

**INTERVENTION PROGRAMME TO INCREASE AWARENESS OF
EXCLUSIVE BREASTFEEDING PRACTICES AMONG NURSING
MOTHERS ATTENDING IWOGBAN PRIMARY HEALTHCARE
CENTRE, BENIN CITY**

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UNIVERSITY OF BENIN

BENIN CITY

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**BEING A REPORT OF PRECEPTORSHIP PROGRAMME PRESENTED
TO THE DEPARTMENT OF HEALTH, SAFETY AND
ENVIRONMENTAL EDUCATION, UNIVERSITY OF BENIN, BENIN
CITY, NIGERIA**

**IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
AWARD OF MASTERS DEGREE IN PUBLIC HEALTH EDUCATION
(MPHE)**

SUPERVISOR: Prof. O. G. OSHODIN

CERTIFICATION

We, the undersigned, certify that this work was carried out by **OMOKARO OSARIEMEN COLLINS** in the Department of Health Safety and Environmental Education, Faculty of Education, University of Benin, Benin City.

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DEDICATION

This work is dedicated to God Almighty for providing the sustenance throughout the course of this programme.

ACKNOWLEDGEMENTS

The researcher wishes to express his deepest appreciation to God Almighty for providing him the possibility to complete this report and granting him the wisdom and knowledge throughout his study programme.

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PART ONE

INTRODUCTION

Preceptorship Programme

The Preceptorship Programme aims to increase awareness on exclusive breastfeeding as well as to promote the practice of exclusive breastfeeding among nursing mothers attending Iwogban Primary Healthcare Centre in Ikpoba Okha Local Government Area of Edo State. The programme seeks to promote exclusive breastfeeding as recommended by World Health Organization (WHO) for the optimal growth and survival of infants globally.

The introductory letter given to the researcher by the Department of Health, Safety and Environmental Education (HSE), University of Benin, was submitted to the Medical Director of Ikpoba Okha Local Government, Idogbo of Edo State for approval. The researcher was attached to Iwogban Primary Healthcare Centre situated along Lucky Way, off Ramat Park, Benin City, Edo State.

Iwogban Primary Healthcare Centre is charged with the responsibility of ensuring and providing continuous and comprehensive healthcare to members of the community thus ensuring accessibility to quality health care of the people in Ute Community and environs. The primary healthcare centre ensures that people at the

grassroots have access to quality and adequate health care as a means of achieving the goal - Health for All (H.F.A).

Objectives of the Programme

The objective of the preceptorship programme was to design an intervention programme that will increase awareness of exclusive breastfeeding as well as promote the practice of exclusive breastfeeding among nursing mothers attending Iwogban Primary Healthcare Centre in Ikpoba Okha Local Government Area of Edo State. This was to ensure the optimal healthy growth and survival of infants in the primary healthcare centre.

Objectives set to achieve the aforementioned goal are as follows:

- Increase awareness on exclusive breastfeeding among nursing mothers by educating them on the benefits to mother and child.
- Promote the practice of exclusive breastfeeding among nursing mothers in the primary healthcare centre.
- Identify specific reasons, myths and misconceptions, why nursing mothers may not practise exclusive breastfeeding.

- Work closely with health personnel at the primary healthcare centre and to assess their previous effort towards increasing awareness on exclusive breastfeeding as well as promoting the practice among nursing mothers
- Carry out an intervention programme that was sufficient to provide adequate and correct knowledge on exclusive breastfeeding as well as promote the practice of exclusive breastfeeding among nursing mothers at the primary healthcare centre.

Scope of Preceptorship

The preceptorship programme was carried out for a period of one academic session; from August 2019 – May 2020. During this period, the researcher worked twice a week, usually Wednesdays and Fridays and spent average of nine (9) hours a day at the healthcare centre.

Description of the Study Area

The intervention programme took place at Iwogban Primary Healthcare Centre in Ute Village, Ikpoba Okha Local Government Area of Edo State. The primary healthcare centre is situated along Lucky Way, off Ramat Park in Benin City. Its geographical coordinates are Longitude: 5.65984534 and Latitude: 6.36651209.

Ute Village is a community in Benin City; the capital and largest city of Edo State in Southern Nigeria. The indigenous people of Ute Village are the Edo people (The Bini People), and they speak the Edo language and other Edoid languages. However, other ethnic groups across Nigeria also live in the village and inhabitants of Ute Village are mainly traders and artisans.

The healthcare centre renders primary health services to the inhabitants of Ute Village and other close by villages/towns such as Aduwawa, Oregbeni, Idunowina and residents of Upper Mission Extension. Health services rendered at the healthcare centre include; immunization, birth control/family planning, maternity and antenatal care services, laboratory tests, nutritional and general health counselling, screening and treatment of common diseases.

The healthcare centre comprises of five (5) units namely:

1. Laboratory unit
2. Antenatal care unit
3. Immunization unit
4. Records unit
5. Outpatient unit

The primary healthcare centre has eight (8) staff and sixteen (16) Npower Volunteers. Namely:

- One Matron
- One Midwife
- Four Community Health Extension Workers
- One Health Educator
- One laboratory scientist
- Three Health Attendants
- Sixteen Npower Volunteers

Programme Components

The programme consist of three components;

1. Assessment
2. Implementation
3. Evaluation

PART TWO

INITIAL ACTIVITY DURING THE PRECEPTORSHIP PROGRAMME

The following were the components of this intervention programme:

Assessment: The assessment of previous effort towards improving knowledge on exclusive breastfeeding and the practice of exclusive breastfeeding among nursing mothers at the healthcare centre. The researcher, sought to find answers to the following questions;

1. Do the nursing mothers know what exclusive breastfeeding is?
2. Do the nursing mothers know the benefits of exclusive breastfeeding?
3. Do the nursing mothers practise exclusive breastfeeding for the first six (6) months for their babies?

