

**PERCEPTION OF MEDICAL PERSONNEL ON ARTIFICIAL BREASTFEEDING AMONG NURSING MOTHERS AMID COVID 19 PANDEMIC IN AKURE SOUTH LOCAL GOVERNMENT AREA, ONDO STATE NIGERIA.**

BY

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**Abstract**

*The food one eats can be either the safest and most powerful form of medicine or the slowest form of poison. The purpose of this study was to consider the perceptions of medical personnel on artificial breast feeding among nursing mothers amid COVID 19 pandemic in Akure South Local Government Area, Ondo state Nigeria. One research question and three hypotheses were raised to guide the study Four hundred participants were selected who took part in the study. A self-developed questionnaire of 4-points Likert type rating scale with reliability coefficient of 0.84 was used to collect data from 400 nurses selected through a multi-stage sampling technique. The statistics of frequency counts and percentages were used to analyse demographic data of the respondents, chi square statistics was used to analyse responses. The results showed that hypotheses one and three were rejected while hypotheses two was accepted at 0.05 alpha level of significance.*

**Key words:** Artificial breast feeding, breast milk, infant health outcome, antenatal and COVID 19.

**Introduction**

A newborn has only three demands, which includes warmth in the arms of the mother, food from the breast of the mother, and security in the mothers' presence, breast feeding satisfies all three. Mothers and babies form an inseparable biological and social unit, the health and nutrition of each cannot be separated from the health and nutrition of the other. Breast feeding is one of the most effective ways to ensure child health and survival. However, nearly 2 out of 3 infants are not exclusively breast fed for the recommended 6 months a rate that has not improved in 2 decades. Breast milk is the ideal food for infants. It is safe, clean and contains antibodies which help protect against many common childhood illnesses. Breast milk provides all the energy and nutrients that the infant needs for the first six months of life, and it continues to provide up to half or more of a child's nutritional needs during the second half of the first year, and up to one third during the second year of life. Breastfed children perform better on intelligence tests, are less likely to be overweight or obese and less prone to diabetes later in life. Women who breastfeed also have a reduced risk of breast and ovarian

cancers. Inappropriate marketing of breast-milk substitutes continues to undermine efforts to improve breastfeeding rates and duration worldwide

(WHO, 2018).

In the view of Nyqvist (2019), breastfeeding refers to an infant receiving only breast milk from the mother, it helps in bonding the baby to the mother. The increasing rates of breastfeeding and in particular, exclusive breastfeeding to six months, is a public health priority across the world, hence it is recommended that infants be exclusively breastfed until 6 months of age and continue to be breastfed, in conjunction with solids, for up to 2 years and beyond if desired. According to Omosebi (2015), breastfeeding is an instinctual and natural act between a mother and the baby, it is also an art that is learned day by day. The reality about breastfeeding is that almost all women can breastfeed, have enough milk for the baby and learn how to overcome health problems.

Frieghess(2015), explained that because breastfeeding is a natural experience, many new mothers assume that they should be able to do it straightaway. In reality, it may come easily to some, but not others. Breastfeeding is a skill that the mother and baby learn together. It may feel a bit awkward at first, the midwife and health visitor should be of help. There are many physical and emotional benefits to breastfeeding. At the start, it can be a wonderful way to develop a loving relationship and a strong emotional bond between mother and child baby. It can also improve mental health and wellbeing for both. Breastfeeding has a long term health benefits for the baby that last right into adulthood. It can help to improve the Intelligent Quotient of the baby, as well as improve personal and social development. It can also help reduce the risk of infections, childhood leukaemia, obesity, diabetes, sudden infant death syndrome, eczema, asthma, food allergies and heart disease in later life. Choosing whether to breastfeed or formula feed babies is one of the biggest decisions expectant and new parents will make. Obamu (2017), opined that breast milk is the best nutritional choice for infants, however, breastfeeding may not be possible for all women. For many, the decision to breastfeed or formula feed is based on comfort level, lifestyle, and specific medical situations. For mothers who cannot breastfeed or who decide not to, infant formula is a healthy alternative. Formula provides babies with the needed nutrients to grow and thrive. On the contrary, Aveshe (2015) reported that the decision to breastfeed or formula feed a baby is a personal one some mothers worry less about not breastfeeding and risk the bond with the baby, stressing that loving mothers will always create a special bond with their children. **Medical personnel** includes physicians, physician assistants, nurse practitioners, and nurses of a **medical** clinic. WHO (2012) informed nursing mothers on how to breast feed. Stating that mothers are to sit comfortably with back supported, hold baby with the head and body in a straight line, hold baby close and support the neck, back and shoulders such that the baby should be able to tilt head back easily, and they should not have to reach out to feed. Place the baby's nose opposite the mother's nipple. Let the baby's head tip back a little so that the top lip can brush against the nipple. This should help the baby to make a wide open mouth. When the baby's mouth opens wide, the baby's chin should be able to touch mother's breast first, with the baby's head tipped back so that the tongue can reach as much breast as possible.

