. A nursing mother can only spend three months on maternity leave by existing labor laws.

Nigeria is the most populous country in Africa, with 149 million people, including 75 million children, sadly, more children die in Nigeria than any other country in Africa, largely from preventable diseases. Under nutrition is an underlying cause in one-third of all under-five deaths. Yet only 13 per cent of children in Nigeria are exclusively breastfed from birth to six months of age. Nigeria has 2 per cent of the world's population but 12 per cent of all deaths of children under the age of five" (UNICEF Executive Director Ann M. Veneman). According to the World Health Organization, breastfeeding which could save 1.3 million children's lives is often abandoned as less than 40 per cent of women worldwide breastfeed exclusively. The 2008 National Demographic Health Survey (NDHS) reported a significant drop in Nigeria's exclusive breast feeding rate from 17% in 2003 to 13%.

## **1.2 RESEARCH OBJECTIVES**

- To examine the level of knowledge of nursing mothers about exclusive breastfeeding
- To assess the opinion of nursing mothers about exclusive breastfeeding
- To elicit any existing misconception about breastfeeding among nursing mothers
- To evaluate the rate of compliance of nursing mothers with exclusive breastfeeding

- To establish if any association exist between the level of knowledge and practice of exclusive breastfeeding among nursing mothers

### 1.3 RESEARCH QUESTIONS

- What is the level of knowledge of nursing mothers about exclusive breastfeeding?
- What is the opinion of nursing mothers about exclusive breastfeeding?
- Is there any existing misconception about exclusive breastfeeding among nursing mothers?
- What is the rate of compliance of nursing mothers with exclusive breastfeeding?
- Is there any relationship between the level of knowledge and the practice of exclusive breastfeeding among nursing mothers?

### 1.4 HYPOTHESIS/ASSUMPTION

The hypothesis of this research is as follows:

H<sub>0</sub>: There is no significant relationship between the level of knowledge and the practice of exclusive breastfeeding among nursing mothers.

H<sub>1</sub>: Not H<sub>0</sub>.

### 1.5 SIGNIFICANCE OF THE STUDY

With continued increases in the incidence of infant mortality and morbidity especially in developing nations such as Nigeria, there is an unprecedented need for infant nutritional health promotion. Nursing professionals can make significant contributions to health promotion among nursing mothers and their babies. This is because nurses understand the physiologic, psychological, and economic benefits of exclusive breastfeeding and its impact on the health of the growing infants; they can therefore address the developmental and health needs of children.

Every infant and child has the right to good nutrition according to the Convention on the Rights of the child. Yet, undernutrition is associated with 35% of the disease burden in children under five. Globally 30% (or 186 million) of children under five are estimated to be stunted and 18% (or 115 million) have low weight-for-height, mostly as a consequence of poor feeding and repeated infections. Therefore, this study stands to elicit factual information on the practices of nursing mothers concerning exclusive breastfeeding and their level of information. It will also serve as a valuable link between previous and future studies.

## 2.0 LITERATURE REVIEW

For hundreds of thousands of years, humans, like all other mammals, fed their young milk. Before the twentieth century, alternatives to breastfeeding were rare. Attempts in 15th century Europe to use cow or goat milk were not very positive. In the 18th century, flour or cereal mixed with broth was introduced as substitutes for breastfeeding, but this did not have a favorable outcome, either. True commercial infant formulas appeared on the market in the mid 19th Century but their use did not become widespread until after World War II. Feeding their newborn is an exciting, satisfying, but often worrisome task for parents. Meeting this essential need of their new child helps parents to strengthen their attachment to their child and fosters their self images as nurturers and providers, yet carries great responsibility.

Nutrition refers to taking in food and assimilating it metabolically for use by the body. It is an essential component of life. The child's nutrition begins before birth and is related to the mother's nutritional state. The natural first food is the breast milk and its intake should be encouraged for all infants. Breastfeeding is the feeding of an infant or young child with breast milk directly from female human breasts (i.e., via lactation) rather than from a bottle or other container. Babies have a sucking reflex that enables them to suck and swallow milk.

