Chapter One

Introduction

1.1 Background to the Study

Globally, human population has been witnessing phenomena growth and it has constituted a major developmental issue and rapid growth in population and this is attributed to different reasons. The trend in sub-Saharan Africa is alarming and the situation is true for most countries in Asia, Latin America and even Europe where the population growth is over 2.5% annually. Nigeria a country in West Africa has a very high population growth rate. It is currently expressing about 3.6% annual growth rate which has been considered a major source of concern. Nigeria's population is estimated to be 223.8 million in June 2023 based on the world meter of the United Nations. Nigeria's population currently is about 2.64% of the world population. Also, Nigeria has become the sixth most populous nation in the world in 2023. It follows China (1,455,850), India (1,421,022), USA (336,806 million), Indonesia (282,286million), and Pakistan (234,215million). The high population has posed some of problems experienced in most of these countries especially poverty and poor health condition[1]. Populations problem are prominent features in most developing countries of the world especially sub Saharan Africa. These problems take the forms of growing unemployment, poverty, malnutrition, food insecurity and a list of others. Conscious and concerted efforts have been made towards alleviating theses problems by many of these countries especially Nigeria but they have yielded relatively little or no success, such effort

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includes the promotion of family planning practices to show that the fertility rates which scholars say are presently very high.

Furthermore, in many countries of the world including Nigeria, fertility level is high, which scholars believe that the prospect of its decline in the nearest future is remote. Although, Nigerian government in 2004 put forward the national policy on population and sustainable development which was to reduce fertility rate by 0.6% by every 5years, this has not achieved the desired results. Recent estimates from the Population Reference Bureau 2020 shows that the Total Fertility Rate (TFR) in Nigeria has remained as high as between 6-8 children per woman. This is somewhat higher than the continental (African) average of 5 children per woman[2]. Studies revealed that Family planning is practiced in Nigeria through several techniques including the traditional and modern methods such as abstinence, withdrawal, use of charms, exclusive breastfeeding, pills and IUDs etc. Traditional practices have been in use through history and are still in use today despite the availability of modern contraception and are known to have effect on fertility level. In Nigeria, alongside the traditional method there is still the use of modern contraception though evidence shows that the rate is low[10].

LAM as a family planning method based on breastfeeding, provides contraception for the mother and breastfeeding for the baby. LAM is a type of birth control that relies on the hormones that your body makes while breastfeeding. Other advantages of LAM include the facts that as long as the mother breastfeeds the child fully, chances of conception are almost nil. Also, the mother does not have to take any pills or devices for birth control its side effects are almost nil. Bellagio consensus has it that chances of pregnancy is less than 2% in

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the first six month of post partum in amenorrheic women who are fully breastfeeding or nearly fully breastfeeding. To this end LAM represent additional contraceptive option.

Increase in population either through high fertility or other sources is a major threat to the Sustainable Development Goal (SDG) including unplanned pregnancy which is a public health issue which is linked with high population growth rate in Nigeria. This has detrimental implications for the mothers and the babies alike. It also has implication for national development. Population management and practical strategies are required to create a healthy population because of the challenges that come with having a big population for a nation, including poverty, unemployment, deficiencies, and strain on social services, particularly health and education. Undoubtedly, a country's ability to develop might be jeopardized by a high population. Population control has been handled differently in different countries mainly through executives and legislations policies, sex education advocacy, enlightenment and social trust benefits. From the opinion expressed above, there is urgent need to address population growth and high fertility in Nigeria through expanded family planning program[3].

Family planning is essential for women and their children's health. It can speed up a nation's progress toward eradicating poverty and accomplishing its development objectives. Given its significance, one of the Sustainable Development Goals (SDGs) includes family planning as an objective for universal access to reproductive health services. More so, 40% of the 150 million pregnancies that occur each year throughout the world are thought to be unplanned, with the majority of them being unwanted[4]. The most common family planning methods that has been used to control unwanted pregnancies includes the use of contraceptives , various types of IUDs and other traditional methods. The use of contraceptive for family planning is widespread. Its widespread use as shown by evidences has contributed to decline in maternal

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mortality, infant mortality and has improved maternal health by reducing occurrence of unwanted pregnancies[5]. Epidemiological studies have stated that postpartum women are particularly vulnerable to unwanted pregnancies making it pertinent to improve postpartum mother and child health outcomes and to persuade women to use healthy timing techniques by combining family planning and breastfeeding. Lactational Amenorrhea Method is a family planning option of potential importance in low-resource communities and developing countries where the mother is informed and supported in how to use breastfeeding for contraception. This method is available and accessible to many women in developing nations like Nigeria; LAM is a significant family planning choice[6].

In Bellagio at a gathering of scholars from around the world that took place in 1988 Lactational Amenorrhea Method standards were stated as: A full or nearly full breastfeeding, postpartum amenorrhea, an infant under six months old are the three components of LAM. Lactational Amenorrhea Method is unquestionably cost-effective because breastfeeding alone provides sufficient nutrition and fluid intake for the first six months, because breast milk is thought to be a healthy option for newborns in low-resource settings, than its substitutes. An earlier study conducted with the goal of studying LAM acceptability revealed that about 84% of lactating women were satisfied with it. Furthermore, compared to standard modern contraceptive methods, LAM offers at least comparable protection against pregnancy within the first year following delivery[7].

Despite the positive sides of LAM, it offers no protection against STDs or STIs. Again it requires counseling from a well informed provider, and intensive breastfeeding can make heavy demand on the woman time. The above has also clearly shown that LAM like other family planning methods has benefits and drawbacks. Therefore, its use is controversial[8].

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Claims have been made for and against its use, because LAM is effective in preventing pregnancies and because it extends the range of contraceptive choice. Conducting a research on LAM is worthwhile and appropriate. We need to therefore investigate the practice of LAM in order to tap the potential assets of LAM especially the promise to introduce more users. As already observed, unwanted pregnancy is a big problem facing women of reproductive age especially in countries like Bangladesh, Indonesia, Egypt, Ghana and Nigeria. In Nigeria, its consequences also affect families and society as a whole. As already noted, LAM is a public health issue[9].

1.2 Statement of the Problem

Studies on Lactational Amenorrhea Method as family planning option are still scanty in literature especially on contraception. Research based evidence give the contraceptive prevalence rate (CPR) in Nigeria as 15% in 2020 with wide variation across the country[10]. Researchers have devoted considerable efforts to understanding contraceptive use, behaviour of people as well as contraceptive use differentials. Findings from these studies have shown that in Nigeria, education, urbanization, industrialization and other socio-economic changes have no effect on contraceptive use. Therefore, contraception has not sufficiently reduced fertility in Nigeria[11]. Breastfeeding has clinically demonstrated contraceptive effect primarily before the menses. Most African mothers have relied on this method of delaying their next pregnancy and this is often accompanied with a period of abstinence from sex. Studies on the use of exclusive breastfeeding as a contraceptive otherwise known as Lactational Amenorrhea Method (LAM) have shown that many African countries like Egypt, Ghana about 80% of married couple know about LAM as contraception but only less than 10% actually practiced it[6].

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Despite the importance and advantages of LAM as a contraceptive as enunciated in many or the above mentioned studies, especially its safety, effectiveness and its economy (less expensive) there are still problems and unanswered question with this method, we certainly know that the LAM is traditional and cultural as such its knowledge, perception, practice, predictors and challenges are bound to vary across cultural and traditional factors. This study therefore examines some of the unanswered questions about LAM with respect to knowledge level, perception and practice of LAM in Ibadan, a typical cultural city in Nigeria. Specifically this study seeks to answer the questions highlighted in the section on research question.

1.3 Aim and Objectives of the Study

The aim of this study is to evaluate the understanding, attitudes, and utilization of LAM as a contraceptive option among breastfeeding women. However, the specific objectives of this study were to:

i. assess the knowledge level about Lactational Amenorrhea Method (LAM).
ii. determine the perception of Lactational Amenorrhea Method among women that uses it.
iii. assess the effectiveness of this contraceptive method.
iv. identify the predictors that favour the use of the method.
v. assess the attitude of men towards using Lactational Amenorrhea Method.

1.4 Research Question

The following research questions were raised to guide the study:

1. What is the knowledge level of Lactational Amenorrhea Method?

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2. What is the perception of those using the Lactational Amenorrhea Method?
3. How effective is the use of Lactational Amenorrhea Method and its contraceptive method?
4. What are the predictors that favour the use of Lactational Amenorrhea Method?
5. What are the roles of men in the use of LAM?

1.5 Significance of the Study

Findings from this study will expand our understanding of the subject of LAM. It will be able to provide information on many aspects or the practice, perception and behaviour of lactating women as well as information on the challenges of this potentially attractive contraceptive method. This study will additionally shed light on the perception of men on the subject as to the success of LAM is dependent on the perceived roles of both men and women. This is an aspect that has been neglected by previous studies. Practically, the information generated in this study will help in developing good local, regional and national policies on family planning especially on LAM as contraception.

Additionally, exploring men's views on LAM may shed light on broader gender dynamics, power structures, and cultural norms related to fertility control, contributing to a more nuanced understanding of reproductive decision-making processes within diverse socio-cultural contexts. Overall, integrating men's perspectives into future research on LAM can enrich our understanding of contraceptive behaviour and inform more inclusive and effective strategies for family planning promotion.

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1.6 Scope of the Study

This study focused on the knowledge level, the perception, and the practice of LAM as a contraception choice among lactating mothers who employed LAM as a form of contraception. It also focuses on the factors as well as the challenges associated with the adoption of LAM.

1.7 Limitation of the Study

This study used a cross sectional research design in examining the knowledge, perceptions, and practices of the Lactational Amenorrhea Method (LAM) among lactating mothers in Ibadan which may encounter several limitations. Firstly, as a snapshot of data collected at a single point in time, a cross-sectional study cannot establish causality or determine the temporal sequence of events. This means that it may be challenging to discern whether knowledge and perceptions precede practice or vice versa. Secondly, cross-sectional designs rely on self-reported data, which may be subject to recall bias or social desirability bias, particularly regarding sensitive topics such as contraceptive use. Thirdly, the study's findings may not be generalizable beyond the specific population and context of lactating mothers in Ibadan, limiting the broader applicability of the results. Finally, cross-sectional studies do not allow for the examination of changes or trends over time, which may be particularly relevant in understanding the dynamics of contraceptive knowledge and practices. Despite these limitations, a cross-sectional study can provide valuable insights into the current state of knowledge, perceptions, and practices regarding LAM among lactating mothers in Ibadan, serving as a foundation for future longitudinal or qualitative research to explore these issues in greater depth.

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1.8 Operational Definition of Terms

Amenorrhea: it is the lack of menstruation, which is commonly referred to as skipping one or more menstrual periods.

Breastfeeding: breastfeeding also known as nursing in the case of child care. It is the feeding of babies and young children with milk from a woman's breast.

Contraceptives: it is the use of devices to prevent unwanted pregnancy.

Exclusive Breastfeeding (EBF): WHO defined EBF as giving breast milk only to the infant, without any additional food or drink, not even water in the first six months of life, with the exception of mineral supplements, vitamins and medicine.

Family Planning: Family planning allows people to attain their desired number of children if any; it also determines the spacing of their pregnancies. It is achieved through use of contraceptives methods and the treatment of infertility.

Lactation: Lactation is the process of producing and releasing milk from the mammary glands in your breasts.

Lactational Amenorrhea Method (LAM): It is a modern as well as temporary contraceptive method that is based on the natural infertility that results from breastfeeding.

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Chapter Two

Literature Review

2.1 Conceptual Review

Literature review provides an overview on the understanding of the topic where, previously published works are examined in order to critically evaluate the controversies and contentions on the topic. Literature review is thus pivotal to any research work. This study examines The Knowledge, Perception, and Practice of Lactational Amenorrhea Method as Contraception among Lactating Mothers in Ibadan. To put the existing state of the phenomenon in context, it reviews previous works on Family Planning, Lactational Amenorrhea Methods, as well as Exclusive Breastfeeding.

2.1.1 Concept of Contraception

The term "contraception" can also refer to the practice of managing fertility through the use of various techniques that obstruct conception. It is an important aspect of reproductive and sexual health. It is the deliberate avoidance of becoming pregnant by means of contraceptive methods, chemicals, medicines, sexual behaviours, or surgery. The lack of access to contraceptive information is a contributing factor in Nigeria's low rate of contraceptive awareness and use. Access to contraceptive knowledge and services is essential for ensuring everyone's health and human rights. Making the proper decision when choosing contraception can help improve the health and wellbeing of people, families, and communities, Contraception involves methods that may be used to prevent pregnancy.

The use of contraception is a wise and economical investment that could promote national advancement. It has a crucial role in preventing serious morbidity and mortality among

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mothers and children. When women of reproductive age utilize contraceptives, they can plan the number of children they want to have and the intervals between pregnancies[1]. Effective contraception, in any societal setting, allows a couple to have a physical connection without fear of an unplanned pregnancy and gives them the flexibility to have children when they want.

The goal is to do it in the most comfortable and private way possible while keeping costs and negative effects to a minimum[2]. Contraception is one of proximate determinant of fertility and the most important predictor of fertility transition. The choice of the contraceptive method, however, it is influenced by the host of interdependent demographic, cultural, economic and social factors which means that a multidimensional approach needs to be adopted for analyzing the contraceptive use pattern[3].

Contraception is the prevention of conception by methods other than abstinence from coitus and may be natural or artificial. The contraceptive prevalence rate among married women varies with age, rising from 3% among women aged 15 to 19 years to a peak of 23% among women aged 35 to 39 years before declining to 13% among women aged 45 to 49 years. There has been a gradual decline in fertility rates in the last decade, from 5.7 births per woman in the 2008 Nigeria demographic and health survey (NDHS) to 5.5 births per woman in the 2013 NDHS and 5.3 births per woman in the 2018. Regional differences are known to exist in contraceptive prevalence rate even within the same countries and localities[4].

Studies in developing countries have shown low frequencies of contraceptive use despite the high level of awareness as shown in Port-Harcourt and in Zaria. The main reasons for this were a desire for larger family size, pressure from husbands, religious concerns, and fear of side effects. Nigeria is the most populous country in Africa with a current population of over

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150 million and a growth rate of approximately 2.4% per annum. Its rapid population growth poses more strain on its resources. This increase in population has been attributed to many factors that include low contraceptive use, high fertility rate accompanied by steady declines in death rates, and high but declining mortality rate[4]. Utilization of modern methods of contraceptives varies with background characteristics such as age, marital status, education, religion, number of living children, desire for more children, ever use of contraceptives, urban–rural residence, and wealth or socioeconomic status[4].

Hence, these background characteristics determine the person's attitude toward the use of contraceptives and the ability to understand the mechanism of action and effective use of the methods. They may also affect the ability to access various types of contraceptives, hence, the type of contraceptive the individual is likely to use. Many factors come together to influence an individual's decision to either use a particular contraceptive method or not; factors such as socio-cultural beliefs and perception and practices may influence knowledge about contraceptives and contraception, and the use of contraceptives. For instance, people who perceive that they are at low risk for pregnancy may not use any contraceptive. Religious and cultural practices in some parts of the world deter women from using contraceptives.

For instance, in Pakistan, it was found that 65% of women believed that contraception is prohibited in religion whereas 35% believed that contraception is permitted in religion in view of providing better resources for the child. And with regard to health, 57% of the women thought that contraceptive use affects their health considerably whereas 43% of them considered that the health was not affected by the contraceptive[4].

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2.1.2 Family Planning

Family planning encompasses the services, policies, information, attitudes, practices, and commodities, including contraceptives, that give women, men, couples, and adolescents the ability to avoid unintended pregnancy and choose whether and/or when to have a child.

Family Planning has been in existence for many years in both developed and developing country even before the emerging of orthodox family planning, record showed that information and practice of family planning has a numerous roles and benefits which called for world-wide attention as a result of its associated benefits and importance in family size decision making, control of population growth and regulation. World Health Organization (WHO) defined family planning as "family planning allows individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. It is achieved through use of contraceptive methods and the treatment of involuntary infertility[5].

Family planning is critical for the health of women and their families and it can accelerate a country's progress towards reducing poverty and achieving development goals. Because of its importance, universal access to reproductive health services, including family planning, is identified as one of the targets of Sustainable Development Goals (SDGs)[6]. Family Planning (FP) is one of the most cost-effective ways to prevent maternal, infant and child morbidity and mortality. It can reduce maternal mortality by reducing the risk of unintended pregnancies, the number of abortions, and the proportion of births at high risk. It is a scientific approach in relation to the determination of when to give birth, how many children does the family want to give birth to and at which rate should the family give birth to that

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number of children[3]. Family planning allows people to attain their desired number of children, if any, and to determine the spacing of their pregnancies. It is achieved through the use of contraceptive methods and treatment of infertility[7]. The concept of informed choice in family planning can be applied to a wide range of sexual and reproductive health decisions. It focuses on whether to seek to avoid pregnancy, whether to space and time one's childbearing, whether to use contraception, what family planning methods to be used and when to switch to or continue other methods. The term family planning could also refer to the family decision making. The principles of informed choice focus on the individual; however it also influences a range of outside factors such as social, economic and cultural norms gender roles, social networks, religious and local beliefs[8].

Family planning is not based on a single method; there are a number of methods available for the willing couples. These methods are divided on the bases of their criteria, such like the format could be traditional,/modern, natural/artificial, in terms of duration it could be temporary/ permanent, specific for male/ female or the mode of usage could be oral/ injectable/ IUCDs[9]. Family planning is central to gender equality and women empowerment. Today family planning program has been incorporated as one of the importance part of health program in almost all countries of the world. WHO, USAID, UNFPA, IPPF and other many NGOs and donor organizations have put a lot of effort and resources to access the quality of family planning service worldwide especially focusing in developing countries. The United Nation Population Fund (UNFPA) state that if women with an unmet need for contraceptives were able to use modern family planning methods, an additional 24 million abortion (14 million would be unsafe, 6 million miscarriage, 70,000 maternal death and 500,000 infant death) would be prevented[10].

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2.1.3 Obstacles to Accessing Family Planning

A comprehensive understanding of family planning necessitates an examination of the obstacles that impedes individual's access to FP. A major factor affecting the utilization of family planning services by women is the status of women in the society and within her family. Women in Nigeria reported lower social standing compared to men, which negatively affects a women's ability to claim rights and to make decisions regarding her sexual and reproductive health. This study also indicates that the position of women within her family affects in making decision in seeking FP services. Women from nuclear family, having good education and employed were more likely to make decision oneself than women living in joint family[11]. Previous research, however, into the barriers to Family Planning service use has highlighted the importance of looking beyond physical access to examine barriers that arise from the socioeconomic, administrative, cognitive and psychosocial access and cultural environment in which an individual lives. Furthermore, the barriers to family planning service use are seen as extending beyond factors operating at the individual and household levels, to include characteristics of the social and cultural environment and the health service infrastructure. This view of access recognizes the importance of attributes of the health system in shaping an individual's ability to seek health care, highlighting the importance of the supply environment on health care utilization. This conceptualization of access incorporates factors operating at the individual, household and community level to influence an individual's ability to utilize a health service, thus framing an individual's access to services in terms of the socioeconomic, cultural and service supply context in which they live. Barriers in accessing FP are presented at four different levels[10].

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1. Individual Level Barriers

The individual level barriers included low self-confidence in seeking FP services, insufficient knowledge of contraceptives, low priority to FP services, lack of autonomy/decision making and money.

2. Family Level Barriers

Many families, particularly in underserved or marginalized communities, may lack knowledge about family planning methods, their benefits, and where to access them. Limited understanding of contraceptive options and their proper use can prevent individuals from making informed decisions[12]. Cultural norms and religious beliefs can significantly influence family planning decisions. Some cultures or religions may promote large families or oppose certain contraceptive methods, leading to resistance or reluctance to use family planning services. Gender inequalities within families can impact access to family planning. In some societies, men often have greater decision-making power and may oppose or restrict their partner's use of contraception. This can result in limited autonomy for women in making choices about their reproductive health[11]. Misinformation or misconceptions about contraceptive methods and their potential side effects can discourage individuals from seeking family planning services. Fear of adverse health effects may lead to avoidance of contraception altogether. Stigmatization of contraception or discussions about family planning can discourage individuals from seeking information and services. Fear of being judged by family members, friends, or community members can create a barrier to accessing family planning[13]. The cost of contraceptives and family planning services can be a significant barrier, particularly for

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families with limited financial resources. In some cases, individuals may prioritize immediate economic needs over long-term family planning goals. Geographical distance, lack of transportation, and inadequate healthcare infrastructure can make it difficult for families, especially those in rural or remote areas, to access family planning clinics or services. Family and social support can influence an individual's decision to access family planning services. Lack of support from partners, family members, or the broader community can discourage individuals from seeking contraception. In some cases, families may desire larger family sizes for cultural, economic, or personal reasons. This desire can lead to reluctance to use contraception or family planning methods[12].

3. Community Level Barriers

Certain cultural or religious beliefs of some communities may discourage or prohibit the use of family planning methods. Community members might view large families as a sign of prosperity or social status, which can lead to resistance against family planning. Low income and limited resources can prevent individuals from affording family planning services or purchasing contraceptives. Cost barriers may also extend to transportation to clinics or facilities offering family planning services[11]. Traditional methods of contraception or health practices that may be less effective or safe could be preferred due to familiarity or cultural significance, leading to resistance against modern family planning methods. In some communities, male partners may not be supportive of family planning, which can impact women's ability to access and use contraceptives. Restrictive laws or policies related to family planning, such as age restrictions or requirements for spousal consent, can limit access to services, especially for young or unmarried individuals. Misinformation about family planning methods, their side effects,

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or misconceptions about fertility can deter individuals from seeking out accurate information and services[12].

4. Organizational Level Barriers

In some areas, family planning services might not be readily available due to a shortage of trained healthcare providers, inadequate infrastructure, or limited resources. Health facilities providing family planning services may be located far away from certain communities, making it difficult for individuals to access them, particularly in rural or remote areas. The cost of family planning methods, consultations, and related services can be a significant barrier for individuals with limited financial means. Even if the services themselves are offered for free or at a reduced cost, transportation and associated expenses can still pose financial challenges[14]. Some health facilities may not provide adequate privacy and confidentiality, making individuals hesitant to seek family planning services due to concerns about their personal information being disclosed. Negative attitudes or biases held by healthcare providers toward certain family planning methods, or a lack of proper training on family planning, can discourage individuals from seeking services. Health facilities might experience stock outs of family planning methods or essential supplies, making it difficult for individuals to access their preferred method when they need it. Health facilities with limited or inconvenient operating hours may prevent individuals from accessing family planning services due to work or other commitments[15].