Once the baby has latched on, the nose should be clear and the cheeks should look full and rounded as they feed.

Dartmouth, (2019), explained that most young mothers are concerned that the baby may not be getting enough breast milk while some are concerned that the baby needs formula for other reasons. In contrast, Alissons (2018), warned that formula feeding can change a baby's normal intestinal bacteria. This could increase a baby's risk of infection in the digestive tract. It could also increase the risk for immune problems later in life, infants who receive formula feedings are also at a higher risk for these illnesses like acute otitis media which may cause an infection to the ear, asthma—a condition of the lungs that causes problems with breathing, diabetes—type 1 and 2 which brings about a problem in controlling the body's sugar levels, eczema—an itchy condition of the skin, lower respiratory tract which may cause lung infections. Thereby increasing the risk of admission to the hospital and being overweight. Maddison (2018), affirmed other risks of formula feeding stating that it is harder to digest for a new baby. It stays in the stomach longer than breast milk, which may cause the baby to feed less often and could cause a decrease in the mother's milk production, supplementing with formula, especially from a bottle, may change a baby's suck pattern at the breast. Latching the baby to the breast may be more difficult after the baby is fed with a firmer bottle nipple or feeds with the faster flow from a bottle. Brissckzy (2020), revealed that babies who drink only the mother's breast milk receive the most health benefits, and also lowers an infant's risk of Sudden Infant Death Syndrome (SIDS) and childhood leukemia—a cancer of the blood.

Early feeding plays a central role in the development and maturation of the infant immune system. Compared with human milk-fed infants, formula fed infants have higher pH stools and greater colonization with pathogenic bacteria, including *E coli*, *Clostridium difficile*, and *Bacteroides fragilis*. Bioactive factors in human milk appear to facilitate the more favorable gut colonization in breastfed infants. These oligosaccharides, cytokines, and immunoglobulins regulate gut colonization and development of gut-associated lymphoid tissue and govern differentiation of T cells that play a role in host defense and tolerance. Formula-fed infants also have a smaller thymus than breastfed infants. These differences in immune system differentiation may underlie the higher incidence of allergic disease observed in formula-fed children. Not breastfeeding may also affect disease risk through exposure to foreign antigens in formula. Health outcomes in developed countries differ substantially for mothers and infants who formula feed compared with those who breastfeed. For infants, not being breastfed is associated with an increased incidence of infectious morbidity, as well as elevated risks of childhood. For mothers, failure to breastfeed is associated with an increased incidence of premenopausal breast cancer, ovarian cancer, retained gestational weight gain, type 2 diabetes, myocardial infarction, and the metabolic syndrome (Froost, 2019).

Going by all the health risks the baby could face as a result of artificial breast feeding and the health risks the mother encounters, it becomes expedient that a research work like this be carried out.

