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The Experience and Perception of Contraceptive Use Among Teenage Girls Living in Lagos, Nigeria

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Walden University
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Abstract

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by

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MSN, Drexel University, 2015

BSN, Walden University, 2011

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

There is a low level of contraceptive use among Nigerian teenagers, leading to unwanted pregnancies and subsequently unsafe abortions. Sexual activities among teenagers in Lagos, Nigeria, are a major public health problem. The principal factors leading to this health problem are poverty, peer pressure among university students leading to involvement in the sex trade, and early marriage in some cultures. There are myths and perceptions about the use of contraception in society, especially concerning the use of condoms, which Nigerian teenagers believe do not make intercourse interesting or satisfying; these ideas can lead to unwanted pregnancies, sexually transmitted infections (STIs), and consequently unsafe abortions. Since 2010, contraceptives use awareness has increased in Nigeria and sub-Saharan Africa, thanks to the Bill and Melinda Gates Foundation, yet many teenagers do not use contraceptives and seek repeat abortions, which are illegal in Nigeria except to save the life of the mother. The health belief model served as the theoretical framework. A qualitative design was used to explore the detailed experiences and perceptions of 20 girls in Lagos aged 18–19 years. The thematic method of analysis was used to analyze the data. The result showed that the nonuse of protection through condoms and other contraceptives by teenagers was caused by inadequate education on contraceptives; barriers to safe sex; and risky sexual behaviors, such as the influence of sex partners on the use of condoms. Implications for positive social change include the development of sex education interventions that can increase the use of contraceptives among teenage girls in Lagos, thus lessening the impact of unwanted pregnancies and STIs.

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Dedication

This dissertation is dedicated to the Lord for his unfailing love, guidance, protection, strength, and courage throughout this PhD journey.

Many thanks to my wonderful husband and children, who have supported me through the process, showered me with love, and supported whatever my heart desired. I love you all.

To my cousin who inspired me in wanting to investigate the issues of contraceptives among teenagers in Lagos, after dying from complications of abortion, may your soul continue to rest in peace.

To my mother who is no longer with us, I thank you for loving me and showing me the path of caring for others. You were an exceptional midwife and nurse. I will never forget all your good work. I am sure you are proud of me. May your gentle soul continue to rest in peace

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Medicine Teaching Hospital for all your help in guiding me to obtain the ethics committee's approval for the collection of data.

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Chapter 1: Introduction to the Study

Introduction

The purpose of this study was to explore and understand the lived experience and perceptions of sexual activity among teenagers in Lagos. In addition, it explored their decision to use contraceptives or not, which could lead to Sexually Transmitted Infections (STIs) and unwanted pregnancies that can lead to abortions (Otoide et al., 2001).

The plan is to share the results and findings of the research with non-Governmental Organizations (NGOs) working to improve contraceptive use in Nigeria like the Bill and Melinda Gates Foundation and the state and local health departments, to discuss programs that can enhance the use of contraceptives in the community. The goal of this study was to provide a basis for an educational program to promote the use of contraception among the teenagers of Lagos and a program that can intervene in a change of behavioral attitudes towards unprotected sexual activities.

Background of the Study

Yakubu and Salisu (2018) and Afolabi et al. (2015) provided factors influencing adolescent pregnancies in sub-Saharan Africa and created appropriate intervention programs. They identified three areas of influence and these were sociocultural, environmental, and economic caused by peer influence, poverty, religion, early marriage, lack of parental guidance, lack of sex education, and lack of use of protection during intercourse.

Schölmerich and Kawachi (2016) and Fatusi and Blum (2008) provided the definitions of multilevel interventions and how they were used in the field of contraception use research. The studies showed that the social-ecological perspective has been used to translate into interventions that involve the community while targeting intrapersonal changes, the outcome was to emphasize human behavior attributes influenced by their environment.

The health belief model (HBM) has been used by many social health prevention programs (Glanz et al., 2015). Behavior change is very important to the comprehensive intervention of the use of contraceptives and the World Health Organization (WHO) in 2015 determined that behavioral interventions and communications programs lead to successful campaigns in the increase the use of contraceptives (De Vasconcelos et al., 2018). HBM theorizes that individual belief is a function of preventive behavior in achieving the desired outcome (Glanz et al., 2015). Personal beliefs concerning the susceptibility to STIs can influence individual use of condoms. HBM model may be used to attempt to link or tie together the perceived benefits of condom use while compared to the perceived barriers of the use, and the model will show that a cue to action and specific stimulus may help to activate the behavioral change decision process. The targeted group may benefit from health motivation to change their behavior of using contraceptives at all times.

Hall (2012) identified that the Health Belief Model (HBM) is needed to understand poor contraceptive behavior and the consequences of reproductive health like

an unwanted pregnancy. The research examined HBM as a well-tested framework appropriate to clarify and predate contraceptive behavior. HBM offers perspectives of importance whereby adapting and allowing issues like socio-demographic, psychological, and reproductive factors to interchange with personal perceptions and the cues to action that impact the decision to use contraception (Egarter et al., 1997). Lamina (2015) and Otoide et al. (2001) stated there is some information about contraceptive knowledge and awareness in Nigeria, but it has not been translated into contraceptive use, resulting in low prevalence, which is associated with high rates of unplanned pregnancies and abortions, particularly in the rural areas.