Implementation: This was the next stage of the intervention. This is the implementation of activities designed as a result of the information gathered from the assessment. The activities were:

- a) Interviews with nursing mothers to know their thoughts and beliefs about exclusive breastfeeding.
- b) Checking the daily immunization register to ascertain the number of nursing mothers who and who do not practise exclusive breastfeeding.

- c) One on one counselling with nursing mothers to equipped them with adequate knowledge of exclusive breastfeeding.
- d) One on one counselling with nursing mothers who just delivered, educate them on the benefits and importance of colostrum as well as exclusive breastfeeding.
- e) Regular health talks on exclusive breastfeeding – meaning and benefits of exclusive breastfeeding as well as correcting myths and misconceptions about exclusive breastfeeding the nursing mothers have.

Evaluation: This was the last stage of the programme. Its essence was to check the effectiveness of the intervention programme i.e to check if the intervention programme achieved its intended aim.. Three forms of evaluation were employed.

They were:

1. **Formative Evaluation:** This form of evaluation is done to ensure the activities being implemented are in line with the stated objectives.
2. **Process Evaluation:** This form of evaluation is done while the intervention programme is taking place to ensure quality and effective delivery of the intervention programme.
3. **Summative Evaluation:** This form of evaluation is done at the end of the programme to find out if the intervention programme were able to realize the stated objectives.

Activities carried out during the Programme.

The following were the activities carried out by the researcher at the healthcare centre

- **Observation:** The researcher made critical observations centered on finding out the information passed on exclusive breastfeeding and why the nursing mothers in the healthcare centre do not practise exclusive breastfeeding.
- **Review of Records:** The researcher went through the daily immunization register to ascertain the number of nursing mothers who do and who do not practise exclusive breastfeeding.
- **Interview:** The researcher had the opportunity to talk one on one with the nursing mothers. This was to know their thoughts, beliefs and misconceptions about exclusive breastfeeding and why they do not engage in the practice.
- **Health Talk:** The researcher gave health talks on their major immunization days (Wednesdays and Fridays). The nursing mothers were made to sit calmly in front of the researcher. The researcher used diagrams, charts, handbills and posters during health talks to comprehensively explain exclusive breastfeeding, The researcher also had one on one counselling with nursing mothers who exercised fears about asking questions during health talks in public.

- **Feedback from Nursing Mothers:** The researcher took time to get feedback from the nursing mothers by asking and answering questions during health talks and also at the end of the intervention programme to ascertain the impact of the programme.

PART THREE

FINDINGS FROM INITIAL ENTRY

The Problem As Seen On Site

During the course of the preceptorship programme, the researcher observed that majority of the nursing mothers attending the primary healthcare centre lack the knowledge of exclusive breastfeeding and as a result they do not practise exclusive breastfeeding. The researcher went through the healthcare centre records (daily immunization register) to ascertain the trend and number of nursing mothers who do and do not engage in the practice. The researcher discovered that over 75% of nursing mothers attending the healthcare centre do not practise exclusive breastfeeding.

Through interviews with the nursing mothers, the researcher discovered the following as the reasons and beliefs why they do not practise exclusive breastfeeding.

1. **Colostrum is dirty:** Some nursing mothers have the belief that colostrum is dirty and should never be given to a new born baby and as a result they expel and discard it.

2. **Breast milk cannot satisfy their baby:** Some of the nursing mothers believe breast milk alone does not satisfy their baby's thirst and hunger, therefore they are of the obligation to give the child water and food supplements. Some even said that they saw nothing wrong in adding food supplements to breast milk.
3. **Breast milk does not contain all nutrients a baby needs for growth and survival:** Nursing mothers have the belief that breast milk alone does not contain all the nutrients a baby needs for optimal growth, hence there should be need for supplements.
4. **Fear of the breast sagging:** Some of the nursing mothers said that the reason they do not practise exclusive breastfeeding is that they do not want their breast to sag, and as result the tendency to engage in the practice was hampered.
5. **It takes too long to get a baby breastfed:** Most nursing mothers at the healthcare centre complained that it takes too long to get a baby breastfed and because of their busy daily schedule, they do not have that ample time.
6. **Inability to lactate:** Some nursing mothers at the healthcare centre also mentioned that their inability to lactate was their major reason.

Definition of Terms

Antibodies: Proteins produced in the body in response to harmful substances.

Breastfeeding: The activity of feeding a baby or young child milk from the breast of a lactating woman.

Breast milk: Human milk, Mother's milk.

Colostrum: A form of milk produced by the mammary glands in late pregnancy and the few days after giving birth. In Humans, it is thick and yellowish. It has high concentrations of nutrients and antibodies, but it is small in quantity.

Disease: A disorder of structure or function in humans, animals and plants, especially one that produces specific symptoms or that affects a specific location and is not simply a direct result of physical injury.

Exclusive Breastfeeding: To feed a baby on breast milk only from birth without food or water.

Immune system: The system that protects the body from diseases and infections. It differentiates self from non-self and protects the body from foreign substances and pathogenic organisms by producing an immune response.

Immunization: To give someone (baby) vaccine in order to prevent infection by a disease.

Infant: A very young human being, from birth to somewhere between six months and two years of age, needing almost constant care and/or attention.

Infection: Disease caused by micro organisms that invade tissues.

Mortality: The death rate of a population. The number of death that occur in a particular time or place.

Morbidity: The rate of illness specified in a population or group.

Neonatal life: The first month after a baby is born.

Newborns: A recently born baby.