Coronavirus disease 2019 also known as COVID-19 is an illness caused by a novel coronavirus now called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; formerly called 2019-

nCoV), which was first identified amid an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China. It was initially reported to the WHO on December 31, 2019. On January 30, 2020, the WHO declared the COVID-19 outbreak a global health emergency. On March 11, 2020, the WHO declared COVID-19 a global pandemic, its first such designation since declaring H1N1 influenza a pandemic in 2009. Illness caused by SARS-CoV-2 was termed COVID-19 by the WHO, the acronym derived from coronavirus disease 2019. The name was chosen to avoid stigmatizing the virus's origins in terms of populations, geography, or animal associations. WHO (2019), advised that when a mother is breastfeeding and have symptoms of or confirmed COVID-19, steps should be taken to avoid spreading the virus to the baby which include washing of hands with soap and water before touching the baby or expressing breast milk either by hand expression or with a breast pump. If soap and water are not available, use hand sanitizer with at least 60% alcohol. Wearing a face [mask](#) when at least less than 6 feet from the child including when feeding at the breast or feeding from a bottle and when expressing breast milk either by hand expression or with a breast pump. [Clean and sanitize breast pumps](#) if expressing breast milk using a breast pump (WHO, 2019). Akure is the capital of [Ondo](#) state. It is one of the most important cities of Nigeria, located 7.25 latitude and 5.19 longitude and it is situated at elevation 353 meters above sea level. in southwestern [Nigeria](#). Akure has a population of 420,594 making it the biggest city in the state. It operates on the WAT time zone. It lies in the southern part of the forested Yoruba Hills and at the intersection of roads from [Ondo](#), [Ilesha](#), [Ado-Ekiti](#), and [Owo](#). Akure is an agricultural trade centre for cassava, corn (maize), bananas, rice, palm oil and kernels, okra, rubber, coffee, and pumpkins. Although cocoa is by far the most important local commercial crop, cotton, teak, and palm produce are also [cultivated](#) for export. Despite being one of the more densely populated cities of the country, Akure does not lag behind in terms of development. The city is important in terms of the economy and the commercial profile of the Ondo state. The mineral deposits of the place makes it a commercial hub. The Akure city connects to certain other Nigerian cities such as Ibadan, Lagos, Benin, Port Harcourt and Kaduna Abuja (Wikipedia, 2019). It is lieu of this background that this study intends to investigate the perceptions of medical personnel on artificial breastfeeding among nursing mothers amid COVID 19 pandemic in Akure South Local Government Area, Ondo State Nigeria.

### Research objective

**The objective of this study was to consider** the perceptions of medical personnel on artificial breastfeeding among nursing mothers amid COVID 19 pandemic in Akure South Local Government Area (LGA), Ondo State, Nigeria.

### Research Question

1. Are there differences between babies fed with artificial milk and mothers' breast milk?

### Research Hypothesis

1. Artificial breastfeeding will not significantly be connected to poor physical development of the baby during COVID 19 pandemic in Akure south LGA Ondo State, Nigeria .
2. Poor mental development of the baby will not significantly be the impact of artificial

breastfeeding during COVID 19 pandemic in Akure south LGAOndo State, Nigeria .

3. Lack of information on proper breastfeeding will not significantly be the reason for artificial breastfeeding among nursing mothers in Akure south LGAOndo State, Nigeria .

### Methodology

The study adopted a descriptive survey research design because it was an investigation in which self-reported data were collected from sampled participants in describing the population on the relevant variables of interest. A multi stage sampling technique was adopted for the study to get sample from the health centres. The simple random sampling technique with replacement was used to select fifteen (15) health centres out of thirty five (35) in Akure south LGAOndo State, Nigeria. Ten (10) respondents were selected from each health centre making a total of one hundred and fifty (150) respondents selected using the stratified random sampling technique. The Purposive sampling technique was used to select the only two government hospitals in Akuresouth LGAOndo State, Nigeria, while convenient sampling was employed to select a total of one hundred and twenty five (125) respondents from each hospital, making the total number of respondents from the hospital two hundred and fifty (250). Hence, four hundred (400) respondents participated in this study.