Human milk is the preferred form of nutrition for full-term infant and it is the most desirable complete diet for the infant during the first six months. The newborn's diet must supply nutrients to meet the rapid rate of physical growth and development. The diet should include protein, carbohydrate, fat, water, vitamins and minerals. Protein is needed for rapid cellular growth and maintenance. Carbohydrates provide energy, Fat provides calories, regulates fluid and electrolyte balance, and develops the newborn brain and neurologic system.

The composition of milk varies with the stage of lactation, the time of day, the time during the feeding, maternal nutrition and gestational age of the newborn at birth. Prolactin and oxytocin work in concert to establish and maintain milk supply. During the establishment of lactation, there are three stages of human milk: colostrum, transitional milk and mature milk. Immunologic advantages of breastfeeding include varying degrees of protection from respiratory and gastrointestinal infections, otitis media, meningitis, sepsis and allergies (Thureen, Deacon, Hernandez et al., 2005). This protection of the breastfed baby extends from the neonatal period through age 18 months, when the baby's own immunoglobulins become active.

The Baby-Friendly Hospital Initiative (BFHI) is a joint effort of the World Health Organization and the United Nations Children's Fund to encourage, promote and support breast-feeding as a model for optimum infant nutrition. It is an initiative that was launched worldwide in 1991 by WHO and UNICEF to encourage hospitals to promote practices that are supportive of breastfeeding (WHO, 1989). Ten research-supported practices were developed by BFHI as a guideline for maternity facilities worldwide to promote breastfeeding (Kyenkyia-Isabirye, 1992; Wright, Rice, and Wells, 1996). The steps include:

- Have a written breastfeeding policy that is routinely communicated to all healthcare staff.
- Train all healthcare staff in skills necessary to implement this policy.
- Inform all pregnant women about the benefits and management of breastfeeding.
- Help mothers initiate breastfeeding soon after birth.
- Show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants.
- Give newborn infants no food or drink other than breastmilk, unless medically indicated.
- Practice rooming-in: allow mothers and infants to remain together 24hrs a day.
- Encourage breastfeeding on demand.
- Give no artificial teats or dummies to breastfeeding infants.
- Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospital or clinic.

In 1981, the combined forces of WHO and UNICEF produced a Code which was adopted at the 34<sup>th</sup> World Health Assembly. The Code has major implications for the midwives. Its recommendations include:

- No advertising or promotion in hospitals, shops or to the general public (this includes posters in hospitals and advertisements in mother-and-baby books).
- No free samples of breastmilk substitutes to be given to mothers
- No free gifts relating to products within the scope of the code to be given to mothers (including discount coupons or special offers)
- No financial or material gifts to be given to health workers for the purpose of promoting products, nor free or subsidized supplies to hospitals or maternity wards
- Information provided by manufacturers to health workers should include only scientific and factual material, and should not create or imply a belief that bottle-feeding is equivalent or superior to breastfeeding
- Health workers should encourage and protect feeding

However, the code does not prevent mothers from bottle-feeding but rather seeks to contribute to safe, adequate nutrition for infants and to promote and protect breastfeeding.

In addition to the physiologic qualities of human milk, the most outstanding psychologic benefit of breastfeeding is the close maternal-child relationship. The infant is nestled very close to the mother's skin, can hear the rhythm of her heart beat, can feel the warmth of her body, and has a sense of peaceful security. The mother has a very close feeling of union with her child and feels a sense of accomplishment and satisfaction as the infant suckles milk from her.