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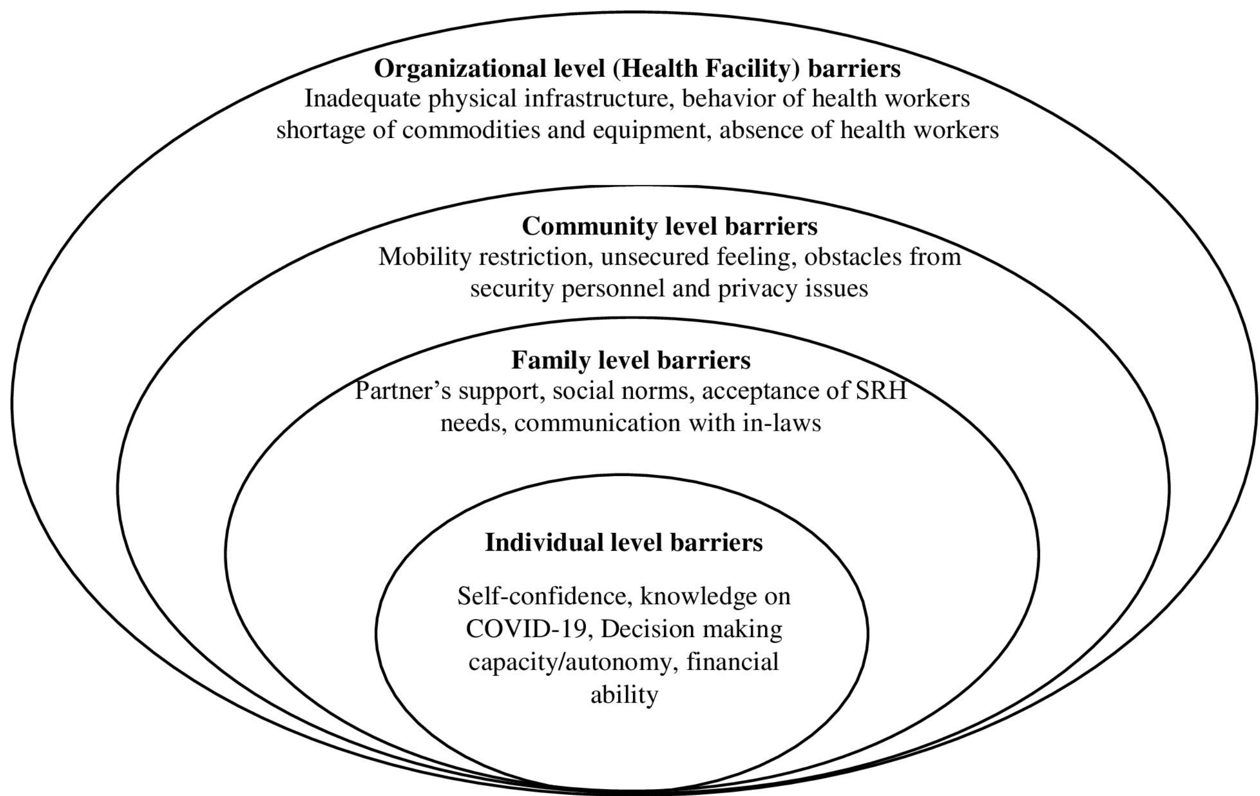

Fig 2.1. Socio-ecological barriers in accessing SRH services adopted from USAID and health community capacity collaborative.

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2.1.4 Methods of Family Planning

Family planning methods play a crucial role in empowering individuals and couples to make informed decisions about their reproductive health and the size of their families. By providing a range of effective and accessible options, these methods contribute to improved maternal and child health, gender equality, and sustainable population growth. This introduction aims to explore the diverse methods of family planning available today, ultimately promoting the well-being of individuals, families, and communities worldwide[16].

Basically, there are two major methods of family planning; the traditional and modern methods, its attempt to control increase in population which started from the early men when

they practiced coitus interruptus (withdrawal method) during sex. Therefore, birth control is as old as man himself. Evidence from medical history indicates that our forefathers did space their children through traditional means[17]. Many couple around the world use herbal approaches, ritual, spiritual powers and similar practices to regulate fertility for economic, cultural and personal reasons. The methods differs from country, one town to another and from one tribe to another, some of those approaches are ineffective. These traditional methods includes the use of (Tesso) on an adolescent girl to prevent her from having sexual intercourse until the spell is renewed, abstinence for about three years after the child birth, jumping up and down after sex to dislodge the sperm, drinking tea made from various harmless roots and weeds, native rings, arm and waist band (Kanbu), pad luck with incantation wearing a leopard skin, sneezing after intercourse to dislodge sperm, However, these traditional method of family planning is associated with socioeconomic factors, cultural belief and cultural practice[18].

Modern family planning refers to the various methods and strategies that individuals and couples use to control and manage their reproductive choices, based on scientific method rational of having child by choice and planning. It involves making informed decisions about when to have children, how many children to have, and the spacing between pregnancies[4].

However family planning can be further classified into four major categories: short term, long term, permanent and natural family planning:

1. **Short Family Planning:** it is a reversible type of family planning that lasts for a moment or days or months and some of them can be used by both men and women

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example are Spermicidal, pills, injection, barrier method, emergency family planning and fertility awareness base method. This type of family planning is reversible.

2. **Long Term Family Planning:** it is a type of family planning which lasts for a long period time between three to twelve (3-12) years, example are Implantation such as Jade and insertion such as IUCD. This method of family planning is reversible and the side effect associated with it is much lesser compare to short term family planning. It seems to be more simple and adoptable by many people in the community.
3. **Permanent Family Planning:** it is an irreversible methods of family planning which can be carried out through minor surgery or incision on either male or female reproductive organ, example are vasectomy, hysterectomy, tubal ligation
4. **Natural Family Planning:** this method of family planning is associated with chemical messengers (reproductive hormone) in the body, most of them are usually last for either a moment or days or months, the practice of this type of family planning require critical observation, assessment and experience in reproductive based hormone related factors.

The diverse methods of modern family planning empower individuals and couples to make informed choices about their reproductive journey. From a comprehensive array of contraception options, fertility awareness-based methods, emergency contraception, and sterilization, to essential education and access to healthcare services, family planning ensures that people have the tools to shape their lives in alignment with their aspirations. By promoting personal autonomy, health, gender equality, and sustainable development, these methods collectively contribute to a more equitable and prosperous future for individuals, families, and societies worldwide[19].

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2.1.5 Unmet Need for Family Planning

Unplanned pregnancy poses a major public health challenge to women of reproductive age in Nigeria and this has been hastened by poor use of modern family planning methods. Unmet need for family planning is defined as the proportion of currently married women who do not want any more children but are not using any form of family planning or who want to postpone their next birth for two years but are not using any form of family planning. Unmet need does not necessarily mean that Family Planning services are not available. It may also mean lack of information of women regarding the availability of the services, not have sufficient inspirations or confidence and not empowered enough for taking decision regarding using these services[20].

Unmet need for family planning can be understood from a health behaviour perspective as the gap between women's reproductive intentions and their contraceptive behaviour[21]. The unmet need for family planning is a global health burden, it has accounted for the high population rates, increased rates of unwanted pregnancies, increased abortion and uncontrolled fertility rates, especially in the developing countries[22].

The United Nations (UN) defines the unmet need for FP as: the proportion of women who are fecund and sexually active and want to stop or delay childbearing but are not using any method of contraception. Based recent estimations, 214 million reproductive-aged women around the world have an unmet need for modern contraception. The unmet need resulted in unintended pregnancies, as 84% of unintended pregnancies occurred among the women with unmet need[23].

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In recent years, unmet need has received renewed attention as an advocacy and monitoring tool for family planning programs, becoming a key indicator (Indicator 5.6) for the Millennium Development Goals (MDGs). It is an important measure for assessing progress toward the Family Planning 2020 goal to extend family planning services to an additional 120 million women and girls by 2020. As such, new scrutiny has been focused on the way in which unmet need is measured, with the objective of assuring that it is calculated consistently over time and across settings. The concept of unmet need for family planning is notable for bringing together in one measures both contraceptive behaviour and fertility preferences, a feature that distinguishes it from other fertility related measures such as the Contraceptive Prevalence Rate (CPR). At the heart of the concept is the prevention of unintended pregnancy among women who want to avoid pregnancy[24]. The Demographic and Health Surveys (DHS) Program has been collecting data with which to calculate unmet need for family planning since the first phase of survey implementation (1984-89). The DHS program has been collecting data on adolescents and youth for more than three decades. An increasing number of surveys now interview both married and unmarried women alike, facilitating measurement of unmet need for both populations. Young women, particularly unmarried women, may disproportionately experience unmet need for family planning due to their unique fertility preferences associated with this stage of the life course. Alternately, they may experience higher levels of unmet need where they lack full knowledge of their options, access to services is lacking (particularly those designed for young people or for spacing needs generally), or where programs underestimate needs of youth[19].

In 2017, over one quarter of pregnancies in Kaduna State, northern Nigeria, were unintended, resulting in pregnancies that occur at too young or old a maternal age, high parity,

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pregnancies that are too closely spaced, and unsafe abortions. Such pregnancies pose a greater-than-average health risk and are key drivers of maternal, new-born and child morbidity and mortality. Low contraceptive uptake and unmet need for family planning in Kaduna, as well as women's lack of empowerment to make fertility decisions, compromise reproductive rights and their ability to determine freely the number and timing of their children, and their access to good quality information and services, free from discrimination or coercion[25].

2.1.6. Benefits of Family Planning

The reproductive choices made by young women and men have an enormous impact on their health, schooling, employment prospects and overall transition to adulthood. Effective contraception uptake helps in controlling rapid population growth. Unsustainable Population growth rates are slowed down to match the available resources. This helps achieve environmental sustainability and economic growth both regionally and nationally[26]. Family planning offers numerous benefits that contribute to healthier lives, empowered individuals, and stronger communities. By enabling individuals and couples to make informed choices about when to have children and how many to have, family planning promotes physical well-being, emotional stability, economic prosperity, and the overall advancement of societies. This vital practice not only fosters individual autonomy but also paves the way for a more sustainable and equitable future for generations to come[27].

Family planning reduces health risks to women and gives them more control over their reproductive lives. With better health and greater control over their lives, families with fewer children are often able to send those children to school so girls get a chance to attain a higher

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education, and as an outcome, the age of their first marriage is often later and their years of fertility reduced. They also benefit from being an employee[25].

Health Benefits to Mothers

Contraceptive use reduces maternal mortality and improves women's health by preventing unwanted and high-risk pregnancies and reducing the need for unsafe abortions. Some contraceptives also improve women's health by reducing the likelihood of disease transmission and protecting against certain cancers and health problems. Family planning helps mothers avoid pregnancy when they are vulnerable because of their youth or old age[28]. The risk of having pregnancy-induced hypertension (high blood pressure) is much higher in younger mothers. On the other hand, older mothers, who have given birth to 5 or more children, have a tendency to uterine rupture during labour, which can cause severe vaginal bleeding and shock.

In places where emergency obstetric care facilities are lacking, these two consequences of age have been leading causes of maternal deaths. Once the desired number of children has been achieved, a woman can avoid further pregnancy by using family planning methods. Pregnancy/ birth equal to or higher than, five can have greater risk for the mother. The risk of dying from multiparity (giving birth more than once) increases for a woman, her risk is 1.5 to 3 times higher than those who have given birth to two to three children. Most abortions result from unwanted pregnancy, and significant numbers of maternal deaths can be attributed to unsafe abortion induced by untrained practitioners. In Nigeria, abortion is one of the leading causes of maternal death. Family planning helps mothers prevent such unwanted pregnancies and promotes gender equality[29].

Health Benefits to Children

Young children and infants are especially vulnerable. Protection from disease, malnutrition, and polluted air are critical to ensure their good health in the early years of life. Provision of hygienic conditions, access to adult care and attention, adequate nutrition, and eventually education enables a healthy child to develop his or her potentials. Family planning offers a multitude of advantages for children by, fostering healthier lives, improved opportunities, and brighter futures. It helps in decreased fatality, adequate housing, clothing, and education are provided, It increases self-worth because of solid parental training, decrease the number of delinquent acts, The parental attention and support that one receives helps one maintain emotional stability. Reduce young people's dangerous conduct, such as teenage pregnancy.

Benefits to the Family

A family may face constraints on resources when a new member is added. These constraints may be looser in richer countries. However, for a family with multiple children in a poorer country, the constraints can challenge the family budget so that limited food, health care, space and education must be shared by even more people. When children are spaced out there is the opportunity for the mother's health to recover, for the family circumstance to improve, and for the child to become more self-sufficient before possible arrival of a sibling. The child also benefits from increased parental attention and training[25].

Benefits to the Community/National Level

The necessity to put in place control measures to keep the country's population growth in check and manage population growth for the benefit of all cannot be overemphasized. One

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way of managing population is the adoption of family planning (FP), which also prevents maternal and child mortality. Family planning has the ability to prevent up to a third of maternal deaths and the survival of newborns. Hence, ensuring access to FP is not only a matter of human rights, but can also play a key role in protecting the lives of mothers and children; not discounting the management of population explosion to prevent demographic disaster[30].

Family planning helps in reducing poverty by contributing to economic growth at the family, community and national levels. When girls have access to family planning, they are able to stay in school, pursue economic opportunities, and reach their fullest potential. These girls, and their children when they're ready, are healthier and more resilient in the face of economic stress, Within a family, the number of children and the ability of the parents to effectively provide for said children is one of the factors that determine the financial and economic status of that family (if that family ends up having more children than they can provide for because of a lack of family planning, they will be forced to live from mouth to mouth and barely get by, which is essentially what poverty is all about. But if they plan for the number of children to have, they are more likely to choose the number they can confidently provide for. This is likely to improve the family's financial status[31].

Therefore, family planning emerges as a transformative force, cultivating healthier lives, empowering individuals, and fortifying the foundation of thriving societies. Its ripple effects, from improved health and economic stability to gender equality and sustainable development, underscore its undeniable significance in shaping a more prosperous and harmonious world for generations to come.

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2.1.7 Factors Influencing Use of Family Planning

Use of family planning services is influenced by the perceived likelihood and appeal of pregnancy, and relationship status. It is influenced by women's knowledge, beliefs, and perceptions of side effects and health risks. Male partners have a strong influence, as do peers' views and experiences, and families' expectations. Contraceptive use also depends upon their availability, the accessibility, confidentiality and costs of health services, and attitudes, behaviour and skills of health practitioners[32]. Family planning being acknowledged as an important intention towards achieving Millennium Development Goals (MDGs), although most people are aware of benefit of family planning service but many factors may influence the use of the service. Family planning has also been found to promote gender equality as well as promote educational and economic empowerment for women. Despite the enormous benefits of family planning services, the uptake of the service still remains low in Sub-Saharan Africa[33]. The utilization of family planning services is influenced by a complex interplay of individual, cultural, socio-economic and systemic factors. These dynamics shape people's choices regarding family planning methods and their overall access to reproductive health services. Understanding these factors is crucial for designing effective interventions and strategies to promote family planning uptake.

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2.1.8 Male Involvement in Family Planning

Male involvement in family planning refers to all organizational activities aimed at men as a discrete group which has the objective of increasing the acceptability and prevalence of the family-planning (FP) practice of either sex[34]. Men's involvement to family planning programs is recognized as a way to achieve optimal women's reproductive health outcomes, improve couple communication, relationships, and childcare and reduce the contraceptive load for women. Male involvement is an important area among reproductive health programme, policy making, and population research for the overall reproductive well-being of the couple[35]. Male involvement in family planning is one of the strategies that were embraced in the International Conference on Population and Development (ICPD) meeting held in Cairo 1994 to help reduce the increasing population in Africa and elsewhere in the world[36]. There is a global recognition of the importance of involving men in family planning and reproductive health matters in order to achieve the Sustainable Development Goals (SDGs), including reducing maternal mortality, the participation of men in reproductive health issues, including family planning is essential. Low male participation in family planning is considered as one of the obstacles to quality reproductive health care delivery. Men's fertility preference plays a major role in men's perception of the importance of family planning and the need for reproductive health services.

The role of men in the utilization of family planning services among women is increasingly being recognized globally. This is because male involvement in family planning services could help in increasing the uptake of contraceptives and enhance their effective use and continuation through spousal communication. However, women have been the primary beneficiaries of family planning services whilst men have often been considered silent partners. In recent study in Zambia, shows that the government has invested heavily by

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providing family planning programmes that aimed at reducing fertility rates by improving knowledge about birth control methods and access to contraceptives for men and as a result, family planning utilization increased from 15% in 1992 to 50% in 2018[37]. Male engagement has historically been depicted as obstructive by impeding women's decision-making on use of family planning, or non-existent among male partners who are absent altogether due to lack of interest in matters related to reproductive health. However, at the same time, men dominate decision-making regarding family size and their partner's use of contraceptive methods in many traditionally patriarchal settings. Women point to their male partner's resistance to family planning as a significant barrier to uptake and continuation, resulting in decisions to use contraceptive methods covertly or not at all. Fear of spousal retaliation due to disagreements about whether to use contraception has also been shown to be a significant barrier among women. This seemingly contradictory role among men of being both key decision-makers regarding fertility desires and remaining detached from reproductive health issues has posed considerable challenges in African contexts to involve men to address low contraceptive prevalence rates.

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While family planning services have traditionally targeted women, there is growing recognition that reproductive health is the joint responsibility of men and women. Given that men often have significant influences on a couple's contraceptive use, pilot programs to engage men have focused on increasing knowledge, enhancing spousal communication, and de-stigmatizing use of family planning methods. Renewed interests in involving men stem not only from women's reproductive health needs, but also to address men's own sexual health concerns, as well as efforts to achieve the Millennium Development Goals (MDGs) for reduction of maternal mortality and HIV transmission. Use of modern contraception and

family planning services is integral in the prevention of unwanted pregnancy, reduction of unsafe abortions, and promotion of childbirth spacing to lower maternal and child mortality risks in developing countries. Family planning also promotes gender equity and greater educational and economic opportunities for women. Several small-scale initiatives aiming to include men in reproductive health programs have had positive experiences, but in-depth understanding of the rationale for men's low participation has been underexplored. This is urgently needed in the development and scale-up of evidence-based male-involvement family planning interventions.

Knowledge about contraception can vary and can influence its use by men. Several factors that can influence the use of contraception in men include a lack of knowledge about available contraceptive methods, concerns about the side effects of using contraceptive methods, and support provided by partners as a basis for confidence in the safety of contraceptive use. There is a significant relationship between education and men's participation in using contraception. This can be explained by the fact that education influences the use of contraception in men. Studies show that men with higher education use more contraception, while men with lower education are less likely to use contraception with a probability of 12,571[38].

2.1.9 Lactational Amenorrhea Method (LAM)

The Lactational Amenorrhea Method (LAM) is a modern and temporary contraceptive method that is based on the natural infertility that results from breastfeeding. It is a contraceptive method available and accessible to many women. LAM was defined during the 1988 Bellagio Consensus Conference in Italy as the informed use of breastfeeding as a

contraceptive method by a woman who is still amenorrheic and does not feed her baby with supplements for up to six months after delivery. LAM is a transitional form of contraception and is most effective in women planning to breastfeed exclusively in women planning to breastfeed exclusively during the first six months[39].

LAM, is part of the World Health Organization's (WHO) list of accepted and effective methods of family planning, which has been widely accepted as a natural family planning method that demands no abstinence. It is used as an introductory method for the postpartum period for the breastfeeding woman who hesitates to use a hormonal or chemical method. It has the added benefit of encouraging optimal breastfeeding behaviour, providing support for the health of the mother and the child[6]. The Lactational Amenorrhea Method (LAM) is a highly efficient tool for the individual woman to utilize physiology to space births. For Lactational Amenorrhea Method to work, it has been suggested that that:

1. The baby must be under six months of age.
2. The mother must not have had a period.
3. The baby must be exclusively breastfed i.e. no added supplementation should be done, even during night.

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Further, which it has been suggested that for best utilization of this opportunity as a method of contraception the mother must breastfeed her baby at least every four hours during day time and at least every six hours during night[40]. In pursuance to the World Health Organization, the effectiveness of this LAM contraception reaches 98% for mothers who breastfeed exclusively during the first 6 months postpartum and before menstruation after childbirth[41]. When used properly, LAM can be a valuable family planning tool, particularly

in low-income countries; however, the degree to which LAM is used correctly and characteristics associated with its use have not been well documented.

The correct use of LAM provides an effective and affordable contraceptive option for breastfeeding women, while also providing an opportunity for linkage and transition of mothers to other FP methods and services. Furthermore, LAM use does not require replenishment of contraceptive supplies or a healthcare provider after appropriate LAM counseling is given. Therefore, LAM can play an important role in preventing unwanted pregnancies during the postpartum period and consequently maternal deaths[42]. Exclusive breastfeeding should be distinguished from "full breastfeeding" because providing the infant too much water can render LAM ineffective. When women exclusively breastfeed, LAM is an effective family planning option. LAM stands as a unique and natural contraceptive option that leverages the temporary infertility associated with exclusive breastfeeding. By taking advantage of the body's physiological response to nursing, LAM offers a potential means of birth control for women who meet its specific criteria. As a method rooted in biology, LAM aligns with the principle of working with the body's natural rhythms to prevent unintended pregnancies[35]. However, it's important to recognize that LAM's effectiveness depends on strict adherence to its conditions, including exclusive breastfeeding, frequent nursing, and the absence of menstruation. While LAM can provide a valuable option for postpartum women, its reliability diminishes as breastfeeding patterns change and fertility gradually returns. Therefore, for individuals seeking long-term, consistent contraception, combining LAM with other methods or transitioning to a more reliable form of birth control may be necessary.

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As with any contraceptive method, comprehensive education and awareness are paramount. Healthcare providers should ensure that women are well-informed about LAM's criteria and limitations, allowing them to make informed decisions that align with their reproductive goals. LAM's cultural, societal, and individual relevance can influence its adoption, and its integration into family planning programs can empower women with another tool to manage their reproductive health[36]. Incorporating LAM into a broader range of contraceptive options acknowledges the diversity of women's needs and the complex interplay of biological, social, and cultural factors that shape their reproductive choices. While LAM may not be a standalone solution for all women, it contributes to the spectrum of choices available, fostering reproductive autonomy and enabling women to make decisions that best align with their unique circumstances and aspirations[37].

2.1.10. Breastfeeding

Breastfeeding as a natural contraceptive practice of women in developing countries is a critical determinant of child survival, maternal reproductive health, and population growth rates. Children not breastfed at all are exposed to the risk of early death from diarrhea, respiratory disease, and other common childhood illnesses compared with children who are exclusively breastfed[43]. Breastfeeding is the optimal way of providing the required nutrients for infants for healthy growth and development. W.H.O recommends that breastfeeding should be initiated within the first four (4) hours after birth and continued exclusive at six (6) months and adequate social and nutritional support to lactating mother is crucial to improve breastfeeding outcome[44].

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In Nigeria, breastfeeding has always been vital and its natural anti-infective properties and ideal nutritional characteristics have facilitated infant survival. The natural contraceptive effect of breastfeeding has also enabled infant survival by delaying subsequent pregnancy long enough to allow an infant to be nourished. The period of breastfeeding in traditional Nigerian communities were generally characterized by abstinence from sexual relations, which also had an important child-spacing effect. The duration and frequency of breastfeeding is an important predictor of the effectiveness of lactation as a contraceptive[45].

2.1.11 Exclusive breastfeeding

Exclusive breastfeeding (EBF) refers to providing the new-born infant no liquid (not even water) or solid foods except breast milk. The WHO and other health authorities recommend EBF for at least six months Increasing the promotion of EBF is one of the most efficient approaches to reduce infant morbidity and mortality globally[46]. Breast milk is usually the first source of nutrition for a new-born, Infants when exclusively breastfed for the optimal duration of six months it serves as an essential factor for the proper growth and development during the first six months of infants' life and helps infants to adapt to their extra-uterine environment and are significantly protected against the major childhood diseases conditions such as diarrhea, gastrointestinal tract infection, allergic diseases, diabetes, obesity, childhood leukemia and lymphoma, inflammatory and bowel disease. In particular, the risk of hospitalization for lower respiratory tract infections during the first year of life is reduced by 72% when infants are exclusively breastfed for more than 4 months. Mothers who exclusively breastfeed their children also enjoy an advantage of prolong Lactational Amenorrhea. The risk of breast and ovarian cancer among breastfeeding women is also lower than those who use infant formula[47].