### Research Instrument

The instrument for gathering information for this study was a self-developed structured questionnaire tagged PMPABFNM. The questionnaire was in two sections, A and B. Section A dealt on demographic data of the respondents while section B sought information on the variables for the study. The likert scale technique was used for eliciting responses, the responses were on four ratings of 'strongly agree' SA, 'Agree' A, 'Disagree' D, and 'strongly disagree' SD. For section 'B', four, points to one, was allotted to positively worded items and the reverse for negatively worded items respectively as indicated below

SA	Strongly agree	4 points
A	Agree	3 points
D	Disagree	2 points
SD	Strongly disagree	1 point
SA	Strongly agree	1 point
A	Agree	2 points
D	Disagree	3 points
SD	Strongly disagree	4 points

### Validity of instrument

A reliable coefficient of 0.84 was obtained through the use of Pearson Product Moment Correlation (PPMC) analysis. Therefore, the instrument is considered adequate and appropriate enough to be used for data collection for the study.

### Administration of research instrument

Copies of the questionnaire was administered with the help of four research assistants who helped in covering the fifteen health centers and two hospital in Akure south LGAOndo State, Nigeria. As much as possible the questionnaire were collected on the spot to ensure high return rate and usability.

### Data Analysis

The descriptive statistics of frequency counts and percentages was used to analyse the demographic data while chi-square at 0.05 level of significance was used to test the hypotheses at 0.05 level of significance.

### Result

#### Demographic Information

##### Descriptive Analysis

The analysis of the demographic variables is presented in table 1

#### Demographic Information of Respondents

Variables	Level	Frequency	Percent (%)
Sex	Male	130	32.5%
	Female	270	67.5%
	<b>Total</b>	<b>400</b>	<b>100%</b>
Age	18-27	40	10%
	28-37	90	22.5%
	38-47	100	25%
	48-57	140	35%
	58+	30	7.5%
	<b>Total</b>	<b>400</b>	<b>100%</b>
Marital status	Single	120	30%
	Married	270	67.5%
	Divorced	10	2.5%
	<b>Total</b>	<b>400</b>	<b>100%</b>
Qualification	RN	30	7.5%
	RM	60	15%
	BNSC	220	55%
	MBBS	80	20%
	MCM	10	2.5%
	<b>Total</b>	<b>400</b>	<b>100%</b>
Years of Experience	1-5	20	5%
	6-10	20	5%
	11-15	60	15%
	16-20	50	12.5%
	20-25	100	25%
	25-30	120	30%
	30+	30	7.5%
	<b>Total</b>	<b>400</b>	<b>100%</b>

Table 1 shows the demographic characteristics of the respondents, table 1 reveals that female 270 (67.5%) are more than male 130 (32.5%). Respondents between the age range of 48 and 57 are the majority with 140(35%), while age 58 and above are 30 (7.5%) are the least. Respondents who are single are 120 (30%), while 270 (67.5%) of the respondents are married. Respondents with BNSC are more than other respondents with a frequency of 220 (55%), respondents with RM are 60 (15%), while respondents with RN are 30 (7.5%), while respondents with MBBS and MCM are 80 (20%) and 10 (2.5%) respectively. Respondents with the longest years of working experience are between the range of 20-25 years 55 (27.5%), while respondents with the least years of working experience falls within the range of 1 and 5 years 20 (5%).

### Hypothesis 1

Artificial breast feeding will not significantly be connected to poor physical development of the baby during COVID 19 pandemic in Akure south LGA, Ondo State, Nigeria .

### Computation of data using chi-square on artificial breast feeding and poor physical development .

**Table 2**

SA	A	D	SD	Total	Df	0.05	X <sup>2</sup>
44 (11%)	82 (21%)	138 (35%)	126 (32%)	400 (100%)	9	14.616	41.20

Degree of freedom Df=9, Critical value =14.616, X<sup>2</sup> = 41.20

Table two above revealed that 44 (11%) of the respondents strongly agreed while 82 (21%) agreed that artificial breast feeding poorly affects the baby's physical development. 138 (35%) of the respondents disagreed while 126 (32%) strongly disagreed that artificial breast feeding poorly affects the baby's physical development in Akure south LGA, Ondo State, Nigeria. Therefore, the chi-square of 41.20 obtained was greater than the critical value of 14.616 at 0.05 alpha level of significance. Thus, the null hypothesis was rejected.

