

**KNOWLEDGE AND PRACTICE OF BREAST HYGIENE AMONG
NURSING MOTHERS ATTENDING PRIMARY HEALTH CARE
CENTRES IN IBADAN SOUTH EAST LOCAL
GOVERNMENT AREA, OYO STATE**

BY

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**A PROJECT SUBMITTED IN THE DEPARTMENT OF HEALTH
PROMOTION AND EDUCATION, FACULTY OF PUBLIC HEALTH,
COLLEGE OF MEDICINE, IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF PUBLIC HEALTH
(HEALTH PROMOTION AND EDUCATION)
OF THE
UNIVERSITY OF IBADAN**

MARCH, 2016

DEDICATION

I dedicate this work to my God my creator, for seeing me through the MPH programme. I know that if not for God, I wouldn't have come this far.

Thank you Jesus.

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ACKNOWLEDGEMENT

My profound appreciation goes to my project supervisor, Dr. O.E. Oyewole who, through his tight schedule painstakingly supervised my work. Your fatherly scolding, advice and support is immeasurable. I also greatly appreciate all the lecturers and the staff of the Department of Health Promotion and Education, which include the Head of Department, Prof O. Oladepo, Dr. F. Oshiname, Dr. (Mrs.) Arulogun, Dr. M.A Titiloye, Mr. F. Dipeolu, Mrs. Desmennu, Mrs. Oluwasanu and Mr. Imaledo. Thank you all so much for what you have all taught me and support throughout the period of this work. Your effort and energy is highly valued.

My appreciation also goes to the non-academic teaching staff of the Department, Mr. A. Olubodun, Mr. P. Ayeni, Mr. O. Bello, Mr. Lanre Quadiri, Mr. Begun, Miss A.E.Olaniyi and Mr. T. Oyeyemi who has contributed one way or the other to success and completion of this work.

My gratitude also goes to my family for the enormous support they have shown me all through this programme. I thank you for the constant words of encouragement and prayers. I particularly celebrate my parents Mr. and Mrs. Aderibigbe for their care and support and for being so much interested in providing quality education for me and my siblings Muyiwa, Abiodun, Kehinde, Taiwo, Tosin, Tolu, thank for being there. Your labour will never be in vain.

To all the authors and scholars whose works were cited in this research, I am grateful.

Oluseyi Yemi ADERIBIGBE

ABSTRACT

Breast hygiene is one of the important information provided for nursing mothers to help them take informed action as it concerns their breast. Despite the importance of breast hygiene to health, many nursing mothers do not understand the basic steps in breast hygiene. Previous studies have focused on breast self-examination and only few studies considered issue of breast hygiene. This study investigated the knowledge and practice of breast hygiene among nursing mothers attending Primary Health Care (PHC) Center in Ibadan South East Local Government Area, (IBSELGA) Oyo State, Nigeria.

A descriptive cross-sectional study was conducted among 425 randomly selected consenting nursing mother in IBSELGA. A three- stage sampling techniques involving random selection of 4 Primary Health Care Centres, proportionate and random selection of the final respondents. A pre-tested semi-structured interviewer-administered questionnaire was used for data collection which comprised of socio-demographics characteristics, knowledge, perception, practice and challenges related to breast hygiene. Knowledge was assessed on a 16-point scale and scores of 0-7, >7-11 and 11 and above were categorised as poor, fair and good knowledge of breast hygiene respectively. Perception was assessed on a 17-point scale and scores ≥ 9 were regarded as positive perception. Practice was assessed on a 9-point scale and scores ≥ 5 were categorised as good practice. Descriptive statistics and Chi-square test were used for data analysis with the level of significance set at $p= 0.05$

Age of respondents was 30.8 ± 5.8 years, (90.1%) were Yoruba. More than half (52.5%) were Christian and (85.2%) were married. Knowledge score was 8.4 ± 2.9 and majority (50.4%) had poor knowledge, (33.6%) had fair knowledge, while (16.0%) had good knowledge of breast hygiene. Some (22.8%) could correctly mention two ways of keeping the breast hygienic while only few (27.5%) could correctly mention two importance of breast hygiene to the infant. Perception scores was 11.5 ± 2.9 and respondents with negative and positive perception towards breast hygiene were (16.2%) and (83.8%) respectively. Some (33.2%) stated that breast infection is common among older women and (45.2%) perceived that they could never have breast infection. Practice scores was 5.3 ± 1.5 and only (44.2%) had good practice, while (55.8%) had poor practice of breast hygiene. Majority (62.6%) admitted that they don't wash their breast every day when bathing. Most (68.2%) reported

that they do report any abnormal sign on their breast to their doctors. Some of the challenges related to breast hygiene included financial status (17.2%), and busy schedule (20.7%), and inadequate information (35.8%). There was also a significant relationship between the level of education, age and occupation of the respondents and knowledge of breast hygiene.

The knowledge and practice of breast hygiene was low among nursing mothers in the study area. Health education strategies such as enlightenment campaign and awareness would be useful to address and improve the knowledge of breast hygiene among nursing mothers attending primary health care centres.

Keywords: Breast hygiene, Nursing mothers, Breastfeeding, Primary Health Care

Word count: 491

CERTIFICATION

I certify that this study was carried out by Aderibigbe, Oluseyi Yemi under my supervision at the Department of Health Promotion and Education, Faculty of Public Health College of Medicine, University of Ibadan.

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ABBREVIATION/ACRONYMS

NDHS	National Demographic and Health Survey
NPC	National Population Commission
W.H.O	World Health Organization
FGN	Federal Government of Nigeria
SIDS	Sudden Infant Death Syndrome
EBF	Exclusive Breastfeeding

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The human body can provide places for disease-causing germs and parasites to grow and multiply. Personal hygiene is necessary to ensure that the body is clean at all times so that it does not may support the growth and contamination by disease-causing microorganism Since the development of the germ theory of disease, hygiene has come to mean any practice leading to the absence of harmful levels of germs. India Parenting (2010) stated that the health risks to which humans are exposed prove that good hygienic practice is essential. In fact, the spread of most diseases and sicknesses of the under-5 has been attributed to a lack of hygiene especially of the mother. With this in mind it is clear that, if sound hygienic practices were more wide spread, all people would benefit, including future generations. Good personal hygiene promotes health, beauty, comfort and directly helps to prevent and isolate disease. It is a basic human need, fundamental to health and well-being and essential to reduce the risk of infections Good personal hygiene is actually a group of habitual practices that need our attention. According to Skelton (2007) women's hygienic practices are particularly important since they are care-givers who breastfeed and nurse a baby, prepare food for others, clean for others and implement personal hygiene for children. Personal hygiene entails bathing regularly, keeping hair clean, trimming fingernails and toenails, brushing teeth and using deodorant (Mundia, 2013).

Women especially nursing mothers need to maintain a good personal hygiene throughout the day; good habits should be established to maintain personal and family hygiene. An aspect of hygiene that is very important to nursing mothers but which has been continually overlooked is the breast hygiene. Breast milk is the basic food for every baby. Besides being easily digestible, it boosts their immune system, therefore enhancing wellbeing and development. Since these toddlers feed through the nipples that are located on the tip of the breasts, it is advisable that every breastfeeding mother observes high levels of personal hygiene (Oluka, 2015).

Breast hygiene is an important matter that needs to be put into practice to reduce the level of contacting breast infection. Most nursing mothers lack adequate knowledge of breast hygiene

during and after breastfeeding their infants. It is necessary to study breast hygiene because breast care also contributes to healthy breastfeeding of an infant, which serves as a way of preventing infants from contacting infection directly from the mothers. Adequate knowledge of breasts hygiene can be done by washing the breast each day with warm water. If necessary, nursing mothers should use a very mild soap solution not more than once a day to avoid dryness, cracked nipples of the breast (“Women and Newborn Health Service,” 2012).

Adequate breast hygiene helps the infant in so many ways, since breastfeeding is one of the most important basic health care provisions that mother can give, because it has been proved that breast milk is best for the newborn babies. Not only that breast milk is nutritious for the baby, it also helps protect the child from almost all forms of infections, by boosting the child’s immunity level. It has been found that no other milk provides as much nutrition and safety for the child as breast milk. Each nursing mother delivers millions of living white blood cells to her baby, helping the baby to fight off all kinds of diseases (Netshikweta and Kyei, 2014).

Before any mother goes ahead to breastfeed their baby, they should ensure they first wash their hands with clean water and soap (Oluka, 2015). The baby should also be kept clean at all times by bathing including during breastfeeding. The aim of bathing a child before breastfeeding is to ensure that they are comfortable as they suckle. This ensures that they feed well and also ensures that the baby’s hand stay clean since babies keep touching the breast during the process of sucking. If the mother does not have enough time, she can only wash the baby’s hands using a clean piece of cloth. After cleaning the baby, mother can then put water in a basin and use it for cleaning both her breasts. She could use either a sponge or any piece of cloth for cleaning (Oluka, 2015). Nursing mothers should also avoid rubbing alcohol, lotions, and strong soaps as these can make the nipples dry and irritated which can easily allow infection to penetrate into the breast either through an unclean brassiere or sweat. It is necessary for nursing mothers to adequately take bath to avoid sweat before breastfeeding take place, washing of the bra frequently is also an advantage for mother to care of the breast (Oluka, 2015).

The feeding of a baby is essential for correct development and good nutrition and it is strongly advised by midwives and other experts in breastfeeding. As the child is suckling one

breast, the other should be covered so as to avoid milk spilling on the mother's clothing. They should wear breast pads all the time since this can help absorb milk coming from the breasts, and therefore keep a mother's clothes stain-free. The pads can be changed every three hours, depending on how much milk is coming out of the mother's breasts. For mothers who cannot afford breast pads, they could use small pieces of clothing made out of cotton material, as this can help to absorb the milk.

A period of time (several days and few weeks) elapses during which the demands of infant gradually influences the hormonal production of the mother which, in turn, adjusts the volume of milk production. The fore-milk is produced between feedings and may constitute a significant leakage problem to the mother because of variations in the human physiology, some nursing mothers who are breast feeding their children may simply experience overproduction of milk between feedings and associated leakage. This problem is especially acute during the night and this is why nursing pads are important in order to prevent staining of clothing and embarrassment caused by leaking of milk. The nursing pads absorb leaking fluids and decrease skin irritation for the mother and, such pads are commonly placed inside the bra this serve as to keep the breast hygienic (Ibrahim, 2011a). Regarding what sort of clothing is suitable for mothers during breastfeeding, front-buttoned, zips and V-necks are recommended, since they make it easy for the mother to access the breasts. But most importantly, mothers should always ensure that they put on the right sizes of bras so that the breasts are kept in a firm position.

Positioning of the baby's body during breast feeding is one of the important factors of a successful breast hygiene among nursing mothers. Most difficulties can be avoided if good attachment and positioning are achieved at the first and early feeding. An effective sucking technique should be considered by the nursing mothers while breastfeeding to ensure that milk transfer has successfully taken place to prevent breastfeeding problems and breast nipple crack (Shams, 2011). When feeding avoid pressing too firmly on the breast with fingers when positioning the breast nipple. Lifting the baby up to the breast rather than leaning down to the baby helps reduce the need to direct the nipple towards the baby's mouth this also helps in avoiding breast crack on the nipple (Babycenter.com, 2013).

1.2 Statement of the problem

Over the years, people had the belief that breast cancer is an older woman's disease, therefore, the primary focus has been on prevention, detection and treatment of breast cancer for women who are 50 and older. The rising global incidence of malignant diseases as documented by World Health Organization (WHO, 1996) is an issue of serious concern, particularly in the developing countries where the increase seems to be more preponderant. In Nigeria for example, over 100,000 people develop cancer annually with majority of patients arriving medical centres at a late stage, thus resulting in a high mortality rate (Costa, 2011). WHO estimated the incidence of breast abscess to vary between 2.65% to 33% with prevalence globally about 10% in breastfeeding mothers (Akwo Cyril and Mirabel, 2014). Breast infection have been one of the most common problem among nursing mothers and infant, which has led to early premature weaning of infant especially in sub-Saharan Africa (Soad Abd-Elsalam, 2011).

According to Oluka (2015), mothers who do not observe proper hygiene while breastfeeding are likely to emit an awful smell especially if they do not change clothes that have been stained by milk from the breasts. "Once any kind of breast milk spills on either the bra or blouse, and the breastfeeding mother does not change the clothes, she will immediately start smelling," There is also a tendency for the breasts to become engorged or soggy when the mother does not wear any absorbent material. "If one does not put on any kind of spongy material to absorb the milk coming from the breasts, it will spill on the bra eventually making it wet. The nipples will even become mushy and sore for the baby to suckle," Also, a mother may develop wounds and cracks on the nipples as a result of the continuous poor placement of the breasts on the baby's mouth (Oluka, 2015).

Worrisome is the fact that child mortality and morbidity have been indicated to be due to inappropriateness of breast hygiene by nursing mothers which have resulted in different diseases of the breast nipples (Soad Abd-Elsalam, 2011). Specifically, in Nigeria, lactation breast disease has been reported to constitute about 95% of current status and causes of breast disease (Efem, 2010).

According to the recent NDHS (2013), the rates of maternal and child mortality are still fall short of the target made by the FGN at the Millennium Summit held in New York in 2000. In fact, Nigeria is still far away from realizing the millennium development goals 4 and 5 based

on the recent NDHS report as she still record 64 per 1000 live birth and 576 per 100,000 live births of child and maternal mortality ratios respectively (NDHS 2013). While the state of maternal, newborn and child health is an important indicator of a nation's health care delivery system and the level of the society's development (Ogunjimi Lucas Olusegun, 2012), the findings in the recent NDHS therefore indicate that efforts to meet the MDGs on the reduction of maternal and child mortality in Nigeria have shown only marginal reductions.

Considering the fact that childhood infections account for 25% of the child death (WHO World Health Statistics 2007) couple with the implication of poor breast hygiene with childhood morbidity and mortality (Soad Abd-Elsalam, 2011). Therefore, there is need to increase efforts to improve knowledge of nursing mothers on breast hygiene.

1.3 Justification of the study

Breastfeeding problems appear to have been with humanity since mothers first put their babies to the breast (Fildes, 1995). Moreover, reports from studies indicate that most nursing mothers lack adequate knowledge of care for breast among breastfeeding mothers attending postnatal care (Warren, 2010). For these reasons, investigating the knowledge and degree of breast hygiene practice among nursing mothers and implementing scientific based strategic intervention, may have significant influence in reversing the high infection related child death and improve maternal health status and thus the justification for this study.

1.4 Significance of the Study

The findings of this study provide answers on the current status of breast hygiene practice among nursing mothers and thus the importance in the planning of interventions toward improving child health. Thus, the study may provide the need to add healthy breast hygiene practice to antenatal services and in the long run to reduce the high child morbidity and mortality rate as well as contribute to improving maternal health.

1.5 Research Questions

1. What is the knowledge of nursing mothers on breast hygiene?
2. What are the perception of nursing mothers toward breast hygiene?
3. What are the practices of breast hygiene among nursing mothers?
4. What are the factors influencing breast hygiene?
5. What are the challenges related to breast hygiene among nursing mothers?

1.6 Research Hypotheses.

Null Hypotheses:-

1. There is no significant relationship between age of nursing mothers and knowledge of breast hygiene.
2. There is no significant relationship between level of educational of nursing mothers and knowledge of breast hygiene.
3. There is no significant relationship between occupation and knowledge of breast hygiene.

1.7 Broad Objective.

The aim of the study is to investigate the Knowledge and Practice of Breast Hygiene among Nursing Mothers Attending Primary Health Care Centres in Ibadan South East Local Government Area, Ibadan. Oyo State

1.8 Specific Objectives:-

1. To assess knowledge of nursing mothers on breast hygiene.
2. To determine the perception of nursing mothers toward breast hygiene.
3. To identify practice of breast hygiene among nursing mothers.
4. To examine the factors influencing breast hygiene among nursing mothers.
5. To identify the challenges related to breast hygiene among nursing mothers.