Duru (2015) provided support for couple contraceptive use and the need to include men in the contraceptive use campaigns in the South district of Nigeria. Cultural and social norms cannot be overlooked in pursuing the WHO goal for the millennium to improve maternal and child health by decreasing the mortality rate, elective abortions, and unwanted pregnancies (WHO, 2016). Although available data show that the rate of sexual activity differs across the regions and different parts of Nigeria, the general agreement is that there is evidence that sexual activities among teenagers are a predominant problem in the country (Alabi & Oni, 2017). However, the cause, effect, and control of teenage pregnancies in Nigeria are due to the consequences of early sexual activities (Alabi & Oni, 2017).

According to the WHO (2016), the Nigeria Demographic and Health Survey (2013) reported that there are 41 million adolescents aged 10–19 years in Nigeria and

50.4% are adolescent girls. The average age of adolescent girls becoming mothers with their first baby is 16.7 years while the average age for boys becoming fathers is 17.8 years. The survey showed that 4.7 million Nigerian adolescents aged 15–19 years are sexually active, with first intercourse occurring for girls at the age of 15.9 years and boys at 17 years (WHO, 2016).

Problem Statement

Increasing unprotected sex among adolescents in Lagos, the most populous city in Nigeria, leading to unwanted pregnancies and STIs, is a major public health problem (Otoide et al., 2001). There is a low level of contraceptive use among Lagos teenagers leading to unwanted pregnancies and subsequently leading to unsafe abortions (Alabi & Oni, 2017). Nigeria is the most populous country in sub-Saharan Africa and Lagos is the most populous city in Nigeria and the continent of Africa with a population of 10 million as of 2018 aged 24 years and under (National Population Commission [NPC], 2019).

The socioeconomic factors leading to this health problem are mainly poverty, peer pressure (especially among university students) to participate in the sex trade, and the culture of early marriage (Afolabi et al., 2015). According to Sunmola et al. (2013), in Nigeria, nine out of 10 nonstudent teenagers were said to have had sex and 40% of high school students had had sex; most of them were between the ages of 10 and 16 years.

The average age at sexual introduction is 15 years of age among Nigerian teenagers and the adolescent fertility rate is 122 births per 1,000 teenage girls age 15–19 years; it is even higher in the northern part of the country at 171 births per 1,000 girls

aged 15–19 years (Cortez et al., 2015). There is not a lot of research that has explored the perception and experience of teenagers in Lagos using birth control. Many types of research have documented economic, social, and health problems that are associated with unplanned pregnancies and early-age sexual activity but little is known about the use of methods of contraception among Nigerian teenagers (Otoide et al., 2001).

A health survey in Ibadan, a southwestern city like Lagos, found that sexually active adolescents were more informed about abortion and its risks than about contraception and that fear from misconceptions about the use of contraception contributed to its nonusage (Tayo et al., 2011). A study of Nigerian teenagers showed an existing gap between contraceptive utilization and contraceptive needs that, if left unfilled, will increase unwanted pregnancies, unsafe abortions, STIs, and maternal mortality (Otoide et al., 2001). Studies like these have not been specifically conducted in Lagos which would provide important data as Lagos is the most populous city in Nigeria.

In developing countries such as Nigeria, 19–20 million abortions are performed by unskilled individuals and mostly in an environment that is below standard leading to unsafe abortions (Afolabi et al., 2015). Most women also do not have access to contraceptives as they are confronted with barriers such as lack of awareness, cultural factors, lack of access to health care, religion, and the fear of side effects in using any contraceptive methods (Afolabi et al., 2015). However, there is a gap in the literature about the lived experiences of teenage girls in Lagos, why they choose not to use contraception and early sexual behavior from the perspective of teenagers.

Studies on contraceptive use among adolescents in Africa are scarce, but studies on determinants of teenage pregnancy can shed some light on issues that are related to contraceptive use (Crawford et al., 2021). This study concentrated on teenage girls because, in Nigeria, they get married early, are introduced to early sex, and can get pregnant, ending in abortion. Several researchers have found that abortion is a challenge that has been associated with reproductive health in Nigeria and this happens to only women, hence the exclusion of males from the study because males in Nigeria hardly use contraceptives or are not subjected to abortions (Crawford et al., 2021). By exploring the lived experiences and perceptions of birth control use among teenage girls living in Lagos, this study might help in reducing unwanted pregnancies and abortions.

Purpose of the Study

The purpose of this study was to explore and understand the lived experience and perceptions of sexual activity among teenage girls in Lagos in their decision to use contraception or not, knowing the effects of STIs and unwanted pregnancies, which can lead to abortion and possible maternal mortality (Otoide et al., 2001). In Lagos, the greatest problem with contraceptive use among teenage girls is that the country as a whole is male controlled and sexist-aggressive (Afolabi et al., 2015). The culture does not allow for open discussion of birth control or sex education in most places, especially in the Northern states. Religion also plays a big role in the doctrines of Christianity and Islam which do not allow sex education to be discussed openly (Bammeke & Durowade, 2006). In Lagos state, secondary school students are exposed to sexual behaviors that are

risky, leading to certain negative results such as unwanted pregnancies (Ayoade et al., 2015). In Nigeria, there is a myth about the use of contraception especially condoms, which men believe do not make intercourse satisfying (Lamina, 2015). STIs and HIV/AIDS are extremely high public health disease burdens in Nigeria, which is the second largest country in Africa with an HIV epidemic as of 2018 (Maju et al., 2019). STIs epidemiological data in Nigeria are difficult to achieve, but Lagos state was found to have the highest gonorrhea rate (Maju et al., 2019). In Nigeria, 55% of patients with STI were also diagnosed with HIV, and women ages 17–19 were the group with the highest STI rate (Ajayi et al., 2019).