### Hypothesis 2

Poor mental development of the baby will not significantly be the impact of artificial breast feeding during COVID 19 pandemic in Akure south LGA, Ondo State, Nigeria .

### Computation of data using chi-square on artificial breast feeding and poor mental development

**Table 3**

SA	A	D	SD	Total	Df	0.05	X <sup>2</sup>
96 (24%)	192 (47.5%)	40 (10%)	72 (18%)	400 (100%)	9	14.616	7.8

Degree of freedom Df=9, Critical value =14.616, X<sup>2</sup> = 7.8

From table three above, it was indicated that 96 (24%) of respondents strongly agreed, while 192 (47.5%) agreed that poor mental development of the baby is as a result of artificial breastfeeding. Also 40 (10%) of the respondents disagreed, while 72 (18%) strongly disagreed that poor mental

development of the baby is as a result of artificial breastfeeding. Therefore, the chi-square value of 7.8 was lower than the critical value of 14.616 at 0.05 alpha level of significance. Thus, the null hypothesis was accepted.

### Hypothesis 3

Lack of information on proper breastfeeding will not significantly be the reason for artificial breastfeeding among nursing mothers in Akure south LGA.

### Computation of data using chi-square on lack of information and artificial breastfeeding among nursing mothers

**Table 4**

SA	A	SD	D	Total	Df	0.05	X <sup>2</sup>
56(14%)	62(15.5%)	168 (42%)	114(28.5%)	400 (100%)	9	14.616	52.8

Degree of freedom Df=9, Critical value =14.616, X<sup>2</sup> = 52.8

From table four above, it is revealed that 56 (14%) of respondents strongly agreed, while 62 (15.5%) agreed that lack of information on proper breastfeeding is the reason for artificial breastfeeding among nursing mothers in Akure south LGA, Ondo State, Nigeria. Also, 168 (42%) of the respondents strongly disagreed as 114 (28.5%) respondents disagreed. Therefore, the chi-square of 52.8 obtained was greater, than the critical value of 14.616 at 0.05 alpha level of significance. Hence, the hypothesis was rejected.

### Discussion of findings

Table 1 revealed that female 270 (67.5%) are more than male 130 (32.5%). Respondents between the age range of 48 and 57 are the majority with 140 (35%), while age 58 and above are 30 (7.5%) are the least. Respondents who are single are 120 (30%), while 270 (67.5%) of the respondents are married. Respondents with BNSC are more than other respondents with a frequency of 220 (55%), respondents with RM are 60 (15%), while respondents with RN are 30 (7.5%), while respondents with MBBS and MCM are 80 (20%) and 10 (2.5%) respectively. Respondents with the longest years of working experience are between the range of 20-25 years 55 (27.5%), while respondents with the least years of working experience falls within the range of 1 and 5 years 20 (5%).

Hypothesis one table two revealed that 44 (11%) of the respondents strongly agreed while 82 (21%) agreed that artificial breastfeeding poorly affects the baby's physical development. 138 (35%) of the respondents disagreed while 126 (32%) strongly disagreed that artificial breastfeeding poorly affects the baby's physical development in Akure south LGA. Therefore, the chi-square of 41.20 obtained was greater than the critical value of 14.616 at 0.05 alpha level of significance. Thus, the null hypothesis was rejected. In support of this findings, Gallegos, Parkinson, Duane, Domegan Jansen and Russelle-Bennette(2020), affirmed that breastfeeding is a complex behavior that relies on individual maternal traits and behaviours as well as infant characteristics intersecting with health

systems and services, family and community support, workplace policy and broader cultural values. Breastfeeding has non-modifiable determinants, such as maternal age, socioeconomic status, geographical residence, parity and birthweight of the infant, as well as modifiable factors, such as type of delivery, self-efficacy, attitudes influenced by religion, previous exposure to breastfeeding and social and professional support. An enabling environment for breastfeeding encompasses an understanding of individual mother and infant attributes, and the barriers and facilitators of a range of settings health systems or services, family, community and workplace, which are all embedded within specific sociocultural and market systems which is having a strong correlation on the physical development of the baby.