PART FOUR

LITERATURE REVIEW

Review of Related Literature

Related literature to the study was reviewed under the following sub-headings

- Concept of Exclusive Breastfeeding
- Overview on Exclusive Breastfeeding
- Knowledge of Exclusive Breastfeeding in Nigeria
- Exclusive Breastfeeding Practices in Nigeria
- Breast Milk
- Characteristics of Breast Milk
- Expressed Breast Milk
- Benefits of Exclusive Breastfeeding
- Summary of Reviewed Literature

Concept of Exclusive Breastfeeding

Exclusive breastfeeding means that the infant receives only breast milk. No other liquids or solids are given – not even water – with the exception of oral rehydration solution, or drops/syrups of vitamins, minerals or medicines (World Health

Organization, 2003; Black et al, 2013). WHO and UNICEF recommend that exclusive breastfeeding should be started immediately after delivery within the first hour of neonatal life, and on demand (that is as often as the child wants, day and night) without use of any artificialities, until the end of the first half year of life (WHO, 2017). This means that no other foods or drinks other than possibly vitamin D are typically given (Kramer & Kakuma, 2012). Thereafter, infants should receive complementary foods with continued breastfeeding till the second years of life or beyond (WHO, 2017).

Overview on Exclusive Breastfeeding

Over the last couple of decades, there has been increasing interest in the promotion of exclusive breastfeeding as the best feeding method for newborns. This, to a large extent, has been inspired by mounting scientific evidence on the importance of exclusive breastfeeding in reducing infant morbidity and mortality. In resource limited settings where poor and sub-optimal breastfeeding practices frequently result to child malnutrition which is a major cause of more than half of all child deaths (Sokol, Aguayo, & Clark, 2007), exclusive breastfeeding is regarded as imperative for infants' survival. Indeed, of the 6.9 million under five children who were reported dead globally in 2011, an estimated 1 million lives could have been

saved by simple and accessible practice such as exclusive breastfeeding (WHO, 2012). It was found that children who were breastfed for long duration had less infectious morbidity and mortality, fewer dental malocclusions, and higher intelligence than those who were breastfed for shorter duration (Verduci et al, 2014; Victora et al, 2016).

The low rate of exclusive breastfeeding in Nigeria may, in part, be due to traditional beliefs, practices and rites. For example, in Yoruba and Bini communities, exclusive breastfeeding is considered dangerous to the health of the infant who is thought to require water to quench thirst or stop hiccoughs (Davies-Adetugbo, 1997). Furthermore, because the majority of women deliver outside health facilities across the community, the Baby Friendly Hospital Initiative strategy alone may not have a positive effect on exclusive breastfeeding rates (Salami, 2006). A lot of factors ranging from cultural, social and economic conditions have been identified as possible hindrances to an effective practice of exclusive breastfeeding.

According to a study by Egenti, Adamu, Chineke and Adogu (2018), the prevalence of exclusive breastfeeding among rural women in FCT was 49%, and the lack of awareness was the major reason for not practicing exclusive breastfeeding. Peterside, Onyaye and Duru (2013), showed that 59.7% of mothers under study knew the correct definition and duration of exclusive breastfeeding,

and it is in contrast to the findings of Bolanle (2013) which showed that 78.4% of the mothers interviewed were not aware of exclusive breastfeeding and only 27% of them could give the correct definition of exclusive breastfeeding. However, Amosu, Oyewole and Ojo (2010), reported that nearly all the nursing mothers under his study could explain exclusive breastfeeding correctly as the process of feeding babies with breast milk alone without adding even water for the first six months, though many confessed that they did not find it easy. The practice of exclusive breastfeeding was found to be significantly associated with maternal level of education, occupation, place of delivery, skilled attendant at birth, husband's level of education and occupation.

Knowledge of Exclusive Breastfeeding in Nigeria

Breastfeeding in Nigeria has been a major aspect of infant feeding, however that cannot be said for exclusive breastfeeding. Numerous researchers have identified several factors attributed to such effect, these includes, but not limited to, lack of adequate information and support on good feeding practices, exclusive in particular and poor attitudes towards exclusive breastfeeding.

The study conducted in Bayelsa State of Nigeria to ascertain the knowledge and practice of exclusive breastfeeding among mothers in Gbarantoru Community, by

Peterside et al, (2013), it was reported that, 134 women were interviewed with age range of 20 to 35 years with 59.7% and 29.9% of which had secondary and primary level of education respectively. 59.7% of the mothers knew the correct definition and duration of exclusive breastfeeding while 19.4% had never heard of exclusive breastfeeding. 80.6% of the mothers heard about exclusive breastfeeding from health workers during antenatal clinic visits, 10.4% heard about it from either the television or radio and 9.0% heard about exclusive breast feeding from relatives and/or friends. All (100%) mothers breastfed their babies within the first 6 months of life. However, only 44.8% of them breastfed exclusively for 3 to 6 months with a mean duration of 5.4 months. The study also showed that, the rate of exclusive breastfeeding practice increased with increased maternal age as well as higher maternal education.

In a similar study conducted in Yobe State by Bolanie (2013), 78.4% of the mothers interviewed were not aware of exclusive breastfeeding. Out of the 21.6% of mothers that were not aware of exclusive breastfeeding, 64.5% of them obtained such information from health workers, 9.0% from the media and 7.3% from their husbands and only about 27% could give the correct definition of exclusive breastfeeding. 78.8% of mothers initiated breastfeeding within one hour of delivery and only 57% gave colostrum to their babies. While 39% of the mothers gave their babies breast milk immediately after delivery, 30% gave water, 17.8% gave animal

milk as the first food and 4.3% commenced breast milk substitutes. The study also reveals that there is positive correlation between educational attainment of respondent mothers and awareness on exclusive breastfeeding and that the more the educational level, the more likely the chances of giving colostrum to the child (Bolanle, 2013).

Another study from Calabar, Cross River state also reported that majority of the mothers were aware of exclusive breastfeeding, believed that the practice is desirable and of low cost and knew that breast milk alone is sufficient for the baby for the first six months, yet less than two-thirds of them actually practised exclusive breastfeeding. Less than one-third of the respondents who had received information about exclusive breastfeeding from health workers actually practised it (Essien, Samson-Akpan, Ndebbio & John, 2009).