Human milk is the most economical form of feeding. It is always available, ready to serve at room temperature, and free of contamination. The projected monetary savings for a population of breastfeeding infants in relation to preventive medicine have been estimated and are considered to be significant. Breastfeeding may also offer protection against obesity, allergy, diabetes, and arteriosclerosis although the evidence is inconclusive. Breast-fed infants, especially beyond 2 to 3 months of age, tend to grow at a satisfactory but slower rate than bottle-fed infants (Dewey et al., 1991). Infants who are exclusively breast-fed have decreased amount of free fat (Butte et al., 2000). Breastfeeding has a protective benefit against infection. Colostrum contains agglutinins that are effective against gram-negative bacteria. Human milk contains large quantities of IgA and Iron-binding protein that exert a bacteriostatic effect on *Escherichia coli*. Human milk also contains macrophages and lymphocytes that promote a local inflammatory reaction. Many advantages to breastfeeding are known, including excellent nutritional balance,

promotion of gastrointestinal function, fostering immune defense, psychologic benefits, and economic advantage.

Although health professionals cannot impact another's parity or prior breastfeeding experience, they can significantly impact breastfeeding success by encouraging expectant mothers to seek out prenatal breastfeeding education. They can also stress the importance of smoking cessation in promoting improved breastfeeding outcomes. Employed mothers can continue breastfeeding with guidance and encouragement. Mothers are encouraged to set realistic goals for employment and breastfeeding, with adequate information regarding the costs, risks, and benefits of available feeding options. Many mothers may find a program of breast-pumping when away from home and feeding the infant with the expressed milk is successful. Expressed milk may be stored in the refrigerator (40<sup>0</sup>C or 39<sup>0</sup>F) without danger of bacterial contamination for up to 5 days (Lawrence and Lawrence, 1999). Although feeding the infant at home may occur on a demand basis, pumping milk away from home may be needed every 3 to 4 hours to maintain adequate supply. If the infant cannot breastfeed, breast pump can be used so that the mother can maintain lactation.

Supplementing an infant with formula when medically unnecessary will likely contribute to decreased breast stimulation and subsequent delay and decrease in maternal milk supply.

Additionally, in these instances, it is likely that an infant will become accustomed to a faster flow of milk than is physiologically normal in the first few days. If this occurs, fussiness may develop during breast feedings and contribute to a mother's low confidence in her breast milk and breastfeeding ability. The mother may then become concerned that her milk supply is insufficient and feel that she needs to supplement with formula to satisfy her infant. Artificial feeding has associated with more deaths from diarrhea in infants in both developing and developed countries.

This is as a result of inadequate ability to maintain optimal hygiene of utensils used for artificially fed babies.

#### **4.0 RESEARCH DESIGN AND METHODOLOGY**

This section presents the summary of how the study was conducted. The research design, the research setting, target population, sampling technique, development of research tool, procedure for data collection and method of data analysis. This research an exploratory study



specifically designed to examine the knowledge and practice of exclusive breastfeeding among nursing mothers in selected Comprehensive Health Centers in Ife East Local Government, South-West, Nigeria. The study was conducted in three selected Primary Health Centers in Ife East Local Government. The target population is the Nursing Mothers attending the Comprehensive Health Centers in Ife East Local Government. Random sampling technique was used to select 3 Comprehensive Health Centers and 200 respondents were randomly selected.

The instrument for data collection is a self developed questionnaire which was used to collect data from the respondents. The questionnaire is made up of three sections viz- A, B and C. Section A covers questions on socio-demographic variables, section B highlights questions on respondents' knowledge of exclusive breastfeeding while section C identifies respondents' pattern of practice of exclusive breastfeeding. The data collected was manually sorted out, coded and entered into the SPSS for analysis using descriptive statistics technique which includes frequency and percentages and Chi-square tests.

#### **4.1 FINDINGS**

The findings from this study are presented under the following sub-headings.

- (i) Socioeconomic profile of Respondents.
- (ii) Knowledge of Respondents about Exclusive breastfeeding.
- (iii) Practices of Exclusive breastfeeding by Respondents.
- (iv) Relationship between Respondents' level of knowledge and practice of Exclusive breastfeeding.

##### **(i) SOCIOECONOMIC PROFILES OF RESPONDENTS**

This section discusses the socio – demographic characteristics of the respondents. The variables analyzed include the Age, Religion, Family background, Ethnicity, and Occupation.