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Exclusive Breastfeeding (EBF) is viewed as being beneficial globally. Following its nutritious nature, it promotes growth and development of the infant, and protecting them from contracting infections. Alongside being beneficial to the infant, Breastfeeding is useful to the mother as it is associated with increased uterine involution, fastening the healing of the uterus post-delivery. Its ability to alter the hormonal balance makes it appropriate and acceptable globally for use as a contraceptive method[48]. This is usually common as Lactational Amenorrhea method of contraception. Within the contraceptive imperatives, the use of exclusive breastfeeding, as a birth control method (Lactational Amenorrhea Method (LAM)) has been relatively low globally. The National Demographic and Health Survey (NDHS) in 2017 reported only about 5% LAM usage globally, in spite the widespread prevalence of the knowledge of exclusive breastfeeding (97%). A few women use the Lactational Amenorrhea Method (LAM), which is disheartening given that 97% of mothers exclusively breastfeed their infants for sustenance. The fact that the rate of exclusive breastfeeding decreased from 17% in 2003 to 13% in 2008 further aggravates the problem. The main issue is why moms do not use exclusive nursing as contraception despite its many health benefits. The worldwide practice of exclusive breastfeeding is influenced by several factors including the maternal knowledge (awareness), and perception[49].

2.1.12 Maternal Awareness on Exclusive Breastfeeding

Maternal Awareness on the exclusive breastfeeding, and its recommendation for a period of six completed months, acts as an independent positive predictor of breastfeeding initiation and duration. In a study to examine the level of awareness of pregnant and lactating mothers on exclusive breastfeeding, a systematic review of peer-reviewed literature from the online databases, based on the study's findings, mothers with a high degree of awareness about the

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benefits of exclusive breastfeeding know that only breast milk, especially in the first six months after delivery, is essential for a baby's nourishment. From the study, it is clear that awareness is an important factor influencing the prevalence of exclusive breastfeeding. It is evident that most mothers in this study had knowledge deficit on the duration of feeding, dangers of bottle-feeding, and the benefits of breastfeeding to both the mother and the baby[50].

Exclusive breastfeeding is defined as the process whereby the infant is given the breast milk by the mother or a wet nurse. This can also be given through expressing the nipple to the mouth of the infant to give the breast milk. Studies highlight that the infant should not be given any liquids or solids, with an exception of drops and syrups of medicines, minerals, supplements, or vitamins. This follows the fact that breastfeeding is the natural source of food serving for a complete nutrition for the infant during the first six months of life. Breast milk contains all the necessary nutritional supplements needed for growth and development of the infant, provided in all bio-available forms[51]. From a study which was conducted in Ethiopia, it is shown that the prevalence of exclusive breastfeeding in Ethiopia is low. The main reason for this may be due to limited information and awareness on the benefits associated with Exclusive Breastfeeding for these mothers. The study recommended that adequate information should be imparted to the mothers on the basis of Exclusive breastfeeding, while also highlighting some of the factors which are likely to influence the practice of Exclusive Breastfeeding. Based on the community-based cross-sectional study conducted in Burao district in Somaliland, where 464 mothers were directly interviewed, it was realized that the prevalence of Exclusive breastfeeding was very low, accumulating to only 20.47%. This study also unveiled that Exclusive breastfeeding is influenced by several factors including; having a female infant, lack of formal education, monthly income, lack of

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family support, especially from the husband, and availability of maternal education on exclusive breastfeeding during antenatal visits. This study recommended promotion of formal education for women based on the exclusive breastfeeding, enhancing husband's engagement, encouraging the mother to have antenatal care follow-ups, and provision of exclusive breastfeeding counseling to the mother during antenatal clinic visits. The study also projected a need to have exclusive breastfeeding prevalence to reach 50% globally by 2025, from the then 40%. The basis of this study was the dominant low exclusive breastfeeding practices, recorded especially in the developing countries[52]. In a study to examine and describe exclusive breastfeeding practices in the rural settings, especially the coastal regions of Tanzania, a cross-sectional study was carried involving 342 mothers with children aged between 6-23 months. From this study, up to 30% of the mothers reported having breastfed their infants exclusively for up to at least six months. Those who reported not practicing complete exclusive breastfeeding complained of insufficient milk production as the main reason. The study reported that the rate of exclusive breastfeeding in the rural areas, as seen in the coastal regions of Tanzania, is still very low. This is influenced by lack of proper and quality maternal education on the benefits of exclusive breastfeeding. It is recommended therefore, that the programs to promote exclusive breastfeeding in rural areas should be prioritized, emphasizing a multifactorial consideration[53].

2.1.13 Maternal Perception on Exclusive Breastfeeding

Maternal perception on exclusive breastfeeding is another major factor influencing the practice of exclusive breastfeeding as recommended. The perception is built especially when the mothers are provided with the right and adequate information on the benefits of exclusive breastfeeding during the antenatal clinic visits. In a study to examine the perception and

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practices of exclusive breastfeeding, a cross-sectional study was carried out on 188 mothers, using a well-structured questionnaire. This study showed that the more the mothers are informed of the benefits of exclusive breastfeeding, the more they practice it[54]. More emphasis should therefore be made on providing quality education to the mothers during their antenatal clinic visits, as a way of boosting their perception on exclusive breastfeeding. This is the most probable way to boost the practice of exclusive breastfeeding. Based on the research, the perception of the mother on the milk production has a major impact on the practice of exclusive breastfeeding. The study cites maternal perception on insufficient milk production as the major reason that engineered the introduction of complementary food for infants. The insufficient breast milk production is also projected as the main factor influencing early breastfeeding cessation for most of the mothers. The study also showed a strong connection between maternal perception of the impacts of exclusive breastfeeding on mother's health, physical appearance, and ability to engage in other, and premature exclusive breastfeeding cessation[54]. Similarly, a study on factors influencing the exclusive breastfeeding practice recommendation of WHO, recorded that the maternal perception of insufficient breast milk production, has been attributed to poor practices of exclusive breastfeeding. More efforts should therefore be directed to addressing these beliefs, so as to effectively promote exclusive breastfeeding practices[52].

2.1.14 Factors Influencing Maternal Awareness and Perception of Exclusive Breastfeeding as a Birth Control Method

Studies shows that factors influencing the actualization of WHO breastfeeding recommendations in poor urban settings in Kenya included a lack of knowledge about breastfeeding benefits, inadequate support from family and healthcare providers,

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misconceptions about breastfeeding, and challenges in the work environment. The study emphasized the importance of breastfeeding counseling and support in promoting exclusive breastfeeding practices. The study highlights the importance of addressing these factors to promote optimal breastfeeding practices in urban poor settings. In a study to explore the factors influencing the maternal decision on exclusive breastfeeding, it found that these factors included personal beliefs and attitudes towards breastfeeding, social and cultural norms, maternal employment, access to support networks, and the influence of healthcare providers[55]. The study highlighted the need to address these factors to support and promote exclusive breastfeeding among women. The findings suggest that maternal decision-making is complex and influenced by multiple interrelated factors. Understanding these factors is crucial for developing effective interventions and support systems to promote optimal infant feeding practices[55]. Studies have investigated that the maternal factors that influence exclusive breastfeeding practices during the first six months of infant life in the Sudair and Al Zulfi areas of Saudi Arabia. The study utilized a cross-sectional design and collected data through structured interviews with 500 mothers who had infants aged 6 to 12 months. The findings revealed that maternal factors influencing exclusive breastfeeding practices in the Sudair and Al Zulfi areas of Saudi Arabia included maternal age, education, occupation, parity, and knowledge about breastfeeding. Younger, more educated, and unemployed mothers were more likely to engage in exclusive breastfeeding, along with mothers with higher knowledge about breastfeeding and its benefits. The study emphasizes the need for targeted interventions that address these factors to enhance exclusive breastfeeding rates in the Saudi Arabian context[56].

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2.2 Theoretical Framework

This study employs the use of four theories for a better understanding of the subject matter, namely; Kristin Lukers Theory of Contraceptive Risk Taking propounded by Kristin Lukers in 1977, Health Belief Model, Social Cognitive Theory, and Theory of Planned Behaviour.

2.2.1 Kristin Luker's Theory of Contraceptive Risk Taking

This theory was formulated in 1977, the theory argued that the utilities of contraception and pregnancy would be cognitively added to form a "risk taking set", an attitudinal set that serves as a direct cause of the risk taking decision. Luker's (1977), formulated the theory of contraceptive risk taking which described women's decision to use contraceptive as a four step process; assignment of utilities to contraceptive use (cost and benefit of contraceptive use), assignment of utilities to pregnancy (cost and benefits of pregnancy), assignment of probabilities of becoming pregnant (perceived susceptibility) and assignment of probability to reversibility of pregnancy (perceptions of abortion)[57]. Luker's drew her theory from relatively unstructured interview with a small sample of contraceptive risk takers. In her theory, it provides an intuitively, plausible and politically acceptable explanation for contraceptive behaviour. The theory heavily relies on the assumption that individuals and couples are acting rationally to when faced with the decision to use contraceptive. Luker's argued that competing perception of the meaning of contraception and unwanted pregnancy/abortion are held by women and medical institutions. She argued that the institutions assumed that the most significant cost of (hetero) sex in unplanned pregnancy/abortion, so medical institutions minimizes the cost of contraception and

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stigmatizes women who refuse to bear these costs as either “ignorant” or “self destructive and irrational”[57].

The central argument of Luker’s theory is that when contraception is situated within the lived context of its use, its non-use becomes an entirely rational act. The theory argued that risk taking behaviour which ends in an unwanted pregnancy is the result of a rational decision making chain produced by a person who is acting in what he or she perceive to be his or her best interest. However, this theory says; to obtain and make use of contraceptives involves the cost of acknowledging to oneself and others (often health professionals) that one is planning to be sexually active. In the view of this theory, the immediate costs of contraception “unplanned pregnancy or abortion” represents an unknown future cost which may be “discounted” or may in some cases be viewed as a benefit (an opportunity to test male partners commitment)[58].

Luker’s theory of contraceptive is relevant to this work because LAM is a contraceptive technique which involves a risk taking decision making process. The Luker’s theory also has its own limitations and weaknesses which includes the fact that it replicates an important aspect of the institutional discourse which it sets of to critique. The medicalization of techniques of fertility control is grounded in a socially specific construct of human subjectivity in the case of techniques of fertility control, medical institutions view self interest as maximized when women have control over the timing of conception. Luker’s theory therefore agrees with institutional logics concerning the forms of human agency which it is possible to exert in relation to techniques of fertility control[59].

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2.2.2 Social Cognitive Theory

This theory was developed by Albert Bandura in 1977 to emphasize the role of observation and cognitive factors in learning, understanding and predicting behaviour. Social Cognitive Theory (SCT) started as the Social Learning Theory (SLT) in the 1960s by Albert Bandura. This theory is based on the idea that we learn from our interactions with others in a social context separately, by observing the behaviour of others, people assimilate and imitate that behaviour, especially if their observational experience are positive ones or includes rewards related to the observed behaviour. It is a learning theory which comes out of the ideas that people learn by watching what others do, and that human thought processes are central to understanding personality[60].

By the mid-1980s, Bandura's research had taken a more holistic bent, and his analyses tended towards giving a more comprehensive overview of human cognition in the context of social learning. The theory he expanded from social learning theory soon became known as social cognitive theory. This theory provides a framework for understanding, predicting and changing human behaviour[61]. The core concepts of this theory are explained by Bandura through a schematization of triadic reciprocal causation. The schema shows how the reproduction of an observed behaviour is influenced by getting the learner to believe in his or her personal abilities to correctly complete a behaviour[62].

1. **Behavioural:** The response an individual receives after they perform a behaviour (i.e. Provide chances for the learner to experience successful learning as a result of performing the behaviour correctly).

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2. **Environmental**: Aspects of the environment or setting that influence the individual's ability to successfully complete a behaviour (i.e. Make environmental conditions conducive for improved self-efficacy by providing appropriate support and materials).

This theory describes the influence of individuals experience, the actions of others and environmental factor. It provides opportunities for social support through instilling expectations, self efficacy and using observational learning and other reinforcements to achieve behavioural change[60]. The key components of the social cognitive theory (SCT) related to individual behaviour change includes:

1. **Self Efficacy**: it is the belief that an individual has control over and is able to execute behaviour. Self-efficacy in the Bandura's theory introduced context of an explanatory model of human behaviour, in which self-efficacy causally influences expected outcomes of behaviour, but not vice versa. Self-efficacy beliefs exert their diverse effects through cognitive, motivational, emotional, and decisional processes. Efficacy beliefs affect whether individuals think optimistically or pessimistically, in self-enhancing or self-debilitating ways[61]. They play a central role in the self-regulation of motivation through goal challenges and outcome expectations. On this regard self efficacy lies at the center of SCLT and shows that beliefs about one's ability or capacity to execute a behaviour successfully. A woman's belief in her ability to successfully use LAM is crucial. If she feels confident in her understanding of the method's requirements, her ability to track her baby's feeding patterns, and her ability to follow the guidelines for optimal effectiveness, she is more likely to use LAM consistently and effectively[63].

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2. **Behavioural Capability:** Behavioural capability meanwhile refers to a person's ability to perform a behaviour by means of using their own knowledge and skills, i.e. in order to carry out any behaviour, a person must know what to do and how to do it. People learn from the consequences of their behaviour, further affecting the environment in which they live. Women are more likely to adopt LAM if they perceive positive outcomes from their observations. If they witness other women who have effectively prevented pregnancy using LAM and have positive experiences with it, they may be more motivated to try it themselves[62].
3. **Reinforcements:** Reinforcements refer to the internal or external responses to a person's behaviour that affect the likelihood of continuing or discontinuing the behaviour. These reinforcements can be self-initiated or in one's environment, and either positive or negative. Positive reinforcements increase the likelihood of a behaviour being repeated, while negative reinforces decrease the likelihood of a behaviour being repeated. Reinforcements can also be either direct or indirect. Direct reinforcements are an immediate consequence of a behaviour that affects its likelihood, such as getting a paycheck for working (positive reinforcement). Indirect reinforcements are not immediate consequences of behaviour but may affect its likelihood in the future, such as studying hard in school to get into a good college (positive reinforcement)[60,61].
4. **Observational Learning**: A central concept in Social Cognitive Theory is observational learning, where individuals acquire new behaviours by watching and imitating others. Bandura believed that this process involves attention, retention, reproduction, and motivation. Individuals pay attention to the model's behaviour,

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remember it, are able to reproduce it, and are motivated to do so base on the perceived rewards or punishments associated with the behaviour. Bandura agreed with the behaviourist that behaviour is learned through experience however he proposed a different mechanism than conditioning. This theory focuses not only on the behaviour itself but also on the mental processes involved in learning so it is not a pure behaviourist theory. A woman might learn about LAM through observing other mothers successfully using it[63]. If she sees her friends, family members, or healthcare providers discussing the method's effectiveness and benefits, she may be more inclined to consider it as a viable contraceptive option.

5. **Reciprocal Determinism**: Bandura emphasized the bidirectional relationship between an individual's behaviour, their cognitive processes (thoughts and beliefs), and their environment. This concept suggests that people's behaviours can influence their environment just as their environment can influence their behaviours and cognitive processes[48.] This dynamic interaction plays a role in shaping behaviour and development. The decision to use LAM can be influenced by a woman's personal beliefs, her interactions with healthcare providers, and her social environment. If her partner, family, or friends are supportive of LAM and believe in its effectiveness, this could positively impact her decision to use the method.
6. **Self-Regulation**: Social Cognitive Theory also focuses on self-regulation, which involves monitoring and controlling one's own behaviour, emotions, and cognitive processes. Bandura argued that individuals are not passive recipients of external influences but are active agents in shaping their own lives. Successfully using LAM requires self-regulation skills, such as monitoring the baby's feeding patterns and

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adhering to the guidelines for optimal contraception. A woman who is motivated to use LAM effectively may engage in self-regulatory behaviours to ensure that she follows the method correctly.

7. **Outcome Expectancies**: Outcome expectancies refer to an individual's anticipation of the outcomes or consequences of their actions. These expectations play a role in decision-making and behaviour. Positive outcome expectancies increase the likelihood of engaging in a behaviour, while negative outcome expectancies may deter it. The anticipated outcomes of using LAM can influence a woman's decision. If she believes that using LAM will provide effective contraception without the need for additional methods, she may be more likely to choose it, especially if she values natural and non-hormonal approaches.

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SCT is a powerful theoretical framework for understanding the intricate interplay between environmental factor, human behaviour and cognitive processes. SCT encompasses several related theories such as the Social Learning Theory (SLT) which emphasizes the role of observed behaviour in shaping our actions, and self –efficacy theory which is a key component of the social cognitive theory of personality. Based on SCT, an individual learn from observing others and environmental factors significantly impact human behaviour. This is illustrated by the concept of reciprocal determinism, which says that an individual, their environment and their behaviour all influence one another in a dynamic feedback loop. Social cognitive theory provides valuable insights into how people perceive and interprets their environment which in turn shapes their behaviour[64]. By applying SCT, we gain a deeper understanding of the intricate mechanism that drives human behaviour and social interactions. The social cognitive theory views people as active agents who both influence and are

influenced by their environment. The theory is built around observational learning and process of learning desirable and undesirable behaviour by observing others. Bandura says that observational learning occurs through a sequence of four processes[65]:

1. **Attention:** The individual needs to pay attention to the behaviour and its consequences and form a mental representation of the behaviour. Some of the things that influence attention involve characteristics of the model. This means that the model must be salient, or noticeable. If the model is attractive, or prestigious, or appears to be particularly competent, you will pay more attention. And if the model seems more like yourself, you pay more attention[66].
2. **Retention:** Storing the observed behaviour where it can stay for a long period of time. Imitation is not always immediate. This process is often mediated by symbols. Symbols are "anything that stands for something else". They can be words, pictures, or even gestures. In order for symbols to be effective, they must be related to the behaviour being learned and must be understood by the observer[64].
3. **Motor Reproduction:** The individual must be able (have the ability and skills) to physically reproduce the observed behaviour. This means that the behaviour must be within their capability. If it is not, they will not be able to learn it.
4. **Motivation:** The observer must be motivated to perform the behaviour. This motivation can come from a variety of sources, such as a desire to achieve a goal or avoid punishment. Bandura (1977) proposed that motivation has three main components: expectancy, value, and affective reaction. Firstly, expectancy refers to the belief that one can successfully perform the behaviour. Secondly, value refers to the importance of the goal that the behaviour is meant to achieve. Lastly, Affective

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reaction refers to the emotions associated with the behaviour. If behaviour is associated with positive emotions, it is more likely to be learned than a behaviour associated with negative emotions. Reinforcement and punishment each play an important role in motivation[65].

Applying Bandura's Social Cognitive Theory to contraceptive behaviour, young women's contraceptive behaviour is understood to depend pivotally on self-efficacy for contraception. Self-efficacy is "the conviction that one can successfully execute the behaviour required to produce the outcome" and is measured by understanding people's confidence in overcoming progressively difficult barriers to the successful achievement of a particular behaviour[67].

The major strength of this theory is that it considers all aspect of the human intellect, behaviour and environment. It also deems motivation, self-efficacy and how individuals work towards achieving their goals along with rewards and punishments. It emphasizes on self-regulation and learning, and also serves as a framework for understanding the study because its provision accommodates most of the factors that are relevant in the analysis of LAM as a contraceptive method especially in terms of the learning process, the individuals past experience, the role of the environment in developing health behaviour[68].

This theory has been criticized because the theory is so broad that not all of its component parts are fully understood and integrated into a single explanation of learning. The findings associated with this theory are still, for the most part, preliminary. The theory is limited in that not all social learning can be directly observed. Because of this, it can be difficult to quantify the effect that social cognition has on development[63].

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2.2.3 Health Belief Model

Health belief model is a social psychological health behaviour change model developed to explain and predict health related behaviours particularly in regards to the uptake of health services. It was developed in 1950s by social psychologist; Godfrey M. Hochbaum, Irwin M. Rosenstock and others who were working in the US Public Health Service to explain the failure of people participating in programs to prevent and detect disease[69]. The health belief model states that people's belief influences their health related actions/behaviours. It is concerned about what people perceive, or belief to be true about themselves in relations to their health. The health belief model states that people's belief influences their health related actions and behaviours. It states that the individual will likely take action when experiencing a personal threat or risk but only if the benefits of taking action outweigh the barriers whether real or perceived[70]. The HBM predicts that specific health behaviour is more or less likely based on an individual's perception of disease severity.

The HBM's adaptability and holistic nature facilitate applications in diverse contexts like family planning and with complex behaviours like contraceptive behaviour. Family planning is a dynamic and complex set of services, programs and behaviours towards regulating the number and spacing of children within a family[71]. Contraceptive behaviour, which is also a form of family planning, refers to activities involved in the process of identifying and using a contraceptive method to prevent pregnancy. Contraceptive behaviour, viewed through the HBM, is motivated by an individual's desire to avoid pregnancy and value placed on not becoming pregnant, nonspecific, stable differences in pregnancy motivations and childbearing desires, perceived ability to control fertility and reduce the threat of pregnancy

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by using contraception[72]. Sufficient motivation must exist to make prevention of pregnancy salient and relevant and to support the contraceptive behaviour decision-making process

The HBM is based on six key constructs

1. **Perceived Susceptibility**: Perceived susceptibility refers to subjective assessment of risk of developing a health problem. The HBM predicts that individuals who perceive that they are susceptible to a particular health problem will engage in behaviours to reduce their risk of developing the health problem. Perceived susceptibility and seriousness of an unwanted pregnancy and its sequel (i.e. birth, abortion, and parenthood) provides the incentive to use contraception[70]. This construct considers personal feelings of the seriousness of becoming pregnant, based upon subjective assessment of medical and social consequences of pregnancy and childbearing. This construct may include factors like fear of body changes or pregnancy complications, or worry of quitting school or losing a job due to increased child-rearing responsibility, which can impact the likelihood of contraceptive use.
2. **Perceived severity**: Perceived severity refers to the subjective assessment of the severity of a health problem and its potential consequences. The HBM proposes that individuals who perceive a given health problem as serious are more likely to engage in behaviours to prevent the health problem from occurring (or reduce its severity). If a woman perceives an unintended pregnancy as having severe physical, emotional, or social consequences, she may be more inclined to consider and use contraceptive methods, including LAM, to prevent such outcomes[69].

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3. **Perceived Benefits:** Health-related behaviours are also influenced by the perceived benefits of taking action. Perceived benefits refer to an individual's assessment of the value or efficacy of engaging in a health-promoting behaviour to decrease risk of disease. If an individual believes that a particular action will reduce susceptibility to a health problem or decrease its seriousness, then he or she is likely to engage in that behaviour regardless of objective facts regarding the effectiveness of the action. It is the perceived effectiveness, feasibility and other advantages of using a contraceptive method to prevent pregnancy, the perceived benefits of using LAM involve a woman's evaluation of how effective and advantageous the method is in preventing pregnancy. If she believes that LAM is a reliable and convenient method for contraceptive protection during the postpartum period, she may be more motivated to adopt it[73].
4. **Perceived Barriers** Health-related behaviours are also a function of perceived barriers to taking action. Perceived barriers refer to an individual's assessment of the obstacles to behaviour change. Even if an individual perceives a health condition as threatening and believes that a particular action will effectively reduce the threat, barriers may prevent engagement in the health-promoting behaviour. In other words, the perceived benefits must outweigh the perceived barriers in order for behaviour change to occur[73]. Perceived barriers are negative consequences of using contraception, it encompass the obstacles or concerns that might deter a woman from using contraceptive (LAM). These could include doubts about the method's reliability, difficulties in accurately monitoring breastfeeding patterns, or concerns about its

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compatibility with her lifestyle. If a woman perceives significant barriers to using LAM, she may be less likely to choose it as a contraceptive method[74].