In a study conducted on Growth faltering among exclusively breastfed infants in Ogun State, Nigeria by Amosu, et al, (2010), the focus group discussions' findings showed that majority of nursing mothers received information on breastfeeding from the nurses, community health workers and community health extension workers. Nearly all the nursing mothers could explain exclusive breastfeeding correctly as the process of feeding babies with breast milk alone without adding even water for the first six months, though many confessed that they didn't find it easy. Ekanem, Asuquo and Eyo (2012) reported that attendance of ante-natal clinic

enhances mothers' understanding and appreciation of the demands and benefits of exclusive breastfeeding and empowers them to resist external interferences and pressures even though 10% of the women never practised exclusive breastfeeding believing that their breast milk was insufficient for babies need.

Exclusive Breastfeeding Practices in Nigeria

Researches have shown that a large number of mothers are not practicing exclusive breastfeeding as a result of poor knowledge which result in poor attitude towards it. Inadequate knowledge or inappropriate practice of breastfeeding were identified as those factors which can lead to undesirable consequences which also affect mother's attitude.

Despite strong evidences in support of exclusive breastfeeding for the first six months of life, its prevalence has remained low worldwide (Diallo, Rodrigue, Barry, Kaba & Daffe, 2000). In Nigeria, breastfeeding is universal with almost all babies being breastfed. However, according to The Nigerian Demographic and Health Survey (2008), the practice of exclusive breastfeeding is rare with only 17% of children younger than six months being exclusively breastfed. The need to protect, promote and support breastfeeding in communities has been widely recognised. It is in realisation of this noble objective that the Federal Ministry of

Health and Social Services in conjunction with UNICEF and WHO launched the Baby Friendly Hospital Initiative (BFHI) to protect, promote and support breastfeeding in Nigeria. To achieve this objective, a number of Teaching and Specialist hospitals were designated as baby friendly hospitals following the “Innocenti Declaration”. The Innocenti Declaration has as its main objectives the promotion of early initiation of breastfeeding (within 30 minutes of delivery), exclusive breastfeeding for the first six months of life, breastfeeding on demand and continuing breastfeeding with complementary feeds into the second year of life (Labbok, Wardlaw, Blanc, Clark, & Terreri, 2006; Perez-Escamilla, 2007).

The Nigerian government established the Baby-Friendly Hospital Initiative (BFHI) in Benin, Enugu, Maiduguri, Lagos, Jos and Port Harcourt with the aim of providing mothers and their infants a supportive environment for breastfeeding and to promote appropriate breastfeeding practices (Salami, 2006), thus helping to reduce infant morbidity and mortality rates. Despite these efforts, child and infant mortality continue to be major health issues affecting Nigeria. The infant mortality rate for the most recent five-year period (1999-2003) is about 100 deaths per 1,000 live births (Nigeria Demographic and Health Survey, 2003) and exclusive breastfeeding rates in Nigeria continue to fall well below the WHO/UNICEF recommendation of 90% exclusive breastfeeding in children less than 6 months in

developing countries (Jones, Steketee, Black, Bhutta & Morris, 2003; WHO/UNICEF, 2009).

Although, exclusive breastfeeding is an important practice that has been identified as related to improved health of mothers, infants and children as well as lower health care cost. Exclusive breastfeeding based on available evidence, achievements of these goals are still far from the desired progress. Exclusive breastfeeding practices including initiation and duration are influenced by multiple inter-woven factors which include health, psychosocial, cultural, political and economic factors. Among these factors, decision regarding exclusive breastfeeding in low-income countries are influenced by education, employment place of delivery, family pressure, cultural values, and spouse support within the home.

To further explain, much research which looks at exclusive breastfeeding shows that there are complex relationships to it which involves not only incentive, but disincentives as well. Often the disincentives outweigh the advantages for many women. These disincentives form any barriers to compliance with the breastfeeding recommendations. These common factors which affect exclusive breastfeeding practice are the mother returning to work outside of the home, the support of the other within the home and mother psychological health (Chudasama, Patel & Karishwar, 2009). Gundelman, Kosa, Peal, Graham, Goodman and Kharrazi (2009), identified lacking job flexibility and psychosocial stress as the

barriers to exclusive breastfeeding practice by working; mothers. Further explanation puts in that one of the problems continually encountered by working mothers which tends to reduce the rate of exclusive breastfeeding practice is sex-specific, and therefore, cannot be viewed as gender neutral in child bearing. The act of breastfeeding becomes even more difficult because many do not consider exclusive breastfeeding to be critical for baby survival. Thus specific legislation on breastfeeding of the right to pump milk, lactation at work, extra package to boost breastfeeding working mothers in Nigeria still remain a mirage.

Breast Milk

Breast milk is made from nutrients in the mother's bloodstream and bodily stores. It has an optimal balance of fat, sugar, water, and protein that is needed for a baby's growth and development. Breastfeeding triggers biochemical reactions which allows for the enzymes, hormones, growth factors and immunologic substances to effectively defend against infectious diseases for the infant. The breast milk also has long-chain polyunsaturated fatty acids which help with normal retinal and neural development (Colen & Ramey, 2014). The composition of breast milk changes depending on how long the baby nurses at each session, as well as on the child's age (Hendrickson & McKeown, 2012).

Table 1. Composition of some key nutrients found in mature breast milk

Components	Mean value for mature breastmilk (per 100 ml)
Energy (kj)	280
Energy (kcal)	67
Protein (g)	1.3
Fat (g)	4.2
Carbohydrate (g)	7.0
Sodium (mg)	15
Calcium (mg)	35
Phosphorus (mg)	15
Iron (mcg)	76

Vitamin A (mcg)	60
Vitamin C (mg)	3.8
Vitamin D (mcg)	0.01

NHMRC Dietary Guidelines for children (2003).