CHAPTER TWO

LITERATURE REVIEW

2.1 Breast feeding

Early initiation of breastfeeding is important for both the mother and the child. Early suckling stimulates the release of prolactin, which helps in the production of milk and oxytocin, which is responsible for the ejection of milk. It also stimulates contraction of the uterus after childbirth and reduces postpartum blood loss. The first liquid from the breast known as colostrum, is produced in the first few days after delivery. Colostrum is highly nutritious and contains antibodies that provide natural immunity to the infant. It is recommended that children be fed colostrum immediately after birth (within one hour) and that they continue to be exclusively breastfed even if the regular breast milk has not yet started to flow (NDHS, 2013).

Breastfeeding is the natural and biological way of providing babies and young children with nutrients required for healthy growth and development. Breastfeeding initiation is variable in length and is influenced by the individual clinical circumstances of both mother and baby. Initiation of breastfeeding enhances mother, baby emotional attachment and contributes to optimal short and long term health outcomes for both. Statistically, a baby who is not breastfeeding has more health care needs than its breastfed counterparts (Queensland Maternity and Neonatal Clinical Guideline Program, 2015).

Breastfeeding is the act of feeding the baby from the breast. According to World Health Organization, breastfeeding confers substantial health benefits on both mother and child. For the infant, the principal advantages of breast milk are nutritional and immunological. For the mother, breastfeeding encourages the involution of the uterus and thus the rapid return of uterine womb which helps the mother to regain her natural shape through the art of care for the breast. It promotes an affectionate bond between mother and child. It is economical to care for the breast so as to achieved the benefit of breast feeding and it is convenient (Odu, Bimbola Kemi, and Ogunlede, 2012).

According to W.H.O report (2011), “breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants”. It is also an integral part of the reproductive process with important implications for the health of mothers. Breastfeeding has an extraordinary range of benefits. It has profound impact on a child’s survival, health, nutrition and development. It provides the infant with nutrients, vitamins and minerals that are needed for growth and development for the first six months. In addition, it carries antibodies from the mother to the child (W.H.O, 2011).

Breastfeeding creates a special bond between mother and baby by the help of adequate knowledge of care toward the breast which lead to positive repercussion for life, in terms of stimulation, behavior, speech, sense of wellbeing and security. It also lowers the risk of chronic diseases, such as breast diseases, obesity, high cholesterol, high blood pressure, diabetes, and childhood asthma and leukemia. Studies have shown that breastfed infants do better on intelligence and behavior tests into adulthood than formula-fed babies (Uchendu,Ikefuna and Emodi, 2012).

Breastfeeding provides the ideal nutrition for a baby and provides many health benefits for both mother and baby. It protects the child from obesity, lowers the baby’s risk of Sudden Infant Death Syndrome (SIDS), reduces the stress level and the risk of post-partum depression of the mother as well as reduces the risk of some types of cancer (www.babycenter.com). Some studies have shown that breastfeeding is protective against several child diseases, such as allergies and asthma amongst others(Costa, 2011). It is also reported in some studies that breastfeeding provides certain important benefits such as increased child spacing, earlier return to pre-pregnancy weight, decreased risk of breast and ovarian cancers, decreased risk of hip fractures and osteoporosis in the post-menopausal period to mothers. Breastfeeding promotes health by providing immunity and prevents diseases such as ear infection and diarrhea. Diarrheal disease is a leading cause of child mortality and morbidity in the world, and mostly results from contaminated food and water sources. Breast milk has disease fighting cells called anti-bodies that help protect infants from germs, illness, and even sudden infant death syndrome (SIDS). It also helps protect the child from almost all forms of infections, by boosting the child’s immunity level. It has been

found that no other milk provides as much nutrition and safety for the child as breast milk (Kyei et al, 2014).

2.2 Breast Hygiene

Breast hygiene is a simple method for mothers to perform hygiene of the breast, nursing mothers who perform breast hygiene are more familiar with their breast potentially making them more aware of any breast problem as they will seek medical advice earlier. Although the efficiency of the breast hygiene may be questionable, when performed accurately and regularly, it provide mothers with opportunity to notice difference in the breast tissues, breast nipple and to detect lumps at an early stage before breastfeeding the child. Breast hygiene is the most important and effective way of caring for the breast among nursing mothers. Washing of the breasts each day with plain warm water, if necessary, mothers may use a very mild soap solution not more than once a day to avoid dryness, cracked nipples(Costa, 2011).

Breast changes occur during pregnancy to prepare infant for breast milk. These changes are caused by the increase in the hormones estrogens and progesterone and of prolactin the hormone which triggers the production of milk. Breast change is also one of the early signs in pregnancy. This may include tenderness of the nipple and breast along with an increase in breast size. This varies among pregnant mothers and it can be noticed that a change occur in the size of breasts or very little change at all. An increase in size may make breasts feel heavy and tender. The breast tissue extends up into the armpit and some women with additional breast tissue (accessory breast tissue) may find that this also gets bigger in size. Many women feel a change in sensation in their breasts such as tingling and soreness (particularly of the nipples). This is due to increased levels of the hormone progesterone and the development of the milk ducts. As pregnancy progresses the nipples and areola become darker in colour and the veins on the surface of the breast may become more noticeable(La Leche League, 2012).

Milk flow can be restricted by a poorly fitting bra, poor positioning of the baby, compression from fingers holding the breast too firmly or even sleeping on stomach. A bump to the breast or the baby pulling at breast can cause bruising and swelling which may restrict milk flow. Incomplete drainage from hurried feeds or too long between feeds can allow milk to collect

and set in the ducts. Picking a well fitting maternity bra is important, maternity bras that have cups does not completely drop down when breastfeeding take place, but a triangle of fabric around the breast can compress the breast and restrict milk from flowing. Nursing mothers need a couple of different sized bras for days when they are fuller(Dewey, 2013).

Meanwhile, the early discovery of breast lumps through breast care is important for the prevention and early detection of breast disease. Early detection of breast infections would be useful for the control of breast disease and also reducing maternal and mortality in both mothers and infant. Early detection of breast infection can increase the survival rate of both mothers and infant. There has not been any systematic approach to increase the awareness of breast disease among nursing mothers. Therefore, many women miss early detection and treatment opportunities due to lack of information, knowledge, and awareness of breast diseases as well as ways of preventive practices which have lead to high rate of mortality among nursing mothers as a result of breast cancer (Alkhabbaz, 2013).

2.2.1 Suckle dirty breasts

When mothers do not wash their breasts and nipples properly, they expose their babies to various infections and diseases. A dirty breast harbours germs and when an infant suckles it, there are high chances that they will get sick. Some of the common conditions that can result from a child suckling dirty breasts include fever, diarrhoea, vomiting, developing a gaseous abdomen and loss of appetite by the baby (Namakula, 2014).

2.3 Breast hygiene Practices

According to (Namakula, 2014)observing that proper breast hygiene practice is the best way to prevent breastfeeding-related infections. The following constitute good breast hygiene

2.3.1 Washing of hands before commencement of breastfeeding

Before any mother goes ahead to breastfeed their baby, they should ensure that they first wash their hands with clean water and soap. For over a century, skin hygiene, particularly the hands, has been accepted as a primary mechanism to control the spread of infectious agents. The most convincing evidence of the benefits of hand-washing for the general public is for prevention of infectious agents found transiently on hands or spread by the fecal-oral route or from the respiratory tract (Larson, 2001). Plain soaps are considered adequate for this

purpose. The important times to wash hands were after defecating or cleaning a child's feces, before eating and before feeding children. It is important that nursing mothers wash their hands before starting breast feeding so that the breast will not be contaminated when they are helping the baby to position the breast or when they want to open their brassieres.

2.3.2 Bathing the baby

The baby should also be kept clean at all times, including during breastfeeding. The aim of bathing a child before breastfeeding is to ensure that they are comfortable as they suckle. This also ensures that they feed well. If the mother does not have enough time, she can only wash the baby's hands using a clean piece of cloth. This is crucial since babies keep touching the breasts during the process of suckling (Oluka 2015). This will prevent the baby from contaminating the breast before and during suckling.

2.3.3 Washing and cleaning of the breast

Breast milk is the basic food for every baby. Besides being easily digestible, it boosts their immune system, therefore enhancing wellbeing and development. Since these toddlers feed through the nipples that are located on the tip of the breasts, it is advisable that every breastfeeding mother washes the breast and the nipples so that they do not feed their babies with infections. According to Oluka (2015), when mothers do not wash their breasts and nipples properly, they expose their babies to various diseases and infections. A dirty breast harbours germs and when an infant suckles it, there are high chances that they will get sick. Some of the common conditions that can result from a child suckling dirty breasts include fever, diarrhoea, vomiting, developing a gaseous abdomen and loss of appetite by the baby. When washing the breast, nursing mothers should concentrate on the areas beneath the breasts, nipples and areolas. The cleaning can last for about five to 10 minutes. Afterwards, the mother must wipe her breasts using a dry towel and then go ahead to feed the baby. Mothers should however avoid using any kind of medicated soap or liquid during the cleaning process. This is because one may fail to rinse the nipples properly and when the baby suckles, they could easily get an infection (Namakula, 2014).

2.3.4 Accessories to practicing breast hygiene

2.3.4.1 Brassiere

The Brassiere is another probable source of contamination. It is the cloth that covers the breast. When this cloth is dirty and stained by the breast milk, it can harbor germs which can contaminate or infect the baby. The milk can serve as a substrate for the breeding of microorganisms especially fungi. This is why a nursing mother should make sure that the brassiere is kept clean at all time and that they are changed when stained with breast milk. Brassieres have also been implicated in some breast diseases. According Sydney Rose, (2011) a Spanish, confirming that bras causes' breast disease, it found that underwear and push-up bras are the most harmful, but any bra that leaves red marks or indentations may cause disease. Women do feel they are being judged for their appearance. In culture, women are often treated as objects, especially their breasts. So this news about bras causing breasts to droop is a powerful motivator to get rid of the bra. Women will ditch the bra to look better, and will be preventing breast cancer at the same time (Sydney Ross, 2011).

2.3.4.2 Nursing pad

Nursing pad is constructed of a plurality of substantially coextensive layers having different characteristics, a non-permeable layer (backing layer) for preventing transfer of breast milk from the liner to clothing, an absorbent layer (inner layer) which comprises an absorbent material for holding the milk within the liner, and a wicking layer (facing layer) to draw the liquid away from the breast and into the absorbing layer. An adhesive may be applied to the outer portion to hold the pad place in the bra (Ibrahim, 2011b).

According to Oluka (2015), nursing mothers should wear breast pads all the time since this can help absorb milk coming from the breasts, and therefore keep a mother's clothes stain-free, the nursing pads can be changed every three hours, depending on how much milk is coming out of the mother's breasts. For mothers who cannot afford breast pads they could use small pieces of clothing made out of cotton material, as this can help to absorb the milk (Namakula, 2014).

2.3.4.3 Maternity bra

Maternity bra is worn before and after pregnancy by mothers who are not planning to breastfeed. Maternity bras, which are designed to provide extra breast support, offer stretchy cups that can expand with growing breasts. Maternity bras are designed to fit comfortably on the tightest hook early in the pregnancy and adjust to the loosest hook by the third trimester (Lutheran, 2014).

2.3.4.3.1 Features of maternity bra

The following features are considered when choosing a maternity bra:

- Wide side bands and shoulder straps to support growing breast tissue
- Cushioned, non-stretch shoulder straps
- Limited decorative details (lace, etc.) that do not scratch or irritate the skin
- Three or more back closures for fit flexibility during and after pregnancy
- Band that lies under the breast and on the rib cage; no creeping
- Cups that are large enough to give adequate coverage and depth
- Cotton or wicking microfiber if you will be pregnant during the summer or get hot easily (Lutheran, 2014).

2.3.4.4 Nursing bra

Nursing bra is worn after baby arrives by mothers who have decided to breastfeed. The cups clip and drop down to expose the breasts for nursing. Nursing bras are usually seamless and are designed to provide a natural shape and much-needed support (Lutheran, 2014)

2.4 Attachment to the breast

A baby who attaches well to the breast can help prevent many breastfeeding problems. A well-attached baby causes no nipple pain and drains the breast well. This helps ensure a good milk supply so the infant grows well. Sore, grazed or cracked nipples usually means that infant is not well attached properly and has caused damaged to the nipples. A poor attachment of the infant to the breast can cause blocked duct or mastitis (Australian Breastfeeding Association, 2012). Problems of splashing of the breast milk when breastfeeding can also be minimized by ensuring the baby is properly attached to the breast.

Improper attachment is one of the main causes for lactation failure. It was seen that 60% mothers did not have proper attachment and position during breastfeeding. Remaining 40%

having good attachments were multipara or had child more than 5 months old (Chaudhary et al, 2011).

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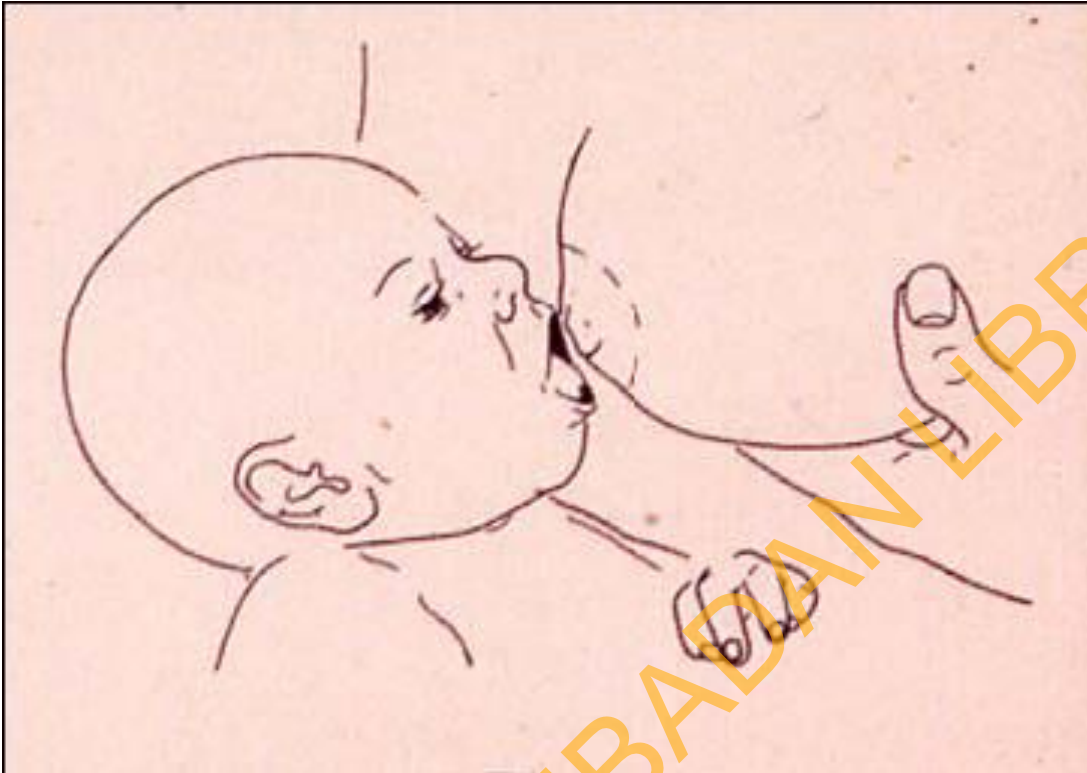


Fig. 2.1: Initiating the Rooting Reflex

Source: Practical Mother and Child Health in Developing country (Child Health, 2013).

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Fig. 2.2a: Attachment to the breast.