The goal of this study was to provide a basis for an educational program to promote the use of contraception among the teenagers of Lagos and a program that can intervene to promote a change of behavioral attitudes towards unprotected sexual activities.

Research Questions

There were three research questions:

RQ1. What are the lived experiences and perceptions of teenage girls in Lagos regarding the use of contraceptives?

RQ2. What are the perceptions of Lagos teenage girls regarding the use of male condoms to reduce the risk of STIs?

RQ3. What are the experiences and perceptions of teenage girls in Lagos regarding the risk of unwanted pregnancy and possible abortion?

Theoretical Foundation

This qualitative study was grounded on the HBM which is used to analyze matters that pertain to the ways and reasons that people do what they do (Glanz et al., 2015). Understanding people's behavior and what makes them change those behaviors or act on those behaviors is very important because it helps researchers to see how people are influenced and what influences them in their environment (Greene, 2017). Researchers use the HBM to analyze data collected due to wanting to change the behavior of individuals in the community (Bandura, 1974). The HBM has been used by many social health prevention programs. Behavior change is very important to comprehensive interventions and prevention of unwanted pregnancies and STDs, and the WHO in 2015 assessed that behavioral interventions and communications programs lead to successful campaigns (De Vasconcelos et al., 2018).

The HBM was used to explore the perceptions of adolescent girls in Lagos in choosing to use contraception or not. Based on the HBM to fully understand that perception, it would be necessary to understand the context of those experiences (Buse et al., 2018). Thus, the consideration of the HBM was appropriate when developing the research questions and interview protocol to ensure that data were collected which allowed for consideration of the broader scope of participant perceptions during analysis (Buse et al., 2018). The HBM is a well-tested social cognitive framework by Rosenstock and colleagues that was one of the first models that was used to explain and predict differences in contraceptive behavior among women in the 1970s and 1980s (Hall, 2012).

Nature of the Study

The study used a qualitative design, which allowed for the collection of data to explore and develop an understanding of teenage girls' perception of the use of contraceptives and factors that led to early sexual activity, unsafe sex, unwanted pregnancy, and abortion. The grounded theory approach was used to identify the thinking of teenage girls and what influences their decisions. In particular, it allowed the uncovering of details about teenage girls' decisions not to use contraception, have unprotected sex, and engage in early sexual activity and the effects of these on living.

Data were collected through interviews. The design and approach allowed for the discovery of details about teenage girls' decisions to engage in early sexual activity and the effects it has on unwanted pregnancy and STIs.

Definitions

The study used the following key concepts or constructs:

Teenagers: The WHO (2012) defined adolescents as individuals aged 10–19 years, but teenagers are 13–19 years old.

Teenage/adolescent pregnancy: Teenage pregnancy occurs when a woman gets pregnant under the age of 20 (Cook & Cameron, 2015). Many cultures in Nigeria allow early-age marriage with the average age ranging by location from 15.2 years in the Northwest to 22.8 years in the Southwest (ICF Macro, 2009). According to ICF Marco and NPC of Nigeria (2009, p. 59), a population whose age of first marriage is low tends

to bear children early and thus have high fertility rates. However, a union is not a prerequisite for having children early.

Contraceptive use: Contraceptive use is defined as the intention to prevent pregnancy by using oral medications, sexual practices, implanted devices, or surgical procedures. Any act or device that prevents a woman from conception can be considered a contraceptive (Jain & Muralidhar, 2011).

Early sexual activity/sexual activity: Early sexual activity is defined as having sex before reaching the age of consent which is mostly 18 years old. However, there is a misconception about the consent age in Nigeria because of the cultures that allow early marriage. The general definition of sexual activity includes voluntary sexual behavior with self and it could be contact or stimulation without penetration (Klein, 1998). The study refers to sexual activity as sex activity performed before the age of 15 years in non-married teenage girls.

Socioeconomic status: This is a combination of education, income, and occupation that is the social standing of a group or population. Examinations of socioeconomic status frequently show inequities especially in accessing resources and people of low socioeconomic status are likely to have a high risk of diseases as well as high mortality rates (National Research Council, 2004).

Assumptions

For this study, I assumed that participants would be honest with all information given, especially their sexual history and age. The assumption might have become a

limitation if the data collected were not truthful. Another assumption was that it was unlikely that teenagers would misrepresent themselves to participate in a study. Instead, they would not enroll and if they did, they would answer questions honestly.