5. **Modifying Variables:** Individual characteristics, including demographic, psychosocial, and structural variables, can affect perceptions (i.e., perceived seriousness, susceptibility, benefits, and barriers) of health-related behaviours. Demographic variables include age, sex, race, ethnicity, and education, among others. Psychosocial variables include personality, social class, and peer and reference group pressure, among others. Structural variables include knowledge about a given disease and prior contact with the disease, among other factors. The HBM suggests that modifying variables affect health-related behaviours indirectly by affecting perceived seriousness, susceptibility, benefits, and barriers[71].
6. **Cues to Action:** The HBM posits that a cue, or trigger, is necessary for prompting engagement in health-promoting behaviours. Cues to action can be internal or external. Physiological cues (e.g., pain, symptoms) are an example of internal cues to action. External cues include events or information from close others, the media, or health care providers promoting engagement in health-related behaviours. It is the internal and external stimuli that trigger a consciousness of the perceived pregnancy threat and facilitate consideration of using contraception to remedy the threat. This may include symptoms like missed menses after intercourse (internal stimuli) or contraceptive communication from the media, and worry from a sexual partner or counseling by a health care provider (external stimuli) [70, 72].
7. **Self-efficacy:** Self efficacy was added to the four components of the HBM (i.e., perceived susceptibility, severity, benefits, and barriers) in 1988. Self-efficacy refers

to an individual's perception of his or her competence to successfully perform a behaviour Self-efficacy was added to the HBM in an attempt to better explain individual differences in health behaviours. The model was originally developed in order to explain engagement in one-time health-related behaviours[74].

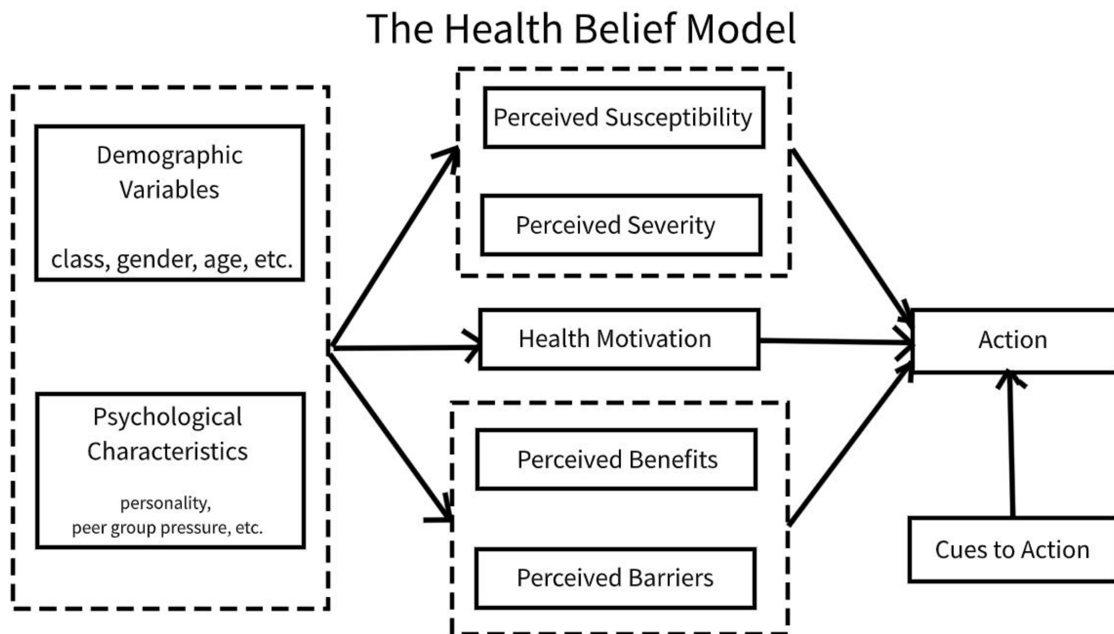

Fig 2.2: The Dynamic Health Belief Model in action

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Several studies have applied the model in explaining the sexual risk taking behaviour among various ages and understanding safe sex behaviour and the use of protection during sex among adolescents. The major strength of this theory is that it is a framework that helps explains the contraceptive compliance, drawing parallels between family planning and other health behaviours. The general argument focused on the role of motivation - that the motivation to prevent an unwanted pregnancy would predict contraceptive compliance just as the motivation to prevent a disease would predict medication therapy compliance[75].

This theory is limited because HBM is more descriptive than explanatory, and does not suggest a strategy for changing health-related actions. In preventive health behaviours, early studies showed that perceived susceptibility, benefits, and barriers were consistently associated with the desired health behaviour; perceived severity was less often associated with the desired health behaviour. The individual constructs are useful, depending on the health outcome of interest, but for the most effective use of the model it should be integrated with other models that account for the environmental context and suggest strategies for change[76].

2.2.4 Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB) started as the Theory of Reasoned Action in 1980 to predict an individual's intention to engage in a behaviour at a specific time and place. The theory was intended to explain all behaviours over which people have the ability to exert self-control. The TPB has been used successfully to predict and explain a wide range of health behaviours and intentions including smoking, drinking, health services utilization, breastfeeding, and substance use, among others. The TPB states that behavioural achievement depends on both motivation (intention) and ability (behavioural control)[77].

The Theory of Planned Behaviour is a theory about the link between beliefs and behaviours. The concept was proposed by Icek Ajzen to improve on the predictive power of the Theory of Reasoned Action by including Perceived Behavioural Control (PBC). It is one of the most predictive persuasion theories. The theory has been applied to studies of the relations among beliefs, attitudes, behavioural intentions and behaviours in various fields such as advertising, public relations and health care. It states that attitude toward behaviour, subjective norms,

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and perceived behavioural control, together shape an individual's behavioural intentions and behaviours[78].

Core Assumptions and Statements

Theory of Planned Behaviour suggests that a person's behaviour is determined by his/her intention to perform the behaviour and that this intention is, in turn, a function of his/her attitude toward the behaviour and his/her subjective norm. The best predictor of behaviour is intention. Intention is the cognitive representation of a person's readiness to perform a given act, and it is considered to be the immediate antecedent of action. This intention is determined by three things: their attitude toward the specific behaviour, their subjective norms and their perceived behavioural control[78]. The theory of planned behaviour holds that only specific attitudes toward the behaviour in question can be expected to predict that behaviour. In addition to measuring attitudes toward the behaviour, we also need to measure people's subjective norms, their beliefs about how people they care about will view the behaviour in question[77].

To predict someone's intentions, knowing these beliefs can be as important as knowing the person's attitudes. Lastly, perceived behavioural control influences intentions. Perceived behavioural control refers to people's perceptions of their ability to perform a given behaviour. These predictors lead to intention. A general rule, the more favorable the attitude and the subjective norm, and the greater the perceived control the stronger should the person's intention to perform the behaviour in question[79]. The theory proposes a model which can measure how human actions are guided. It predicts the occurrence of a particular behaviour, provided that behaviour is intentional. The model is out lined in the next figure

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and represents the three variables which the theory suggests will predict the intention to perform a behaviour. The intentions are the precursors of behaviour[80].

Behaviour

In implementation research, interventions are designed to change the behaviour of individuals. The target behaviour should be defined carefully in terms of its Target, Action and Time. In a contraceptives context, the target is the couple, action is the trip, context is the method of contraceptive and time is the space in-between children and the number of children in the family.

Intention

Although there is not a perfect relationship between behavioural intention and actual behaviour, intention can be used a proxy measure of behaviour. This observation is one of the most important contributions of the TPB model compared to previous models of the attitude-behaviour relationship. Therefore, the variables in this model can be used to determine the effectiveness of the implementation interventions even if there is not a readily measure of actual behaviour.

Attitudes towards the behaviour

Attitude toward the behaviour is a person's evaluation of the behaviour. It is assumed to have two components which work together: beliefs about consequences of the behaviour and the corresponding positive or negative judgments' about each of these features of the behaviour.

Subjective Norms (about the behaviour)

Subjective norms are a person's own estimate of the social pressure to perform the target behaviour. Subjective norms are assumed to have two components which work in interaction: beliefs about how other people, who may be in some way important to the person, would like

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them to behave (normative beliefs). Therefore, the variables in this model can be used to determine the effectiveness of the implementation interventions even if there is not a readily measure of actual behaviour[79].

Application of the Theory in Explaining LAM

The influence of subjective norms can be seen in the encouragement or discouragement from partners, family members, or friends. Positive support from these individuals may encourage lactating mothers to adopt LAM, while negative perceptions or misinformation could deter its use. Healthcare provider recommendations to lactating mothers' interactions with healthcare providers play a crucial role. If healthcare providers endorse and educate about LAM as a safe and effective option, it can positively impact subjective norms and lead to greater acceptance of the method[81]. Lactating mothers' attitudes towards LAM will be influenced by their perceptions of its benefits, such as its natural and non-hormonal nature, which might align with their preferences for contraception during breastfeeding. Attitudes will also be influenced by perceived drawbacks, such as concerns about its effectiveness, potential disruptions to breastfeeding routines, or cultural beliefs about the appropriateness of LAM[82]. Lactating mothers' perceived ability to use LAM effectively will depend on their understanding of the method's requirements, such as exclusive breastfeeding and avoidance of supplemental feeding. Proper education and access to accurate information will enhance perceived behavioural control. The mother's confidence in her ability to breastfeed exclusively and manage her infant's feeding schedule without resorting to supplemental feeds will impact her perceived control over practicing LAM[83].

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Based on their attitudes, subjective norms, and perceived behavioural control, lactating mothers will form intentions regarding LAM use. Positive attitudes, strong subjective norms, and high perceived control are likely to result in a higher intention to use LAM. The actual use of LAM will depend on the mother's ability to translate her intentions into behaviour. Overcoming any barriers related to perceived control and external influences will determine whether LAM is effectively practiced. There are external factors that also shape attitudes, subjective norms and perceived behavioural control such as Cultural beliefs and societal norms around contraception, breastfeeding, and family planning will interact with the TPB components. Availability of resources like breastfeeding support groups, access to healthcare, and educational materials can facilitate the implementation of LAM and enhance perceived control[81].

Synthesis of the Theory

In studying a set of behaviour upon which social actions are based, there are different theories that can be used to explain such actions. These theories can be compared and synthesized. These theories are theoretical framework or ideas that seek to explain social phenomena, patterns and relationship in society.

In this work, four theories were used as the theoretical framework namely: Kristin Lukers theory of contraceptive risk taking, social cognitive theory, health belief model and theory of planned behaviour. These four theories relate to contraceptive use behaviour and can explain one aspect of contraception or the other. Luker's theory can be used to explain contraceptive use or risk taking in the sense that it sees rational decision to the use of contraceptive to be

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the result of rational decision of people who is acting on what he/she believes is of interest to them.

The social cognitive theory explains the role of observation and other cognitive factors in social behaviour i.e. that behaviour are learnt from the behaviour of others especially if the observational experience is positive. The theory believes that others learn by watching what people do that has positive/beneficial results. Going by the social cognitive theory, the use of contraception is a function of what an individual learn from observing others. In other words, social cognitive theory posits that human social behaviour like the use of contraception (LAM inclusive) is influenced by his/her experience or other environmental factors.

The health belief model is used to explain health seeking behaviour such as the uptake of health services including the use of LAM services. In the context of this study, the health belief model says that individuals who perceive that he/she is susceptible to a health challenge (unwanted pregnancy) will engage in behaviour to reduce the risk (such as the practice of LAM as a contraceptive technique)

Theory of planned behaviour also explains the link between belief and behaviour. It is a theory that believes that human social behaviour is a product of one's intention. The four theories each with a different perspective can be brought together to explain different aspect of human social behaviour. They are behaviour theories or social psychological theories that can be used to understand why people act the way they do and reason for behavioural changes and it explains the factors that drive human behaviour and social interaction. They are theories that deal with how people opinions are influenced within social groups. They provide the framework for understanding behavioural changes including contraception.

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These theories enable one to understand the role of different factor such as environmental factor, human behaviour and cognitive processes in analyzing human actions

2.3 Review of Empirical Studies

Family planning is critical to fertility/birth control, child spacing, family health and control of population growth. Studies have been carried out by researchers on several aspect of family planning such as its awareness techniques, the acceptance of family planning, the usage and practice of family planning, the outcomes of using family planning and the host of others.

A study titled empirical analysis of demand for family planning services In Kenya's city slums, The major aim of the study was to investigate factors that determines the usage of family planning among the poor, The study employed the descriptive survey design and primary data were collected using questionnaires, raw data collected were analyzed using the two-step regression analysis (binomial logic model). The result of the study revealed low usage of family planning services which was attributed to several factors that include: Partners quality of services friendliness of staffs administering the services, the women's knowledge about family planning services, income level, proximity to the service proximity and the religious background of the women. The study concluded that low usage of family planning is observed in Kenya's city slum and recommended the enhancement of the activities of community-based distributors promotion of family planning education and activities at the household level, formation of lobby group to enhance cultural change as well as awareness creation, counseling and the integration of family planning service with HIV/AIDS program[84].

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Lactational Amenorrhea Method (LAM) is a family planning method that simultaneously promotes child spacing and breastfeeding with the benefits of optimal nutrition and disease prevention for the infant, and a delay of fertility return and subsequent pregnancy for the mother. It is a reliable form of contraception for up to six months following childbirth, provided the mother's periods have not returned and she is breastfeeding exclusively with sufficient feeds and no dummy or bottle use. A study considered how LAM works and how it may be supported in practice, and provides a local example involving the use of information provision and training to overcome barriers to its understanding and use[85]. The results confirm that LAM is acceptable and ready for widespread use, and should be included in the range of services available in maternal and child health, family planning, and other primary health care settings[84].

The efficacy of the method had been demonstrated in previous in studies, comparing the acceptability of LAM to that of other family planning methods presents special difficulties In that LAM is an interim method, and by definition cannot be used on a long-term basis. The disparity in breastfeeding rates across developed and developing nations is a significant barrier to LAM acceptance[86]. The difference in time needed to complete research recruitment demonstrates the prevalence of full breastfeeding in a community and willingness to adopt a breastfeeding-based method of contraception. Although LAM allows for some flexibility, the method requires that the mother be aware of, and adhere to, the three requirements for LAM, and that she is aware of the fourth parameter: the need to change to another method if any of the three requirements are not met[87].

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In developing countries like Nigeria, knowledge of Lactational Amenorrhea Method is low but the knowledge of modern family planning excluding LAM is high and is often recommended by family planning providers. Based on NPC and ICF Macro's Nigeria Demographic Health Survey (D.H.S) 2008, 5% of all women age 15-49 had ever used LAM even though the knowledge of any contraceptive method is widespread in Nigeria[88]. Lactational Amenorrhea Method in a lot of literature shows that breastfeeding is not often emphasized as a contraceptive but more as an optimal feeding practice of children. Eight percent of women age 35-39 had ever used LAM compared with women age 15-19 (0.5%) [73].

Various studies have been conducted with regard to the demand for health services in general and contraceptive use in particular. However, studies in low-income countries have reported less progress and recommend including men as equal partners and beneficiaries of family planning, and advocate for educating men continually about the benefits of contraceptives[32]. The uptake of reliable family planning methods has the potential for averting about 32% of all maternal deaths and almost 10% of child deaths in countries were mortality rates are high[33].

Based on previous studies view towards family planning and the use of contraceptive techniques are related. An information, education, and communication effort was begun in 1992–1993 with the goal of modifying Nigerians' views toward family planning and thereby increasing the use of contraceptives. The campaign was founded on data showing that media messages about family planning can have an impact on contraceptive use.

In past studies, effects of contraceptive use on maternal mortality were estimated in an analysis including 172 countries. They concluded through their data that the use of

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contraception is a substantial and an effective primary prevention strategy to reduce maternal mortality in developing countries[30]. A study on the Knowledge, Attitude and Practice towards Family Planning in Saudi Arabia among adult married subjects, it revealed that the use of contraception methods was quite high among the Saudi subjects and the authors associated this with the fact that most of the subjects had high educational degrees[89].

Previous study titled Understanding family planning outcome in the Northwestern Nigeria and analyze social behaviour change factors, Based on the prevailing high fertility and low contraceptive used due to high infertility norm, pro-natal, cultural and religious beliefs, and misconception about contraceptive method and gender inequalities. The study investigated that the determinants of the contraceptive use/uptake using a cross-sectional household survey conducted in states of Kebbi, Sokoto, and Zamfara, Involving 3,000 women aged between 15 and 45 years with children less than 2 years. Data were collected using questionnaire and analyzed using the logistic regression analysis the results of the study revealed that the knowledge approval of family planning and social influence particularly from husbands were critical[90]. Also, it showed that women who personally approve of family planning were nearly three times more likely to use modern contraception and six times more likely to intend to start use in the next six months and that husband influence was a factor. They recommended programme that will improve the knowledge, encourage spousal and partner communication should be put in place similar observations were made in the study on spousal communication changes in partner attitude and contraceptive use among the Yoruba of southwest Nigeria[91].

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A study titled Attitude toward the Acceptability and Practice of Modern Contraceptives among Women of Child Bearing Age in Jigawa State, Nigeria shows that despite recent improvements in the use of contraceptives amongst married women in Jigawa, the utilization rates are still far below the national figures in the emerging regions of the country. Result shows that Majority of the respondents (92.3%) had heard about the contraception while (7.70%) had not. Injection DepoProvera was the most (85.6%) known method of contraception whereas pills and condom recorded 84.8% and 82.7% respectively. Lactation Amenorrhea (8.2%) was the least method heard. The study shows that majority of the respondents had got information of contraception through mass media (33.2%) and health workers (28.1%). Only few (9.6%) got the information through relatives[92].

Another study titled Overview of Knowledge about the Lactational Amenorrhea Method in Breastfeeding Mothers, based on the results of the study, the description of knowledge about the lactation amenorrhea method in breastfeeding mothers in Waiselang Hamlet, Kairatu Village, Kairatu Regency, West Seram District, in 2023 can be interpreted as mother's knowledge about the lactational amenorrhea method, breastfeeding mothers have good knowledge of 19 people (34.5) enough as many as 22 people (40.0%) and at least 14 people (25.5%) had less knowledge. And the use of the lactation amenorrhea method in breastfeeding mothers mostly did not use the lactation amenorrhea method for contraception as many as 49 people (89.1%) and at least 6 people (10.9%) used the lactation amenorrhea method for contraception[93].

Furthermore, demand and utilization of family planning (FP) in Northern Nigeria has been consistently low. Evidence from literature has demonstrated that male involvement in FP

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programming can be successful in increasing demand for FP services. Studies on male involvement showed that there is generally a high level of awareness about Family Planning methods among men in Northern Nigeria. A study carried out on male knowledge, attitude, and family planning practice in northern Nigeria, reported generally high levels of male awareness of FP with 63.6% of the respondents indicating knowing at least one method. A study conducted in Zaria, Nigeria, similarly reported a high level of awareness among the men with 67.4% of them being knowledgeable about FP. According to the NDHS 2013 report, the northern region of the country reported higher values of awareness (95%) about a contraceptive method among men, which was not different from the national average of 95%. A more recent study conducted in Jos, north-central Nigeria, reported that 98.8% of the men were aware of Family Planning

In accordance with the NDHS 2013 report, among the northern states, awareness of contraceptive methods among men was lowest in Niger (84%) and Yobe (86%) States. There were only small differentials in the knowledge of any contraceptive method by age group, but differentials were greater by place of residence, zone, educational level, and wealth quintile. The most commonly known method of contraception among men was the male condom (91%), followed by pills (65%) and injectables (61%). The least known methods were male sterilization (27%), lactational amenorrhea (20%), and IUCDs (20%), and the most popular source of information about Family Planning among men in Northern Nigeria has been reported to be from the media through the radio[94].

Studies have reported that males in Northern Nigeria desire large families due to multiple factors ranging from religious beliefs to economic security. A review of studies on Family

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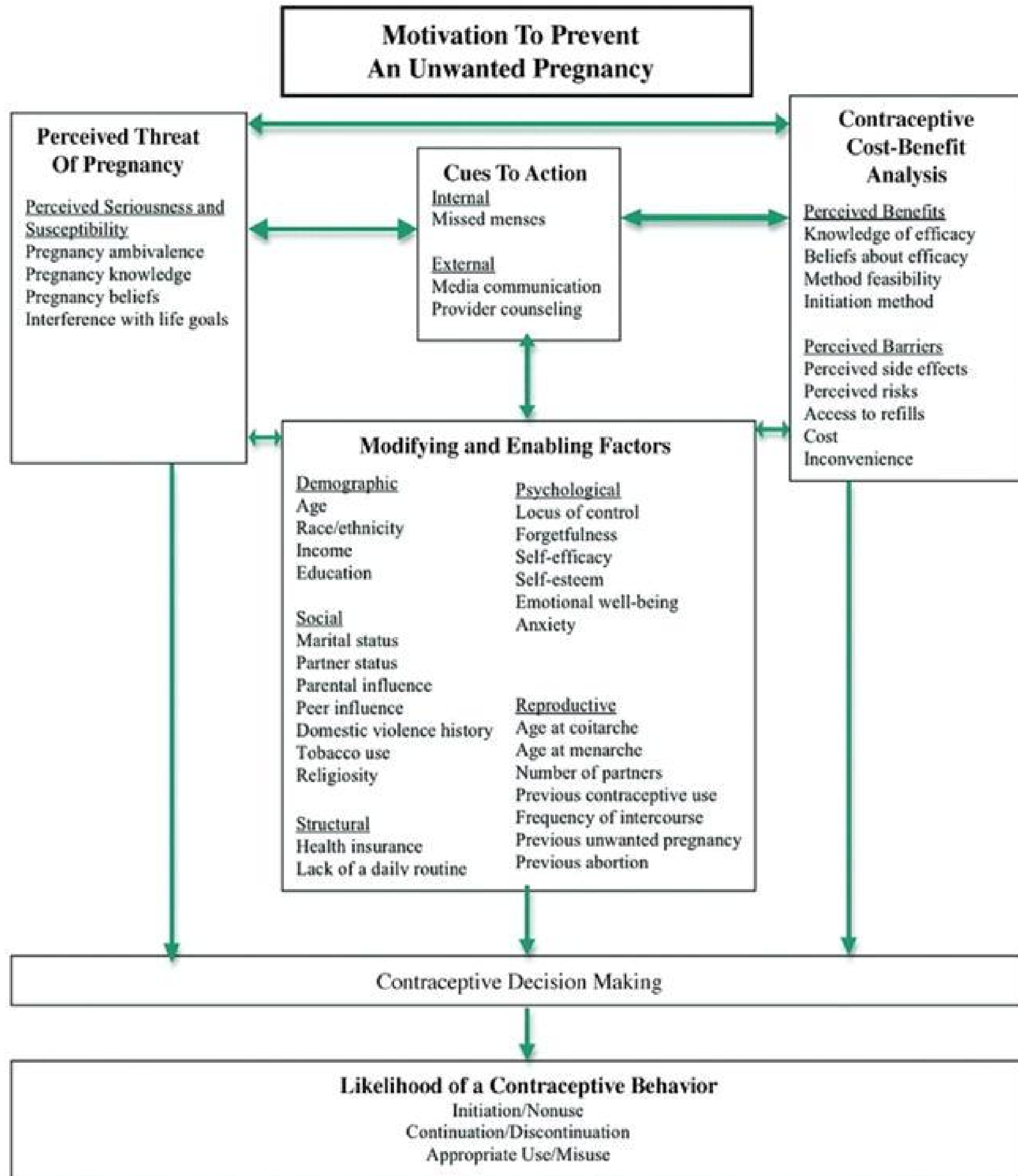
Planning knowledge, attitudes, and behaviour in Northern Nigeria revealed that due to the high value placed on children, limiting childbearing was found to be a controversial or disliked practice whereas child spacing was generally accepted[84]. A study conducted found that the attitude of men to FP was generally negative, 65% disapproved of the very concept of contraception, and disapproval was higher among those with low educational attainment. Studies revealed that there was a generally negative attitude toward limiting family size. A large proportion (62%) were not willing to use and allow their spouses to use FP even for child-spacing purposes and 85% of the respondents were not willing to or allow their spouses to use FP for economic reasons. Respondents in the study who were willing to use contraceptives were more willing to use them for child-spacing purposes than explicitly for limiting family size. A more recent study conducted in Zaria, showed that more than half (54%) of male respondents approved of FP and 29% of these stated the reason for this was to promote family health, whereas 17% said it would help them cater for their children properly. The main reason for disapproval of FP was due to contradiction with religious beliefs (40%)[84].