Source: Practical Mother and Child Health in Developing country (Child Health, 2013).

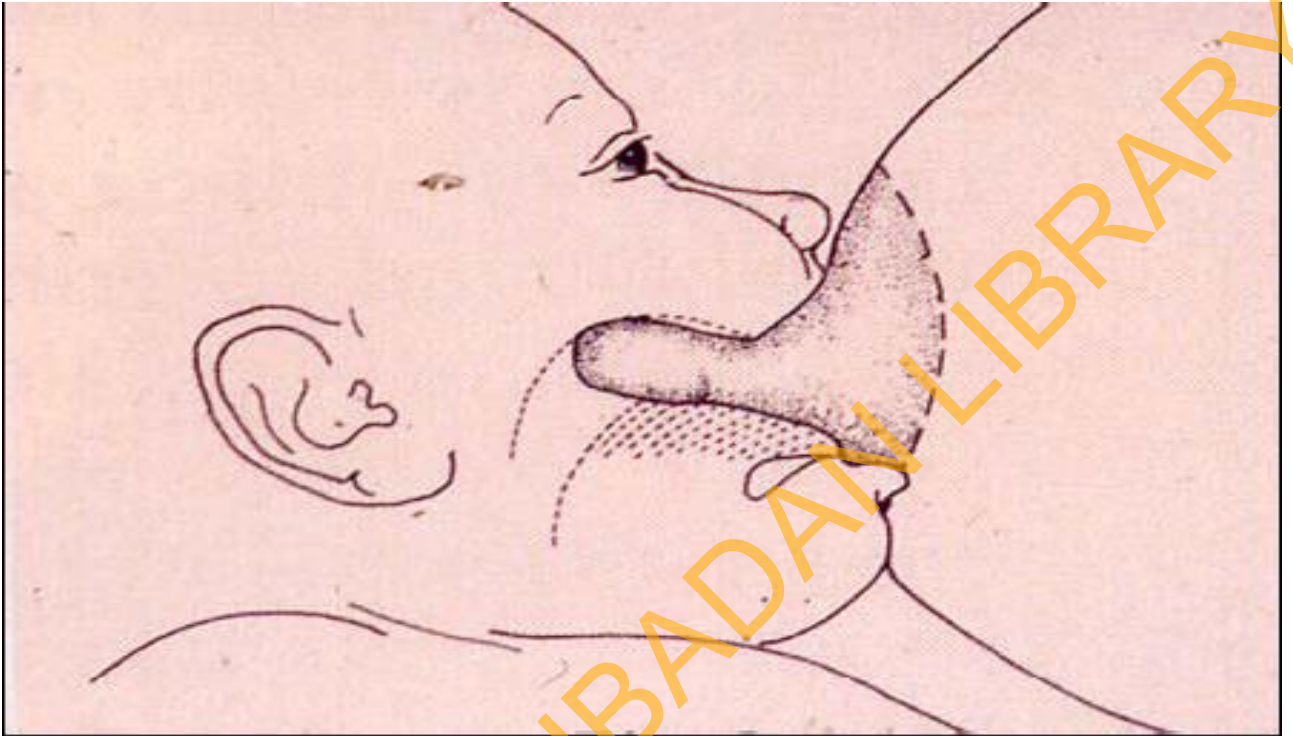


Fig. 2.3b: Attachment to the breast

Source: Practical Mother and Child Health in Developing country (Child Health, 2013).

First time nursing mothers may need help with initiating breastfeeding by being shown the following:

- Holding the baby in close body contact with the baby's nose near the nipple
- Gently squeezing the breast until a drop of milk is visible on the nipple
- Touching the baby's lips with the nipple
- Wait a second or two for the baby to open his mouth wide (the Rooting Reflex)
- Moving the baby gently onto the breast ensuring that the baby has taken whole of the nipple and the areola well into the mouth so that the baby's lower lip is well below the nipple.

2.5 Positioning of infant

The most important measure to prevent nipple soreness is positioning the baby at the breast and making sure the baby is "latched on" to the nipple, and stays latched on properly. In a correct latch, the whole nipple and some of the areola, the darker skin surrounding the nipple are deep in the baby's mouth. Good positioning and latched on are important for successful nursing. Good positioning includes sitting or lying down in a comfortable position with the baby well supported by pillows so the baby faces the breast at the level of the nipple. Nursing mothers should learn nursing positions and how to get the baby latched on before leaving the hospital (Ellen Edmondson, 2010).

Nursing mother can hold her baby to her body in the way that feels right for her. Many nursing mothers choose to hold their baby upright on their chest and between their breasts. Mothers also find that a semi-reclined position works well. In a semi-reclined position, it is easier for a baby to make his own way to his mother's breasts, gently supported by his mother. It can also help to minimize nipple trauma, as it reduces the drag on a mother's nipple that may occur when a mother is sitting upright (Australian Breastfeeding Association, 2012).

2.6 Common breastfeeding problems associated with breast hygiene

Breast problems are common problems among nursing mothers who attend primary health care centres. Although the problem is expected to have significant morbidity, patients usually hide or present late for breast related problems in Nigeria. According to a research by Uchenna (2012) which shows that Psychological problems encountered by nursing mothers during breast feeding ranged from 150 (62.5%) lacked the confidence to breastfeed exclusively. 220 (91.67%) worried about the stresses associated with breastfeeding exclusively. 98 (40.83%) feared that EBF would crack their nipples and 137 (57.08%) cannot imagine breastfeeding with cracked nipples (Uchenna, 2012). Frequently cited problems with breastfeeding include sore nipples, engorged breasts, mastitis, leaking milk, pain, and failure to latch on by the infant. Women who encounter these problems early on are less likely to continue to breastfeed unless they get professional assistance. Research has found that mothers base their breastfeeding plans on previous experiences, and resolution of these problems may affect their future decisions about feeding. Concern about insufficient milk supply is another frequently cited reason for early weaning of the infant. One national study on feeding practices found that about 50 percent of mothers cited insufficient milk supply as their reason for stopping breastfeeding. Having a poor milk supply can result from infrequent feeding or poor breastfeeding techniques, but lack of confidence in breastfeeding or not understanding the normal physiology of lactation can lead to the perception of an insufficient milk supply when in fact the quantity is enough to nurture the baby (United State Department of Health and Human Services 2011).

According to a research by Boskabadi (2014) shows that most common breast problem in the study was breast fissure. Inverted nipples and mastitis were in the next level, and 30% of mothers have two or three problems, several studies have reported that 2%-3% incidence rate for mastitis, 11%- 96% for breast fissure and breast abscess occurs in 5%-11% of nursing mothers with mastitis this resulted as lack of information on breast care practice (Boskabadi and Hassan, 2014).

According to research done by the royal women hospital in Victoria Australia shows that part of the problems that occur to nursing mother's breast when breast feeding their infant includes:

2.6.1 Nipple Blanching and Vasospasm

Vasospasm of the nipple may occur due to infection or other intrinsic causes such as Raynaud's. Raynaud's phenomenon which may involve the nipple and presents as a burning sensation at the end of feeding. It may last minutes and is associated with blanching of the nipple (Tipu Khan, 2014). Vasospasm occurs when blood vessels constrict (or tighten). Vasospasm may occur in any blood vessels in the body such as in the heart, brain or eyes and blood vessels in the nipples are affected causing pain during, immediately after, or between breastfeeds (Royal Women Hospital, 2013a).

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Fig. 2.4: Blanching of breast nipple from vasospasm

Source: - California Academy of family physicians (2014).

2.6.2 Breast Nipple Thrush

Breast nipple thrush can cause strong nipple and breast pain, the breast pain may be severe enough to lead to early weaning of infant if the condition is not treated. The thrush is a fungi infection cause by the organism candida albicans, which can occur in the nipple or breast tissue. Breast and nipple thrush may be linked to a history of vaginal thrush, recent use of antibiotic or breast nipple damage (Royal Women Hospital, 2013b).

2.6.3 Candidiasis of the nipple

Candidiasis is a type of fungus that can cause infections in various warm and humid places, such as the nipples, breasts, skin, vagina, mouth, and baby's bum these infections are commonly called "thrush" or "yeast infections".

Candidiasis is an overgrowth of naturally occurring yeast, *Candida albicans*, which lives on the skin, mucous membranes, and genitourinary track. Because the infant's mouth and mother's nipples are warm and moist, Candidiasis can occur at any time during lactation, but infants or nursing mothers who have received antibiotic therapy, or nursing mothers with nipple trauma, are more susceptible. Additionally, mothers with vaginal Candidiasis prior to delivery can infect their infants during vaginal birth, who then infect the mothers' breast and nipple during breastfeeding (Nancy, 2013).



Fig. 2.5: Candidiasis of the breast nipple

Source: - California Academy of family physicians (2014).

2.6.4 Impetigo of breast nipple

The skin's natural barrier (i.e. stratum corneum), rapid cell turnover, an acid pH of 5 to 6 and the skin's normal dryness usually prevent infection. When there is a break in the integument in any skin surface, a secondary infection can occur due to bacterial or fungal contamination, these infections may lead to a delay in wound healing. Sore nipples associated with skin breakage (crack, fissure and ulceration) have a high risk of being contaminated with microorganisms (Genae and Nancy, 2013).

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Fig. 2.6: Impetigo of breast nipple

Source: - California Academy of family physicians (2014).

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2.6.5 Mastitis and Abscess

Mastitis is a complication encountered by nursing mothers and develops in 1% - 24%. A breast abscess develops as a complication of mastitis in 5% to 11% of cases. The most common bacteria is *Staphylococcus aureus*. Bacteria enter the skin by a small laceration or proliferate in a stagnant lactiferous duct. Common clinical symptoms of breast infection include pain, redness, and heat (Amin and Mattingly, 2013).

2.7 Some warning signs of unhygienic breast

The first noticeable symptom of breast disease is typically a lump that feels different from the rest of the breast tissue. The lump might be painless and has uneven edges or are tender, soft, and rounded. More than 80% of breast disease cases are discovered when the woman feels a lump. The absence of a discernible lump may delay detection dangerously. Indications of breast disease among mothers other than a lump may include:

- New lump in the breast or underarm (armpit)
- Thickening or swelling of part of the breast
- Irritation or dimpling of breast skin
- Redness or flaky skin in the nipple area or the breast
- Pulling in of the nipple or pain in the nipple area
 - Nipple discharge other than breast milk, including blood
- Any change in the size or the shape of the breast
- Pain in any area of the breast (Eli, 2012).

2.8 Symptoms of breast infection

2.8.1 Breast pain: -This is a common breast symptom and is not ordinarily a symptom of cancer. Most frequently, breast pain is associated with normal changes in hormone levels during the menstrual cycle and the presence of a breast cyst. However, a woman with breast pain or pain associated with a breast lump should see a medical professional for an evaluation (Komen, 2013).

2.8.2 Breast engorgement

Breast engorgement is when the breasts overflow with milk and the breasts become swollen, hard and painful. Large numbers of nursing mothers experience this, usually in the first few days after giving birth, although it can also occur later on. During a time when mothers are coping with the demands of a new baby it may be particularly distressing. Breast engorgement may mean that mothers fail to successfully start breastfeeding, cause them to give up breastfeeding, or serious illness can result, including breast infection (Mangesi and Dowswell, 2010). Breast engorgement may affect the area around the nipple and areola only or the entire breast, and may affect one breast only, or both. Once engorgement occurs, swelling around the nipple may make it even more difficult for the baby to latch-on and feed successfully, and this may make the engorgement worse. This problem may be compounded if concern that the baby is not getting enough milk, or breast pain and swelling, discourage women from continuing breastfeeding. Women may also receive limited advice and support from health professionals; lack of knowledge in managing this condition could be the reason for limited or inappropriate advice (Dowswell, 2010).

2.8.3 Sore or Nipple crack

Sore nipples are common during early days of breastfeeding, physical findings include vertical or horizontal red or white lines on the breast; fissures, cracks, or bleeding from the nipples, Sucking and tongue problems can also cause nipples to be painful and may also put the infant at risk for insufficient milk intake (Abd-Elsalam, Shadia and Howyida, 2011).

Nipple pain and trauma associated with breastfeeding are common, with incidences varying between 34% and 96% are cited as one of the main reasons for early cessation of breastfeeding in the early postpartum period, while later on, low milk supply is often seen as a reason to stop breastfeeding (Fluhr and Gensch, 2011).

2.9 Prevention of breast infection

- Use only water, not much soap, to clean nipples.
- Use mild, unscented laundry soap to wash bras and clothing.
- Don't use breast pads with a plastic liner; use pads that are made of cotton cloth or have soft cotton lining. Change breast pads when they get wet.
- Wear a comfortable bra that is not tight.
- Use breast creams very little and only for dry or chapped nipples. Purified lanolin cream is recommended. This is safe for the baby and does not have to be washed off before feeding.
- Instead of using breast cream, express some milk onto the nipple after feeding and allow it to air dry. Breast milk has healing properties.
- Leave bra flaps down or go braless to let air circulate around the nipple.
- Watch for red, cracked or bleeding nipples and call your healthcare provider if these symptoms occur. (Chetana, 2015)

2.10 Conceptual Frame Work

Health Belief Model

Health belief model was used to explain knowledge and practice of breast hygiene among nursing mothers. The health belief model was developed in the 1950s by a group of United State public health service social psychologist who wanted to explain why so few people were participating in programs to prevent and detect disease. They theorized that people belief about whether they were or not susceptible to disease, and their perception of the benefit of trying to avoid it, influenced their readiness to act. A heavy component of the behaving individual's perceptual world and motivation was incorporated into the health belief model by its developer. The model is interactive as each step influence the other and is based on three primary dimension in ensuring years researcher expanded upon this theory, eventually concluding that six main construct influence peoples decision about whether to take preventive care and control illness.