Another assumption was that the participants would trust me enough to open up and answer all questions correctly. If they did so, truthful answers would be collected and the study would be accurate. Estimating sample sizes is not very well understood by researchers, but to reduce the probability of error and to improve the study success rate a good sample size of the targeted population is selected (Martínez-Mesa et al., 2014). Teenagers living in Lagos as of 2018 numbered 1.3 million, with 620,000 girls and 640,000 boys (Igundunasse & Anozie, 2018). Qualitative research interviewing differentiates itself by getting close to the samples and not counting on large numbers of participants; the aim is not to prove statistical results but to look into details of the perceptions and the experiences of the sample (Smith & Sparkes, 2016). In a grounded theory study, using about 20 participants will allow the researcher to achieve theoretical saturation, meaning that all categories are accounted for and that all the relationships between them are validated and tested (Smith & Sparkes, 2016).

It was assumed that 20 participants would be recruited for the study to get a good same size as the targeted population. Additionally, because in qualitative research, there is a point at which samples will have diminishing returns, having more data at that point does not mean that more information will be collected differently (Mason, 2010). I assumed that interviews would be completed within 4 to 8 days that is, 1 to 2 days for

each group of participants (20 girls from three universities within the city of Lagos). As all participants had an alias name, participants were reassured that their answers were confidential.

Scope and Delimitations

The study scope was limited to the experiences and perceptions of sexual activity among teenagers, aged 18–19 years in Lagos, exploring their decision to engage in early sexual activity, the effects of unwanted pregnancies, and the effects of STIs that can result from these decisions. The focus on teenage girls allowed the data collection to provide important information in regard to the development of behavioral interventions to stop or reduce teenage girls' early sexual activity, which could prevent STIs and unwanted pregnancy in Lagos, ultimately reducing abortion mortality.

The delimited participants included unmarried teenage girls who were not pregnant at present but might have been in the past and either aborted or given birth. This was due to time constraints imposed during the data collection for international study, and the fact that only sexually active teenage girls can describe their perceptions of their personal experiences.

The study being qualitative research, its result cannot be generalized to other populations but can apply to similar populations (Guba & Lincoln, 1981). This is discussed in detail in Chapter 3.

Limitations

The choice of 18 to 19-year-old girls as the sample for this study was made to increase the chances of getting participants because such girls are college-age in Nigeria. Access to samples was challenging due to the age group and the ongoing strike of professors in federal colleges. Stereotyping, unsupported assumptions and culture were huge hurdles crossed as well (Rudestam & Newton, 2015).

All participants in a study must tell the truth for the data to be accurate. Barriers faced included getting participants to take part voluntarily without any monetary or gift compensation. For this reason, all participants were given a monetary sum of 2000 naira ($5) each after the interview to buy phone credits. The assumption that participants answered the questions honestly could have been a limitation due to the ways that they might have answered to satisfy the researcher rather than telling the truth.

Assuming that participants would answer the interview questions honestly, could have been a limitation because they may have answered the interview questions in a way that reflected what they thought I wanted to hear. Participants might have had different cultural norms though they lived in the same city because of the large diversity in Nigeria, with many local languages. Therefore, participants with a cultural background that involved honoring people with higher authority might have felt that their opinions were not valuable and felt constrained in discussing a sensitive topic such as sexual activity.

For cultural reasons, some participants may also have been socially defamed in their communities and may therefore have felt uncomfortable discussing certain things about sex, which might have created interview and response bias (Trochim & Donnelly, 2007, p. 113). To minimize the bias, I sought to earn the trust of the participants while conducting interviews in private, letting them know how important their information was to the study. Recruitment of a small sample of 20 participants can create sample bias which can lower the depth of understanding of a study. A gift for phone network airtime credit was given to the participants as an incentive for participating, this was necessary for them to buy airtime on their phones for the interviews in a city where people are always suspicious of foreign researchers.

Significance of the Study

According to Olufemi et al. (2018), there are 12–14 million teenage pregnancies worldwide in developing countries each year, sub-Saharan Africa reordered about 10% to 79% of these pregnancies to women below 20 years. Nigeria has over 41 million adolescents of aged 10–19 years, making up a third of teenagers living in sub-Saharan Africa and about 1 million births per year to teenage mothers account for 72% of deaths to abortion complications. The frequency of unwanted pregnancies among Nigerian teenage girls (ages 13–19 years) is a problem for public health, as many unwanted pregnancies lead to abortions and in turn mortality of the teenagers (Lamina, 2015). The perceptions of teenage girls about sex, contraception, abortion, and the role of social

factors were studied; these are circumstances associated with early sexual behavior, poverty, and peer pressure.

Social Change Implication

The dissertation has potential social change implications, in that it may lead to a decrease in unwanted pregnancies and abortions through behavioral change involving the use of contraceptives. Since 2010, contraceptive use awareness has increased in Nigeria and sub-Saharan Africa, thanks to the Bill and Melinda Gates Foundation, yet a lot of teenagers do not use contraceptives and seek repeated abortions. Abortions are, however, illegal in Nigeria except to save the life of the mother (Lamina, 2015). Additionally, this research may lead to a decrease in STIs by promoting behavioral change involving the increased use of condoms among teenage girls in Lagos. If the men are not going to use condoms, girls can supply and insist on the use of condoms.