Hypothesis two table three indicated that 96 (24%) of respondents strongly agreed, while 192 (47.5%) agreed that poor mental development of the baby is as a result of artificial breastfeeding. Also 40 (10%) of the respondents disagreed, while 72 (18%) strongly disagreed that poor mental development of the baby is as a result of artificial breastfeeding. Therefore, the chi-square value of 7.8 was lesser than the critical value of 14.616 at 0.05 alpha level of significance. Thus, the null hypothesis was accepted. To corroborate the finding of this result Gartner, Morton, Lawrence, Naylor, O'Hare, Schanler and Eidelman (2005) stated that extensive research using improved epidemiologic methods and modern laboratory techniques documents diverse and compelling advantages for infants, mothers, families, and society from breastfeeding and use of human milk for infant feeding with advantages such as health, nutritional, immunologic, developmental, psychological, social, economic, and environmental benefits. The human milk is species specific, and all substitute feeding preparations differ markedly from it, making human milk uniquely superior for infant feeding. Breastfeeding is the normative model against which all alternative feeding methods must be measured with regard to growth, health, development, and all other short and long term outcomes. In addition, human milk fed premature infants receive significant benefits with respect to host protection and improved mental developmental outcomes compared with formula fed premature infants. In another research findings by Oluwakayode (2014), it was revealed that the health benefits of breastfeeding and lactation include decreased postpartum bleeding and more rapid uterine involution attributable to increased concentrations of oxytocin, decreased menstrual blood loss and increased child spacing attributable to lactational amenorrhea, earlier return to pre pregnancy weight, decreased risk of breast cancer, decreased risk of ovarian cancer, and possibly decreased risk of hip fractures and osteoporosis in the postmenopausal period.

From hypothesis three table four, it is revealed that 56 (14%) of respondents strongly agreed, while 62 (15.5%) agreed that lack of information on proper breastfeeding is the reason for artificial breastfeeding among nursing mothers in Akure south LGA, Ondo State, Nigeria. Also, 168 (42%) of the respondents strongly disagreed as 114 (28.5%) respondents disagreed. Therefore, the chi-square of 52.8 obtained was greater, than the critical value of 14.616 at 0.05 alpha level of significance. Hence, the hypothesis was rejected. Okunriboye (2011) informed that breastfeed can

start as soon as the baby is born contrary to believes in some part of the world that the baby only starts with water the first day the baby is born. In the first few days after the baby is born, the mother's breasts will produce yellow fluid called colostrum. This is concentrated food, so the baby will not need a lot during each feed, but may want to feed quite perhaps every hour. The milk in the mother's breast comes in after about 3 days and the breasts get much fuller. The amount of milk will increase or decrease depending on how much the baby drinks. It can take a few days for the milk supply to match the baby's needs. Even if the mother is having more than one baby, the breast will make enough milk for all babies. The longer the mother breastfeeds, the longer the protection lasts and the greater the benefits. Mothers are advised not to worry about how long they are able to breastfeed for, any amount of breast milk has a positive effect.

### Conclusion

**The findings of the research work revealed that** artificial breastfeeding poorly affects the baby's physical development, lack of information on proper breastfeeding is the reason for artificial breastfeeding among nursing mothers while poor mental development of the baby was not agreed to be a result of artificial breastfeeding in Akure south LGA, Ondo State, Nigeria,

### Recommendations

Based on the findings of the study, the following recommendations were suggested

1. Health education should be taught at all levels of education, from primary to tertiary.
2. Frantic efforts should be made by the government in ensuring that medical personnel equip nursing mothers with appropriate information that will enhance and encourage proper breastfeeding.
3. Non-governmental organizations should partner with government at all levels in ensuring that enlightenment programs on the benefits of breastfeeding are often on TV and radio and other means of communication for a wider coverage.

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