They argued that people are ready to act if they:

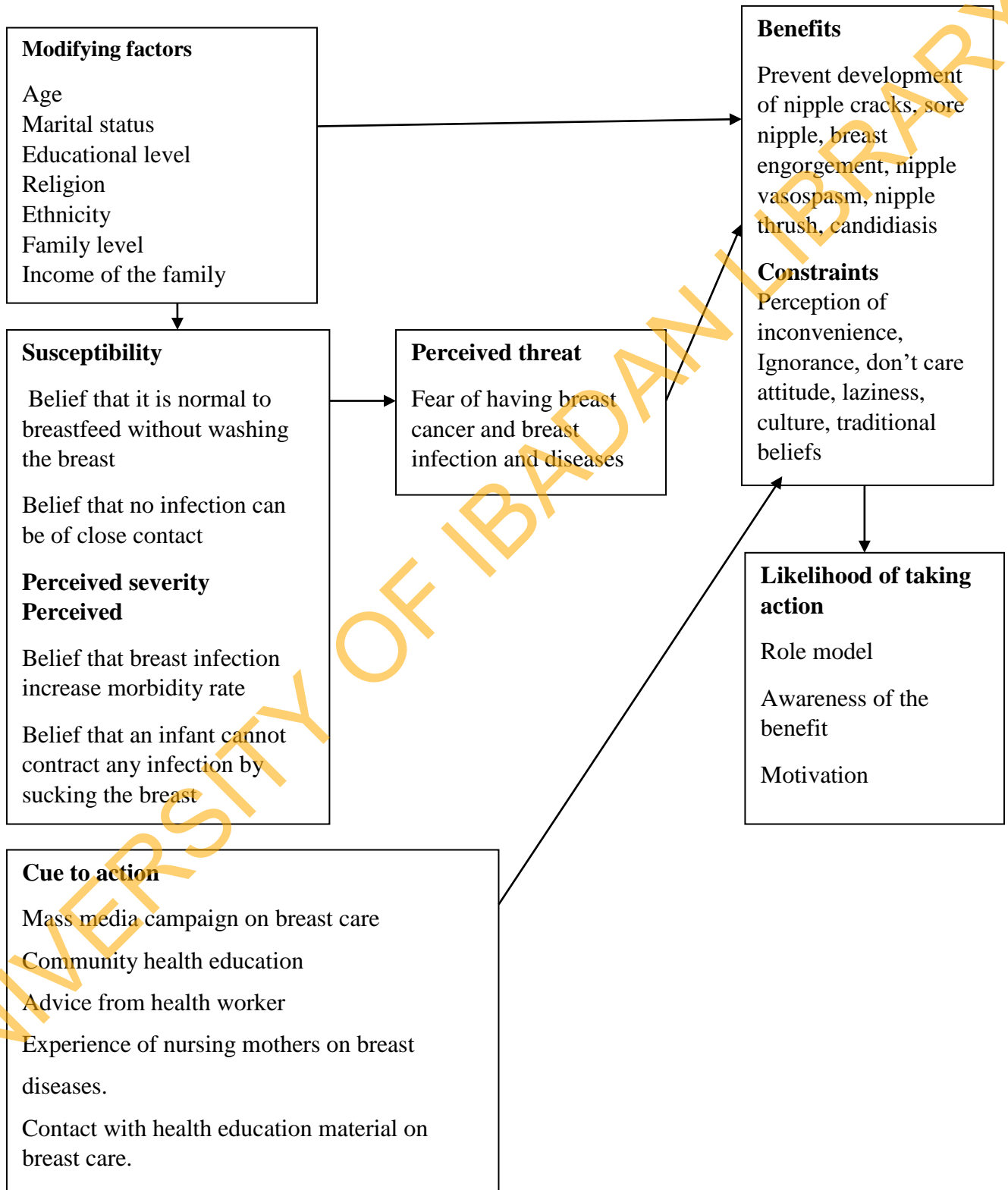
- 1) Believe they are susceptible to the condition (perceived susceptibility)
- 2) Believe the condition has serious consequences (perceived severity)
- 3) Believe taking action would reduce their susceptibility to the condition or its severity (Perceived benefit)
- 4) Believe cost of taking action (perceived barriers) are outweighed by the benefits
- 5) Are exposed to factors that prompt action (e.g. television advertisement)(cue to action)
- 6) Are they confident in their ability to successfully perform an action (self-efficacy)

Since health motivation is the central focus, the HBM is a good fit for addressing the problem of behaviour, that evoke health issues or concerns.(e.g. breast diseases, breast care among nursing mothers, protein energy malnutrition in under five years of age, high-risk of sexual behaviour, and the possibility of contracting HIV/AIDS).

Application of the health belief model on nursing mothers on breast hygiene.

- ***Perceived susceptibility:*** - An individual estimated probability of encountering a specific health problem with the breast.
- ***Perceived severity:*** -The degree of concern on experience created by the thought of breast disease or problem associated with a given health.
- ***Perceived threat:-*** The combine impact of perceived susceptibility and the perceived severity refers to the study subject i.e. nursing mothers. To identify perceive threat to mothers, their knowledge and practice through pre-test instrument develop for the study.
- ***Modifying factors:*** - These include a variety of selection of demographic, socio-psychological and structural factors that predispose the factors i.e. age of the mothers, Marital status, Educational level, types of family, religion of the family, occupation of the mothers.
- ***Cue to action:*** -It is the factors that purport to trigger health action. The cue to action is the source of health information.

HEALTH BELIEF MODEL



CHAPTER THREE

METHODOLOGY

3.1 Study Design

A descriptive cross sectional study was design to investigate the knowledge and practice of breast hygiene among nursing mothers attending primary health care centres in Ibadan South East Local Government Area, Oyo State, as well as their socio demographic characteristics.

3.2 Description of Study Site

Ibadan South East Local Government Area has 12 Primary Health Care Centres located in community. The study was conducted in selected primary health care centres located within the community in Ibadan South East Local Government Area.

Ibadan South-East Local Government Area was created on the 27th August, 1991 and it is the smallest urban Local Government Area and contains some of the core slum areas in Ibadan. The administrative headquarters of the Local Government Area is situated at the Centre of Ibadan on the top of Mapo hill. Ibadan South-East Local Government Area is bounded in the North by Ibadan North Local Government Area, in the east and south by Ibadan North East and Oluyole Local Government Areas respectively and bounded on the West by Ibadan South-West Local Government Area. It covers an area of about 893 hectares and has a population of 266,046. There are 12 wards in the Local Government Area and numerous tourist sites including Mapo Hall, Olubadan's palace and the Central Mosque, Oja'ba(Adijolola, 2014).

3.3 Study variables

The independent variables in this study were the socio-demographic characteristics such as age of the respondents, educational level, and marital status, ethnic group of the respondents, religion, and occupation of the respondents. The dependent variables included knowledge and practice of breast hygiene among nursing mothers attending primary health care centres in Ibadan South East.

3.4 Study Population:

The study population consist of nursing mothers who attending Primary Health Care Centres in Ibadan South East Local Government Area, Oyo State. These nursing mothers included married, divorced, separated, and widowed in the research.

3.5 Eligibility criteria

➤ Inclusion Criteria

The inclusion include nursing mothers who attended Primary Health Care (PHC) Centres for immunization at the post natal care and also include nursing mothers who are willing to participate in the study and mothers who understand Yoruba and English language.

➤ Exclusion Criteria

Nursing mothers who were not willing or refused to participate and also mothers who reside outside Ibadan South East Local Government Area Oyo State were excluded from the research study.

3.6 Determination of sample size

The sample side was calculated using Fischer et al (1991) formula as following = $\frac{Z^2pq}{d^2}$

Where z= confidence limit of survey 1.96, (95% CI)

N= Minimum sample size require.

Z= Standard normal deviation set at 1.96 normal interval.

P= The prevalence of nursing mothers on breast hygiene is estimated to be = 50%

Q= Proportion of nursing mothers with poor knowledge and practice under investigation,

(Q= 1-P)

Q= 1-0.50=0.50 (Since there is no documented prevalence)

D= Degree of accuracy set at 0.05 (precision set at 5%)

$$\blacktriangleright n = \frac{1.96^2 \times 0.5(1-0.50)}{0.05^2} = 384.16 \text{ (Base sample size)}$$

The sample is further increase by 10% to account for contingencies such as non-response or recording error which finally arrive at 423. The final sample size to be use is 425sample size.

3.7 Sampling Procedure

A three stage multistage sampling technique was used to sample the respondents for the research. Both simple random sampling and proportionate sampling technique was used for the selection of respondents.

STAGE 1:-A sampling technique (balloting) was used to select 4 Primary Health Care (PHC) Centres from the twelve (12) PHC centres in Ibadan South East Local Government.

STAGE 2:- Proportionate sampling was used to determine the number of respondents to be picked from each of the 4 selected PHC centres.

A list of total numbers of nursing mothers coming for Post Natal Care at each of the selected PHCs was collected from the Oyo State Ministry of Health (Appendix 2) and used to calculate the number of respondents to be picked from each of the PHCs.

Proportionate calculation for sample size determination

$$\text{Oranyan PHC: } \frac{3239 \times 425}{7865} = 175 \text{ respondents}$$

$$\text{Agbongbon PHC: } \frac{2352 \times 425}{7865} = 127 \text{ respondents}$$

$$\text{Orita Aperin PHC: } \frac{1456 \times 425}{7865} = 79 \text{ respondents}$$

$$\text{Elekuro PHC: } \frac{818 \times 425}{7865} = 44 \text{ respondents}$$

Table 3.1 Proportionate sampling of respondents

Primary Health Care Centres	Number of nursing mothers coming for Post-natal Care	Total number of respondents
Oranyan PHC:	3239	175
Agbongbon PHC:	2352	127
Orita Aperin PHC	1456	79
Elekuro PHC	818	44
Total	7865	425

STAGE 3

Simple random sampling was used to select the final respondents from each of the selected primary health care centres that met the inclusion criteria and were willing to participate in the study.

3.8 Methods and instrument for data collection

Quantitative instrument of data collection was used

3.8.1 Quantitative Instrument of data collection

A semi-structured interviewer-administered questionnaire was designed using information gathered through the review of literature. The Questionnaire was prepared in English Language and translated to Yoruba. The questionnaire contained both open ended and close ended question under the following section.

- A. Socio-demographics characteristics
- B. Knowledge of breast hygiene among nursing mothers
- C. Perception of breast hygiene among nursing mothers
- D. Practice of breast hygiene among nursing mothers
- E. Challenges related to breast hygiene among nursing mothers

3.9 Validity of instrument

The instrument was validated by ensuring that a comprehensive review of literature was conducted and salient variables relating to knowledge and practice of breast hygiene among nursing mothers. Literature for this research was acquired from reliable sources.

SCIENCEDIRECT and PUBMED were mostly used as well as WHO search box. It was limited to recent journals. The result of the literature review was used to develop the questionnaire. After development of the questionnaire, it was extensively revised after thorough expert review by the researcher's supervisor and other staff and lecturers in the Department of Health Promotion and Education of the faculty of Public Health, University of Ibadan. The questionnaire was then pre-tested in a similar sample population. After pre-test, errors (systematic or otherwise) in the structure of the questionnaire were corrected before the final questionnaire was produced and used for the research.

3.10 Reliability of instrument

This refers to the measure of internal consistency. A measure is said to have a high reliability if it produces consistent results under consistent conditions. Reliability was ensured by coding copies of the pre-tested questionnaire and then entered using SPSS. Ten (10) percent of the total sampling size was pre-tested. The pre-testing of the instrument was done in different primary health care centres in similar characteristics. The pre-testing was done in Ibadan North Local Government Area. Measure of internal consistency was determined using the Cronbach's Alpha coefficient method. For this method of reliability measurement, any result which shows a correlation coefficient greater than 0.5 is said to be reliable depending on the researcher's specific requirement. For this study, the result obtained was 0.910 which shows that the instrument has a high degree of reliability.

3.11 Data Collection

3.11.1 Recruitment and training of research assistants

The researcher visited the matron of each PHCs centres for consents of the respondents i.e. the nursing mothers so that the respondents can participate in the study. Four (4) research assistants were recruited and trained for data collection using a quantitative tool. The (4) four research assistants trained were (3) three female all were within 20 – 26 years and (1) one male is 28 years. Training of the research assistants was done by the researcher and took place for two days. During the training session, goal and objectives of the research were carefully explained to the research assistants, so that they understood the goal of the research and their roles and responsibilities as research assistants. While the process of data collection took three weeks, which was done using interviewer-administered questionnaires. The

challenge faced during the data collection was that some of the nursing mothers especially the Muslim women decided not to participate in the study due to religion believes. In each PHCs centres each research assistants administered ten questionnaires.

3.12 Data Analysis

The data collected were checked for completeness and accuracy in the field, serial numbers was assigned to each questionnaire for easy identification and for correct data entry and analysis. Coding guide was developed to facilitate entry of the responses into the computer. The coded responses of the respondents were entered into SPSS version 20 on the computer. After that, the entered data was cleaned and analyzed using descriptive statistics (frequency and Chi-square).

Knowledge was assessed on a 16-point scale and respondents with 0-7 points were regarded as having poor knowledge of breast hygiene, from >7-11 points were regarded as having fair knowledge while from >11 point and above were categorised as good knowledge of breast hygiene. One mark was assigned to each correct response.

Perception was assessed on a 17-point scale by assigning 1 point to each correct response. Respondents with 0 – 8 points were regarded as having negative perception of breast hygiene, while respondents with >9 points and above were regarded as having positive perception of breast hygiene.

Practice on the other hand was assessed on a 9-point scale by assigning 1 point to each correct answer while zero point for incorrect answer. Respondents with 0 – 5 points were regarded as having poor practices of breast hygiene, while respondents with >5 points above were regarded as having good practices of breast hygiene.

Results obtained were summarized and presented in frequency distribution tables, charts and graph as shown in chapter 4.

3.13 Ethical consideration

This project was submitted to ethical review committee in Oyo State Ministry of Health for approval. The study follow the ethical principles guiding the handling of human participant in research:

Confidentiality of data: In order to guarantee respondents of confidentiality of the information that was given, names, phone numbers were not required, only identification numbers were assigned to the questionnaire for proper recording of the information.

Beneficence: The outcome of the research is of benefit not only to the researcher but to the participant (nursing mothers) who attend primary health care centres and beyond.

Translation: Participants were illiterate in English the official language in Nigeria, thus, the questionnaire was translated into respondents' native language that is Yoruba for effective communication and easy understanding.

Non-maleficence to participants: The research was not invasive in nature; therefore collection of invasive materials was not required. Hence, safety of the participants is guaranteed.

Voluntariness: The participants had the full detail concerning the research before taking part in the research

CHAPTER FOUR

RESULTS

The findings of this study are presented in this chapter. They are organized into the following sections.

- Socio-demographic characteristics
- Knowledge of breast hygiene
- Perception of breast hygiene
- Practice of breast hygiene
- Challenges related to breast hygiene

4.1 Socio-demographic Characteristics

The ages of the respondents ranged from 20 to 45 years. The ages of the respondents were further grouped into three categories age- groups: 20 – 29, 30 – 39, and 40 – 49 years. A little less than half of the respondents (45.9%) were between 20 – 29 years category, almost the same percentage (45.2%) were between 30 – 39 years category; while few (8.9%) respondents were between 40 – 49 years category. The Mean age of the respondents was 30.8 ± 5.8 .

More than half (52.5%) of the respondents were Christian, 46.4% were Muslim while very few (0.9%) respondents were traditional religion worshipers. The respondents were very diverse in culture, Most of the respondents (90.1%) were Yoruba 7.8% were Igbo while 1.4% of the respondents were Hausa. Other ethnic group respondents included Urhobo (0.7%). Majority of the respondents were secondary education (68%), 15.8% had tertiary education leaver and 12.9% had primary education while those without formal education were 2.8%.

Majority of the respondents (85.2%) were married; 4.7% were divorced while (10.1%) were separated. The commonest occupation was trading (66.1%) followed by artisan (18.1%) although few of them (11.1%) were Civil servant. Others occupations included: Tailoring (3.8%) and Hair dressing (0.7%).

Table 4.1: Socio-demographic characteristics of the respondents (N=425)

Socio-demographics Characteristics	Frequency (n)	Percentage (%)
Age		
20 -29 years	195	45.9
30 -39 years	192	45.2
40 -49 years	38	8.9
Marital Status		
Married	353	83.1
Divorced	29	6.8
Separated	43	10.1
Religion		
Christianity	223	52.5
Islam	198	46.6
Traditional	4	0.9
Ethnic Group		
Yoruba	382	90.1
Igbo	33	7.8
Hausa	6	1.4
Others	3	0.7
Level of education		
No formal education	12	2.8
Primary education	55	12.9
Secondary education	291	68.5
Tertiary education	67	15.8
Occupation		
Trading	281	66.1
Civil Servant	47	11.1
Artisan	77	18.1
Tailor	16	3.8
Hair dresser	3	.7
Teacher	1	.2

4.2 Knowledge of breast hygiene

Half of the respondents (50.4%) had poor knowledge of breast hygiene while (33.6%) had fair knowledge of breast hygiene. Only few of them (16.0%) had good knowledge of breast hygiene. The mean knowledge score was 8.39 ± 2.91 . Only about one-third (22.8%) could correctly mention 2 ways of keeping the breast hygienic. Most of the respondents (73.2%) could only mention one way to keep the breast hygienic. Few of the respondents (27.5%) could mention 2 benefits of breast hygiene to nursing mothers, most of the respondents (70.6%) could only mention one. In the same pattern, most of the respondents (69.9%) could only mention one importance of breast hygiene to the infant while few (28.5%) could mention 2 correct importance of breast hygiene to the infant.