The results of this study might be looked at in the future to create an education intervention, which would be taught as self-prevention from unwanted pregnancy and STI. The plan is to standardize care throughout the state and if effective, across the nation. The use of condoms could be readily available to the people of Lagos, and then possibly to people in other parts of the state. The prevention of unwanted pregnancy and STIs is best strategized through the promotion of the use of condoms or other forms of contraceptives. A lot still needs to be done to achieve at least 70% contraceptive use at all times. This is a continuous challenge for public health practitioners. In developing

nations, unwanted pregnancies and STIs consequences lead to many teenagers' initial doctor's visits (Latifi et al., 2017).

Summary

As indicated earlier, some factors can contribute to a girl's decision to engage in early sexual activity. These factors include but are not limited to cultural norms, peer pressure, poverty, early marriage, and contraceptive use perception. This study explored the lived experiences and perceptions of teenage girls ages 18–19 years in Lagos, Nigeria, with regard to the decision to use contraceptives in protecting themselves from unwanted pregnancies and to use condoms always to protect against STIs. The interviews were individually conducted one on one on the phone, recorded, and kept confidential. The plan was to use open-ended questions to gather data, noting the lived experiences and perceptions of the girls on the use of birth control.

Teenage sexual activity outcomes include but are not limited to unwanted pregnancies that may lead to unsafe abortions, STIs, and lifelong complications from abortion (Otoide et al., 2001). Defining the population for the study as teenagers ages 18–19 years and limiting the scope of the study to the perception and experience of girls in Lagos, the study was able to address what influences the decision to use or not to use contraceptives.

The limitations of the study could have been influenced by the cultural norms of the community. The study was aimed to be used for behavioral interventions which could potentially lead to a decrease in sexually transmitted diseases through the individual

change in the use of contraceptives such as condoms among the teenagers in Lagos. In Chapter 2, I will discuss more of the literature review that led to the identification of the gap that brought about the study. In Chapter 3, I will explain the methodology, trustworthiness, and ethics of the study. In Chapter 4, I will discuss the data collection, interpretations, and results; finally, in Chapter 5, I will discuss the conclusion and recommendations of the study.

Chapter 2: Literature Review

Introduction

Sex among teenage girls in Lagos is causing a pandemic of STIs and abortions that are not safe (Afolabi et al., 2015), but there is a lack of understanding of the situations that are related to this public health problem (Tayo et al., 2011). There is a gap in the literature about the lived experiences of teenage girls in Lagos, why they choose not to use contraceptives, and early sexual behavior from the perspective of teenage girls. By exploring the lived experiences and perceptions of birth control use among teenagers living in Lagos, this study might help in bridging the gap of knowledge and consequently reducing unwanted pregnancies and abortions.

Though there is an increase in the awareness of contraception in Lagos, unwanted pregnancy rates are still very high among teenagers (Tayo et al., 2011); awareness and availability do not guarantee knowledge about and use of contraceptives among teenagers (Basebang & Aderibigbe, 2011). Condoms protect against STIs, and contraception protects against unwanted pregnancy, thus safeguarding against unsafe abortion, which contributes to high maternal mortality rates in Nigeria and consequently ends many young women's education opportunities (Tayo et al., 2011).

Data collected from this study may be used to provide a basis for an educational program to promote the use of contraception among the teenagers of Lagos and a program that can promote change of behavioral attitudes towards unprotected sexual activities.

Peer-reviewed professional journals and articles were reviewed to support the gap in the literature and establish the relevance of contraceptive use among teenagers in Lagos.

Literature Search Strategy

The literature review was conducted by drawing from applicable peer-reviewed articles and journals, books, government organizations' websites, published public health reports, the university library accessing the Ovid database, EBSCOhost, MEDLINE, CINHL plus, ProQuest database, and Google Scholar. Search terms and phrases used were *teenagers experienced perceptions contractions*; *Nigerian teen contraception use*; *teen pregnancy in Lagos*; *teen pregnancy in Nigeria*; *teenagers and consequences of early sex*; *consequences of pregnancy in teenagers*; *attitude and belief theory*; *health belief model*; *contraception use in sub-Saharan contraceptive knowledge and usage amongst female secondary students in Lagos, Nigeria*; *contraceptive awareness among teenagers in Lagos*; and *knowledge, use, and non-use of contraception.* Search terms were utilized individually and in various combinations to gather a comprehensive summary of materials related to this overall topic and to identify the gap in the literature.

The key variables and concepts that were related to the review of the literature were included. Studies that demonstrated different methodologies were included, and many articles that were similar to this research in qualitative grounded theory methods were also included. A review of the literature is included in this chapter, which relates to the key variables and concepts of studies that demonstrated different types of

methodologies, some of which were qualitative studies like this study. Contained also in the chapter are three major subsections: theoretical framework, conceptual framework, and literature review.

Theoretical Foundation

The study was grounded on the HBM, which is useful for intervention when used to change health behaviors, based on the work of researchers in the early 1950s. The HBM is central to prevention programs and health promotions for public health and has become an object of research (Rayner & Lang, 2012). The HBM grew out of independently applied research problems that confronted a group of Public Health Services between the 1950s and 1960s. The theory and its development grew with answers to practical problems describing classes of circumstances, which are the setting, training, and background experiences of the research participants (Rosenstock, 1974).