Contraceptive use by men in most of the communities in Northern Nigeria has been very low. Based on the NDHS 2013, 30% of the sampled male population was currently using contraception, with condom use as the dominant method (66%).The level of contraceptive use was significantly higher among sexually active single men, at 68%, compared to 19% among monogamous married men and 9% among polygamous men.

2.4 Conceptual Framework



A Current and Inclusive Contraceptive Behaviour Health Belief Model that can Facilitate Contraceptive Behaviour Science and Practice[95].

2.5 Summary of Gaps in Literature Reviewed

The postpartum period's physiological changes in a woman's body can affect the validity of LAM. Understanding how elements like irregular menstrual cycles, variations in nursing frequency, and the resumption of fertility affect the method's efficacy is an area of knowledge gap. LAM is intended to be used for the first six months after giving birth; thereafter, alternative forms of contraception are advised. There is, however, a dearth of study on the elements that affect women's decision-making as they switch from LAM to alternate methods. LAM must be integrated into established healthcare systems in order to be widely used and effectively implemented. The knowledge gap relates to the methods needed to successfully integrate LAM teaching and counseling into standard postpartum care services.

Women's thoughts and choices regarding contraception, including LAM, are significantly influenced by cultural norms and societal attitudes. There is a knowledge gap about how cultural values, social factors, and community norms influence the acceptance and adoption of LAM among various groups. Based on studies conducted during postpartum care visits, healthcare practitioners frequently fail to effectively educate new moms about LAM. This breakdown in communication may be a factor in women not obtaining adequate instruction on how to use LAM correctly and securely. When certain parameters are met, LAM is regarded as a reliable contraceptive method, however other research indicate that failing to grasp these conditions can result in the method failing and unplanned pregnancies. To comprehend the causes of failure rates and how to combat them, more research is required. Many breastfeeding mothers are not sufficiently aware of or knowledgeable about the LAM as a means of contraception. Based on previous findings, there are many misconceptions and

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gaps in knowledge on the merits, standards, and prerequisites of the procedure, which results in it are under- or improper application.

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Chapter Three

Methodology

Methodology is the logic of scientific investigation. It is a set of procedures in carrying out an investigation into a particular research or the principles underlying selection of such methods. It is the crucial stage in a research project against which the validity of the results or finding is judged. This chapter therefore outlines the method and procedures that was used in carrying out this study.

3.1 Research Design

Research design is regarded as the blueprint for the collection and analysis of data. In any empirical research, research design is indispensable, specifying the steps to be taken in the collection and analysis of data to ensure generalization. This study employed a cross-sectional research survey utilizing the mixed methods approach involving both quantitative and qualitative data collection technique. The survey research method provided a broader coverage of the situation under study and was fast and economical. A cross-sectional design had been selected because the method enabled the researcher to collect data from a population at once, analyze the data collected, and make inferences based on the data collected.

3.2 Population of the Study

The study population consisted of all mothers with children below 2years of age (less than 24 months) who are currently breastfeeding their children. Others include health officers including clinical officers/nurses, and health practitioner (Doctors, Matrons) located in the

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selected local government (Ibadan North Local Government Area). This study targeted women who had a child of less than or equal to 24 months old and were breastfeeding in selected Local Government Areas of Oyo State. The study made use of the principle of social inclusion; for this reason, the study was nondiscriminatory in nature. Every individual within the population of the study who satisfied the criteria for the study had a chance of being included. Therefore, the total population for this study was 1500 women and this population was gotten from the Health Records Department for women attending the clinic between the months of August to October.

The study area for this work is Ibadan, Oyo State Nigeria. It is the third-largest city by population in Nigeria after Lagos and Kano, with a total population of 3,649,000 as of 2021, and over 6 million people within its metropolis. It is the country's largest city by geographical area. This study made use of Adeoyo Maternity Teaching Hospital situated at Yemetu, Ibadan. The justification for the use of the above named hospital is that it has a breastfeeding clinic.

3.3 Sample Size and Sampling Technique

The sample of this study is the subset of a given population that is drawn from the population and use for undertaking the study, while a sample size refers to the number of item to be selected from the population to constitute the sample. The population of this study is considered large and therefore samples were used for the study.

3.3.1 Sample Size

The sample size for this study was determined by using the Slovin formula. This formula is used in preference to other methods of determining sample size.

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Slovin formula: $n = N / (1+Ne^2)$

Where:

n= Sample Size

N= Population

e= accepted margin error (0.05)

Therefore, substituting the values into the formula:

$n = 1500 / (1+1500(0.05^2))$

$n = 1500 \div 1+1500 \times 0.05^2$

$n = 1500 \div 3.75$

$n = 315.8$

$n = 316$

3.3.2 Sampling Technique

This study adopted a purposive sampling technique. Health center (hospital) was purposively selected. The selection of the health care center was guided by two major pre-conditions.

1. The health centers should have attendants from diverse background.
2. The number of post-natal clients must be sufficient and large to allow good random selection of respondents

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The respondents were sub-sampled according to the following groups based on purposive methods

1. Breastfeeding women
2. Health care workers.

3.4. Description of Research Instruments

This study adopted the use of both qualitative and quantitative research instrument. The instruments used are Copies of questionnaire and Key Informant Interview.

3.4.1 Questionnaire

For this study, a structured questionnaire format was used, as it had both the questions and the alternative answers provided. It consisted of several sections aligned with the objectives of the study.

Section A for the study questionnaire consisted of demographic questions such as age group, religions, and marital status.

Section B of the questionnaire consisted of questions about the knowledge and practice of Lactational Amenorrhea Method as contraception among lactating mothers.

Section C consists also of questions that was used to access women's perception towards the use of LAM as a contraceptive.

Section D consists of questions that helped assessed the effectiveness of this contraceptive technique.

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Section E contained questions that helped assessed the predictor that favour the use of LAM as a contraceptive.

Section F this section focused on questions that were used to assess the role of men when using this contraceptive technique.

3.4.2. Key Informant Interview

This involved the use of structured interview, where the structured Interview Guide was strictly followed (the researcher did not deviate in any way from the questions). The interview was conducted among the Health Officers, totaling 5 in number (including Doctors, Nurses, and Matrons). All the information generated was properly recorded using electronic devices.

3.5 Validity of Research Instrument

For a research to have worth, the validity of the instrument is important. Validity refers to the degree to which an instrument measures what it is supposed to measure, i.e., the degree to which it measures what it is designed to measure. For this study, content and construct validity appeared mandatory. Content validity was concerned with whether all important aspects of the constructs were covered. The validity of the questionnaire was tested using experts' opinions, the project supervisor, and staff of the department.

3.6 Reliability of Research Instrument

To test the reliability of the instruments used for this study, a pre-test was conducted with the planned instruments. The author of the instrument reported a Cronbach's alpha reliability coefficient of 0.90.

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The Cronbach's alpha reliability coefficient to measure the internal consistency of the instrument in this study was reported using SPSS.

3.7 Method of Data Collection

Data collection for this study involved the use of the research instruments discussed above. Utilizing the questionnaire, data were collected through self-administered questionnaires to ensure a high response rate, eliminate loss-in-transit, and enable the researcher to offer explanations on some questions. Additionally, interviews were conducted, and responses were recorded by the researcher. Copies of questionnaires were distributed to collect quantitative data from the selected samples of respondents. Key Informant interviews were also conducted to collect qualitative data useful for the study. The participants in the Key Informant Interview included health officers knowledgeable about the use of LAM.

3.8 Method of Data Analysis

Data collected for this study were analyzed using both qualitative and quantitative methods of analysis. Data collected through qualitative methods (Key Informant Interview) were transcribed from electronic recording devices and combined with field notes using content analysis

Quantitative data gathered through questionnaires were analyzed using descriptive statistical methods. Descriptive methods of data presentation, especially charts, were utilized. Additionally, descriptive statistics such as frequency, percentages, mean, and standard deviation were employed to describe breastfeeding and Lactational Amenorrhea information. Cross-tabulation and chi-square analyses were used to determine the significance of differences and relationships between variables (dependent and independent variables).

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Multiple regression methods (stepwise) were utilized to analyze the factors that favor the use of LAM. All analyses were performed using SPSS (Statistical Package for the Social Sciences).

3.9 Ethical Consideration

Ethical approval was obtained from the Oyo State Ministry of Health (NREC/OYOSHRIEC/10/11/2022). Ethical principles, including informed consent, anonymity, and confidentiality, were taken seriously in this research. Participants in this study were properly informed about the research's purpose, which contributed to the body of scientific knowledge. The identity of the respondents was concealed as part of the ethical rules in social science research. Where necessary, permission from ruling authorities or leadership was sought for the smooth running of research activities in the study location.

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Chapter Four

Results and Discussion of Findings

The result and analyses are discussed in accordance with the objectives of the study. The major goal of this study was to assess the Knowledge Level, Perception and Practice of Lactational Amenorrhea Method as Contraceptive among Lactating Mothers in Ibadan.

The data and presentation in this chapter are based on the data retrieved. Data was analyzed at a descriptive level of analysis using frequency tables while qualitative data was analyzed using content analysis. Thereafter, the findings of this study were discussed in relation to existing literature for this study.

4.1 Demographic Data Analysis

This section presents data on the socio-demographic characteristics of the respondents. Variables analyzed include age, marital status, educational attainment, occupation, household size and number of years married.

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Table 4.1: Socio-Demographic and Economic characteristics of Respondents

Variable	Frequency	Percentage
Age		
15-20 Years	24	9.2
21-24 Years	90	34.6
25-29 Years	122	46.9
30 and above Years	24	9.2
Marital Status		
Single	28	10.8
Married	232	89.2
Duration of Marriage		
1-3 Years	98	37.7
4-6 Years	84	32.3
7-9 Years	34	13.1
10-12 Years	8	3.1
13 years and above	8	3.1
Not Applicable	28	10.8
Educational Attainment		
Primary	6	2.3
Secondary	50	19.2
Tertiary	204	78.5
Not working	18	6.9
Business/Trading	144	55.4
Civil Servant	64	24.6
Student	34	13.1
Household size		
2 Persons	18	6.9
3 Persons	90	34.6
4 Persons	102	39.2
5 Persons	44	16.9
6 Persons	6	2.3
Number of children		
1 child	98	37.7
2 children	112	43.1
3 children	44	16.9
4 children	6	2.3
Monthly income		
Less than 20,000 Naira	2	0.8
51,000 - 100,000	76	29.2
101,000 - 150,000 Naira	100	38.5
150,000 and above	82	31.5
Total	**260**	**100**

Source: Author’s Field Work, 2024

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Table 4.1 presents the age distribution of respondents. The table shows that the highest numbers of respondents are between the ages of 25-29 years with frequency 122 representing (46.9%), this was followed by the age 21-24 years with frequency 90 representing (34.6%), and 15-20 years with frequency 24 representing (9.2%). The table further showed that women aged 30 years and above with frequency 24 representing (9.2%) was the least represented age group in the study. The table further revealed that 232 participant representing 89.2% are married and 28 respondents making up 10.8% of the entire population are single. This data indicates that the majority of the surveyed population is married, with singles making up a smaller portion of the total population.

Furthermore, the table below shows the distribution of respondents across different lengths of years within the analyzed category. Majority of respondents fall within the categories of 1-3 years which represents (37.7%) and 4-6 years (32.3%), while fewer respondents are in the categories of 7-9 years (13.1%), 10-12 years (3.1%), and 13 years and above (3.1%). Additionally, a small portion of the sample (10.8%) does not have this demographic variable applicable to them. The table indicated that a minority of participants (2.3%) had a primary education certificate, compared to 19.2% who had a secondary education certificate and 78.5% who had tertiary education certificate. As a result, respondents with secondary and higher education were more than those with only primary education. Most respondents who had tertiary education suggests that they had the credentials to competently respond to this inquires about the knowledge, perception and practice of Lactational Amenorrhea Method as contraception among lactating mothers.

As shown in table 4.1, business/trading made up about 144 of all participants or 55.4% of the entire sample, civil servant made up about 64 or 24.6% of the entire population, while about

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13.1% of the sample or 34 respondents in total were student. Finally, 18 respondents or 6.9 of the sample are not working.

The information on the respondents' household sizes is shown in the table with 34.6% reporting a household size of three people and 39.2% reporting a household size of four, the majority of respondents live in homes with three or four people. Furthermore, 16.9% of participants stated that they were part of a household consisting of five people. A comparatively smaller percentage of participants said that they were part of two-person homes (6.9%) or six-person households (2.3%). Overall, the data shows that the population under study had a variety of household sizes, with three to four people living in households most of the time.

As depicted in table, the data showcases the number of children reported by respondents. The majority of respondents, constituting 37.7% of the sample, reported having one child. This indicates that a significant portion of the surveyed population consists of individuals with a single child. Furthermore, 43.1% of respondents reported having two children, suggesting that a substantial proportion of the sample has two children. Additionally, 16.9% of respondents reported having three children, indicating a smaller but still notable segment of the population with three children. Only a minority of respondents, representing 2.3% of the sample, reported having four children.

In the table, the data provides insights into the monthly income of the respondents. It's evident that the largest portion of respondents falls within the income bracket of 101,000 to 150,000 Naira, comprising 38.5% of the sample. This suggests that a significant proportion of the surveyed population earns within this range. Following this, 31.5% of respondents

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reported a monthly income of 150,000 Naira and above, indicating another substantial segment of the population with relatively higher incomes. Moreover, 29.2% of respondents reported monthly incomes ranging from 51,000 to 100,000 Naira, indicating a considerable portion of the sample within this income bracket. However, a small proportion, only 0.8% of respondents, reported incomes below 20,000 Naira per month.

4.2 Presentation of Data

Table 4.2: level of knowledge and practice of Lactational Amenorrhea Method

Variable	Frequency	Percentage
Have you heard about Lactational Amenorrhea Method as a contraceptive method?		
Yes	198	76.2
No	62	23.8
Total	260	100.0
How would you describe your understanding of LAM?		
Limited	78	39.4
Moderate	32	16.2
Extensive	88	44.4
Total	198	100.0
What does Lactational Amenorrhea Method mean to you?		
Breastfeeding and no menses	24	12.1
A contraceptive method that involves breastfeeding	38	19.2
Exclusive breastfeeding	66	33.3
Breastfeeding induced infertility	20	10.1
A non hormonal birth control method	26	13.1
Temporal infertility that is linked to the physiological & hormonal changes associated with breastfeeding	24	12.1
Do you know that LAM relies on exclusive breastfeeding to provide a natural contraceptive effect?		
Yes	192	97.0
No	6	3.0
Total	198	100.0
Where did you primarily gather information about LAM?		
Health care provider	134	67.7
Friends or family	30	15.2
Internet	26	13.1
Radio programme	8	4.0
Total	198	100.0

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Are you currently using LAM as a method of contraception		
Yes	102	51.5
No	96	48.5
Total	198	100.0
What is the duration you have relied on LAM as a contraceptive method?		
1 Year	72	70.6
2 Years	22	21.6
3 Years	6	5.9
4 Years	2	2.0
Total	102	100.0
How often do you breastfeed your child?		
Frequently	92	90.2
Occasionally	10	9.8
Total	102	100.0
Has there been any problem reported with the use of this method?		
Yes	30	29.4
No	72	70.6
Total	102	100.0
Do you use other contraceptive method alongside LAM?		
Yes	82	80.4
No	20	19.6
Total	102	100.0
Those who used other contraceptive method other than LAM, What are they?		
IUD	32	39.0
Diaphragm	10	12.2
Condom	8	9.8
Pills	26	31.7
Birth control rings	6	7.3
Total	**82**	**100.0**

Source: Author's Field Work, 2024

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As presented in the table above, it is evident that a substantial majority of respondents, accounting for 76.2% of the sample, have heard about LAM. This suggests a noteworthy level of familiarity with the method within the surveyed population. Conversely, 23.8% of respondents reported not being aware of LAM. This indicates that there is still a portion of the population who may not have access to information about this contraceptive method or

may not be adequately informed about its existence. Overall, the data highlight a considerable degree of knowledge regarding LAM among the respondents, which LAM is a natural contraceptive method used by breastfeeding mothers in the postpartum period. It relies on the temporary infertility that breastfeeding can induce, provided certain criteria are met, including exclusive breastfeeding, amenorrhea (absence of menstruation), and the infant being less than six months old. LAM offers a hormone-free, non-invasive contraceptive option for women during this unique phase of their reproductive cycle, promoting maternal and infant health through extended breastfeeding practices. From the responses from the quantitative data, 76.2% of the respondents had the knowledge of LAM as a contraceptive method. To compliment this point, information from the qualitative data was also extracted:

> Many mothers are aware of LAM generally but only few of them have knowledge of LAM as a contraceptive method. To the very best of my knowledge, the awareness level of LAM is low, only a few are aware of LAM as a contraceptive method. But we as health officers we don't tag LAM as a contraceptive method but a benefit of breastfeeding to the mother and her child
>
> (KII 06/12/2023, 10:13am) Female Lactation Consultants, Adeoyo Maternity Teaching Hospital, Yemetu, Age: 43years)

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Furthermore, quantitative data provides insights into respondents' perceptions of their understanding of the Lactational Amenorrhea Method (LAM) The data indicates that a significant portion of respondents, comprising 44.4%, perceive their understanding of LAM to be extensive. This suggests that a substantial proportion of the surveyed population feels well-informed about the method. Additionally, 39.4% of respondents reported having a limited understanding of LAM, while 16.2% described their understanding as moderate.

These figures imply that there is variability in the depth of knowledge about LAM among the respondents, with a notable portion feeling less confident in their understanding. Overall, while a considerable segment of the surveyed population feels extensively informed about LAM, there remains a need to address and potentially enhance understanding among those with limited or moderate levels of comprehension.

As shown in the above table, presents the various interpretations respondents have regarding the Lactational Amenorrhea Method (LAM). Among the responses, the most common perception, accounting for 33.3% of respondents, is that LAM involves exclusive breastfeeding, a significant portion of respondents, constituting 19.2%, view LAM as a contraceptive method that involves breastfeeding. Furthermore, 12.1% of respondents associate LAM with breastfeeding and the absence of menstruation, while an equal percentage perceive it as breastfeeding-induced infertility. Another 13.1% of respondents consider LAM a non-hormonal birth control method. Lastly, 12.1% of respondents describe LAM as a form of temporary infertility linked to the physiological and hormonal changes associated with breastfeeding. The data underscores the varied understandings of LAM among respondents, highlighting different perspectives ranging from its association with exclusive breastfeeding to its role as a method of contraception leveraging breastfeeding-induced infertility.

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The table also illustrates respondents' awareness of whether Lactational Amenorrhoea Method (LAM) relies on exclusive breastfeeding to offer a natural contraceptive effect. The overwhelming majority of respondents, comprising 97.0%, answered affirmatively, indicating that they are aware of this fundamental aspect of LAM. Conversely, only a small

proportion, 3.0% of respondents, reported not knowing that LAM relies on exclusive breastfeeding for its contraceptive effect. This data suggests a high level of awareness among the surveyed population regarding the mechanism by which LAM operates; reinforcing the understanding that exclusive breastfeeding plays a crucial role in providing contraceptive protection.

The table further gives an insight into the primary sources from which respondents gathered information about the Lactational Amenorrhea Method (LAM). The data indicates that the most common source of information for respondents was their healthcare provider, with 67.7% of respondents reporting this as their primary source. This finding underscores the significant role that healthcare professionals play in disseminating information about contraceptive methods such as LAM. Additionally, 15.2% of respondents indicated that they primarily obtained information about LAM from friends or family members, highlighting the influence of social networks in shaping individuals' knowledge and attitudes towards contraception. Moreover, 13.1% of respondents reported the internet as their primary source of information about LAM, reflecting the increasing reliance on online resources for accessing health-related information. Only a small proportion, 4.0% of respondents, reported not gathering information about LAM from any specific source. Therefore, the data underscores the importance of healthcare providers in educating individuals about LAM while also highlighting the role of interpersonal networks and online platforms in disseminating information about contraceptive methods.

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When seeking information on Lactational Amenorrhea Method (LAM) as a contraceptive option, individuals can explore various reputable sources ranging from healthcare providers

and family planning clinics to trusted medical websites and academic literature. Understanding the principles, efficacy, and criteria of LAM from these sources is crucial for informed decision-making regarding postpartum contraception. To support this point, insights from the qualitative data were also gathered:

> Most women get their information from us (health officers) by sensitizing them during our breastfeeding clinic days at the hospital, and also they get their information mostly from friends and family. Many of them come to us that they got to know about this method through their friend who has used LAM as a method of contraception and they believe since they know about this method it will work for them also. Also, for the people that may know about it, it may be that it has worked for them during their first childbirth.
>
> (KII 06/12/2023, 10:13am) Female Lactation Consultants, Adeoyo Maternity Teaching Hospital, Yemetu, Age: 43years)

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Also, presented in the table are data on the current usage of the Lactational Amenorrhea Method (LAM) as a method of contraception among respondents. Of the total respondents, 51.5% indicated that they are currently using LAM for contraception. This suggests a significant adoption of LAM among the surveyed population. Conversely, 48.5% of respondents reported not using LAM as a contraceptive method. This data indicates that while LAM is utilized by a notable portion of respondents, a considerable proportion opt for alternative contraceptive methods. The findings indicate a moderate level of utilization of LAM among the surveyed population, with nearly half of the respondents choosing other methods of contraception.

In the above table presents data regarding the duration for which respondents have relied on the Lactational Amenorrhea Method (LAM) as a contraceptive method. Among respondents who reported using LAM, the majority (70.6%) indicated that they have relied on it for duration of one year. A smaller proportion of respondents (21.6%) reported using LAM for two years, while only a few respondents (5.9%) reported using it for three years. Additionally, a very small percentage (2.0%) of respondents reported using LAM for four years. Overall, the data suggests that among those who utilize LAM as a contraceptive method, the majority rely on it for a relatively shorter duration, with a decline in usage duration over time. This may reflect either a transition to other contraceptive methods or a shift in family planning strategies as circumstances change.