Only very few of the respondents (17.4%) could mention 2 reasons why nursing mothers should take their bath regularly while most of them (76.0%) just able to mention one. Few of the respondents (19.8%) could not mention any correct health problems that can result from unhygienic breast to child, majority (62.6%) were able to correctly mention one while few (17.6%) were able to mention two correct health problems that can result from unhygienic breast to child. More than one-quarter (29.4%) were not able to mention 2 symptoms that may be associated with unhygienic breast care, half of them (51.5%) mentioned one correctly while some (19.1%) were able to mention two correct symptoms that may be associated with unhygienic breast care.

More than half of the respondents (62.6%) could not mention 2 types of brassiere recommended for nursing mothers, some of them (28.7%) were able to mention one while very few (8.7%) were able to mention 2 types of brassiere recommended for nursing mothers. More than one-quarter (26.9%) were able to mention 1 reason why it is unhealthy to put plastic lining in the bra while majority of them (73.2%) could not mention any. Majority of the respondents (80.0%) were able to care for leaking of the breast though some (20.0%) could not mention any.

Table 4.2: Respondents' knowledge of breast hygiene Scores (N=425)

Knowledge Variable	Frequency (n)	Percentage (%)
Mention 2 ways to keep the breast hygienic?		
No response	17	4.0
One correct way	311	73.2
Two correct ways	97	22.8
Mention 2 benefit of breast hygiene to nursing mothers?		
No response	8	1.9
One correct benefit	300	70.6
Two correct benefits	117	27.5
Mention 2 importance of breast hygiene to the infant?		
No response	7	1.6
One correct importance	297	69.9
Two correct importance	121	28.5
Mention 2 reasons why nursing mothers should take their bath regularly?		
No response	28	6.6
One correct reason	323	76.0
Two correct reasons	74	17.4
Mention 2 health problems that can result from unhygienic breast to child?		
No response	84	19.8
One correct health problem	266	62.6
Two correct health problems	75	17.6
Mention 2 symptoms that may be associated with unhygienic breast care?		
No response	125	29.4
One correct symptom	219	51.5
Two correct symptoms	81	19.1
Mention 2 types of brassiere recommended for nursing mothers?		
No response	266	62.6
One correct type	122	28.7
Two correct types	37	8.7
Mention 1 reason why it is unhealthy to put plastic lining in the bra?		
No response	311	73.2
One correct reason	114	26.8
Mention one way to care for leaking of the breast?		
No response	85	20.0
One correct way	340	80.0
One mark was assigned to each correct response		

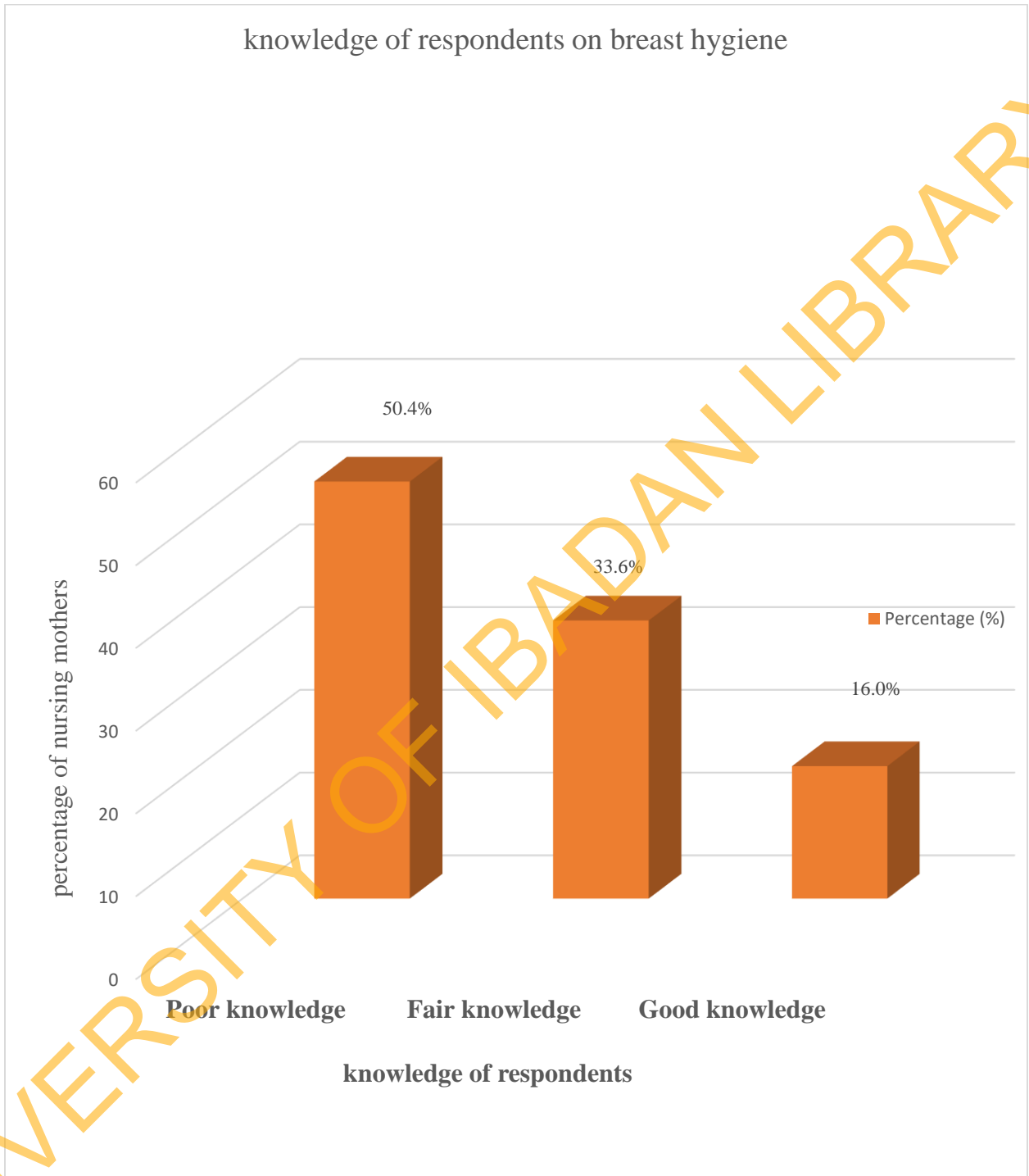


Figure 4.1 Respondents knowledge of breast hygiene

4.3 Respondents' perception of breast hygiene

Majority of the respondents (92.0%) agreed that regular breast hygiene can prevent breast infection while 8.0% felt otherwise. Almost all the respondents (93.9%) perceived regular washing of the brassiere to help in the prevention of breast infection. About a third of the respondents (33.2%) stated that breast infection is common among older women although more than half of them (59.5%) disagreed. Almost half of the respondents (45.2%) perceived that they could never have breast infection although 54.8% did not. A third of the respondents (31.5%) agreed that breast hygiene will cost them much money while most of them (68.5%) didn't feel breast hygiene would cost them much money. Some of the respondents (28.5%) however felt that daily breast washing is not too important although about three-quarter (74.1%) perceived that breast hygiene can make child stay healthy.

More than a third of the respondents (36.0%) perceived that washing of the breast can reduce milk production while 63.1% respondents felt washing of the breast cannot reduce milk production. Majority of the respondents (64.5%) disagreed that breast infection is normal for nursing mothers after breast feeding a child. About a third (39.5%) agreed that regular washing of the bra cannot prevent breast infection while majority of the respondents (60.5%) disagreed. Most of the respondents (72.2%) agreed that breast nipple should be clean with water before breast feeding although few of the respondents (27.8%) perceived that it is not necessary for the breast nipple to be cleaned with water before breast feeding. More than three quarter (80.2%) of the respondents agreed that breast hygiene is important for nursing mothers while 19.8% of the respondents did not agree. Majority of the respondents (70.6%) agreed that lack of adequate breast hygiene cause breast infection while 79.5% agreed that breast infection can result from inadequate hygiene of the breast. A quarter of the respondents (24.9%) saw nothing wrong in putting plastic lining in the bra while 38.1% also stated that the use of breast pad is not necessary for leaking breast. Majority of the respondents (53.4%) however agreed that it is good to always wash the breast with soap and water before breastfeeding although some (39.1%) disagreed.

Table 4.3a Respondents' perception of breast hygiene (N=425)

Variable	Frequency (N)	Percentage (%)
Regular breast hygiene can prevent breast infection		
Agree	391	92.0
Disagree	34	8.0
Regular washing of the breast can prevent breast infection		
Agree	399	93.9
Disagree	26	6.1
Breast infection are only common among older women		
Agree	141	33.2
Disagree	253	59.5
No response	31	7.3
I can never have breast infection		
Agree	192	45.2
Disagree	233	54.8
Breast hygiene will cost me much money		
Agree	134	31.5
Disagree	291	68.5
Daily breast washing is not too important		
Agree	121	28.5
Disagree	304	71.5
Breast hygiene can make my child stay healthy		
Agree	315	74.1
Disagree	110	25.9
Washing of the breast can reduce milk production		
Agree	153	36.0
Disagree	272	64.0
Breast infection is normal for nursing mothers after breastfeeding child		
Agree	148	34.8
Disagree	277	65.2
Regular washing of the bra cannot prevent breast infection		
Agree	168	39.5
Disagree	257	60.5
Breast nipple should be cleaned with water before breastfeeding		
Agree	307	72.2
Disagree	118	27.8

Table 4.3b Respondents' perception of breast hygiene (N=425)

Variable	Frequency (N)	Percentage (%)
Breast hygiene is important for nursing mothers		
Agree	339	79.8
Disagree	86	20.2
Lack of adequate breast hygiene causes breast diseases		
Agree	300	70.6
Disagree	125	29.4
Breast infection can result from inadequate hygiene of the breast		
Agree	3443	80.7
Disagree	82	19.3
There is nothing wrong in putting plastic lining in the bra		
Agree	106	24.9
Disagree	269	63.3
No response	50	11.8
Use of breast pad is unnecessary for leaking breast		
Agree	162	38.1
Disagree	237	55.8
No response	26	6.1
It is good to always wash the breast with soap and water before breastfeeding		
Agree	227	53.4
Disagree	166	39.1
No response	32	7.5

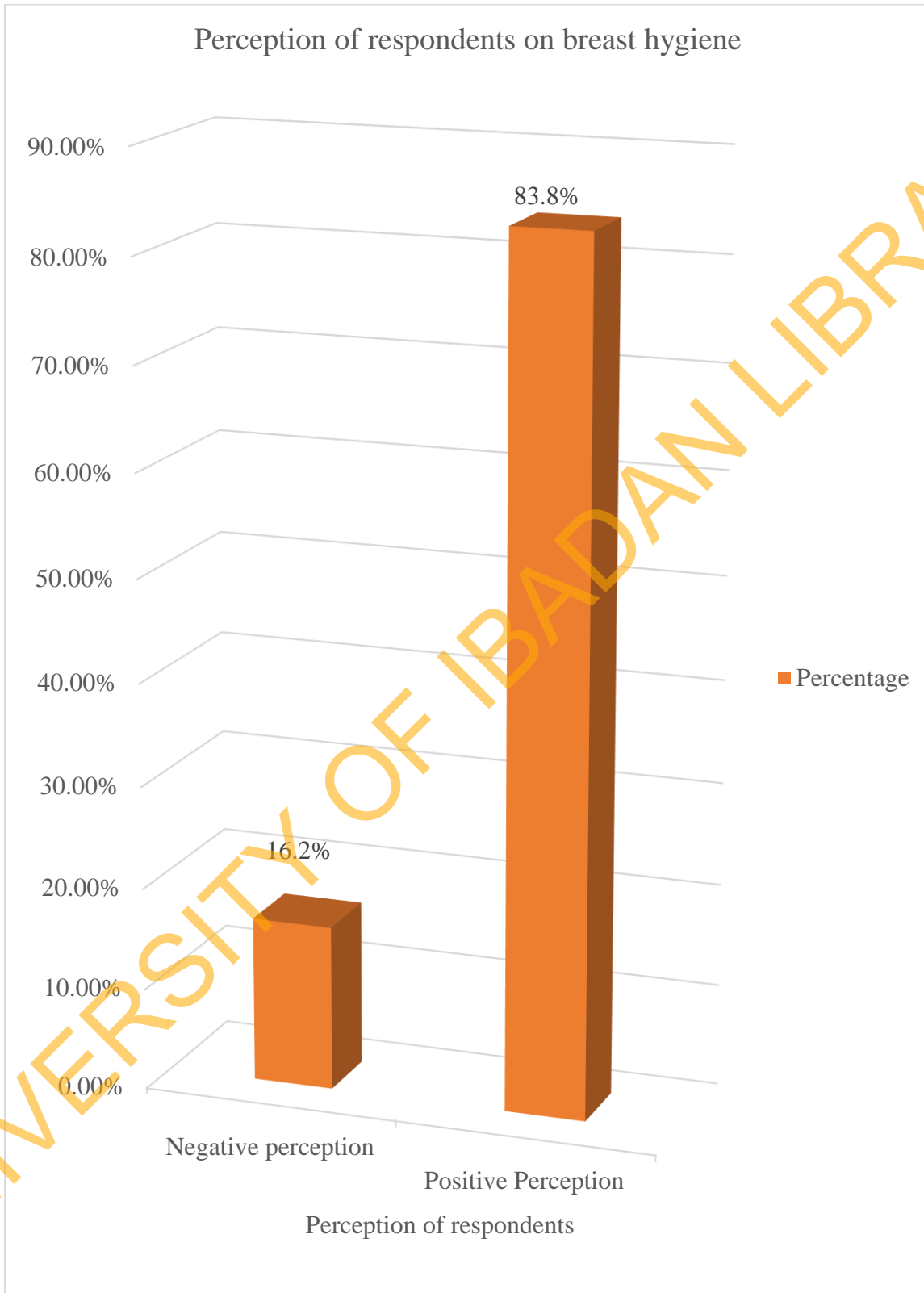


Figure 4.2: Perception score of breast hygiene

4.4: Practice of breast hygiene

More than one-third of the respondents (39.8%) reported that they rob herbal mixture on the breast as breast hygiene practice while just a little above half of the respondents (59.5%) stated that they wash their bra after every single use. Majority of the respondents (62.6%) admitted not washing their breast every day when bathing while only few of them (37.4%) said they do wash their breast every day when bathing. Most of the respondents (68.2%) reported that they do report any abnormal sign on their breast to their doctors although about (30.1%) said they don't.

Majority of the respondents (61.9%) reported that they attend postnatal clinic regularly to listen to talk on breast care practice although some (38.1%) admitted not going to listen to talk on breast care practice. More than half of the respondents (53.2%) reported that they don't wash their breast with soap and water before breast feeding. Almost half of the respondents (43.1%) reported that they wear a tight brassiere every day to keep their breast firm while (40.5%) reported putting plastic lining in their bra. Almost half (42.6%) said they do not use breast pad for leaking breast.

Table 4.4: Respondents practice of breast hygiene (N=425).