The HBM is a cognitive and interpersonal framework in which humans are rational beings who use several approaches to decision making to perform healthy behavior (Rosenstock, 1974). It can be used for complex preventative health behaviors, such as the decision to use contraceptives. The HBM focuses on perceived benefits and barriers in other to motivate healthy behavior to reduce threats (Skinner et al., 2015). The HBM's dimensions originated from social psychology theory, which depends deeply on cognitive factors concerned with goal accomplishment—in this case, motivation to prevent pregnancy (Hall, 2012). HBM concepts highlight factors that are modifiable and

allow possible interventions to decrease public health problems, such as unwanted pregnancy.

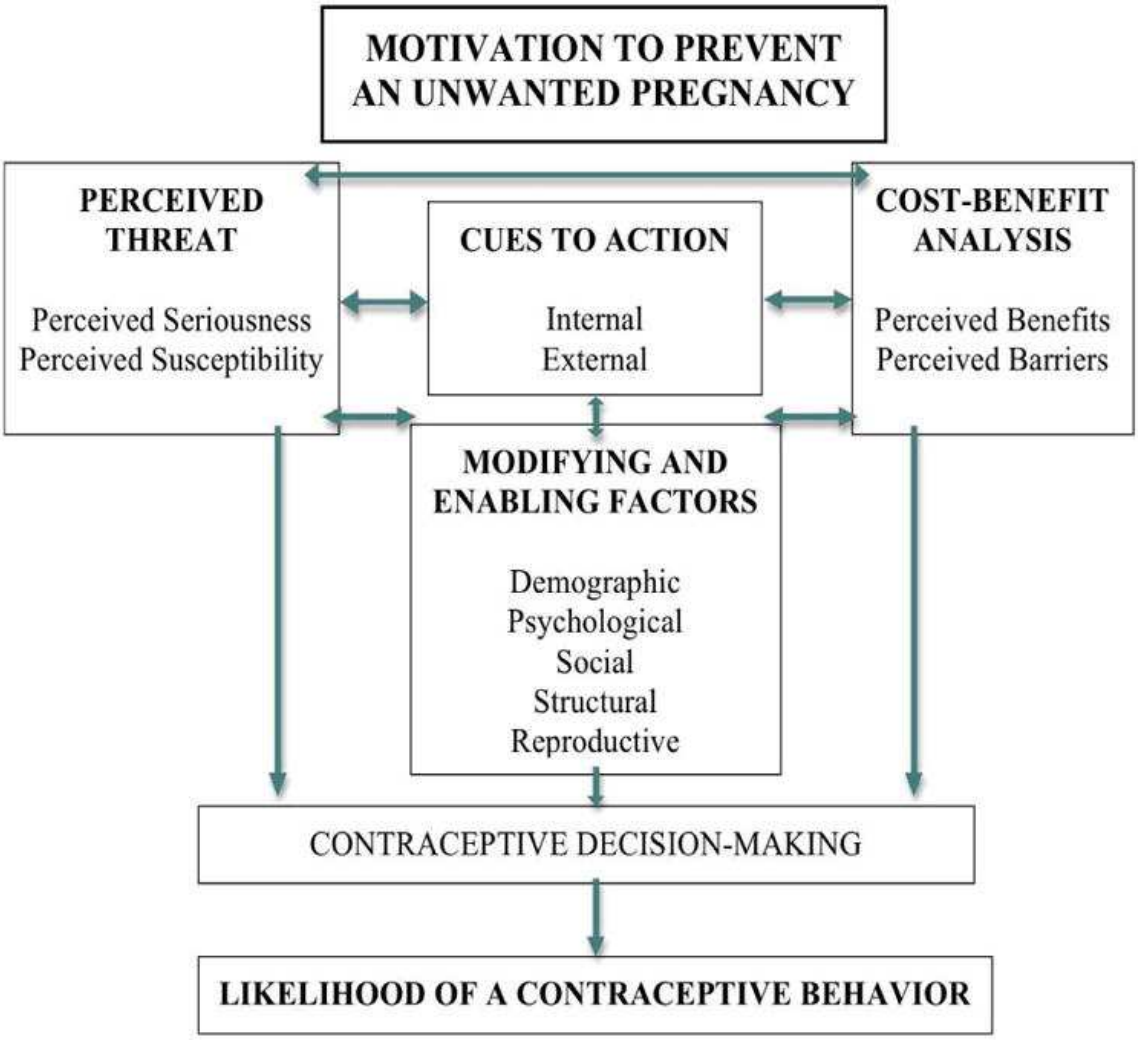
The HBM indicates that individual belief on health is a function of preventive behavior in achieving a desired outcome (Glanz et al., 2015). Personal beliefs concerning susceptibility to unwanted pregnancy and STIs can influence individual use of contraceptives. The HBM involves an assumption that the perceived benefits of use will be compared to the perceived barriers to use, and the HBM suggests that a cue to action and specific stimulus may help to activate the behavioral change decision process. The group that this research targeted may benefit from health motivation to change members' behavior of using contraceptives. The HBM may be used to explore the knowledge of contraceptives and STI transmission, the perception of susceptibility may be used to explore chances of unintended pregnancies and exposure to infection, and the perception of severity may be used to explore the consequences of not using contraceptives (Glanz et al., 2015).