The frequency of breastfeeding among responders using the Lactational Amenorrhea Method (LAM) as a means of contraception shown in the table appears to be a regular and consistent nursing habit since the majority of respondents (90.2%) reported breastfeeding their infant frequently. On the other hand, a lower percentage of participants (9.8%) mentioned that they occasionally breastfed their child. Based on the available data, it can be inferred that most LAM users follow a frequent nursing schedule. This is crucial because LAM relies on exclusive and frequent breastfeeding to suppress ovulation and offer contraceptive protection. Furthermore, to support this information from the quantitative data, insights from the qualitative data were also gathered:

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Among the respondents, 29.4% reported experiencing problems with the method, while the majority (70.6%) did not report any issues. This data suggests that while LAM is generally well-tolerated by a significant proportion of users, a notable minority encountered difficulties or challenges while utilizing it. The reported

problems could include issues such as difficulties in maintaining exclusive breastfeeding, irregularities in menstrual patterns, or concerns related to contraceptive efficacy. Some mothers complain of their inability to breastfeed consistently and some may say that they lack support or guidance, i.e. they don't receive adequate information or support from family members during use.

(KII 20/12/2023, 9:43am) Female, Psychologist, Adeoyo Maternity Teaching Hospital, Yemetu, Age: 36years)

Another challenge is the return of menstruation. Most women experienced return of menses between 40-59days after childbirth and thus can increase the risk of ovulation and unintended pregnancy while using LAM. Also, many of them complain of misunderstanding the method which they don't understand fully the criteria for its use and its limitations.

(KII 20/12/2023, 10:53am) Female, Pediatrician, Adeoyo Maternity Teaching Hospital, Yemetu, Age: 40years)

Also, due to the challenge of stress, illness and changes in the mother or baby's routine it can impact on the hormonal balance necessary for LAM to be effective. And last of the most common challenges faced by women during the use of this method is unintended pregnancy. Anything after 41 days of childbirth a woman should seek other method of FP. Unintended pregnancy is common among women with return of menstruation despite breastfeeding. I can say in out of every 100 of women, you can only see 3 women who recorded a high success rate of LAM use.

(KII 13/12/2023, 11:11am) Female nutritionist/dietitian, Adeoyo Maternity Teaching Hospital, Yemetu, Age: 34years)

Understanding these reported problems can be valuable for healthcare providers in offering support and guidance to users of LAM, potentially addressing any barriers or challenges

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faced during its utilization. The table also shows the response on whether respondents use other contraceptive methods alongside the Lactational Amenorrhea Method (LAM). The majority of respondents, accounting for 80.4%, reported using other contraceptive methods in addition to LAM. Conversely, a smaller proportion of respondents (19.6%) stated that they solely rely on LAM without using any other contraceptive method concurrently. This data shows that a significant portion of individuals who utilize LAM as a contraceptive method may also employ additional contraceptive measures to enhance contraceptive efficacy or address specific reproductive health needs. The findings underscore the importance of considering individual preferences and circumstances when determining contraceptive strategies and highlight the potential complementarily of LAM with other contraceptive methods. It shows that other contraceptive methods used by respondents who also utilize methods other than the Lactational Amenorrhea Method (LAM). Among these respondents, the most commonly reported additional contraceptive method is the intrauterine device (IUD), with 39.0% of respondents using it alongside LAM. Additionally, 31.7% of respondents reported using contraceptive pills, indicating a significant reliance on oral contraceptives in conjunction with LAM. Other reported contraceptive methods include diaphragms (12.2%), condoms (9.8%), and birth control rings (7.3%). These findings highlight the diversity of contraceptive strategies adopted by individuals who incorporate LAM into their family planning approach. The data suggests that while LAM may be utilized as a primary contraceptive method by some, others may choose to supplement it with additional methods to enhance contraceptive effectiveness or address specific contraceptive preferences and needs.

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Table 4.3 Perceptions of respondents towards the use of Lactational Amenorrhea Method as a Contraceptive Method.

Variable	Frequency	Percentage
LAM is a very convenient and cost effective contraceptive method		
True	102	100.0
Using LAM is safe for both the mother and baby		
True	102	100.0
Exclusive breastfeeding is very difficult.		
True	18	17.6
False	78	76.5
Not Sure	6	5.9
LAM is outdated		
True	44	43.1
False	50	49.0
Not Sure	8	7.8
LAM is 100% effective when used correctly		
True	42	41.2
False	58	56.9
Not Sure	2	2.0
There is no sufficient information on LAM from health care providers.		
True	68	66.7
False	30	29.4
Not Sure	4	3.9
There are risks associated with relying solely on LAM for contraception		
True	60	58.8
False	40	39.2
Not Sure	2	2.0
Long intervals between breastfeeds while a mother is at work do not affect LAM's effectiveness		
True	52	51.0
False	50	49.0
Acceptance and promotion of LAM as a contraceptive option may lessen the problems of providing appropriate contraceptive choices for breastfeeding women		
True	44	43.1
False	52	51.0
Not Sure	6	5.9
Breastfeeding and LAM are the same thing		
True	36	35.3
False	60	58.8
Not Sure	6	5.9

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LAM provides protection against HIV		
False	98	96.1
Not Sure	4	3.9
Manually expressing milk for the infant when mother is unable to breastfeed is effective as sucking to suppress ovulation.		
True	14	13.7
False	82	80.4
Not Sure	6	5.9
LAM be considered a sustainable and reliable long-term contraceptive option for lactating mothers		
True	34	33.3
False	62	60.8
Not Sure	6	5.9
Total	**102**	**100**

Source: Author's Field Work, 2024

The Lactational Amenorrhea Method (LAM) is a cost-effective and convenient way of contraception. The Table shows the respondents' opinions on these points. The majority of respondents agreed with the assertion that LAM is an extremely practical and affordable method of contraception. Based on the results, it appears that everyone who was surveyed thought LAM was an affordable and useful method of family planning. The results show that LAM is a viable contraceptive option that is well-liked and accepted, which may have an impact on people's decisions about whether or not to include it in their reproductive health plans.

Based on respondents' opinions of the safety of the Lactational Amenorrhea Method (LAM) for the mother and the child as shown in the table indicates that majority of respondents concurred with the assertion that using LAM is safe for the mother and the child. The people surveyed had a unified good opinion about the safety of LAM as a form of contraception, as evidenced by the results. The results point to a high degree of confidence in the mother's and the child's safety and wellbeing while using LAM for family planning. These favorable

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opinions are probably going to help LAM become more widely accepted and used as a preferred method of birth control among people looking for safe and reliable options. Integrating of qualitative findings with the quantitative results reveals that perception of mothers towards the use of LAM as a contraceptive method can vary depending on cultural beliefs, access to healthcare information, and personal experiences. Some mothers may view LAM as a natural and effective way to prevent pregnancy while breastfeeding, appreciating its non- invasive and convenience. Others may have concerns about its reliability or may not have access to accurate information about its use. Understanding these diverse perspectives is crucial in promoting informed decision-making around contraceptive choices. To compliment this point, insights from the qualitative data were also gathered:

> Mother's perceptions towards the use of LAM as a contraceptive method vary. Some may see the use of LAM in positive way and some may see it in a negative way, although most people have a positive perception especially when they have a good understanding of LAM. One of the positive views of mothers is that it is safe, reliable and cost effective and it has no side effect. Just like I have said it has both negative and positive perception. And for the perception we have seen in out of every 100 women about 3 may have a negative perception that it can provide protection against STIs. Also I have met an older woman who believes that LAM i.e. breastfeeding may make the child suck for too long, and which I believe that the reason for the negative perception is lack of adequate information on the benefits of breastfeeding.
>
> (KII 13/12/2023, 11:11am) Female nutritionist/dietitian, Adeoyo Maternity Teaching Hospital, Yemetu, Age: 34years)

Furthermore, the table reveals the respondents' opinions on the challenges associated with Lactational Amenorrhea method. Only 17.6% of respondents believed that exclusive nursing

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was extremely tough, however the majority of respondents (76.5%) disagreed, and indicating that they don't think exclusive breastfeeding was very difficult. people's decisions on exclusive breastfeeding and their readiness to include family planning techniques, such as the use of LAM as a means of contraception, may be influenced by these perceptions.

As shown in the above table, 49.0% disagreed with the statement that LAM is out of date, while 43.1% agreed. Likewise, 7.8% of respondents said they were unsure if LAM was still relevant. Based on these data, it appears that attitudes about the applicability and timeliness of LAM as a method of contraception vary somewhat. Although a sizable percentage of respondents think LAM is out of date, almost half of respondents don't agree with this statement. These impressions may result from a variety of things, such as individual experiences, cultural beliefs, and information availability. Therefore, the findings highlight the importance of understanding and addressing perceptions of LAM's relevance and effectiveness in family planning initiatives. Efforts to educate and raise awareness about the benefits and contemporary applicability of LAM may help dispel misconceptions and promote its utilization as a viable contraceptive option.

The table presents data on respondents' perceptions regarding the effectiveness of the Lactational Amenorrhea Method (LAM) when used correctly. Among the respondents, 41.2% agreed that LAM is 100% effective when used correctly, while 56.9% disagreed with this statement. Additionally, a small proportion of respondents (2.0%) expressed uncertainty about the effectiveness of LAM when used correctly. These findings suggest that there are some variations in perceptions regarding the efficacy of LAM among the surveyed population. While a notable portion of respondents believe that LAM is 100% effective when used correctly, a larger proportion disagree with this notion. Such perceptions may be

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influenced by factors such as personal experiences, cultural beliefs, and access to accurate information about contraceptive methods. Efforts to educate individuals about the effectiveness of LAM, including its proper use and limitations, may help address misconceptions and promote informed decision-making regarding contraceptive choices.

Furthermore, the table presents data on respondents' perceptions regarding the availability of sufficient information on the Lactational Amenorrhea Method (LAM) from healthcare providers. Among the respondents, 66.7% agreed that there is no sufficient information on LAM from healthcare providers, while 29.4% disagreed with this statement. Additionally, a small proportion of respondents (3.9%) expressed uncertainty about the availability of sufficient information on LAM from healthcare providers and these findings reveals that a significant portion of respondents perceive a lack of adequate information on LAM from healthcare providers. This perception may indicate gaps in communication and education regarding LAM among healthcare professionals, who can impact individuals' awareness and understanding of this contraceptive method and addressing these perceived information gaps through improved communication and education efforts within healthcare settings may help enhance awareness and utilization of LAM as a contraceptive option.

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Moreover, the table shows the data on respondents' perceptions regarding the presence of risks associated with relying solely on the Lactational Amenorrhea Method (LAM) for contraception. Among the respondents, 58.8% agreed that there are risks associated with relying solely on LAM for contraception, while 39.2% disagreed with this statement. Additionally, a small proportion of respondents (2.0%) expressed uncertainty about the presence of risks associated with relying solely on LAM for contraception. findings indicate that a significant portion of respondents perceive potential risks associated with relying

solely on LAM for contraception. Such perceived risks may include concerns about contraceptive failure, unintended pregnancy, or health-related risks for the mother or infant and thereby addressing these perceived risks through education, counseling, and providing comprehensive information about LAM and its limitations can help individuals make informed decisions about contraceptive methods and potentially reduce misconceptions or fears associated with LAM utilization.

Also the above table provides data on respondents' perceptions regarding whether long intervals between breastfeeds while a mother is at work affect the effectiveness of the Lactational Amenorrhea Method (LAM). Among the respondents, 51.0% agreed that long intervals between breastfeeds while a mother is at work do not affect LAM's effectiveness, while 49.0% disagreed with this statement. Findings show the divergence in opinions among the surveyed population regarding the impact of long intervals between breastfeeds on LAM's effectiveness. Those who agree may believe that the overall frequency and duration of breastfeeding, rather than the specific timing of feeds, are more crucial for maintaining LAM's contraceptive effect. However, those who disagree may have concerns that longer intervals between breastfeeds could potentially disrupt the hormonal balance necessary for LAM's effectiveness, leading to a higher risk of unintended pregnancy. These perceptions highlight the importance of understanding and addressing factors that may influence individuals' perceptions of LAM's effectiveness, including breastfeeding practices and work-related considerations. Providing accurate information and support regarding breastfeeding practices and LAM utilization can help individuals make informed decisions about contraceptive methods and promote effective family planning.

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The table also shows data on respondents' perceptions regarding whether the acceptance and promotion of the Lactational Amenorrhea Method (LAM) as a contraceptive option may lessen the problems of providing appropriate contraceptive choices for breastfeeding women. Among the respondents, 43.1% agreed that acceptance and promotion of LAM as a contraceptive option may lessen the problems of providing appropriate contraceptive choices for breastfeeding women, while 51.0% disagreed with this statement. Additionally, a small proportion of respondents (5.9%) expressed uncertainty about the potential impact of accepting and promoting LAM as a contraceptive option. The result shows the varying opinions among the surveyed population regarding the role of LAM in addressing the contraceptive needs of breastfeeding women. Those who agree may believe that promoting LAM as a viable contraceptive option can help overcome challenges related to contraceptive choices for breastfeeding women by providing a natural and effective method that aligns with breastfeeding practices. However, those who disagree may have concerns about relying solely on LAM and advocate for a more comprehensive range of contraceptive options tailored to the individual needs and preferences of breastfeeding women. These perceptions highlight the complex considerations involved in addressing the contraceptive needs of breastfeeding women and the potential role of LAM in mitigating challenges in providing appropriate contraceptive choices. Further research and discussions are warranted to explore the implications of promoting LAM as a contraceptive option and its impact on addressing the contraceptive needs of breastfeeding women. It also shows data on respondents' perceptions regarding whether breastfeeding and the Lactational Amenorrhea Method (LAM) are the same thing. Among the respondents, 35.3% agreed that breastfeeding and LAM is the same thing, while 58.8% disagreed with this statement. Additionally, a small proportion of

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respondents (5.9%) expressed uncertainty about the equivalence of breastfeeding and LAM. These findings suggest some divergence in opinions among the surveyed population regarding the distinction between breastfeeding and LAM. Those who agree may perceive LAM as simply a natural consequence of breastfeeding, where the absence of menstruation is seen as a direct result of exclusive breastfeeding rather than a deliberate contraceptive method. Nevertheless, those who disagree may recognize LAM as a specific contraceptive strategy that relies on exclusive breastfeeding patterns to suppress ovulation and prevent pregnancy, distinct from the act of breastfeeding itself and these perceptions may highlight the importance of clarifying the distinction between breastfeeding and LAM, particularly in promoting understanding and awareness of LAM as a contraceptive option. Educating individuals about the unique mechanisms and effectiveness of LAM as a contraceptive method can help address misconceptions and promote informed decision-making regarding contraceptive choices among breastfeeding women.

Additionally, the table presents data on respondents' perceptions regarding whether the Lactational Amenorrhea Method (LAM) provides protection against HIV. Among the respondents, the overwhelming majority (96.1%) indicated that LAM does not provide protection against HIV, while a small proportion (3.9%) expressed uncertainty about this statement. findings align with established scientific knowledge, as LAM is primarily recognized as a method of contraception based on the suppression of ovulation through exclusive breastfeeding practices. While breastfeeding itself may offer some degree of protection against HIV transmission from mother to child, LAM is not specifically designed or recognized as a method for preventing HIV transmission. The result therefore shows the need for accurate information and education regarding the capabilities and limitations of

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contraceptive methods, including LAM, to ensure individuals make informed decisions regarding their reproductive health and HIV prevention strategies. Efforts to provide comprehensive sexual and reproductive health education should include discussions about the appropriate use of condoms and other methods for HIV prevention alongside contraceptive methods like LAM. Also, in the above table presents data on respondents' perceptions regarding whether manually expressing milk for the infant when the mother is unable to breastfeed is as effective as sucking to suppress ovulation. Among the respondents, 13.7% agreed that manually expressing milk is as effective as sucking to suppress ovulation, while 80.4% disagreed with this statement.

Additionally, 5.9% of respondents expressed uncertainty about this comparison. Findings reflect a divergence in opinions among the surveyed population regarding the effectiveness of manually expressing milk for suppressing ovulation compared to direct sucking during breastfeeding. Those who agree may perceive manually expressing milk as a potential alternative to breastfeeding for maintaining lactational amenorrhea and contraceptive protection. Alternatively, those who disagree may recognize the unique hormonal stimulation associated with direct sucking during breastfeeding as essential for suppressing ovulation and may have concerns about the effectiveness of manual expression alone. These perceptions show the importance of understanding the physiological mechanisms underlying Lactational Amenorrhea and the factors influencing its effectiveness as a contraceptive method. Further research and education efforts may help clarify the role of various breastfeeding practices, including manual expression, in maintaining Lactational Amenorrhea and inform individuals' contraceptive decision-making processes.

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It also presents data on respondents' perceptions regarding whether the Lactational Amenorrhea Method (LAM) can be considered a sustainable and reliable long-term contraceptive option for lactating mothers. Among the respondents, 33.3% agreed that LAM can be considered a sustainable and reliable long-term contraceptive option, while 60.8% disagreed with this statement. Additionally, 5.9% of respondents expressed uncertainty about this assertion. The data above indicate a divergence in opinions among the surveyed population regarding the suitability of LAM as a long-term contraceptive option for lactating mothers. Those who agree may perceive LAM as a sustainable and reliable method for birth spacing or family planning among breastfeeding women, given its natural and non-invasive nature. Conversely, those who disagree may have concerns about the limitations of LAM, such as its reliance on strict criteria for effectiveness, potential challenges in maintaining exclusive breastfeeding over the long term, and the risk of unintended pregnancy if not used correctly. These perceptions highlight the complexities involved in evaluating the long-term sustainability and reliability of LAM as a contraceptive method, considering factors such as individual circumstances, cultural norms, and access to healthcare resources. Further research and education efforts may help clarify the role of LAM in long-term contraceptive planning and inform discussions about its suitability for lactating mothers seeking effective and sustainable birth control options.

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Table 4.4: Assess the effectiveness of LAM as a contraceptive method

Variable	Frequency	Percentage

How effective do you think LAM is as a contraceptive method?		
Effective	48	47.1
Ineffective	42	41.2
Not Sure	12	11.8
Are you aware that exclusive breastfeeding is a key factor for the effectiveness of LAM?		
Yes	78	76.5
No	22	21.6
Not Sure	2	2.0
Have you experienced a return of menstrual periods while using the Lactational Amenorrhea Method?		
Yes	78	76.5
No	22	21.6
Nil	2	2.0
If yes, how soon did your menstrual periods return?		
20 - 39 Days	12	15.4
40 -59 Days	42	53.8
60 days and above	24	30.8
Have you experienced an unplanned pregnancy while using this method?		
Yes	22	21.6
No	72	70.6
Nil	8	7.8
If yes please specify the reason		
Return of Menses	12	54.5
Inconsistent breastfeeding pattern	10	45.5
How consistently have you followed the method?		
Consistent	38	37.3
Inconsistent	58	56.9
Nil	6	5.9
Were there any challenges in implementing this method?		
Yes	80	78.4
No	22	21.6
For those with challenges implementing LAM, what were the challenges?		
Menstrual Irregularities	26	32.5
Breastfeeding Inconveniences	22	27.5
Pain in the breast during breastfeeding	32	40.0
Total	**102**	**100**

Source: Author's Field Work, 2024

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Data on respondents' opinions of the Lactational Amenorrhea Method's (LAM) efficacy as a method of contraception are included in the table. Of those surveyed, 47.1% thought LAM

was an effective means of contraception, while 41.2% thought it was unsuccessful. Furthermore, 11.8% of respondents said they were unsure about LAM's efficacy as a means of contraception. These results show that the population surveyed had differing perspectives about the effectiveness of LAM as a form of contraception. People who find LAM to be effective might view it as a dependable method of birth control, especially if used in accordance with recommendations for amenorrhea and exclusive breastfeeding. On the other hand, people who believe LAM is ineffectual might be skeptical of its dependability, effectiveness, or applicability in actual situations. These opinions highlight how crucial it is to spread knowledge and encourage appropriate usage of LAM as a means of contraception. People can make more educated decisions about family planning and contraception if they are given correct information about the mechanics, effectiveness standards, and possible drawbacks of LAM. Furthermore, dispelling myths or doubts regarding LAM's efficacy could encourage its use as a practical method of contraception for those who qualify.

> Few mothers have a mindset that since this method worked for their friend effectively; it must work for them also. For some women it can be effective when she meets the criteria for LAM, and for some it is not effective due to the nature of their body system. Some women may experience return of menstruation after 41 days of childbirth and some earlier than that, which can render the whole process ineffective. LAM is not 100% effective. So most times we don't advice them to rely solely on LAM for contraceptive purpose but rather they should seek advice from us on which method of FP is best for them.
>
> (KII 13/12/2023, 11:11am) Female Nutritionist/Dietitian, Adeoyo Maternity Teaching Hospital, Yemetu, Age: 34years)

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> I will say LAM is a natural and temporary method. It is not effective and it can fail at any time.
>
> (KII 13/12/2023, 11:43am) Female, Nurse, Adeoyo Maternity Teaching Hospital, Yemetu, Age: 30years)

The information on respondents' awareness of whether exclusive breastfeeding is a crucial component of the Lactational Amenorrhea Method's (LAM) efficacy is included in this table. Of those surveyed, 76.5% said they knew exclusive breastfeeding is a crucial component of LAM's efficacy, but 21.6% said they were unaware of this information. Furthermore, 2.0% of respondents said they were unsure about their knowledge of the contribution of exclusive breastfeeding to the efficacy of LAM. Therefore, findings highlight the benefits of education and awareness regarding the criteria for LAM's effectiveness, particularly the role of exclusive breastfeeding. Individuals who are aware of the significance of exclusive breastfeeding are more likely to understand the requirements for LAM to provide reliable contraceptive protection. Addressing these gaps in knowledge and promoting awareness about the relationship between exclusive breastfeeding and LAM's effectiveness can help individuals make informed decisions about contraception and family planning methods. Also, healthcare providers play a crucial role in providing accurate information and counseling to ensure that individuals have a clear understanding of LAM's requirements and potential benefits. , LAM as a contraceptive technique offers a lot of benefits. The response from the qualitative data below compliments the point raised in the quantitative data:

> LAM as a contraceptive method has numerous of benefits, such as strengthen the bond between mother and her child by providing the maximum benefits of breastfeeding, and breastfeeding helps the body to contract on time after birth, and when using this methods there are no side effects involved. But here in our clinic we don't advise lactating mothers to use

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> LAM as a contraceptive option because it can fail at anytime despite its benefit.
>
> (KII 13/12/2023, 12:00pm) Female, Nurse, Adeoyo Maternity Teaching Hospital, Yemetu, Age: 30years)

Moreover, the table shows the data on respondents' experiences regarding the return of menstrual periods while using the Lactational Amenorrhea Method (LAM). 76.5% of the surveyed population reported experiencing a return of menstrual periods while using LAM, indicating a cessation of the method's contraceptive effect. In contrast, 21.6% of respondents reported not experiencing a return of menstrual periods while using LAM, suggesting the continued effectiveness of the method in suppressing ovulation. In addition, 2.0% of respondents reported "Nil," indicating either a lack of menstruation prior to or during LAM usage. This result shows the variability in individual experiences with LAM and its effectiveness in maintaining amenorrhea, which is essential for contraceptive protection. Factors such as breastfeeding patterns, the introduction of complementary foods, and individual hormonal responses may influence the duration of amenorrhea while using LAM. Understanding these experiences can broaden discussions on contraceptive effectiveness and support individuals in making informed decisions about family planning and contraceptive choices.