Variable	Frequency(N)	Percentage (%)
Rob herbal mixture on my breast as breast hygiene practice		
Yes	169	39.8
No	256	60.2
Wash bra after every single use		
Yes	253	59.5
No	172	40.5
Do not wash breast every day when bathing		
Yes	266	62.6
No	159	37.4
Report abnormal sign on breast to Doctor		
Yes	290	68.2
No	128	30.1
No response	7	1.6
Attend post natal clinic regularly to listen to talk on breast care practice		
Yes	263	61.9
No	162	38.1
Do not wash breast with soap and water before breastfeeding		
Yes	226	53.2
No	199	46.8
Wear a tight brassiere every day to keep breast firm		
Yes	183	43.1
No	242	56.9
Do you put plastic lining in your bra		
Yes	172	40.5
No	238	56.0
No response	15	3.5
Do not use breast pad for leaking breast		
Yes	181	42.6
No	244	57.4

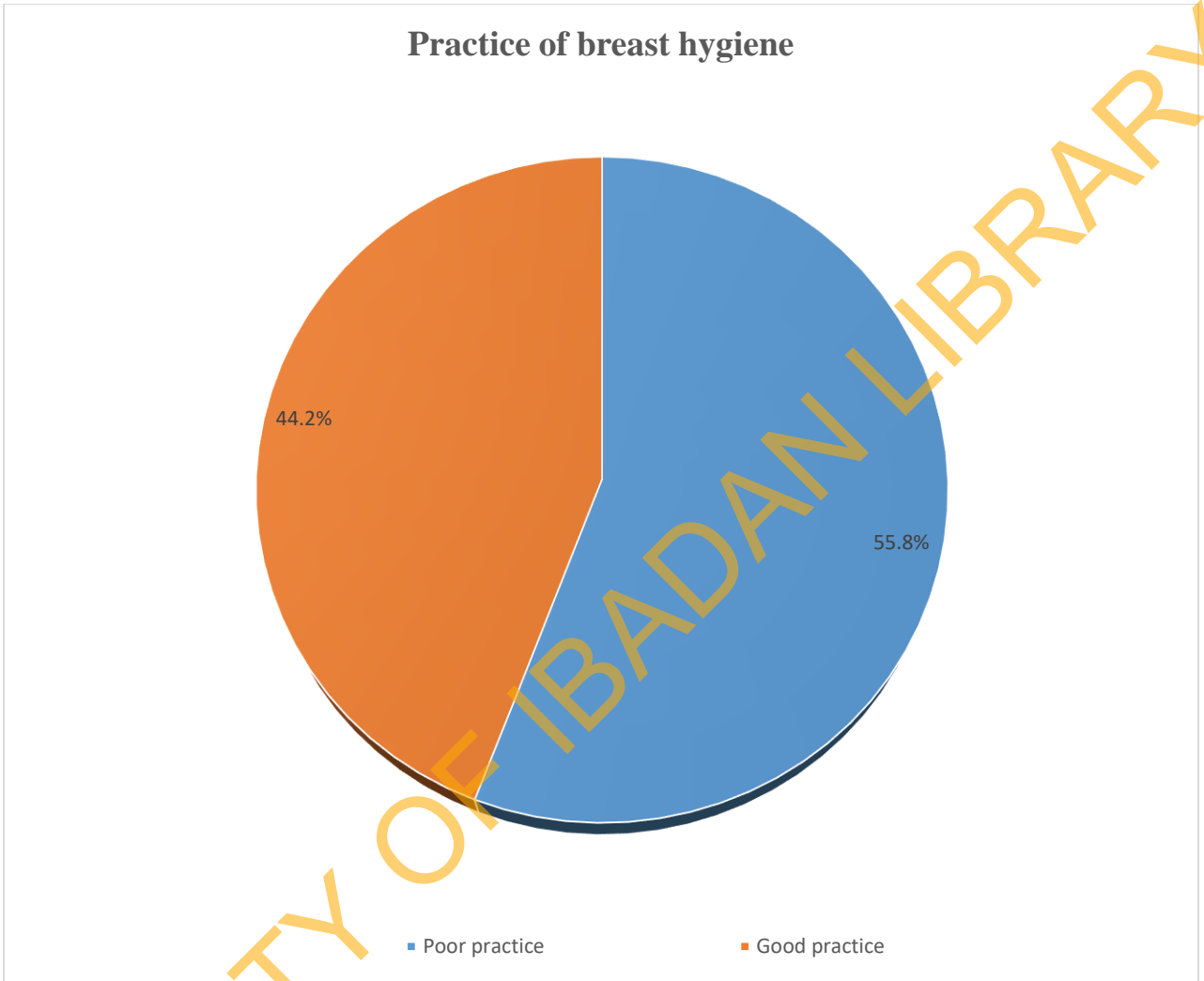


Figure 4.3: Practice score of breast hygiene

4.5 Respondents challenges related to breast hygiene

Some of the challenges related to breast hygiene as mentioned by the respondents included financial status (17.2%), and busy schedule (20.7%). Few of the respondents (16.2%) however reported that lack of training on breast hygiene affected them from taking good care of breast. About one-quarter (24.9%) reported that attitude of health workers can prevent them from going for PHC training on breast hygiene although majority of them (75.1%) felt otherwise.

One hundred and ten respondents (25.9%) reported that lack of knowledge prevented them from taken care of their breast hygienically while majority of the respondents (74.1%) opposed. Majority of the respondents (64.2%) reported that they have enough information on how to care for breast hygienically while 35.8% admitted not having enough information on how to take care of the breast hygienically. A third of the respondents (33.9%) reported that religion prevented them from caring for their breast while majority of the respondents (66.1%) disagreed that religion prevented them from caring for breast.

Majority of the respondents (66.8%) reported that culture encouraged them to clean their breast while 33.2% reported otherwise. More than one-third of the respondents (33.9%) reported that their occupation prevented them from breast hygiene while majority of the respondents (66.1%) said otherwise. Ninety-eight respondents (23.1%) reported that friends discouraged them from caring out breast hygiene while majority of the respondents (88.0%) reported that mother's in-law encouraged them on breast hygiene practice. Majority of the respondents (88.0%) reported that health workers talk to them on how to care for their breast hygienically at the health care facility while 12.0% stated that health workers do not talk to them on how to take care of their breast hygienically.

Table 4.5 Respondents Challenges related to breast hygiene (N=425)

Variable	Frequency (N)	Percentage (%)
Does your financial status affect the care of your breast		
Yes	73	17.2
No	352	82.8
Does busy schedule affect you from caring for the breast hygienically		
Yes	88	20.7
No	337	79.3
Does lack of training on breast hygiene affect you from caring the breast		
Yes	69	16.2
No	356	83.8
Can attitude of health workers prevent you from going for PHC training on breast hygiene		
Yes	106	24.9
No	319	75.1
Can lack of knowledge prevent you from taken care of breast hygienically		
Yes	110	25.9
No	315	74.1
Do you have enough information on how to care for breast hygienically		
Yes	273	64.2
No	152	35.8
Does your religion prevent you from caring for the breast hygienically		
Yes	144	33.9
No	281	66.1
Does culture encourage you to clean your breast		
Yes	284	66.8
No	141	33.2
Does your occupation prevent you from breast hygiene?		
Yes	144	33.9
No	281	66.1
Does your friend discourage you from caring for the breast?		
Yes	98	23.1
No	327	76.9
Does your mother in law encourage you to practice breast hygiene after breastfeeding your infant?		
Yes	307	72.2
No	118	27.8
Do health workers talk to you on how to care for your breast hygienically at the health care facility		
Yes	374	88.0
No	51	12.0

4.6 Test of hypotheses

Some assumptions were made at the beginning of the project work. The summary of the results of hypothesis are presented in table below.

Ho 1- there is no significant relationship between level of education of nursing mothers and knowledge of breast hygiene

The null hypothesis above was postulated to test the relationship between the levels of education and knowledge of breast hygiene. The result showed that there is a significant relationship between the respondents' level of education and knowledge of breast hygiene (df = 6, p-value = 0.001), thus the null hypothesis which state that there is no relationship, is rejected ($p < 0.05$). See table 4.6 for more clarification.

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Table 4.6 Chi-square test on relationship between respondents' level of education and knowledge of breast hygiene

Level of education (%)	Knowledge level			Total	X ² df	P-value
	Poor (%)	Fair (%)	Good (%)			
No formal education	33.3	66.7	0.0100.0	22.895	6	0.001
Primary education	67.3	23.6	9.1100.0			
Secondary education	45.035.119.9100.0					
Tertiary education	62.729.97.5100.0					

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Ho 2- There is no significant relationship between age of nursing mothers and knowledge of breast hygiene

The null hypothesis above was postulated to test the relationship between the age and knowledge of breast hygiene. The result showed that there is a significant relationship between the respondents' age and knowledge of breast hygiene ($df = 4$, $p\text{-value} = 0.000$), thus the null hypothesis which states that there is no relationship, is rejected ($p < 0.05$). See table 4.7 for more clarification.

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Table 4.7: Chi-square test relationship between the respondents' age and knowledge of breast hygiene

Age of nursing mothers		Knowledge level			Total	X ² df	P-value
		Poor	Fair	Good			
%	%	%	%	%			
20 – 29 years	16.0	31.3	7.7	100.0	66.6	4	0.000
30 – 39 years	46.9	37.0	16.1	100.0			
40 – 49 years	13.2	28.9	27.9	100.0			

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Ho3- there is no significant relationship between occupation of nursing mothers and knowledge of breast hygiene

The null hypothesis was postulated to test the relationship between the occupation and knowledge of breast hygiene. The result showed that there is no significant relationship between the respondents' occupation and knowledge of breast hygiene ($df = 10$, $p\text{-value} = 0.554$), thus the null hypothesis which state that there is relationship was accepted ($p > 0.05$). See table 4.8 for more clarification.

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Table 4.8: Chi-square test of relationship between respondents' occupation and knowledge of breast hygiene

Occupation	Knowledge level			Total	X ² df	P-value
	Poor %	Fair %	Good %			
Trading	46.6	35.6	17.8	100.0	0.775	10
Civil Servant	61.7	32.5	8.5	100.0		
Artisan	54.5	32.5	13.0	100.0		
Tailoring	62.5	18.8	18.8	100.0		
Hair dress style	33.3	33.3	33.3	100.0		
Teachers	100.0	0.0	0.0	100.0		

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CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

This cross-sectional descriptive study was conducted to investigate the Knowledge and Practice of Breast Hygiene among Nursing Mothers Attending Primary Health Care Centres in Ibadan South East Local Government Area, Oyo State. This chapter focus on the findings of the study. It was organized into the following sub-section: socio-demographic information, knowledge of breast hygiene, perception of breast hygiene, practice of breast hygiene, and challenges related to breast hygiene. Other sub-sections are the implication of the findings for health education and social policy, conclusion, recommendation and suggestion for further research.

5.1 Socio-demographic Characteristics

The ages of the respondents ranged from 20 to 45 years with a mean age of 30.8 ± 5.8 . A little less than half of the respondents were between 20 – 29 years category and 30 – 39 years category which obviously is in the range of child-bearing age for a woman. This is similar to what was obtained by (Awogbenja & Ndife, 2012) in a study carried out among nursing mothers in Eggon Local government area of Nasarawa, Nigeria. The predominant religion is Christianity as more than half of the respondents were Christian. Since the study was conducted in a South –western part of Nigeria, almost all the respondents were Yoruba although few of the respondents were Igbo and very few were Hausa. Majority of the respondents only had secondary education with only few of them having tertiary education. This may be an indication that parents don't invest on a female child's education or that female do not have much interest in education in this area.

Majority of the respondents were married although few were separated and very few were divorced. This similar to what was obtained by Bello and Joseph (2014) in a study carried out in Oyo State. As reflected by the level of education of the respondents, the major occupation of the respondents was trading followed by artisan with only very few of them being Civil servants. This showed that women in this area prefer to trade and learn a trade rather than pursuing higher education.

5.2 Knowledge of breast hygiene

To implement daily breast hygienic practices and avoid hygiene-related diseases of an infant, people need to possess knowledge of, and appreciation for, the importance of good breast hygiene. It is the only way people can make informed decisions regarding breast hygienic practices (MUNDIA, 2013). Sadly half of the respondents had poor knowledge of breast hygiene while a third of them had fair knowledge of breast hygiene and only few of them (16.0%) having good knowledge of breast hygiene. This may definitely have something to do with their level of education as majority of the respondents only finished secondary education. This can also be attributed to inadequate enlightenment program especially on the issue of breast hygiene as the topic is not popular. This situation can be compounded by the fact that most of the respondents are trader and artisan since they will go to the market where they may come in direct contact with different people and micro-organisms which may contaminate the breast which they will give their infants. The poor knowledge is reflected in the fact that only one-third could correctly mention 2 ways of keeping the breast hygiene and few of them could also mention 2 benefits of breast hygiene to nursing mothers. This especially may affect their adoption of good breast hygiene practice as they are not even aware of the benefits and importance of breast hygiene to the infant. Majority of the respondents were able to mention just one reason why nursing mothers should take their bath regularly.

According to Barrett, Heller, Stone, and Murase, (2013), breastfeeding offers optimal nutrition and immunologic protection for the infant, but can also be a source of contamination for the infant if the breast is unhygienic. The nipple and the surrounding flesh if contaminated could cause infection and health problems especially for the infant that is just developing his/her immune system. Only few of the respondents could mention two correct health problems that can result from unhygienic breast to child. More than one-quarter were not able to mention 2 symptoms that may be associated with unhygienic breast care.

The best bra for a nursing mother is the one that is designed to support a woman's increased breast size during lactation and provide ready access to her breast for nursing. Example of such brassieres is the nursing bra which was designed with fuller cups, comfortable fabrics, and wider shoulder straps for increased comfort. The nursing bra aids breastfeeding by

providing flaps or panels that form the bra cup that can be unclipped and folded down or to the side with one hand, exposing the nipple. When in public, this also enables a mother to nurse her infant with minimal effort, minimizing undue or unwanted attention. In the study, more than half of the respondents could not mention 2 types of brassiere recommended for nursing mothers which showed that nursing bra is not yet popular among the sample population. This is an indication for enlightenment campaign and health promotion and education.

In this study, there is a significant association between respondents' level of education and knowledge of breast hygiene which showed that level of education is a predictor of the level of education of the respondents. Age also showed a significant association with knowledge of breast hygiene. Knowledge of breast hygiene increased with increasing age of nursing mothers as the age bracket 40-49 years had the highest knowledge of breast hygiene. This could be because the nursing mothers had the privilege of learning from experience. However, there is no significant relationship between the respondents' occupation and knowledge of breast hygiene which means that the nursing mother's occupation had nothing to do with their knowledge of breast hygiene.

5.3 Respondents' perception of breast hygiene

(MUNDIA, 2013) maintained that personal cleanliness is an important factor in the maintenance of hygiene. Conversely, poor standards in breast hygiene are associated with many unhealthy conditions like skin infections. Nursing mothers with poor standards of personal hygiene especially breast hygiene not only endanger their own health but also the health of their infants. The spread of infectious diseases especially to an infant practicing exclusive breastfeeding may often be traced to poor breast hygienic habits of mothers. It is therefore delighting that almost all the respondents agreed that regular breast hygiene can prevent breast infection. Almost all the respondents also perceived regular washing of the brassiere to help in the prevention of breast infection. This is a very significant result because the brassiere could actually harbor most of these disease causing microorganisms if not washed especially as most of the mothers engaged themselves in trading where they would have come in contact with dust and other contaminant which could have found their way to the breast through sweat and absorbed by the brassiere. Unfortunately about a third of the respondents stated that breast infection is common among older women while almost half of the respondents they could never have breast infection. This is not true as breast infection can

happen to anybody irrespective of the age. Although about three-quarter of the respondents perceived that breast hygiene could make child stay healthy but a quarter of the respondents however felt that daily breast washing is not too important. According to (MUNDIA, 2013), people who do not bath regularly are more susceptible to fungus infections. This may also be applicable to the breast. If breast are not wash especially after sweating from daily job, it may infect the infant being breastfed with fungus. More than a third of the respondents also perceived that washing of the breast can reduce milk production. About a third (39.5%) agreed that regular washing of the bra cannot prevent breast infection which is an indication of the need to health educate them on the importance of regular washing of the breast on prevention of breast infection.

According to (Spitzfaden), washing and rinsing nipples can help prevent bacterial infection especially if nipple is cracked. It is necessary to wash once a day with a gentle fragrance free soap that is not antibacterial. This is because when bacteria invade a wound, they create a bio-film that does not allow anything to penetrate. Baby's saliva also encourages this bio-film. Washing and rinsing help to remove bio-film and allows nipples to heal faster. After every feed, rinse nipples with clean water or saline rinse. Most of the respondents (72.2%) actually agreed that breast nipple should be clean with water before breast feeding and that breast hygiene is important for nursing mother. Majority of the respondents also agreed that lack of adequate breast hygiene cause breast infection and that most breast infection could be as a result of inadequate hygiene of the breast.