Characteristics of Breast Milk

According to Miller and Chopra (2001), Breast milk is unique in its physical structure and types and concentrations of protein, fat, carbohydrate, vitamins and minerals, enzymes, hormones, growth factors, host resistance factors, inducers and modulators of the immune system, and anti-inflammatory agents.

There are three phases of milk namely: Colostrum, Transitional milk and Mature milk, each with distinct characteristics.

Infant's First Milk: The first milk that is synthesized by the breast for the baby right after birth is thick, yellow-coloured fluid called Colostrum. The yellow colour is owing to the high concentration of beta-carotene, a precursor of vitamin A which is required for the protection against infection and for early retinal development

(Naylor & Wester, 2009). It has also been stated that the amount of colostrum obtained is limited but it rich in nutrients and substances that the infant needs in the first days of life (United States Department of Agriculture, 2011). The “liquid gold” is rich in proteins, fat-soluble vitamins, minerals, and immunoglobulins A (IgA). It should be noted that IgA protects the infant’s immune system by identifying and destroying foreign bodies such as bacteria and viruses (United States Department of Agriculture, 2011). Another advantage of colostrum is that the mother will have less blood loss because the uterine contracts as the baby suckle. Furthermore, colostrum also contains white cells which help to prevent infection in the infant and it also consists of lactose which prevents hypoglycemia and at the same time helps the newborn to pass meconium (Naylor & Wester, 2009). This in turn, promotes the excretion of bilirubin.

Transitional Milk: Transitional milk is used to describe the postcolostral period (7 to 21 days postpartum) when the composition of the milk changes more slowly than in the first few days following parturition. The content of transitional milk includes high levels of fat, lactose, water-soluble vitamins, and contains more calories than colostrum but lower levels of immunoglobulins (Pons, Bargallo, Folgoso & Sabater, 2000).

Mature Milk: Mature milk (21 days postpartum) also varies but to a lesser extent than in early lactation. Mature milk looks thinner, paler and is more watery than

colostrum (Pons et al, 2000). Additionally, it consists of 90% water which is required to maintain hydration of the infant and the remaining 10% consists of carbohydrates, proteins and fats which are important for both growth and to meet energy needs of the baby.

There are two types of mature milk: **Foremilk and Hind-milk.**

- **Foremilk:** Foremilk is the first milk available in large amount at the beginning of a feeding which is watery thus, providing all the water the baby needs from it. Therefore, no other drinks such as water or juice are required before 4-6 months, even in hot climate. Foremilk is rich in proteins, lactose and other essential nutrients but contains less fat.
- **Hind-milk:** Hind-milk is the richer milk, containing more fat which occurs after the initial release of milk and is more opaque and creamy white in colour. This type of milk induces a feeling of satiety in the infant as well as making the latter feels sleepy (United States Department of Agriculture, 2011).

Expressed Breast Milk

Owing to certain circumstances, mothers are unable to breastfeed, so they wish to express their milk because it is the only opportunity for the infant to have the

human milk (Jones, Dimmock & Spencer, 2011). Expressing is simply a way of taking milk from the breast without the baby suckling and this can be achieved either by the hand or manual pump or electric pump (Babycentre, 2010). The breast milk may be kept at room temperature for up to six hours, refrigerated for up to eight days or frozen for six to twelve months.

Mothers express milk for multiple reasons. Expressing breast milk can maintain a mother's milk supply when she and her child are apart. A sick baby who is unable to nurse can take expressed milk through a nasogastric tube. Some babies are unable or unwilling to nurse. Expressed milk is the feeding method of choice for premature babies (Spatz, 2006). Some women donate expressed breast milk to others, either directly or through a milk bank. This allows mothers who cannot breastfeed to give their baby the benefits of breast milk. Many women exclusively feed expressed milk, expressing milk at work in lactation rooms. Women can leave their infants in the care of others while traveling, while maintaining a supply of breast milk.

However, research suggests that the antioxidant activity in expressed breast milk decreases over time, but remains at higher levels than in infant formula (Hanna, 2004). Viral disease transmission can be prevented by expressing breast milk and subjecting it to Holder pasteurisation (Tully, Jones & Tully, 2001).

Benefits of Exclusive Breastfeeding

Benefits for infants' nutritional status: Breastfeeding protects against weight loss due to diarrhoea. Exclusive breastfeeding often means that babies will breastfeed more, which helps keep up the milk production so they get more nutrition. (The practice of giving water together with breast milk in the first six months means the water displaces breast milk, so babies nurse less and the mother produces less milk). Because of its large impact on reduction of infectious diseases, breastfeeding plays a role in reduction of stunting, a condition in which infectious diseases are important determinants. However, breastfed children will become stunted if they do not receive an adequate quantity and quality of complementary foods from the age of six months onward.

Benefits for reducing risk of chronic conditions: Breastfeeding lowers infants' risk of chronic conditions later in life compared with formula-fed infants, including asthma, overweight and obesity, diabetes, heart disease and cardiac risk factors such as hypertension and high cholesterol levels, and cancers such as childhood leukemia and breast cancer later in life.

Benefits for infants' intellectual, motor and emotional development: Many studies confirm that children who are breastfed do better on tests of cognitive and

motor development, as well as academic outcomes, than children who are not breastfed, and infants who are fed breastmilk tend to have higher IQ scores. A recent study adds to the body of literature concluding that children who are breastfed for more than six months have a lower risk of mental health problems as they enter their teenage years. Other aspects of exclusive breastfeeding are harder to quantify but profoundly beneficial. These include the additional opportunities for bonding of mother and infant through more time together with skin-to-skin contact and the contribution this prolonged time of secure physical closeness makes to the infant's well being.