It also reveals data on the timing of the return of menstrual periods among respondents who experienced a return while using the Lactational Amenorrhea Method (LAM). Among these respondents, 15.4% reported that their menstrual periods returned within 20 to 39 days after initiating LAM usage. Additionally, 53.8% reported a return of menstrual periods between 40 to 59 days, while 30.8% indicated that their menstrual periods returned 60 days or more after starting LAM. This illustrates the variability in the timing of menstrual return among

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individuals using LAM, reflecting the diverse hormonal responses and breastfeeding patterns observed among lactating women. Understanding the range of potential timelines for menstrual return can help individuals and healthcare providers anticipate changes in contraceptive effectiveness and make informed decisions about ongoing contraceptive strategies and family planning. Furthermore, this information reveals the value of regular monitoring and follow-up care to assess contraceptive efficacy and address any changes in reproductive health status among LAM users.

From the above table it is deduced that respondents' experiences regarding unplanned pregnancies while using the Lactational Amenorrhea Method (LAM) that 21.6% reported experiencing an unplanned pregnancy while using LAM, indicating a failure of the method to prevent pregnancy in those cases. In contrast, 70.6% of respondents reported not experiencing an unplanned pregnancy while using LAM, suggesting successful contraceptive use. Meanwhile, 7.8% of respondents reported "Nil," indicating either a lack of pregnancy or no response to the question. The result revealed the importance of understanding the effectiveness and limitations of LAM as a contraceptive method. While LAM can be highly effective when practiced according to established guidelines, including exclusive breastfeeding and amenorrhea, there is still a risk of unintended pregnancy in some cases. Factors such as inconsistent breastfeeding patterns, introduction of complementary foods, and individual variations in hormonal responses can influence the method's efficacy which addressing these factors and providing comprehensive education and support can help individuals make better decisions about contraceptive choices and family planning. Also, healthcare providers play a crucial role in assessing individuals' eligibility for LAM and providing appropriate counseling to support effective contraceptive use.

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Among the respondents who reported experiencing an unplanned pregnancy, 54.5% specified the reason as the return of menstrual periods, indicating a cessation of LAM's contraceptive effect due to the resumption of ovulation, 45.5% of respondents cited inconsistent breastfeeding patterns as the reason for the unplanned pregnancy, suggesting that deviations from exclusive breastfeeding practices may have contributed to contraceptive failure in these cases. This indicates the necessity of adherence to established guidelines for LAM effectiveness, including exclusive breastfeeding and amenorrhea. Deviations from these guidelines, such as inconsistent breastfeeding patterns or the return of menstrual periods, can compromise LAM's contraceptive efficacy and increase the risk of unintended pregnancy. Addressing factors contributing to contraceptive failure, such as providing support for breastfeeding and promoting consistent contraceptive use can help individuals achieve effective family planning and prevent unintended pregnancies.

Furthermore, it shows the data on respondents' self-reported consistency in the use of LAM, 37.3% reported following the method consistently, while 56.9% reported being inconsistent in following the method likewise 5.9% of respondents reported "Nil," indicating either a lack of response to the question or uncertainty about their consistency in following the method. The outcome of the survey shows the difference in adherence to LAM guidelines among the surveyed population. Consistent adherence to LAM practices, such as exclusive breastfeeding and monitoring for the return of menstrual periods, is essential for maintaining contraceptive effectiveness. Deviations from these practices, such as introducing complementary foods too early or not breastfeeding exclusively, can compromise LAM's efficacy and increase the risk of unintended pregnancy

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Lastly, the table gives an insight on respondents' experiences regarding challenges in implementing the Lactational Amenorrhea Method (LAM). 78.4% reported facing challenges in implementing this method, while 21.6% reported not encountering any challenges. 32.5% cited menstrual irregularities as a challenge indicating issues related to the return of menstrual periods while using LAM, 27.5% reported breastfeeding inconveniences as a challenge, suggesting difficulties or discomfort associated with breastfeeding practices. Furthermore, 40.0% of respondents identified pain in the breast during breastfeeding as a challenge, indicating physical discomfort or complications during the breastfeeding process. It shows the various barriers and challenges that individuals may encounter when implementing LAM as a contraceptive method. Menstrual irregularities and breastfeeding inconveniences may disrupt the consistent practice of LAM, compromising its contraceptive effectiveness. Additionally, experiencing pain during breastfeeding can further complicate LAM utilization, affecting breastfeeding practices and overall contraceptive outcomes. Addressing these challenges requires tailored support, education, and access to healthcare resources to help individuals overcome barriers and achieve successful LAM implementation. Healthcare providers play a crucial role in identifying and addressing challenges, providing appropriate guidance and support to optimize contraceptive outcomes for LAM users.

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Table 4.5: Assess the Predictors to the use of LAM

Variable	Frequency	Percentage
Are there any misconceptions or fears about reliability of LAM that may discourage its use among mothers?		
Yes	126	48.5
No	66	25.4
Not Sure	68	26.2

For those who have misconception and fears that will Discourage them. What are they?		
Variability of menstrual patterns	34	27.0
Lack of awareness about transition to other methods	38	30.2
Inconsistent information on duration of effectiveness	26	20.6
Misunderstanding of exclusive breastfeeding	10	7.9
Societal and cultural stigma	4	3.2
Concerns about ovulation	14	11.1
Does lack of access to health care facilities makes it difficult for mothers to use LAM as a Contraceptive method?		
Yes	66	25.4
No	126	48.5
Undecided	68	26.2
Does lack of information and knowledge of LAM among partner make it difficult for you to use LAM as a contraceptive method?		
Yes	142	54.6
No	54	20.8
Undecided	64	24.6
Are there any side effects that may discourage you from using this method?		
Yes	138	53.1
No	58	22.3
Not Sure	64	24.6
Do you receive enough family support that will influence your decision to use LAM as a contraceptive method?		
Yes	126	48.5
No	66	25.4
Undecided	68	26.2
Total	**260**	**100**

Source: Author's Field Work, 2024

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The Chi-Square statistics was used to ascertain variables that significantly influence or are associated with the use of Lactational Amenorrhea Method for contraception in the study area. Results of the statistics are shown in Table

Table 4.5b: Summary of Chi - Square Test Values of Predictor Variables for the use of Lactational Amenorrhea Method for contraception in the study area

Predictor Variables	P-value	Chi Square Coefficient of Linear-by-linear association (r)	Statistics Cramer's V test/percent	Chi Square value	(df)
Age	0.00*	0.14	0.22 (22.0%)	25.045	6
Marital status	0.14	0.55	0.12 (12.0%)	3.99	2
Duration of length of marriage	0.13	0.98	0.17 (17.0%)	15.069	10
Educational attainment	0.69	0.46	0.46 (46.0%)	2.255	4
Occupation	0.04*	0.96	0.16 (16.0%)	13.545	6
Monthly income	0.00*	0.001	0.22 (22.0%)	24.581	6
Misconceptions of fear for LAM	0.00*	0.003	0.68 (68.0%)	2.423	4
Lack of access to health facilities	0.00*	0.00	0.67 (67.0%)	2.323	4
Lack of information and knowledge of LAM	0.00*	0.00	0.69 (69.0%)	2.495	4
Side effects that discourage use of LAM	0.00*	0.00	0.69 (69.0%)	2.511	4
Family support influence on use of LAM	0.00*	0.00	0.67 (67.0%)	2.322	4

* Significant at 0.05

Source: Author's Data Analysis, 2024

Results of the Chi-Square statistics contained in Table 4.5b shows that age of respondents was found to have significant influence on the use of LAM in the study area *($p = 0.00$)*, with a linear by linear relationship of 0.14 implying a positive and weak relationship with use of LAM and a Cramer's V test value of 0.22 implying that 22% of the reasons for the use of LAM by lactating mothers is dependent on their age.

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Also, occupation of respondents ($p = 0.04$), monthly income ($p = 0.00$), misconceptions of fears for the use of LAM ($p = 0.00$), lack of access to health facilities ($p = 0.00$), lack of information and knowledge of LAM ($p = 0.00$), side effects that discourages use of LAM ($p = 0.00$) and family support influence on use of LAM ($p = 0.00$) were found to have significant influence on the use of LAM by the respondents. Most importantly, occupation of respondents had a Cramer V test (CV) value of 0.16 (16%), monthly income (CV test = 0.22), misconceptions of fear for use of LAM (CV test = 0.68), lack of access to healthcare facilities (CV test = 0.67), lack of information and knowledge of LAM (CV test = 0.69), side effects that could discourage use of LAM (CV test = 0.69) and family support influence on use of LAM (CV test = 0.67).

This implies that occupation of respondents, monthly income, misconceptions of fear for use of LAM, lack of access to healthcare facilities, lack of information and knowledge of LAM, side effects and family support predicts 16%, 22%, 68%, 67%, 69%, 69%, and 67% of the reasons for the use of LAM by the respondents respectively. The high values of the CV test values of most of the variables presupposed that these variables positively predict the use of LAM by respondents in the study area.

However, marital status ($p = 0.14$), duration of length of marriage ($p = 0.13$) and educational attainment ($p = 0.69$) were found not to be significantly associated with the use of LAM, with Cramer V test values of 0.12 (12%), 0.17 (17%) and 0.07 (7%) respectively (Table 4.48). The implication of this finding is that marital status, duration of length of marriage and educational attainment were found not to be significantly associated with the use of LAM, but predicted 12%, 17% and 7% respectively of the decisions for the use of LAM by the respondents.

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Therefore, from the forgoing analysis it deduced that the major predictors to the use of LAM in the study area are age of respondents, occupation, monthly income, misconceptions of fear for use of LAM, lack of access to healthcare facilities, lack of information and knowledge of LAM, side effects that could discourage use of LAM and family support influence on use of LAM.

Table 4.6: the role of men in the use of LAM

Variable	Frequency	Percentage
The presence and support of the partner in Understanding LAM are important for its successful use.		
Disagreed	41	15.8
Agreed	153	58.8
Undecided	66	25.4
Men should be actively involved in the decision making process of using LAM as a contraceptive method.		
Disagreed	39	15.0
Agreed	153	58.8
Undecided	68	26.2
Disagreed	40	15.4
Agreed	156	60.0
Undecided	64	24.6
Men should encourage their partners to breastfeed exclusively and frequently to maximize the effectiveness of LAM		
Disagreed	57	21.9
Agreed	141	54.2
Undecided	62	23.8
Men should provide emotional support to lactating mothers during breastfeeding, understanding its role in contraception		
Disagreed	80	30.8
Agreed	117	45.0
Undecided	63	24.2
Men should be involved in facilitating the communication between the lactating mothers and health care Providers regarding LAM.		

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Disagreed	71	27.3
Agreed	126	48.5
Undecided	63	24.2
Men should actively participate in ensuring the mother's overall well-being, including adequate nutrition, rest and stress management, which can impact the effectiveness of LAM.		
Disagreed	33	12.7
Agreed	165	63.5
Undecided	62	23.8
Men should be supportive if the lactating mother wants to explore other contraceptive methods in addition to LAM.		
Disagreed	36	13.8
Agreed	158	60.8
Undecided	66	25.4
Men should be willing their sexual behaviours and use alternative contraceptive methods during transition period when LAM may no longer be effective.		
Disagreed	48	18.5
Agreed	144	55.4
Undecided	68	26.2
The involvement of men in LAM can strengthen the overall contraceptive effectiveness and enhance the bond between partners.		
Disagreed	46	17.7
Agreed	148	56.9
Undecided	66	25.4
Total	**260**	**100**

Source: Author's Field Work, 2024

Above shows the respondents' opinions regarding the importance of the presence and support of the partner in understanding and successfully using the Lactational Amenorrhea Method (LAM), 15.8% disagreed with the statement, indicating that they do not perceive the partner's involvement as important for the successful use of LAM. On the other hand, 58.8% of respondents agreed that the presence and support of the partner are important for the successful use of LAM. Meanwhile, 25.4% of respondents remained undecided about the importance of the partner's involvement in LAM utilization. The importance of partner support and involvement in contraceptive decision-making and implementation in the use of

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LAM is highlighted by these findings. Supportive and knowledgeable partners can help make LAM a successful practice by offering encouragement, helping with domestic chores and childcare, and being aware of the requirements of the method. That being said, as indicated by those who disagreed or remained indecisive, not all respondents may view the partner's presence and support as absolutely necessary. In order to foster understanding and cooperation between partners in family planning topics, specific education and counseling initiatives may be needed to address differing viewpoints on partner involvement in contraceptive decision-making.

The table reveals that 58.8% of respondents felt that men should actively participate in this decision-making process, demonstrating how important they think it is to include men in conversations about contraceptive options when it comes to LAM. Similarly, 15.0% of respondents disagreed with this statement, indicating that they do not think men should be involved in the decision-making process when determining whether to use LAM for contraception. The remaining 26.2% of respondents were unsure of how important they thought men should be involved in this decision-making. The outcome demonstrates the variety of viewpoints on men's roles in the selection and use of contraceptives, especially with reference to LAM. In the meanwhile, the majority is in favor of males actively participating in decision-making. As a way to tackle these different points of view, it might be necessary to implement specific education and counseling programs to encourage communication and cooperation between partners on family planning issues, including the use of LAM as a method of contraception.

The assertion that men should educate themselves about LAM for its effective usage as a contraceptive technique was supported by 60.0% of the respondents. On the other hand,

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15.4% disagreed with this statement, indicating that they did not think it was necessary for men to become knowledgeable about LAM and, 24.6% of those surveyed were still unsure regarding this issue. The results of this study shed light on differing viewpoints regarding the place of men in the discussion and selection of birth control, especially when it comes to LAM. Even though most respondents agree that men should teach them about LAM, sizeable fractions have opposing opinions or are unsure. Targeted educational interventions that encourage communication and cooperation between partners on family planning issues, such as the use of LAM as a method of contraception, should be put in place to address these differing points of view.

Respondents' opinions regarding whether men should encourage their partners to breastfeed exclusively and frequently to maximize the effectiveness of the Lactational Amenorrhea Method (LAM) Among the respondents, 54.2% agreed indicating their belief that men should play a role in encouraging exclusive and frequent breastfeeding to enhance LAM's effectiveness as a contraceptive method. However, 21.9% disagreed with this statement, suggesting they do not see the importance of men's involvement in encouraging exclusive breastfeeding and 23.8% of respondents remained undecided about this issue. Therefore, the varying perspectives on the role of men in supporting breastfeeding practices within the context of LAM differs and thereby the need to address these diverse perspectives may require targeted educational interventions and support services aimed at promoting understanding and collaboration between partners in family planning matters, including the use of LAM as a contraceptive method.

Moreover, 45.0% of the respondents concluded that men should provide emotional support to lactating mothers during breastfeeding, recognizing its importance in contraceptive

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effectiveness. Although, 30.8% disagreed and 24.2% remained undecided about this issue, Therefore, the diverse perspectives may necessitate targeted educative programmes and support services aimed at promoting understanding and collaboration between partners in family planning matters. Also, respondents' viewpoint towards men involvement in facilitating communication between lactating mothers and healthcare providers regarding the Lactational Amenorrhea Method (LAM) shows that 48.5% agreed, 27.3% disagreed, and 24.2% of respondents remained undecided. Furthermore, the above table shows that 63.5 % of respondents believed that men should actively participate in ensuring the mother's overall well-being, including adequate nutrition, rest, and stress management which can impact the effectiveness of the Lactational Amenorrhea Method. However, 12.7% of participant did not see the need for male involvement in family planning.

Meanwhile, 60.8% of respondents indicating their belief that men should be supportive if the lactating mother wishes to explore other contraceptive methods alongside LAM, and 55.4% of participant concurred that men should be willing to adjust their sexual behaviours and use alternative contraceptive methods during the transition period when the Lactational Amenorrhea Method (LAM) may no longer be effective, while a notable portion holds dissenting views or remains undecided. The involvement of men in the Lactational Amenorrhea Method (LAM) can strengthen the overall contraceptive effectiveness and enhance the bond between partners which 56.9% attested to and 17.7% disagreed with this statement, suggesting they do not see the importance of men's involvement in this aspect. Likewise, 25.4% of respondents remained uncertain.

4.3 Discussion of Findings

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Research Question One was formulated to identify the level of knowledge and practice of Lactational Amenorrhea Method as a form of contraceptive among lactating mothers in Ibadan. The result obtained shows that the awareness level and practice of LAM as a contraceptive method among lactating mothers in Ibadan is high, by implication it means that women in South West Nigeria put their babies to breast regularly. Probably because they have good knowledge of what breastfeeding can do to their health and that of their baby. This finding is consistent with the existing literature that breast milk is an excellent source of nutrition for the baby, and promotes an affectionate bond between mother and child and more so that it can lengthens the interval between births. WHO and UNICEF agreed that for lactation amenorrhea to be used as reliable contraceptive, the baby must receive all of its nutrition from the breast, no bottle supplements or solid foods and the baby feed at least every four hour during the day and every six hours at night. Emphasis laid on giving information on reproductive attitudes and motivation may be helpful in understanding the factors that affects breastfeeding and fertility. It is very clear that women have a very high knowledge of basic concept of breastfeeding and child spacing. But many women are still very confused about the fact that breastfeeding can be a reliable contraceptive measure[1].

Previous study carried out in Uganda explored the knowledge and use of Lactational Amenorrhoea as a FP method among adolescents in Uganda. The findings indicate that nearly 60% of eligible adolescents in 2016 had knowledge about LAM, and there was an increase in the percentage of adolescents with knowledge of LAM in the examined period. It further revealed that any true increase in levels of knowledge about LAM may be attributed to various efforts that have been implemented over time by the Ugandan government including free primary education, FP initiatives including the use of community health

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workers and promoting the provision of adolescent and youth-friendly services. Regardless, the observed increase in knowledge may result in better attitudes towards and acceptability of LAM as an effective contraceptive method, which would contribute to increase adoption. But this would be dependent on the appropriateness of the information to which adolescents are exposed and their ability to apply it correctly, among other factors[2].

The present result shows that 51.5% of women relied on the use of LAM for 6months to 12 months. Similarly, previous study found that practicing exclusive breastfeeding (EBF) in the first 6 months of life and continuing breastfeeding from 6 to 11 months was identified as one of the single most effective preventive interventions in reducing child mortality by the Bellagio Child Survival Study Group in 2003, with the potential of saving 1.3 million lives annually[3].

Breastfeeding confers numerous benefits on babies and mothers. Early initiation, "exclusive breastfeeding" and breastfeeding for at least two years post-delivery are the recommended practices by W.H.O. In mothers, breastfeeding reduces postpartum bleeding, enhances accelerated involution of the uterus and plays a crucial role in child spacing through lactational amenorrhea. Evidence from a recent study indicates that breastfeeding is critical to the survival of newborns and infants. An estimated 13% reduction in infant mortality rate can be achieved through the practice of exclusive breastfeeding. Initiating breastfeeding within the first hour of life could reduce the rate of neo natal mortality by up to 22%. The many benefits of breastfeeding notwithstanding, the rate of exclusive breastfeeding are only 39% in developing countries[4].

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In many societies including Nigeria, The use of breastfeeding as a method of birth spacing occasionally ends in "unplanned pregnancy." This is due to unexpected expiration of one or more of the Lactational Amenorrhea Method (LAM) prerequisites. Once the baby is 6 months old or when supplementary feeding has been started or the menses has resumed, LAM no longer provides reliable protection against pregnancy, and another family planning method should be introduced[5]. Result from this present revealed that many mothers used other forms of contraceptive alongside LAM for 100% efficacy such as IUDs and oral pills which have been used for a long time and have been shown to decrease the incidence of pregnancy by 75%–85% when the use of LAM fails[5]. Previous study carried out in Egypt shows that the knowledge and practice of emergency contraceptive as backup plan is quite low. It revealed that only 0.7% of young women had ever heard of Emergency Contraceptive and only eight of them (0.3%) had ever used it. Thus, if awareness and availability of this backup method can be provided during the postpartum period, it may act as an alarm to women to initiate the use of regular method of contraception. Emergency Contraceptive may also decrease the incidence of unplanned pregnancy during breastfeeding[5].

Research Question Two was formulated to identify the perceptions of mothers toward the use of Lactational Amenorrhea Method as a form of contraceptive. Findings from the present study through the use of IDI reveal that most women have a negative perception towards LAM as contraceptive technique. Nigeria is among countries with high maternal mortality rates, yet contraceptive uptake rates are still relatively low in the country. Only about 10% of currently married Nigerian women use modern forms of contraception including the lactational amenorrhea method (LAM). Breast feeding may pose a further challenge to the

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uptake of contraception by possibly restricting use of certain methods for either real, or perceived risks of possible side effects[6].

Maternal perception on LAM is another major factor influencing its use as recommended. The perception is built especially when the mothers are provided with the right and adequate information on the numerous benefits of lactational amenorrhea method during the antenatal clinic visits. In this present study it revealed that women indeed belief LAM to be convenient and cost-effective contraceptive method for certain individuals.

Previous findings shows that LAM can be particularly advantageous for women in resource-limited settings where access to other contraceptive methods may be limited. It doesn't require any additional supplies or equipment, making it affordable and accessible to many. However, it's crucial for individuals relying on LAM to understand its limitations and effectiveness criteria, as well as to have access to support and information regarding its proper use and potential risks.

Another perception about the use of LAM by lactating mother is that they belief that LAM is safe for both the mother and the baby. The perception that Lactational Amenorrhea Method (LAM) is safe for both the mother and the baby is based on the understanding that during exclusive breastfeeding, the hormonal changes associated with lactation suppress ovulation, providing a natural form of contraception. This belief stems from research indicating that when practiced correctly, LAM can be an effective method of birth control during the postpartum period, without the need for additional contraceptives. Advocates of LAM argue that it fosters a bond between mother and infant through prolonged breastfeeding, while also providing a natural and non-invasive means of family planning. However, it's important to

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note that while LAM can be highly effective when followed strictly according to guidelines, it is not full proof and may carry risks if not adhered to correctly, such as unintended pregnancy. Therefore, while perceived as safe by many, it is essential for lactating mothers to understand the principles and limitations of LAM and to make informed decisions in consultation with healthcare providers[7].

Research Question Three: Family planning is the most effective method to control the continuing growth of the population. The study findings relate to previous studies that also show a low prevalence of LAM use among women of reproductive age in general and adolescents in particular. Low correct use of LAM is a result of not fulfilling one or more of the three criteria, which also influence the effectiveness of LAM as an FP method. This would mean that if new adolescent mothers are not correctly using LAM and they are not using any other FP methods within the first six months after childbirth, they would be at higher risk of becoming pregnant again. This would also vary based on factors like sexual activity or access to clinical or social support during this period[8].

Moreover, an understanding of breastfeeding as a contraceptive method has been established at the Bellagio consensus, Italy, since 1988. This consensus brought together an international interdisciplinary study group in lactation infertility to discuss LAM as an effective and safe contraception method. The consensus results showed a 98% chance of protection against pregnancy and amenorrhea in the first six months after childbirth, under the circumstances where the mother practices direct breastfeeding. In addition, this approach is considered appropriate if the three LAM criteria are fulfilled and breastfeeding mothers must understand the three LAM criteria so that this contraceptive method can be successful[9]. The effectiveness of LAM is known to decrease with the return of menstruation. Hence, mothers

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are expected to immediately use another contraceptive approach when a postponement of pregnancy is needed. Therefore, providing substantial information is necessary to increase maternal knowledge about LAM and distinguish the correct application technique. Moreover, health workers are encouraged to record the success of mothers adopting LAM and support the realization of exclusive breastfeeding.