According to (Edmondson), the use of breast liner is not recommended. Instead of breast liner, pads that are made of cotton cloth or soft cotton lining are recommended. In this study, a quarter of the respondents saw nothing wrong in putting plastic lining in the bra. According to (MacGrego, 2010), breasts don't need special cleaning, just bathing with water, without using soap on your nipples. Soaps and detergents have been described as the most damaging of all substances routinely applied to skin. Anionic and cationic detergents are more harmful than nonionic detergents, and increased concentrations of surfactant result in more rapid, severe damage(Larson, 2001). Each time the skin is washed, it undergoes profound changes, most of them transient. In this study, majority of the respondents (53.4%) agreed that it is good to always wash the breast with soap and water before breastfeeding. Washing the breast with soap especially when the soap is not completely washed off can contaminate the breast

with chemical which the baby cannot metabolize and may cause health problem to the child. About a third of the respondent stated that breast hygiene will cost them much money.

5.4 Practice of breast hygiene

Good breast hygienic behavior and practices can improve an infant's general state of health and prevent the occurrence of hygiene-related diseases. According to (Mundia, 2013) hygienic behavior lowers the risk of infections. Therefore proper breast hygiene practices can decrease the spread of many diseases. A significant percentage (39.8%) of the respondents reported that they rub herbal mixture on the breast as breast hygiene practice. The implication of this practice is that the baby is exposed to contamination if the herbal mixture is not hygienically prepared. Even if the herbal mixtures were prepared hygienically, the child is exposed to herbs which can interfere with the baby's metabolism and thereby cause adverse or allergic reactions to the child.

Majority of the respondents also admitted that they do not wash their breast every day when bathing. This poor habit and practice can lead to contamination of the breast with dirt which can also cause diseases in the child being breastfed. The breast which is the major food of the child must be kept clean at all time. Therefore it should be washed everyday especially when the mother is taking her bath. The breast should also be washed before the commencement of breastfeeding with water. The nipple should be washed with clean water and not with soap. A little more than half of the respondents actually stated that they do not wash their breast with soap and water before breast feeding. Washing of the bra is also an important aspect of breast hygiene that must be observed by nursing mothers. This is because the breast is housed in the bra. The bra is in constant touch with the breast and if the bra is dirty, then the breast too can become contaminated by the bra. This is why nursing mothers must ensure that the bra is clean and that it is washed after every single use. In this study, only a little above half of the nursing mothers (59.5%) wash their bra after every single use.

The relationship between doctors and their patients has received philosophical, sociological, and literary attention since Hippocrates, and is the subject of some 8,000 articles, monographs, chapters, and books in the modern medical literature. A robust science of the doctor-patient encounter and relationship can guide decision making in health care plans. But even till now many patients still don't trust their Doctors and are therefore reluctant to

discuss their problems with their Doctors. Many of them wait till the problem has escalated before they go to the hospital. In this study, most of the respondents reported that they report any abnormal sign on their breast to their doctors but about a third (30.1%) stated that they do not report any abnormal sign to their Doctors.

Most of the respondents reported that they attend postnatal clinic regularly to listen to talk on breast care practice but as observed in this study, it did not translate into good practice. Almost half of the respondents reported that they wear a tight brassiere every day to keep their breast firm while 36.0% reported putting plastic lining in their bra. Nursing mothers should wear breast pads all the time so that milk coming from the breasts can be absorbed and therefore keep a mother's clothes stain-free. The pads can be changed every three hours, depending on how much milk is coming out of the mother's breasts. For mothers who cannot afford breast pads, pieces of clothing made out of cotton material can be used to absorb the milk (Oluka, 2015). In this study almost half (42.6%) of the respondents said they do not use breast pad for leaking breast while 40.5% reported that they insert plastic lining in the bra. This practice can increase the likelihood of contamination as the bra and clothes may be stained by the breast milk and this can aid the breeding of microorganism.

5.5 Respondents challenges related to breast hygiene

Some of the challenges related to breast hygiene as mentioned by the respondents included financial status, and busy schedule. Few of the respondents however reported that lack of training on breast hygiene affected them from taking good care of breast while about one-quarter reported that attitude of health workers can prevent them from going for PHC training on breast hygiene. The impact of the negative attitude to work by health care providers in public and private hospitals in Nigeria, is particularly worrisome. Years of poor attitudinal problem particularly in the public sector has further endangered lives of patients. There is a need to ensure that health workers develop a good relationship and positive attitude towards their clients. This will go a long way in re-establishing the trust and faith which have been lost in the Nigeria Healthcare System. A quarter of the respondents however reported that lack of knowledge prevented them from taken care of their breast hygienically which showed that much is yet to be done in the area of enlightenment and health education of nursing mothers about how to take care of their breast hygienically. Majority of the respondents

reported that they have enough information on how to care for breast hygienically while 35.8% admitted not having enough information on how to take care of the breast hygienically.

A third of the respondents (33.9%) reported that religion prevented them from caring for their breast while majority of the respondents reported that culture encouraged them to clean their breast. More than one-third of the respondents (33.9%) reported that their occupation prevented them from breast hygiene. Many of the nursing mothers were traders and artisans and these jobs require their attention and may not give them room to wash their breast. Many traders most time even breast feed their children while attending to their customers. Some of the respondents reported that friends discouraged them from carrying out breast hygiene while majority of the respondents reported that mother's in-law encouraged them on breast hygiene practice. Grandmothers influencing roles on nursing mothers cannot be overemphasized. It is therefore good that grandmothers encouraged the nursing mothers to practice breast hygiene. Majority of the respondents (88.0%) also reported that health workers talk to them on how to care for their breast hygienically at the health care facility.

5.6 Implications for health promotion and education

The findings of this present study provide important information on knowledge and practice of breast hygiene among nursing mothers attending Primary Health Care Centres in Ibadan South East Local Government Area, Oyo State. The limited detailed knowledge indicates the need to develop more specific health education programs to tackle the lack of knowledge of breast hygiene among nursing mothers attending primary health care centers. It is also important to note that the occurrence of a particular disease in a community of certain people depends on their behaviour which is guided by certain antecedent factors like their perceived severity, perceived susceptibility, perceived benefits and constraints. Under-5 children are particularly prone to many of these diseases especially diarrhoea because they are just developing their immune system. This is why nursing mothers must be educated on the issue of good personal hygiene especially breast hygiene.

Health promotion and education generally adopts different strategies at the primary prevention, secondary prevention and tertiary prevention stages in order to ensure high quality life. The choice of strategies are guided by evidence based data/ information/research

and studies like this. This will ensure that quality and evidence based information are used to plan, implement and evaluate programs that are aimed at ensuring quality and full health potentials are attained

Poor knowledge leads to wrong/negative/ unfavorable perception which can also lead to poor preventive practices which can lead to occurrence of diseases or ailments. The poor knowledge emphasized the need to embark on health promoting and educating interventions which will be aimed at improving the knowledge which will lead to a positive behavioral change. This can however be achieved through programs designed to help improve physical, psychological, educational and work outcomes for an individual. These programs can also help in controlling or/and reducing the overall health care cost by emphasizing and stimulating prevention of health problems and promotion of healthy lifestyles. This can be successfully achieved through the use of different health promotion strategies including training, health talks, community development and empowerment.

Training Method

Training of health workers should be conducted by health professional to train nursing mothers on how to keep the breast hygienic. The importance of daily washing of the breast must be stressed especially when breastfeeding a child. This will equip them with more information so that they can educate the nursing mothers when they come for Post-natal clinic. Health professionals need trainings to do effective communication during their consultations with patients. This can be achieved through workshops and seminar. They have to be able to ask about the knowledge of breast hygiene and educate patients appropriately so as for nursing mothers to have good understanding and importance of breast hygiene.

Health talk

Health talks should be organized by health professional on the dangers associated with inappropriate and unhygienic care of the breast and its effect to infants. This can be emphasized more during antenatal and Post-natal clinic during the usual health education.

Health professional should use different method to address nursing mothers on how to care for the breast hygienically, through teaching method.

Increasing the knowledge and practice of breast hygiene among nursing mothers, health promotion and education is essential. Creating awareness among nursing mothers can be

achieved through health talks at the postnatal clinic sessions because health education is a part of health cares that is concern with promoting healthy behaviours.

Use of information and educational materials like posters, media (radio and television) targeting the nursing mothers and enlightening them on the importance of attending the post-natal clinics during the immunization.

Behavioral change communication

Behavioral change communication intervention programmes should be carried out to address the issue of unhygienic condition of the breast and its effects on mothers and infants. Such programmes should be introduced by production of hand bill, posters in PHCs Centres, television advert and radio jingles on how to care for the breast hygienically. This will be aimed at promoting the knowledge of breast hygiene among mothers, should be created and implemented.

Community groups can also be empowered with knowledge and skills and can be used as peer educators to train other women of reproductive age on the importance of keeping the breast hygienic other complementary interventions such as the creation of social support groups, creation of awareness about breast hygiene for both nursing mothers and pregnant mothers should be organized.

Counseling method

Counseling of the nursing mother should be carried out by trusted health personnel to increase the knowledge and practice of nursing mother on breast hygiene through adequate information and awareness of risks associated with unhygienic breast during breast feeding their child.

5.7 Conclusion

This study explored Knowledge and Practice of Breast Hygiene among Nursing Mothers Attending Primary Health Care Centres in Ibadan South East Local Government Area, Oyo State. Half of the respondents had poor knowledge of breast hygiene while a third of them had fair knowledge of breast hygiene and only few of them had good knowledge of breast hygiene. Only few of the respondents could mention two correct health problems that can result from unhygienic breast to child. Almost all the respondents agreed that regular breast hygiene can prevent breast infection and that regular washing of the brassiere to help in the prevention of breast infection. Unfortunately about a third of the respondents stated that breast infection is common among older women while almost half of the respondents believed they could never have breast infection.

Although about three-quarter of the respondents perceived that breast hygiene could make child stay healthy but a quarter of the respondents however felt that daily breast washing is not too important while a third agreed that regular washing of the bra cannot prevent breast infection which is an indication of the need to health educate them on the importance of regular washing of the breast on prevention of breast infection.

A significant percentage of the respondents reported that they rob herbal mixture on the breast as breast hygiene practice. More than a quarter of the respondents also admitted that they do not wash their breast every day when bathing while most of them said that they don't report any abnormal sign on their breast to their doctors

Some of the challenges related to breast hygiene as mentioned by the respondents included financial status, and busy schedule. Few of the respondents however reported that lack of training on breast hygiene affected them from taking good care of breast while about one-quarter reported that attitude of health workers can prevent them from going for PHC training on breast hygiene. A third of the respondents (33.9%) reported that religion prevented them from caring for their breast while majority of the respondents reported that culture encouraged them to clean their breast

There is a significant association between respondents' age and level of education with knowledge of breast hygiene Knowledge of breast hygiene increased with increasing age of nursing mothers as the age bracket 40-49 years had the highest knowledge of breast hygiene.

5.8 Recommendations

1. There should be a provision for health talk on breast hygiene in every health facilities, since it was found that high proportion of nursing mothers lack adequate knowledge of breast hygiene when breastfeeding their child.
2. Awareness should be organized at the community and religion level for nursing mothers in particular and to all mothers in general, in order to improve their knowledge and practice of breast hygiene.
3. Advocacy and sensitization programs should be used to influence key players and decision makers on the creation and implementation of programs aimed at improving the knowledge of breast hygiene among nursing mothers. Knowledge and practice can be endorsed by promoting nationwide public health awareness campaigns and establishing sustained educational framework and policy guidelines. It is essential that breast hygiene awareness campaigns are implemented by health care professionals such as breast care nurses, midwives and medical practitioners to explore the concept of breast health, breast hygiene and breast infection. Selective health education can educate nursing mothers and lead to changes in health behavior.
4. Social support groups should be created to encourage nursing mothers when faced with challenges related to breast hygiene during breastfeeding their child.
5. Moreover, further research is needed. A nation-wide survey with a larger sample size will be useful in providing a better description of supplement use in the country.

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APPENDIX 1

QUESTIONNAIRE

KNOWLEDGE AND PRACTICE OF BREAST HYGIENE AMONG NURSING MOTHERS ATTENDING PRIMARY HEALTH CARE CENTRE IN IBADAN SOUTH EAST LOCAL GOVERNMENT AREA, OYO STATE.

Dear Respondents,

I am from Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan. The purpose of this study is to investigate the **Knowledge and Practice of Breast Hygiene among Nursing Mothers Attending Primary Health Care Centre in Ibadan South East Local Government Area, Oyo State.** Your identity, responses and opinion will be strictly confidential and will be used for the purpose of this research only, also try and please give honest answers to the questions asked as much as your maximum co-operation will assist in making this research a success.

Can we start now? (1) YES { } (2) NO { }

Thank you very much.

Important Instruction(s): Please Do Not Request For Name

Section A; Socio-demographic Characteristics

Instructions: In this sections please tick (✓) in the appropriate boxes that correspond to your answers or complete the spaces provided below

1. Age : { }

2. Marital status 1.married { } 2.divorced{ } 3.separated{ } 4 widow { }

3. Religion 1.Christianity { } 2. Islam { } 3.Traditional { } 4.others -

4. Ethnic group 1. Yoruba { } 2.Igbo { } 3.Hausa { } 4.Others (specify) ---

5. Level of education 1. No formal education { } 2 Primary { } 3. Secondary { } 4. Tertiary { }

6. Occupation
 1. Trading { } 2. Civil servants { } 3. Artisan { }
 4. Others (specify)-----

SECTION B: - Knowledge of breast hygiene among nursing mothers.

S/N	Statement	Response	Score
7	Mention 2 ways to keep the breast hygienic?	1..... 2.....	
8	Mention 2 benefits of breast hygiene to nursing mothers?	1..... 2.....	
9	Mention 2 importance of breast hygiene to the infant?	1..... 2.....	
10	Mention 2 reasons why nursing mothers should take their bath regularly?	1..... 2.....	
11	Mention 2 health problems that can result from unhygienic breast to child?	1..... 2.....	
12	Mention 2 symptoms that may be associated with unhygienic breast care?	1..... 2.....	
13	Mention 2 types of brassiere recommended for nursing mothers?	1..... 2.....	

14	Mention 1 reason why it is unhealthy to put plastic lining in the bra?	1.....	
15	Mention one way to care for leaking of the breast?	1.....	

16. Score obtained =.....

17. Code =

Section C: - Practice of breast hygiene among nursing mothers

S/N	Statement	Answers	Score
18	I rob herbal mixture on my breast as breast hygiene practice.	Yes <input type="checkbox"/> No <input type="checkbox"/>	
19	I wash my bra after every single use.	Yes <input type="checkbox"/> No <input type="checkbox"/>	
20	I don't wash my breast every day when bathing.	Yes <input type="checkbox"/> No <input type="checkbox"/>	
21	I report abnormal signs on my breast to the doctors.	Yes <input type="checkbox"/> No <input type="checkbox"/>	
22	I do attend post natal clinic regularly to listen to talk on breast care practice?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
23	I don't wash my breast with soap and water before breastfeeding?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
24	I wear a tight brassiere every day to keep my breast fit.	Yes <input type="checkbox"/> No <input type="checkbox"/>	
25	Do you put plastic lining in your bra?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
26	I do not use breast pad for leaking breast.	Yes <input type="checkbox"/> No <input type="checkbox"/>	
27	I insert plastic lining in my bra	Yes <input type="checkbox"/> No <input type="checkbox"/>	

28. Score obtained =

29. Code =

SECTION D: Perception of nursing mothers on breast hygiene.