The use of contraceptives, as viewed by the HBM, is driven by the individual's interest in protecting themselves from getting pregnant, the perceived capability to control getting pregnant and decreasing the threat of pregnancy by using contraceptives. There must be good motivation in the individual to make the prevention of pregnancy and STIs noticeable and applicable to support the contraceptive use decision-making process (Hall, 2012).

The HBM has four constructs that could be used to drive environmental influence, one embedded in the other and moving from the innermost level to the outside (Figure 1).

Figure 1

Constructs of the Health Belief Model



Note. Concepts of the health belief model, describing the influences of the model as related to contraceptive behavior (Hall, 2012). Figure 1 shows that factors influencing the development of human beings as considered by the four levels of the organization—

perceived susceptibility, perceived benefits, perceived barriers, and cues to action—may help to activate the behavioral change decision process (Hall, 2012).

Perceived susceptibility: This is the perceived threat of risk of exposure to unwanted pregnancy and its consequences, such as abortion or parenthood, which can motivate the use of contraception. It involves personal feelings about the significance of getting pregnant or having children at a young age. This concept may include teenagers worrying about quitting school, which can impact the prospect of contraceptive use (Jaccard et al., 2003).

Perceived barriers: These are the perceived penalties of using contraception, as some girls feel that side effects of contraceptives include weight gain, blood clots, and mood swings (Rosenberg & Waugh, 1998). Some girls feel that taking oral contraceptive pills daily is inconvenient, and for condoms, the complaint is that they are hard to apply before intercourse (Peterson et al., 1998). The cost of condoms as contraceptives may be a barrier to their use. Condoms are expensive and cost between $2 and $6 for a box of three, or about $1 each if bought in a quantity of 12 in a box (Nguyen et al., 2021). These disadvantages may constrain contraceptive use.

Perceived benefits: The benefits relating to the perceived advantages, effectiveness, and possibility of using contraceptives to prevent unwanted pregnancy versus the perceived barriers. The concept may include health-promoting benefits of the different methods and increased knowledge of the benefits, which could increase and improve use (Glei, 1999).

Cues to action: The question here is the following: Does the individual in the sample know about all the risks of nonuse of contraceptives, which consist mainly of STIs and unwanted pregnancy? And if they know, to what extent? This will help in guiding the teaching content. If an individual does not know about the disease, it will be difficult to teach prevention. It is the description of the individual influence of their experiences, factors of the environment that influence health behaviors, and the effects of others on individuals (Glanz et al., 2015).

A complete survey of studies found that the HBM is significant in understanding preventive activities and suggested its utilization in well-being training programs. What is more, the particular allowance of faith-based expectations depicted in the HBM has been estimated and used to anticipate whether an individual will embrace practices to stay away from unwanted pregnancy (Edem & Harvey, 1994). The esteem hope hypothesis states that the parts of the HBM estimation that preventive conduct is an element of two factors: the worth of the individual perfect well-being and the person's conviction that particular preventive activities will accomplish the ideal objective (Edem & Harvey, 1994). The HBM indicates that the apparent advantages of contraceptive use are weighed against the apparent boundaries of the use of contraception (Edem & Harvey, 1994). Finally, the HBM suggests that a particular boost or a sign of activity is frequently important to trigger the dynamic procedure.

Kelsey (2016) reported how the copper intrauterine device (IUD), as effective as it is, is rarely used. The researcher described that if HBM is used for prevention teaching,

then the theory can increase the use of the IUD. Kelsey contended that unintended pregnancy is a problem in the United Kingdom and there is a need to reduce its occurrence. The study described how both oral pills and the copper IUD are available for emergency contraception in the United Kingdom, but women are often unaware of their availability, and many myths and misperceptions prohibit use. The study explained how the use of the HBM would assist in understanding the factors that affect women's choices, which could lead to behavioral change and increased use (Conner & Norman, 2005). Contraceptive centers are available in Lagos and funded by the Gates Foundation; Conner and Norman's (2005) the study guided the recommendation of effective teaching in the use of emergency contraceptives in this study

The HBM indicates that the more serious the health problem, the more likely the individual is to be keen to take proactive measures to prevent it. Research has shown that unmarried women of high educational status are more likely to use contraception (Herold, 1998). According to Herold (1998), before engaging in preventive health activities, the individual considers the perceived benefits of the actions versus the cost of the proposed prevention program. Major benefits of using contraceptives include unprotected sex by not planning for intercourse and the admission of being sexually active to others. Cues to action is the final major concept of the HBM; cues could be internal (i.e., within an individual) or external influences.

Many researchers have used models to understand the factors that influence human development and human behavior. Tudge et al. (2016) reported that including the

models was not exhaustive; therefore, many more researchers have used the HBM in their studies, and this study used the model to show the factors that influence human development and behavioral change.

This study focused on the experience and perception of contraceptive use among teenage girls in Lagos at one point in time and not over a longer period, and it did not include the biological aspects of teenagers; hence, the HBM concept was a good fit for the theoretical framework.