Benefits for maternal health: Initiation of breastfeeding immediately after delivery helps to contract the uterus, expel the placenta and reduce bleeding. Breastfeeding may lead to a more rapid return to pre-pregnancy weight. Exclusive breastfeeding in the first six months may delay the return of fertility, thus reducing exposure to the maternal health risks associated with short birth intervals. In the longer term, mothers who breastfeed tend to be at lower risk of pre-menopausal breast cancer and ovarian cancer.

Economic and social benefits: Breastfeeding is the least expensive method of infant feeding. For many poor households, the high cost of breast-milk substitutes, feeding and sterilizing equipment and fuel represents a substantial drain on scarce household resources. Added to this are the costs of health care for the sick infant

exposed to contaminants from mixed feeding or water in addition to breast milk. When mothers miss work to care for sick infants, employers and the economy are also affected. Moreover, as previously stated, breastfeeding is a basic human right, so effective exclusive breastfeeding practices should become available to all, including vulnerable and marginalized populations. Breastfeeding can help bridge economic and social gaps.

Summary of Reviewed Literature

Exclusive breastfeeding refers to giving infant breast milk only, without additional food or drink and WHO encourages all women to practise exclusive breastfeeding of their infants from birth until six months followed by continued breastfeeding with appropriate complementary food for up to two years or beyond. Feeding an infant with human breast milk is the gold standard, especially in the first six months of life. The advantages of this creamy-coloured fluid have been demonstrated in many research studies and include the infant's protection from pneumonia, diarrhoea, otitis media, or asthma as well as long-term effects against obesity and other chronic diseases.

Researches have helped to understand multiple barriers that may affect the practice of exclusive breastfeeding which may include maternal factors, health system

factors, family and community factors. The lack of knowledge of exclusive breastfeeding among nursing mothers consequently pose hindrance to them engaging in the practice. Nevertheless, the importance of exclusive breastfeeding practice among nursing mothers cannot be overemphasized. Evidences have proven its immense benefits from individual (mother and child) to economic and social benefits in reducing morbidity and mortality rates among infants across the globe.

PART FIVE

PROGRAMME INTERVENTION

Theoretical Framework

The Information Motivation Behavioural Skill Model (IMB Model)

The Information Motivation Behavioural Skill Model was constructed by Fisher and Fisher (1992), as a social psychological conceptualization for understanding and promoting health related behaviours and practices. The IMB model asserts that health-related information, motivation and behavioural skills are fundamental determinants of performance of health behaviours. To the extent that individuals who are well informed, motivated to act, and possess the requisite behavioural skills for effective action, they will be likely to initiate and maintain health-

promoting behaviours and practices and experience positive health outcomes. In contrast, to the extent that individuals are poorly informed, unmotivated to act, and lack behavioural skills required for effective action, they will tend to engage in health risk behaviours and experience negative health outcomes.

According to the model, the determinants include:

1. **Information:** According to the IMB model, information that is directly relevant to the performance of health behaviour and that can be easily enacted by an individual in his or her social ecology is a critical determinant of health behaviour and performance (Fisher & Fisher, 1992; 2000; Fisher & Fisher, 1993; 1999). Information can include specific facts about health promotion as well as relevant heuristics (simple rules which permit automatic and cognitively effortless decisions about whether or not to engage in a health promotion/behaviour). Health promotion information can also involve relatively elaborate implicit theories (complicated sets of beliefs) that require cognitive effort to process in making decisions about health-related action.
2. **Motivation:** The IMB model specifies that motivation is an additional determinant of the performance of health-related behaviours and practices, and influences whether even well-informed individuals will be inclined to undertake health promotion actions. According to the model, personal

motivation (attitudes toward personal performance of health promotion actions) and social motivation (social support for enactment of health promotion actions) are critical influences on performance of health related behaviours and practices.

3. **Behavioural Skill:** Behavioural skills for performance of health promotion actions are an additional critical determinant of whether well informed and well motivated individuals will be capable of effectively enacting health promotion behaviours. The IMB model's behavioural skills component focuses on an individual's objective abilities and his or her sense of self-efficacy. (Rye, 1990; 1998) concerning performance of a given health-related behaviours.

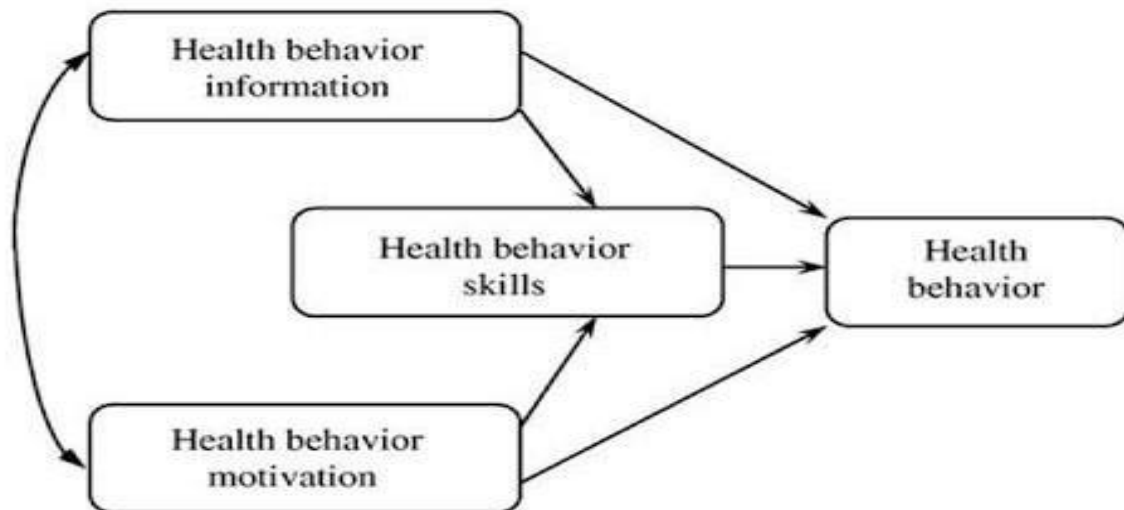


Figure 1. Information Motivation Behavioural Skill Model (IMB Model)
(Fisher & Fisher, 1992)

Application of The Information Motivation Behavioural Skill Model (IMB Model) to the Intervention Programme

Information: This is the amount of information the nursing mothers have at their disposal to enable them comply with the expected healthful practice. The mothers were exposed to adequate and correct information on exclusive breastfeeding which include; the meaning, benefits, methods and positions to take when breastfeeding their babies.