**Table 1: Distribution of Respondents by the Socioeconomic Characteristics.**

<b>VARIABLE</b>	<b>FREQUENCY (N=100)</b>	<b>PERCENTAGE (%)</b>
<b><u>AGE</u></b>		
Below 20yrs	2	2.0
20-24yrs	24	24.0
25-29yrs	43	43.0
30-34yrs	29	29.0
35-39yrs	2	2.0
<b><u>RELIGION</u></b>		
Christianity	85	85.0
Islam	15	15.0
<b><u>FAMILY BACKGROUND</u></b>		
Monogamy	96	96.0
Polygamy	4	4.0
<b><u>ETHNICITY</u></b>		
Yoruba	97	97.0
Igbo	1	1.0
Others	2	2.0
<b><u>OCCUPATION</u></b>		
Business	86	86.0
Civil service	6	6.0
Schooling	8	8.0

Data was collected from 2 Primary Health Centers in Ife East Local Government. These are: Ifelodun Primary Health Centre and Iloro Primary Health Center and 100 respondents were used for the study. Data on Age indicated that 2% were below 20 years, 24% were between 20-24 years, 43% were between 25-29 years, 29% between 30-34 years while only 2% were between 35-39 years of age. This shows that the greater percentages (43%) of the respondents were between the ages of 25-29 years. Also there were 85 Christians, and 15 Muslims among the respondents. 96% of the Respondents were from Monogamous family; while only 4% were from Polygamous family. Moreover, there were 97 Yoruba, 1 Igbo, and only 2 from other ethnic groups. It is clear that majority are Yoruba with the leading figure of 97%. Among the 100 respondents, 86% were business women, 6% were civil servants while 8% were still schooling.

#### (ii) KNOWLEDGE OF RESPONDENTS ABOUT EXCLUSIVE BREASTFEEDING

**Table 2: Respondents' Information about Exclusive Breastfeeding**

Ever Heard About Exclusive Breastfeeding?	Frequency	Percentage
Yes	100	100.0
No	-	-
Total	100	100.0

Data gathered from the respondents revealed that they have all heard about exclusive breastfeeding at one time or the other.

**Table 3: Source of Information about Exclusive Breastfeeding**

Source of Information	Frequency	Percentage
Health workers	96	96.0
Family members	2	2.0
TV/Radio	2	2.0
Total	100	100.0

Majority (96%) of the respondents heard about exclusive breastfeeding from health workers, 2% heard from family members while the other 2% heard from the TV/Radio.

**Table 4: Rating of Respondents' Knowledge about Exclusive Breastfeeding**

Level of Knowledge	Frequency	Percentage
Good	67	67.0
Fair	33	33.0
Total	100	100.0

From the data collected, respondents' level of knowledge was graded by giving the highest score to the most correct answer. Their responses were then summed and rated as follows: below 14 was rated Poor, 15-21 was rated Fair and 22-28 was rated Good knowledge. It was discovered that 67% of the respondents had Good knowledge while 33% had Fair knowledge. None of the respondents had Poor knowledge.

**Table 5: Rating of Opinion**

Rating of Opinion	Frequency	Percentage
Right opinion	100	100.0
Wrong opinion	-	-
Total	100	100.0

Respondents' opinion was elicited using a scale of Agreed, I don't know and Disagreed. Correct opinion was accorded 3, I don't know- 2, and wrong opinion- 0. This was summed together and scores between 0 -14 were rated as Wrong opinion while scores between 15 -21 were rated as Right opinion. It was found that all the respondents had right opinion about exclusive breastfeeding.

**Table 6: Rating of Practice**

Rating of Practice	Frequency	Percentage
Good practice	80	80.0
Poor practice	20	20.0
Total	100	100.0

The Questionnaire contained a section asking specific questions about respondents’ own pattern of practice of exclusive breastfeeding. The responses were grouped and graded by giving highest scores to the most appropriate practice. The responses were then rated as thus: Below 20 – Poor practice, while scores between 21-28 were rated as Good practice. It was then discovered that 80% had Good pattern of practice while 20% had Poor pattern of practice of exclusive breastfeeding.