Research Question Four was formulated to identify the predictors to the use of LAM as a contraceptive method. Generally, the wide variety of results can be explained by the difference in socio-demographic and cultural factors in different areas and settings in which various studies have been conducted (rural and urban settings) and access to information and the services. Education and income level and number of children ever born had significant impact with the use of LAM. In this context, higher education of the women was associated with the increase use of LAM. The association of higher education status with using LAM has been demonstrated by other authors. According to a survey, pills, condoms, and traditional methods were more common among educated women while injectable and permanent methods were more common among uneducated women. It can be assumed that women with higher education status probably have more knowledge and fear about the side-effects of LAM. However, authors have often observed a positive association between the level of education and LAM utilization. Income level had also a positive association with acceptance of LAM. This finding is supported by several studies indicating that using LAM was more frequent in higher income groups and educated individuals. In contrast, in Bangladesh, India, and Haiti, poorer women were more likely to use LAMs than wealthier women. This may reflect a different policy environment in the mentioned countries than other countries[10].

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Religious and cultural factors also influence acceptance, and use, of contraception during the postpartum period. Studies in the review described cultural norms encouraging childbearing and/or religious prohibition of contraception for postpartum women. While postpartum women have unique barriers to using contraception, Fear of side effects was reported in several studies in our review, and was consistently cited as a formidable barrier that led to low uptake and high discontinuation rates among postpartum women[11].

A scholarly finding reveals that current contraceptive use was significantly higher among Christians than Muslims and is consistent with existing literatures. It shows that religion remains a fundamental factor in contraceptive use in Nigeria. As previously mentioned, there are numerous consequences of not using contraceptives. Ignoring them can adversely affect a person's life when religious beliefs equate ignorance with virtue and when anxiety and indignity from religious persecution overshadow common sense, people cannot decide on acceptance and utilization of contraceptive as they wish. This is contrary to the endorsement at the 1994 International Conference on Population and Development presented in Cairo, Egypt, that the decision of when or even whether to have children is a basic human right. The religious differences in contraceptive use could be a factor responsible for wide disparity in current contraceptive use among the northern and southern regions in Nigeria as evidenced in this study. Higher proportions of women who currently use contraception were found in all the regions in the southern part of Nigeria than any of the regions in the North. This is consistent with previous findings conducted among all women of childbearing age in Nigeria[12].

Also, a similar study titled uptake and predictors of contraceptive use in afghan women, found low rates of contraceptive use among married, non-pregnant women in Afghanistan

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with further reduction in uptake associated with the poverty, low level of education and younger age. Number of years of education might provide married women on the better awareness on advantages of birth spacing and use of contraceptive. Similarly, educated women could have positive health seeking behaviour. The increase number of living children as mentioned strongly associated with use of contraceptive among currently married women[13].

Furthermore, Myths and misconceptions surrounding the Lactational Amenorrhea Method (LAM) can significantly impact a mother's choice of use and its effectiveness as a contraceptive method. However, if individuals hold misconceptions about how LAM works or its reliability, they may not use it correctly or trust its efficacy. For example, some may believe that breastfeeding alone is a foolproof contraceptive method, leading to unprotected intercourse when infact, certain criteria must be met for LAM to be effective, such as exclusive breastfeeding and absence of menstruation. Additionally, cultural or social myths may influence perceptions of LAM's reliability, leading individuals to doubt its effectiveness and resort to alternative methods or no contraception at all. Therefore, addressing and dispelling these myths through education and awareness campaigns is crucial for promoting the proper use of LAM and improving its effectiveness as a contraceptive option[14].

Research Question Five: This study which sought to examine the role of men in family planning on the background of an African culture where it had been shown that the male is the dominant force for decision making in most marital relationships. The interest in men's involvement in reproductive health has continued to increase since the International Conference on Population and Development (ICPD) in 1994. Despite this, low levels of

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men’s involvement in family planning services continues to be a major barrier to achieving a high rate of use of modern contraceptive in sub-Saharan Africa.

The role of the Husband's supports in the successful contraception of LAM shows a good result. The majority of people who succeed in exclusive breastfeeding have Husband's support with the success of LAM as contraception. The Husband's support is some effort made by the Husband to give attention, comfort, and strong self confidence that can provide emotional benefits and support to the recipient's behaviour. The Husband's support is a social source that the wife needs when facing pressure and some problems, it can be in the form of appreciation and interest for the wife, tolerance, and attitudes that show affection. According to scholars, family is a group of people who are closest to an individual and always give encouragement in any form and situation, and the husband is the closest family member and can be trusted to provide support to his wife[15]. The implication of this is that the level of the involvement of men in family planning procedures of their wives is satisfactory. It could then be deduced generally that married males are very much aware of the importance of family planning to the wellness of their families. This result is in tandem with the findings of scholars in their various studies which show that adequate awareness of family planning by couples will help them in regulating intervals between children, preventing unplanned pregnancy and build their future[16].

Previous study showed that education was significantly associated with men’s overall knowledge, attitude and use of modern contraception, thereby improving their roles in family planning. Men with secondary or tertiary education are more likely to participate in family planning, or positively influence their spouses towards better uptake of modern contraception. This finding was similar to reports from other studies within Nigeria and Africa, but different

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from a study from Ibadan, Nigeria which reported primary education as significant predictor of use of contraceptive. This might be due to the presence of many donor-funded reproductive health programmes in the state which might have targeted and changed the behaviour of the least educated people in the community[17].

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Chapter Five

Conclusion

5.1. Summary of Findings

The Lactational Amenorrhea Method (LAM) is a modern, temporary family planning technique that was created as a tool to help support both breastfeeding and family planning use. This study looked at the knowledge, practice, and perception of LAM as a form of contraception among lactating moms. Through its research instruments: a questionnaire and an in-depth interview segmented for nursing mothers and health officers—it studied and also investigated. The work is broken up into five parts. The first chapter covers the topic, the problem description, the study's purpose and objectives, and the research questions that are important to know in order to collect data on the problem. The work's second chapter concentrated on the earlier research on family planning, the Lactational Amenorrhea Method, factors influencing the uptake of contraceptives, and male engagement in family planning. It also included an explanation of the theories; Kristin Luker Theory of Contraceptive Risk Taking, Health Belief Model, Theory of Planned Behaviour, and Social Cognitive Theory that served as the work's theoretical framework and direction. The research techniques used to collect, examine, and interpret the study's data were covered in the third chapter. While the fourth chapter presented the research findings and the discussion on the knowledge, practice and perception of breastfeeding mothers towards use of Lactational Amenorrhea Method as a contraceptive method. The last chapter sums up the work and recommends other areas of further research.

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5.2. Conclusion

This study examines breastfeeding knowledge, practices, and attitudes concerning the use of the lactational amenorrhea method as a method of contraception. Analyses of the data were

conducted in accordance with the study's goals. The study was conducted in Ibadan. It was determined after taking the study's results into account that nursing mothers are highly knowledgeable about LAM. Their high frequency of nursing was found to have an impact on their fertility by extending the duration of their amenorrhea. Meanwhile, it has been found that adequate breastfeeding, particularly exclusive breastfeeding, improves the mother's and the child's health. Therefore, it was determined that having a positive attitude toward breastfeeding will help mothers choose to breastfeed their children successfully and extend the time that they do so. As a result, health professionals, counselors, and other relevant agencies should support mothers in their efforts to breastfeed their children. Most lactating mothers believe that the Lactational Amenorrhea Method (LAM) is a safe, practical, and affordable method of contraception for both the mother and the child.

Based on their opinions, it's critical to promote LAM as an effective family planning method, especially in environments with little resources where access to contraception may be restricted. Using the physiological changes that occur naturally after giving birth, lactation synchronization (LAM) offers moms a cost-effective and useful way to space out pregnancies while protecting their own and their babies' health. Promoting knowledge and understanding of nursing mothers can enable them to make decisions about their reproductive health that are well-informed, ultimately leading to better results for both the mother and the child. The Lactational Amenorrhea Method (LAM) is a highly effective method of contraception, as evidenced by the overwhelming positive opinions of nursing mothers about it. This speaks to the importance of Lactational Amenorrhea Method (LAM) as a dependable method of family planning. This is consistent with empirical data showing that, when applied appropriately during the postpartum phase, Lactational Amenorrhea Method has a high

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efficacy. Since Lactational Amenorrhea Method is widely accepted as a reliable method of contraception, lactating mothers can make educated decisions about their reproductive health, fostering greater autonomy and well-being within their families and communities, this is because Lactational Amenorrhea Method uses the natural biological processes of lactation to prevent ovulation and thereby reduce the risk of unintended pregnancies. This highlights how crucial it is to support access to Lactational Amenorrhea Method and ongoing education as components of comprehensive family planning programs.

Lastly, promoting gender equality and reaching comprehensive reproductive health goals depend heavily on the participation of men in family planning. Through proactive involvement of males in conversations and decision-making processes around contraceptives, couples can improve mutual understanding, communication, and shared responsibility in their relationships. Involvement of men not only encourages a more equitable division of family planning tasks, but it also improves partner and family reproductive health outcomes. Men who actively participate in family planning are better equipped to support their partners' reproductive decisions, which in turn promotes healthier relationships and, in the end, more inclusive and sustainable methods of achieving reproductive health and rights for all.

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5.3. Recommendations

Recommendation of the study based on the study findings,

1. Public Education Campaigns: effective education campaigns must be implemented. In order to promote women's awareness and practice of FP, the health sectors of the regions and other stakeholders should bolster the health extension program. A family planning policy should be established by the government to direct the community and service providers. Given that women have a positive attitude on family planning.
2. Encourage Ongoing Reinforcement and Refresher Sessions: Despite the high level of LAM knowledge and application, it's critical to reaffirm this understanding over time. Provide recurrent refresher courses or opportunities for additional education to people who have already been informed about LAM. These meetings can be used to refresh their memory on the main ideas and advantages of LAM, answer any new queries or worries, and give them information on developments or modifications to best practices. It can guarantee that people retain a complete awareness of LAM and its function as a form of contraception by consistently enhancing the knowledge base.
3. Promote the Formation of Peer-to-Peer Support Networks: Encourage the formation of LAM-using and competent individuals to form peer-to-peer support networks. Urge those who have successfully used long-acting maternity minerals (LAM) to share their stories and perspectives with others who might be considering this type of birth control. Peer support networks can present individuals with beneficial chances to share knowledge, give and receive assistance, and learn from one another. Through the employment of peer support, the community's current understanding and application of LAM can be strengthened even more. Additionally, individuals can feel more empowered and supportive of one another.

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4. Health professionals should provide community women with comprehensive family planning education to increase the use of family planning techniques and information including a variety of contraceptive choices, including LAM. This entails outlining each method's operation, efficacy, advantages, possible drawbacks, and usage considerations. People can make judgments based on their own tastes, requirements, and situations by being given a thorough overview.
5. In addition to providing information, health workers should ensure that family planning services and methods, including LAM, are accessible and available to community women. This may involve addressing barriers such as geographic distance, cost, stigma, or lack of resources. By making services readily accessible, more women can effectively utilize family planning methods to support their reproductive health goals.
6. There should be integration of LAM into existing family planning programs and policies at both national and community levels. Incorporation of LAM education into national family planning programs and maternal health policies by ensuring that healthcare facilities have the necessary resources and trained staff to provide accurate information about LAM and government should allocate funds to support training programs for healthcare workers and to ensure the availability of educational materials.
7. Educational Campaigns and Awareness Programs: Launch targeted educational campaigns and awareness programs to promote LAM as a safe and effective contraceptive option. Develop culturally sensitive materials and messages that emphasize the benefits and advantages of LAM, particularly among populations

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where breastfeeding is common. These campaigns should target not only women of reproductive age but also their partners, families, and communities to ensure widespread understanding and support for LAM use. By raising awareness about the effectiveness of LAM and addressing any misconceptions or concerns, which can help empower individuals to make informed decisions about their reproductive health and increase the uptake of this contraceptive method.

8. Promote Shared Responsibility and Involvement: Men should be encouraged to take on a shared responsibility for contraception within their relationships which includes actively participating in contraceptive decision-making, planning, and implementation. Men can contribute by educating themselves about contraceptive methods, including LAM, and understanding their roles and responsibilities in ensuring their effective use. Encouraging men to take an active interest in reproductive health fosters a sense of partnership and shared decision-making within relationships, leading to better communication, mutual understanding, and support for contraceptive use. Additionally, involving men in discussions about family planning helps break down traditional gender norms and promotes more equitable relationships based on shared responsibility and respect.

5.4 Contribution to Knowledge

The study contributes to knowledge by focusing on breastfeeding mothers in Nigeria. The study addresses a demographic that is often understudied in contraceptive research. Nigeria, with its large population and diverse cultural landscape, presents a unique context for understanding the utilization of LAM as a contraceptive method. Examining the knowledge, practices, and perceptions of LAM among this specific group can offer insights into the

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cultural, societal, and economic factors that influence contraceptive decision-making in low-resource settings. In addition, the study provides valuable data on the effectiveness of LAM as a contraceptive method within the Nigerian context. Understanding the extent to which breastfeeding mothers rely on LAM for family planning can inform healthcare policies and programs aimed at promoting safe and effective contraceptive practices. Moreover, identifying any gaps in knowledge or misconceptions regarding LAM usage can guide targeted interventions to improve contraceptive education and access for breastfeeding mothers.

Furthermore, the study's findings also may contribute to the broader discourse on reproductive health and family planning strategies in developing countries. LAM represents a natural, non-invasive contraceptive method that aligns with cultural preferences and religious beliefs in many communities. By exploring how LAM is perceived and practiced among breastfeeding mothers in Nigeria, the study sheds light on the potential role of culturally sensitive contraceptive options in promoting reproductive autonomy and maternal health outcomes. Likewise, the study's insights can inform future research directions and programmatic interventions aimed at enhancing contraceptive uptake and utilization among breastfeeding mothers in Nigeria and similar contexts by identifying barriers to LAM adoption and utilization, as well as factors that contribute to its successful implementation, researchers and policymakers can develop targeted strategies to overcome challenges and promote informed decision-making regarding family planning. Ultimately, the study's contribution lies in its potential to improve access to and utilization of effective contraceptive methods among breastfeeding mothers, thereby supporting their reproductive health and rights.

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5.5 Suggested Area of Further Research

Research on Knowledge, Practice and Perceptions of Lactational Amenorrhea Method as contraception among lactating mothers in Ibadan is a critical and evolving field. Such areas as the role of health workers in promoting the uptake of contraceptive use, assessing the impact of LAM utilization on maternal and child health outcomes comparing urban and rural settings, different ethnic or religious communities or regions with varying access to healthcare services.

Another area of further research is community based interventions aimed at increasing the awareness and acceptance of LAM among women.

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Appendix I

Lead City University, Ibadan

Faculty of Management and Social Sciences

Department of Sociology

Questionnaire

My name is Ogidiolu Ayotomiwa Teniola. I am a Postgraduate student of the Department of Sociology, Lead City University, Ibadan. I am conducting a research on the Knowledge, Practice and Perception of Lactational Amenorrhea Method as Contraceptive among Lactating Mothers in Ibadan. I seek for your consent and cooperation in filling this questionnaire. Information received will be strictly used for academic purpose and will be treated with absolute confidentiality.

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Instruction: please tick {~} appropriately

Section A: Bio data

1. Age (years) ____
2. Marital status: Single { } Married { } Separated { } divorced{ } widow{ }
3. If married, for how many years? 1-5{ } 6-10{ } 11-15{ } 16-20{ }
4. Educational attainment? No formal education { } Primary { }Secondary { } Tertiary {}
5. Occupation? Not working { }Business/trading { }Civil servant { }Student { }
6. Household size? ______________________________________
7. Number of children____________________________
8. Monthly income (#,000) Less than 20{} 21-50 {} 50-100 {}101-150{}150 and above

Section B: Assess the Knowledge level and Practice of Lactational Amenorrhea Method

1. Have you heard about Lactational Amenorrhea Method as a contraceptive method?__________________
2. How would you describe your understanding of LAM? ________________________
3. What do Lactational Amenorrhea Method means to you? ____ ____
4. Do you know that LAM relies on exclusive breastfeeding to provide a natural contraceptive effect? ________________________
5. Where did you primarily gather information about LAM? Health care provider{} friends or family{} internet{}
6. Are you currently using LAM as a method of contraception? _____________________
7. What is the duration you have relied on LAM as a contraceptive method____________
8. How often do you breastfeed your child? ________________________
9. Has there been any problem reported with the use of this method? _________________
10. Do you use other contraceptive method alongside LAM? ________________________

    If any, please specify____

Section C: Assessing the perceptions of lactating mothers towards the use of LAM as a contraceptive method

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S/N	Variables	True	False	Not sure
1	LAM is a very convenient and cost effective contraceptive method			
2	Using LAM is safe for both the mother and baby.			
3	Exclusive breastfeeding is very difficult.			
4	LAM is outdated.			
5	LAM is 100% effective when used correctly.			
6	There is no sufficient information on LAM from health care providers.			
7	There are risks associated with relying solely on LAM for contraception.			
8	Long intervals between breastfeeds while a mother is at work do not affect LAM's effectiveness			
9	Acceptance and promotion of LAM as a contraceptive option may lessen the problems of providing appropriate contraceptive choices for breastfeeding women.			
10	Breastfeeding and LAM are the same thing			
11	LAM provides protection against HIV			
12	Manually expressing milk for the infant when mother is unable to breastfeed is effective as sucking to suppress ovulation.			
13	LAM be considered a sustainable and reliable long-term contraceptive option for lactating mothers			

Section D: Assess the effectiveness of LAM as a contraceptive method

1. How effective do you think LAM is as a contraceptive method?____________________
2. Are you aware that exclusive breastfeeding is a key factor for the effectiveness of LAM?__________________________
3. Have you experienced a return of menstrual periods while using the lactational amenorrhea method?___________________________
4. If yes, how soon did your menstrual periods return?_____________________

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5. Have you experienced an unplanned pregnancy while using this method?____________

6. If yes please specify the reason.______________________________

7. How consistently have you followed the method?_________________________

8. Were there any challenges in implementing this method?_____________________

9. If any, please specify_____________________________________

Section E: Assess the predictors to the use of LAM

1. Are there any misconceptions or fears about reliability of LAM that may discourage its use among mothers? ______________________________

2. If yes, please specify____

3. Does lack of access to health care facilities makes it difficult for mothers to use LAM as a contraceptive method? _____________________________

4. Does lack of information and knowledge of LAM among partner make it difficult for you to use LAM as a contraceptive method? _________________________

5. Are there any side effects that may discourage you from using this method? If any please specify____

6. Do you receive enough family support that will influence your decision to use LAM as a contraceptive method? ______________________________

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Section F: Assess the role of men when using LAM

S/N	Variables	Agree	Disagree	Undecided
1	The presence and support of the partner in			

	understanding LAM are important for its successful use.			
2	Men should be actively involved in the decision making process of using LAM as a contraceptive method.			
3	Men should educate themselves about LAM to ensure its proper implementation as a contraceptive method.			
4	Men should encourage their partners to breastfeed exclusively and frequently to maximize the effectiveness of LAM			
5	Men should provide emotional support to lactating mothers during breastfeeding, understanding its role in contraception.			
6	Men should be involved in facilitating the communication between the lactating mothers and health care providers regarding LAM.			
7	Men should actively participate in ensuring the mother's overall well-being, including adequate nutrition, rest and stress management, which can impact the effectiveness of LAM.			
8	Men should be supportive if the lactating mother wants to explore other contraceptive methods in addition to LAM.			
9	Men should be willing their sexual behaviours and use alternative contraceptive methods during transition period when LAM may no longer be effective.			
10	The involvement of men in LAM can strengthen the overall contraceptive effectiveness and enhance the bond between partners.			

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Appendix II

Lead City University, Ibadan

Faculty of Management and Social Sciences

Department of Sociology

Interview Guide

My name is Ogidiolu Ayotomiwa Teniola. I am a student of the Department of Sociology, Lead City University, Ibadan. I am conducting a study on the knowledge, practice and perception of Lactational Amenorrhea Method as contraceptive among lactating mothers in Ibadan. I seek for your consent during this interview. Information received will be strictly used for academic purpose and will be treated with absolute confidentiality.

Section A: Knowledge about LAM

1. What is Lactational Amenorrhea Method (LAM) ?
2. Are lactating mothers are generally aware of LAM as a contraceptive method?
3. What sources of information are most commonly relied upon by lactating mothers to learn about LAM?

Section B: Perception of LAM

4. What are the perceived benefits of using LAM?
5. Are there any misconceptions you have come across regarding LAM among mother using this method?

Section C: Practice of LAM

6. How often is LAM practiced by mothers?
7. How effective is LAM as a contraceptive method when used correctly?
8. What are the common challenges faced by lactating mothers who used the method?

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9. Have you come across any cases of unintended pregnancies among mothers using LAM, and if so, what were the reasons?

Section D: Health Officer's Role

10. What role do you, as a health officer, play in promoting LAM as a contraceptive method among lactating mothers?
11. Are there any educational or outreach programs that your organization or facility has implemented to inform mothers about LAM?

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Bio-data

A. Personal Data

Full Name:	Ayotomiwa Teniola OGIDIOLU
Gender:	Female
Marital Status:	Single
Address:	No.1, Idah Avenue, ksu staff quarters
Email:	ayomidebest9@gmail.com
Phone No:	08105889694, 09051840701
Date of Birth:	September 21st 2000
State of Origin:	Kwara State
Nationality:	Nigerian
Next of Kin:	Tamilore Ogidiolu

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B. Educational Background

Educational Institutions Attended with Dates and Qualifications

- M.Sc. in Medical Sociology (In View)
  Lead City University, Ibadan, Oyo State

- B.Sc in Sociology (2015-2019)
  Kogi State University, Anyigba

- S.S.C.E (2009-2015)
  Citadel International College,
  Ikare-Akoko, Ondo State

- First School Leaving Certificate (2005-2009)
  University of Benin Staff School
  Benin-City, Edo State

C. Working Experience with Dates.

- University of Benin, (2021_ 2022)
  Department of Sociology,
  Administrative Staff (NYSC)

D. Awards and Fellowships

Nill

E. Membership of Academic/Professional Bodies

Nill

F. Publications

Nill

G. **Major Conferences Attended**

COVID-19, Global Crisis, Socio-Economic Lockdown and Sustainable Development in Nigeria by Nigerian Anthropological and Sociological Practitioners Association (NASA) 2021

H. Referees

- Prof. Adesola Ogidiolu,
  Kogi State University, Anyigba
  Department of Geography and Environmental Studies,
  08144217913

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- Dr. E.A. Tegbe,
  Lead City University, Ibadan,
  Department of Sociology,
  08034917847

____________________________ ____________________________

Signature **Date**

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The University Compliance Certification

This is to certify that, this thesis by Ayotomiwa Teniola OGIDIOLU with matriculation number LCU/PG/003136 in the Department of Sociology, Faculty of Management and Social Sciences, Lead City University, Ibadan, is in full compliance with the approved university format and style.

______________________________ _________________________

Signature **Date**

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