Motivation: These are the factors that will facilitate the adoption of breastfeeding practices by nursing mothers. At this stage, they were aware of the benefits and advantages of exclusive breastfeeding for their babies and themselves.

Motivation could be personal or social motivation:

- **Personal Motivation:** This can also be referred to as intrinsic motivation, which are behaviours or practices that are driven by internal rewards. In other words, the motivation to engage in a behaviour or practice arises from within the individual because it is naturally satisfying. In the case of this intervention programme, the happiness and satisfaction that the nursing mothers feel considering the immense healthful benefits they are making in the life and future of their babies and their health, will motivate them.

- **Social Motivation:** It is also referred to as extrinsic motivation, which refers to behaviour or practice that is driven by external rewards such as money, fame, grades, praises etc, as the case may be. This type of motivation arises from outside the individual, as opposed the intrinsic motivation which originates from inside of the individual. They are social support for enactment of health promotion practices. If nursing mothers see breastfeeding as cheaper, breast milk is readily available at appropriate temperatures, expressing of milk can be done for those who are not chanced because of their tight schedules, breastfeeding increases the chances of mother to child bonding as well as the praise the health workers will give those who practice exclusive breastfeeding, - all these, altogether motivated them.

Behavioural Skill: This deals with practising exclusive breastfeeding. The nursing mothers are aware of the benefits of exclusive breastfeeding by the information provided. The information serves as a tool to bring about adoption of the recommended behavioural practice.

Programme Intervention

Increasing awareness on exclusive breastfeeding as well as promoting the practice among nursing mothers attending Iwogban Primary Healthcare Centre was done under the following headings:

- Health Talk/Education
- Counselling
- Reminders (Handbills and Posters)
- Follow-up

Health Talk/Education: The researcher was allowed to give health talk twice a week (Wednesdays and Fridays) which were the major immunization days at the healthcare centre. The health talks were given before the commencement of the immunization exercise. The researcher explained exclusive breastfeeding exhaustively in their simple and common language (Pidgin). He corrected their beliefs and misconceptions about exclusive breastfeeding:

1. **Colostrum is dirty:** The researcher corrected the common belief among nursing mothers at the healthcare centre that the first infant's milk otherwise called colostrum is dirty. He explained that colostrum is not dirty but actually contains important nutrients needed by the baby at that particular point in time. He further explained, that the yellow colouration is owing to the high concentration of beta-carotene, a precursor of vitamin A which is required for the protection against infection and for early retinal

development in the life of the baby. Colostrum also consists of lactose which prevents hypoglycemia and at the same time helps the newborn to pass meconium which in turn, promotes the excretion of bilirubin.

2. **Breast milk cannot satisfy their baby:** The researcher explained that allowing their baby to suck the breast milk for longer period will quench the baby's hunger. If they breastfeed their baby only for a short time, the baby feeds on the first part of the breast milk; the foremilk, which will only quench the baby's thirsts because it is majorly made up of water. This therefore prevents the baby from feeding on the hindmilk (the major food part) which addresses the baby's hunger.
3. **Breast milk does not contain all the nutrients a baby needs for growth and survival:** The researcher explained that breast milk contains all the nutrients their baby needs for optimal growth and survival – preventing diseases and allergies in babies. Breast milk contains fat, sugar, water, and protein that is needed for a baby's growth and development. Breast milk helps to prevent weight loss in babies, reduce risk of stunted growth, dental malocclusions, pneumonia and chronic diseases such as asthma, obesity, heart diseases, hypertension, high cholesterol level, leukemia etc.
4. **Fear of the breast sagging:** The researcher made the nursing mothers understand that exclusive breastfeeding does not negatively affect breast

shape or volume. During pregnancy, the ligaments that support the breasts might stretch as the breasts get fuller and heavier. This stretching might contribute to sagging breasts after pregnancy - whether or not they breastfeed their baby. Nevertheless, the researcher encouraged nursing mothers to practise exclusive breastfeeding, considering the immense benefits they are making in the life of their baby.

5. **It takes too long to get a baby breastfed:** Nursing mothers who complained of not having the ample time to properly breastfeed their baby, expression of breast milk into feeding bottles for their babies was recommended.
6. **Inability to lactate:** The researcher explained that the inability to lactate by some nursing mothers maybe due to insufficient glandular tissue (IGT) or hypoplasia of the mammary gland. This is when the mammary tissues of the breast are supplanted by fatty tissues and thus the mammary tissues do not develop normally, therefore resulting in developing fewer ducts. This is one of the main cause of primary lactation failure or failure to ever produce enough breast milk. Other causes of the inability to lactate in nursing mothers maybe due to hormonal or endocrine problems (polycystic ovarian syndrome), previous breast surgery or the use of hormonal birth control drugs.

The researcher recommended that the nursing mothers see a qualified doctor. The researcher also emphasized on the need to engage in some physical activities that could ease the flow of breast milk from the breast, like mildly massaging the breast, drinking a lot of water, tea and taking some local foods (like “pepper soup”) can help. Also, continually allowing the baby to suck the breast even in this condition may help correct the abnormality.

Counselling: In addition to the duties of the researcher at the healthcare centre, he was in charge of entering the details of new born babies in the immunization cards. The researcher utilized this medium to have one on one counseling with nursing mothers especially those who just delivered. The researcher educated them on exclusive breastfeeding - encouraging them to adhere to the practice for the first six months after delivery.