S/N	STATEMENT	Answer	Score
30	Regular breast hygiene can prevent breast infection.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
31	Regular washing of the brassiere can prevent breast infection.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
32	Breast infection are only common among older women.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
33	I can never have breast infection	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
34	Breast hygiene will cost me much money.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
35	Daily breast washing is not too important.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
36	Breast hygiene can make my child stay healthy.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
37	Washing of the breast can reduce milk production.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
38	Breast infection is normal for nursing mothers after breastfeeding child.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
39	Regular washing of the bra cannot prevent breast infection?	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
40	Breast nipple should be cleaned with water before breastfeeding.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
41	Breast hygiene is important for nursing mothers.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
42	Lack of adequate breast hygiene causes breast diseases	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
43	Breast infection can result from inadequate hygiene of the breast	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
44	There is nothing wrong in putting plastic lining in the bra.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	
45	Use of breast pad is unnecessary for leaking breast.	Agree <input type="checkbox"/> Disagree <input type="checkbox"/>	

46	It is good to always wash the breast with soap and water before breastfeeding.	Agree <input type="checkbox"/>	Disagree <input type="checkbox"/>	
----	--	--------------------------------	-----------------------------------	--

47. Score obtained =

48. Code =

SECTION E: Challenges related to breast hygiene among nursing mothers.

S/N	STATEMENT	Answers	
49	Does your financial status affect the care of your breast?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
50	Does busy schedule affect you from caring for the breast hygienically?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
51	Does lack of training on breast hygiene affect you from caring for the breast?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
52	Can the attitude of health workers prevent you from going for PHC training on breast hygiene?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
53	Can lack of knowledge prevent you from taken care of breast hygienically?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
54	Do you have enough information on how to care for breast hygienically?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
55	Does your religion prevent you from caring for the breast hygienically?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
56	Does your culture encourage you to clean your breast?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
57	Does your occupation prevent you from breast hygiene?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
58	Does your friend discourage you from caring for the breast hygienically?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
59	Does your mother in-law encourage you to practice breast hygienic after breastfeeding your infant?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
60	Do health workers talk to you on how to care for your breast hygienically at the health care facility?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Thank you for your cooperation

IBEERE

IMO ATI DARA TI IMOTOTO OYAN LAARIN NTOJU ABIAMO ILO SI ILE IRA ITOJU NI IBADAN SOUTH EAST LOCAL GOVERNMENT, OYO STATE .

Eyin idahun,

Emi lati Department ti Health Promotion ati Education , Oluko ti Public Health , College of Isegun , University of Ibadan . Awon idi ti iwadi yi je lati se iwadi awon **Imo ati Dara ti Imototo Oyan laarin Abiamo Lilọ sí Ile ira Itoju ni Ibadan South East Local Government Area , Oyo State**. Idanimọ rẹ , ti se ati ero yoo wa ni pa muna igbekele ati ki o yoo wa ni lo fun idi ti iwadi yi nikan , tun gbiyanju ki o si jowo mo fun idahun si awon ibeere beere bi Elo bi o poju re ajo - ise ti yoo ran ni sise yi iwadi a asejori.

Le a bere bayi ? (1) BEENI { } (2) KO { }

O seun pupo.

Pataki itonisona (s) : Jowo Maa Ko le bere fun Fun Name

Section A :-DAPO - IBI ABUDA

Awon ilana : Ni yi ruju jowo ami (√) ni o ye apoti ti badogba lati re idahun tabi pari awon alafo pese ni isale

1. ori : { }
2. Ipo igbeyawo, Ipo 1.married { } 2.divorced { } 3.separated { } 4 opo { }
3. Esin 1.Oni gbagbo kristi { } 2. Musilimu { } 3.Olori sa { } 4.Miran -----
4. Eya egbe 1. Yoruba { } 2.Igbo { } 3.Hausa { } 4.Others (pato) ---
5. Ipele ti eko 1. Ko si lodo eko { } 2 Eko ibere { } 3. Eko keji { } 4. Ile-iwe giga { }
6. ojuse 1. Trading { } 2. Abele awon iranse { } 3. artisan { } 4. miran (pato) -----

Ipin b: - Imo ti Imototo oyan laarin abiamo ntoju omo.

S/N	Gbolohun	Idahun	Igbelewon
7	Daruko ona meji lati je ki omu wa ni imo toto?	1 2	
8	Daruko anfani meji ti awon abiamo ri ni nu lati pa omu mo toni toni?	1 2	

9	Darukọ ona meji pataki to omu tonitonifi se pataki si awon omọ ikókó?	1 2	
10	Darukọ meji idi ti ntojú iya ye ki o gba won we déédéé?	1 2	
11	Darukọ ona meji ilera isan ti o le je yo ni nu ise imo toto si omọ ?	1 2	
12	Darukọ ona meji aisan ti o le wa ni nkan se pelu ise imototo omu itoju?	1 2	
13	Darukọ ona meji orisi ti brassiere niyanju fun ntojú abiamo?	1 2	
14	Darukọ Ona kan idi ti o je nfi lati fi sisu awo ninu awon ikomu ?	1	
15	Darukọ ona kan lati bikita fun njò ti omu ?	1	

16. O wole gba =.....

17. Koodu =.....

Ipin C : - Dára ti imototo laarin abiamo ntọ́jú omọ

S/N	Gbólóhùn	Ìdáhùn	Igbelewọ̀n
18	Mo ma fi ewe ise adelu ra omu bi iwa imototo omu.	Beṣeni <input type="checkbox"/> Beṣọ <input type="checkbox"/>	
19	Mo ma wẹkọmu mi ni ekan ti mo balo.	Beṣeni <input type="checkbox"/> Beṣọ <input type="checkbox"/>	
20	Emi ko wẹ omu mi ni gbogbo oṣo nigba ti mo ba we..	Beṣeni <input type="checkbox"/> Beṣọ <input type="checkbox"/>	
21	Mo jabo ajeji ami lori mi omu si awọn onisegun.	Beṣeni <input type="checkbox"/> Beṣọ <input type="checkbox"/>	
22	Mo ma lo si ile iwosan nigbagbogbo lati gbọ oro lori itoju omu ati pipa omu mo?	Beṣeni <input type="checkbox"/> Beṣọ <input type="checkbox"/>	
23	Emi ko wẹ omu mi pẹlu oṣe ati omi ki o to fun omọ lo omu?	Beṣeni <input type="checkbox"/> Beṣọ <input type="checkbox"/>	
24	Mo wọ a ju ikomu gbogbo oṣo lati toju omu.	Beṣeni <input type="checkbox"/> Beṣọ <input type="checkbox"/>	
25	Se o fi siṣu awọ ninu ikomu.	Beṣeni <input type="checkbox"/> Beṣọ <input type="checkbox"/>	
26	Emi ko lo fo mu fun nṣọ omu.	Beṣeni <input type="checkbox"/> Beṣọ <input type="checkbox"/>	
27	Mo fi sii siṣu awọ se ninu ikomu.	Beṣeni <input type="checkbox"/> Beṣọ <input type="checkbox"/>	

280 wole gba=

29 koodu =

IPIN D : Iro ti ntojú abiamo ni si imototo oyan.

S/N	Gbólóhùn	Ìdáhùn	Igbelewọn
30	Deede imototo omu o le pa omu mo late ma ni ikolu omu.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
31	Fifọ ikomu deede le se idena lati ma ni ikolu omu.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
32	Ikolu omu ni o wa nikan wọpọ laarin awon agbalagba obirin.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
33	Mi kò le ni ikolu omu.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
34	Imo toto omu yoo na mi ni lowo.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
35	Fifọ omu lojojumo ko se Pataki.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
36	Imototo omu le şe omọ mi ni ilera alafiya.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
37	Fifọ omu le din na wara gbòdì.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
38	Ikolu omu je hun Pataki si abiamo ti o hun fun omo loyan.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
39	Fifọ ikomu deede ko di na ikolu kokoro omu.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
40	Ori omu ye ki o wa niimototo pelu omi ki wa to ma fun omo loyan.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
41	Imo toto omu je ohun pataki fun ntojú omo.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
42	Aiko deede ni pa imototo omu fa arun omu.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
43	Ikolu omu le ja si lati aiko imo ni pa awon imototo omu.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
44	Ko si ohun ti o buru ni fifi nri şišu awọ ninu awon ikomu.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	
45	Lilo fomu omu je koboju mu fun njò omu.	Ti gba <input type="checkbox"/> Koo <input type="checkbox"/>	

46	O je ohun to dara nigbagbogbolati ma fi oṣe ati omi ma fo omu ki o to omo loyan.	Ti gba <input type="checkbox"/> <input type="checkbox"/>	
----	--	--	--

47O wole gba =

48 koodu =

Ipin E: Italaya ti o ni ibatan si imototo oyan laarin abiamo ntojú omo

S/N	Gbólòhùn	Ìdáhùn
49	Ṣé rẹ owo ipo ni ipa ni itoju ti omu rẹ?	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>
50	Ṣé o nṣiṣe iṣeto ni ipa ti o lati nife fun awon imototo? omu	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>
51	Ṣe aini ti ikeko on bo ri imototo ni ipa ti o nife lati fun awon omu?	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>
52	Se awon iwa ti awon osise ilera se idena lati lo fun ilewosan ikeko lori imototo o omu ?	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>
53	Se aini imo idena lati se imototo oyan re?	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>
54	Ṣe o ni alaye lori bi o si bikita fun imototo oyan?	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>
55	Ṣé esin ko gba laye lati se imototo oyan re?	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>
56	Se asa iwure fun e ni aye lati to ju oyan re?	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>
57	Se ise re de lowo lati se imototo oyan re?	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>
58	Se ore irewesi ba o lati ma se itoju oyan re?	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>
59	Se iya oko ofin - iwuri fun o lati niwa imototo oyan lehin ti o ba fun omo ikókó loyan ?	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>
60	Se awon osise ilera soro si o lori bi o si bikita fun omu re tenilorun ni awon itoju ilera apo?	Bẹni <input type="checkbox"/> Bẹko <input type="checkbox"/>

APPENDIX 2

Primary Health Care Centres in Ibadan South East L.G.A

				bcg attendance	anc attendance	opv 0 given	hep b 0
Agbongbon	Pimary	Health	Centre	2352	756	382	401
OritalAperin	Health	Centre		1456	377	300	296
Balaro	Primary	Health	Centre	350	185	71	72
Boluwaji	Primary	Health	Centre	1313	319	202	190
Elekuro	Primary	health	Centre	818	270	178	143
Iyana	Court	Health	Centre		190	91	60
Lanioka	Health	Center		4	66	6	9
Mapo	Health	Centre		89	138	5	44
Molete	Health	Centre		377	1192	996	993
Odinjo	Primary	Health	Centre	1654	575	438	196
Oranmiyan	Primary	Health	Centre	3239	665	559	354
Owode	Health	Centre		11	267	55	152

Source: - Oyo state Ministry of Health (January – June 2015)

APPENDIX III

INFORMED CONSENT FORM

**Title of Research: KNOWLEDGE AND PRACTICE OF BREAST HYGIENE
AMONG NURSING MOTHERS ATTENDING PRIMARY HEALTH CARE
CENTRES IN IBADAN SOUTH EAST LOCAL GOVERNMENT AREA,
OYO STATE**

Dear Respondent,

My name is **Oluseyi Yemi ADERIBIGBE**, a postgraduate student of the department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan. The purpose of this study is to investigate the knowledge and practice of breast hygiene among nursing mothers attending primary health care centres in Ibadan South East Local Government, Oyo State.

Your identity, responses and opinion will be kept strictly confidential and will be used only for the purpose of this research only. Please note that you do not have to write your name on this questionnaire. I will appreciate you provide your honest answers to the questions asked as your maximum cooperation will assist in making this research as success.

Thank you.

I have read the description of the research and have decided that **I will participate**

Date:

Signature:

I have read the description of the research and have decided that **I will not participate**

APPENDIX IV



DEPARTMENT OF
HEALTH PROMOTION AND EDUCATION
AFRICAN REGIONAL HEALTH EDUCATION CENTRE
FACULTY OF PUBLIC HEALTH, COLLEGE OF MEDICINE
UNIVERSITY OF IBADAN

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Assistant Lecturer

zfisayo@yahoo.com

Our Ref. HPE/SF.

14th August, 2015

TO WHOM IT MAY CONCERN


Re: ADERIBIGBE, Oluseyi Yemi
Matric No: 183440

This is to certify that the bearer ADERIBIGBE, Oluseyi Yemi is an MPH (Health Promotion and Education) student in the Department of Health Promotion and Education, Faculty of Public Health, University of Ibadan.

The student is to carry out research on a project titled: "Knowledge and Practice of Breast Hygiene Among Nursing Mother Attending Primary Health Care Centre in South East Local Government Area, Oyo State by Oyo State".

Kindly accord him all necessary assistance he may require.

Thank you.


Professor O. Oladepo

HEAD
DEPARTMENT OF HEALTH
PROMOTION & EDUCATION
COLLEGE OF MEDICINE
UNIVERSITY OF IBADAN
IBADAN, NIGERIA

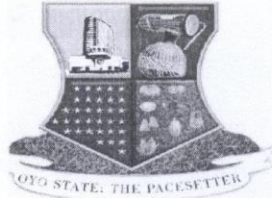
Professor O. Oladepo
Head



APPENDIX V

TELEGRAMS.....

TELEPHONE.....



MINISTRY OF HEALTH
DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION
PRIVATE MAIL BAG NO. 5027, OYO STATE OF NIGERIA

Your Ref. No.

All communications should be addressed to
the Honorable Commissioner quoting

Our Ref. No. AD 13/ 479/988

December, 2015

The Principal Investigator,
Department of Health Promotion and Education,
Faculty of Public Health,
University of Ibadan,
Ibadan.

Attention: ADERIBIGBE Oluseyi

**ETHICAL APPROVAL FOR THE IMPLEMENTATION
OF YOUR RESEARCH PROPOSAL IN OYO STATE**

This is to acknowledge that your Research Proposal titled: "Knowledge and Practice of Breast Hygiene Among Nursing Mother Attending Primary Health Care Centre in South East Local Government Area, Oyo State" has been reviewed by the Oyo state Review Ethical Committees.

2. The committee has noted your compliance. In the light of this, I am pleased to convey to you the full approval by the committee for the implementation of the Research Proposal in Oyo State, Nigeria.

3. Please note that the National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations, in line with this, the Committee will monitor closely and follow up the implementation of the research study. However, the Ministry of Health would like to have a copy of the results and conclusions of findings as this will help in policy making in the health sector.

4. I wish you all the best.



(Dr) Abbas Gbolahan
Director, Planning, Research & Statistics
Secretary, Oyo State, Research Ethical Review Committee

APPENDIX VI

IBADAN SOUTH - EAST LOCAL GOVERNMENT

Primary Health Care Dept.



Your Ref.....
058/Vol IV^A/10

Our Ref.....

MAPO HILL,
IBADAN
TEL. 02-2412452

Date.....
29th July 2015

Aderibigbe Oluseyi Yemi
Matric NO: 183440
Department of Health Promotion and Education
Faculty of Public Health
University of Ibadan.
Ibadan.

RE: PERMISSION TO CONDUCT MASTER RESEARCH PROJECT

With reference to your letter dated 17th June, 2015 on the above subject matter. I am directed to inform you that you have been permitted to conduct your Master project on "Knowledge and Practice of Breast Care Among Nursing Mothers Attending Primary Health Care Centre in Ibadan South East Local Government Area, Ibadan, Oyo State"

You are to note that a copy of results and findings should be submitted to this office.

Wishing you success.

Dr. M.B. Akinyemi
Medical Officer of Health
For: Chairman
Ibadan South East Local Government
Mapo Hill.