**Level of knowledge \* Rating of practice Crosstabulation**

Count

		Rating of practice		Total
		Poor practice	Good practice	
Level of knowledge	Fair knowledge	6	27	33
	Good knowledge	14	53	67
Total		20	80	100

Cross tabulation was used to compare the Level of Knowledge of Respondents with the Rating of their practice. This shows that out of the 20 respondents who had poor practice, six had fair knowledge, while 14 had good knowledge. Out of 80 who had good practice, 27 had fair knowledge, while 53 had good knowledge.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.102 <sup>a</sup>	1	.750		
Continuity Correction <sup>b</sup>	.003	1	.958		
Likelihood Ratio	.103	1	.748		
Fisher's Exact Test				1.000	.486
Linear-by-Linear Association	.101	1	.751		
N of Valid Cases <sup>b</sup>	100				

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.60.

b. Computed only for a 2x2 table

The Chi-Squared tests above reveals that the test in our hypothesis above is not significant.

## 5.0 CONCLUDING REMARKS

In this study, we have been able to assess the knowledge and practice of exclusive breastfeeding among nursing mothers in a developing country. Our results reveal that the knowledge and practice of exclusive breastfeeding is still relatively poor in this part of the world.

Three main areas have been proposed as essential in promoting breastfeeding: correct sucking technique, absence of a rigid feeding time schedule, and correct positioning of the infant at the breast to achieve latch-on. Correct sucking for breastfeeding is defined as a wide open mouth,

tongue under the areola, and expression of milk by slow, deep sucking. Breast milk should be the only food for the first 6 months and should continue through 12 months of age, with addition of solid foods from 6 to 12 months. Providing breastfeeding information and instruction positively influences the number of women who decide to breastfeed and increases the number of months they choose to continue breastfeeding (Kramer, 2001). The most effective programs for encouraging breastfeeding are those that involve education and skill/problem-solving information given at least one session by a health professional. Successful breastfeeding probably depends more on the mother's desire to breastfeed, satisfaction with breastfeeding, and available support systems than on any other factors. Contrary to popular belief, breastfeeding is not instinctive. Mothers need support, encouragement and assistance during their postpartum hospital stay and at home to enhance their opportunities for success and satisfaction. Breastfeeding can still be done with twin births (and other multiples). If the infants are full term, they can begin feedings immediately after birth. Simultaneous feeding promotes the rapid production of milk needed for both infants and makes the milk that would normally be lost in the letdown reflex available to one of the twins.

However, cultural beliefs and values often influence infant feeding practices. There is also concern that the increasingly early discharge of new mothers from hospitals, more aggressive marketing of infant formulas to the public, and more employed mothers have contributed to the decline of breastfeeding. In addition, a mother's lack of confidence in her own breast milk and her breastfeeding ability play a strong role in a mother's decision to introduce or substitute formula into her infant's diet (O'Brien M, Buikstra E, Hegney D, 2008). Many mothers have come to understand the benefits of breastfeeding yet still face difficulties continuing to breastfeed, especially exclusively. Recent studies have identified varied socio-demographic, biomedical, and psychosocial determinants of continued breastfeeding. Not surprisingly, other studies have revealed that early breastfeeding discontinuation is significantly associated with younger maternal age, lower maternal education and income level, single marital status, living in the urban area, and intention to return to work after birth. Although most of these socio-demographic barriers are not modifiable, a mother's decision on when and how she returns to work is. Studies have revealed that breastfeeding duration and exclusivity are significantly decreased for mothers who are primiparous, obese, have no prior breastfeeding experience, have received limited to no prenatal education, smoke during or after pregnancy,

introduce pacifiers to their babies in the hospital, or deliver by cesarean section or other operative delivery.

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