Reminders (Handbills and Posters): The researcher made handbills and posters on exclusive breastfeeding. The handbills and posters diagrammatically and with write ups illustrated the importance and benefits of exclusive breastfeeding. The handbills were handed to the nursing mothers and the posters were strategically place at different location in the healthcare centre to educate and always serve as reminder even in the absence of the researcher.

Follow-up: The researcher monitored the progress of the intervention programme by constantly checking the daily immunization register on weekly basis to ascertain the impact of the intervention programme. He contacted the nursing mothers (especially those who just delivered) on phone to remind and encourage them to practise exclusive breastfeeding for the first six (6) months.

Evaluation of Intervention Programme

The intervention Programme was a huge success. The researcher visited the healthcare centre every week for three months to monitor the impact of the programme. He observed that there was a tremendous increased in awareness of exclusive breastfeeding among nursing mothers at the healthcare centre. Nursing mothers at the healthcare centre were heard advising other nursing mothers who just joined the healthcare centre on the importance of exclusive breastfeeding and the need to adhere to the recommended practice.

During health talks by the healthcare workers, the nursing mothers had the confidence to communicate and discuss issues related to exclusive breastfeeding.

More so, the practice of exclusive breastfeeding among nursing mothers at the healthcare centre had also increased. This was evident in the daily immunization register and on personal interaction with the nursing mothers. They expressed joy

for the healthful information acquired in promoting a healthy life for their babies. They never forgot the mantra during the intervention program – “exclusive breastfeeding is the best for my baby“ as they kept reciting it whenever health talks were given at the healthcare centre..

Summary

The purpose of this Intervention programme was to increase awareness of exclusive breastfeeding as well as promote the practice of exclusive breastfeeding among nursing mothers attending Iwogban Primary Healthcare Centre.

The programme revealed that majority of the nursing mothers attending the healthcare centre do not have adequate knowledge of exclusive breastfeeding and as a result they do not practise exclusive breastfeeding. This necessitated the need for this intervention programme to increase awareness of exclusive breastfeeding – correct myths and misconceptions and promote the practice of exclusive

breastfeeding as recommended by WHO. The intervention programme was centered on health talks/education, counselling, Reminders and follow-ups. At the end of the intervention programme, appreciable success was attained as evident from observation, healthcare centre records and feedbacks.

Awareness of exclusive breastfeeding among nursing mothers attending Iwogban primary healthcare centre was increased as well as the practice of exclusive breastfeeding among them.

PART SIX

CONCLUSION AND RECOMMENDATION

Conclusion

Breastfeeding is the cornerstone to an infant's survival, growth and development WHO (2015). Exclusive breastfeeding for the first six months has immense benefits for mother and child (and even the society) and therefore health practitioners and concerned organisations are of the strong view to always recommend exclusive breastfeeding for any nursing mother. However, in spite of

these recommendations, it has been documented over the years that exclusive breastfeeding has not been adopted universally, most mothers embrace the idea but fail to breastfeed exclusively few weeks after giving birth to their baby. Evidence show a lot of factors ranging from cultural, social and economic conditions may be possible hindrances to effective exclusive breastfeeding practices.

Breastfeeding exclusively will be much easier and attractive to mothers if the right health education, support and motivation are given. An idea about the level of knowledge, education, and practice of exclusive breastfeeding and the social support system available to mothers are very imperative for improvement in exclusive breastfeeding. Hence, it is very indispensable that government, health practitioners/workers and concerned health organizations carryout regular community based campaigns to continuously enact the benefits of exclusive breastfeeding in the consciousness of mothers and encourage them to keep up the practice. TV and radio jingles can serve as media to reach wider population of nursing mothers and even their family members.

In healthcare centres, regular health talks and seminars emphasizing on the benefits of exclusive breastfeeding and demonstrative proper breastfeeding practices and positions should be done. Mothers should be aware of the need for exclusive breastfeeding for their baby for the first six months and even go ahead to educate their friends who are not well informed.

Recommendation

At the end the intervention programme, the following recommendations were proffered;

- The emphasis on exclusive breastfeeding can never be too much, hence much emphasis and time should be given to the topic during weekly immunization sessions.
- Comprehensive and demonstrative methods on the appropriate positions during breastfeeding should be well shown to the nursing mothers

- Awareness program involving their husbands should be considered to further minimize family hindrances to exclusive breastfeeding practices by nursing mothers.
- Exclusive breastfeeding promotion programmes should target all mothers, but with special focus on poor and illiterate families, mothers who delivered at home and mothers who have had no antenatal clinic visits.
- Further research is particularly needed to explore how traditional beliefs, practices, and indigenous knowledge on breastfeeding can be negotiated and modified to promote public health interventions especially on issues relating to breastfeeding.
- Raise awareness about the benefits of exclusive breastfeeding using mass media, such as television, radio, newspaper and magazines, for encouraging this practice.
- Enhancement and development of policies, rules, regulations, legislation and laws that appropriately promote as well as support breastfeeding in and outside work locations.

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APPENDIX I

Exclusive Breast Feeding

Exclusive Breastfeeding for the first six months is the best for your baby

- Breast milk provides all the nutrient your baby needs
- Breast milk contains important antibodies and thus reduce risk of diseases against your baby
- Breast milk is easily digestible by your Baby
- Breast milk improves the development of your baby's brain, making them smarter



...A healthy baby, a healthy future

Breast milk is all your baby needs for the first six months

Courtesy: Omokaro Osariemen Collins
Master in Public Health Education
University of Benin
2017/18 session

Handbill on Exclusive Breastfeeding

APPENDIX II



Researcher describing the benefits of exclusive breastfeeding



Researcher describing the benefits of exclusive breastfeeding



Researcher answering questions during health talk