Conceptual Framework

The conceptual framework links the action of theories to a fundamental pathway of the research topic. It highlights key issues in the experience and perception of contraceptive use among teenage girls living in Lagos, Nigeria (Katatsky, 1977). The framework may demonstrate that the public health problems that are related to contraceptive utilization and contraceptive need, if left unfilled, may increase unwanted pregnancies, unsafe abortions, STIs, and maternal mortality (Otoide et al., 2001). The research identified factors that influenced the decision on whether to use contraception or not and the risks involved if it is not used.

The HBM served as the base to develop a detailed framework of the perception and understanding of risky behaviors of exposure to unwanted pregnancy and STIs when they could be prevented by the simple use of contraception. The framework incorporated the use of words that were familiar and easily understood by the targeted population (teenagers) and was used to highlight how individuals can protect themselves and decide

not to be infected or deal with an unwanted pregnancy. To reduce the risk of unwanted pregnancy, which can lead to unsafe abortion, members of the population should be taught how to use female condoms apart from other contraceptives so that if the partner is not ready to use condoms, she can protect herself.

The framework was originally built on the HBM, which showed the association between multiple levels of its concepts. The HBM focuses on the responsibility of inspiring factors in health behavior change and prevention programs. Adaptations include the family and peers, which highlights the understanding of the social norm that exists and shaped the microsystem in which they were rooted (Pulerwitz et al., 2019).

The grounded theory approach of the study was supported by the HBM because it allowed for an appropriate interpretation of the data that were collected. The model was used to support research on adolescents' choice of sexual activities, unwanted pregnancies, and experiences with community influences. The grounded theory approach to developing the research questions was used to allow the targeted population to collect and share information that shows the effects of the main concepts of the HBM that guide developmental growth.

Many studies have addressed the relationship between health behavior performance and many health outcomes; those studies have shown the importance of many behaviors for morbidity and mortality (Taylor et al., 2006). The HBM may be used to explore the factors associated with teenagers' reproductive health in countries such as Nigeria, called *developing countries*. In developed countries such as the United States,

researchers study the reproductive health of teenagers almost 7 times more than in developing countries (Mmari & Blum, 2009).

Ross et al. (2002) reported that from the HBM viewpoint, daily activities in youth development are both a cause and a consequence in recording the processes that connect youth to social institutions and opportunities to build social ties while keeping them from other activities. The study indicated that the framework could be used to study the effects of media and their implications for the well-being and development of youth. The HBM shows interest in background influences and is conceptualized as procedures that offer opportunities and restrictions on youth activities and the role that youths played in their development, from peer influences, their choices, and the interpretations of their experiences. Therefore, to capture the complexity of youth perception and experience in the use of contraception in Lagos, an HBM framework would be better used to investigate the role of media for youth.

Literature Review

A review of the literature and critical appraisal of articles supporting the gap in the literature for the research was performed. Schölmerich and Kawachi (2016) reviewed the definitions of multilevel interventions and how it is used in the field of contraception use research. The study showed that the social-ecological perspective has been used to translate into interventions that involve the community while targeting intrapersonal change. The article used an experimental or quasi-experimental design to assign the effect of changes in fertility and family planning outcomes in Africa, Asia, America,

Eurasia, and the Middle east. Evidence to develop the outcome of the study is emphasizing human behavior attributes influenced by their environment.

Yakubu et al. (2019), identified the use of the HBM in assessing intervention programs on sexual abstinence among adolescent girls in Northern Ghana. The study concluded that using the HBM significantly improves the knowledge of contraceptives and sexual abstinence practices regarding pregnancy prevention. The study explained the complex phenomenon of adolescent pregnancy identifying community-level factors' influence on contraceptive use among adolescents in Ghana and developing countries. Sixteen million girls aged 15–19 and about a million girls under 15 years are pregnant and give birth yearly in most low and middle-income countries (WHO, 2012). The framework was used to substantiate that women's contraceptive use is shaped by their individual, community, and household wealth attributes. The study explained the adolescent's risky sexual behaviors and use the HBM to predict preventive programs that worked (Champion & Skinner, 2008). Champion & Skinner's article, substantiates that using the HBM theory would be relevant for the dissertation's conceptual framework to prove that behavior, environment, and community are major influences on the decision to use contraceptives or not.

Yakubu and Salisu (2018) identified the factors influencing adolescent pregnancies in sub-Saharan Africa to make an appropriate intervention program. The method used to collect the data was qualitative and cross-sectional studies were used to find the factors that influence adolescent pregnancies. The study identified three areas of

influence and these were sociocultural, environmental, and economic. Socio-cultural includes peer influence, poverty, religion, early marriage lack of parental guidance, lack of sex education, and lack of use of protection during intercourse. The articles indicated that programs to empower and educate these adolescents would make a positive impact. This study will help the dissertation prove that programs like this would help Lagos adolescents too if available. A review of the literature and critical appraisal of the discovered research supporting the expected outcome emphasizes human behavior attributes influenced by their environment. A key strategy for reducing teen pregnancy is increasing awareness, access, and availability of contraception. There are many articles reviewed to identify factors influencing adolescent pregnancies in sub-Saharan Africa to make appropriate intervention programs.

It has been identified that there is a major challenge of unintended pregnancy among young adults in developing countries (Ireti et al., 2010). Some of these young women after unwanted pregnancies seek abortions that are mostly performed in an unsafe environment, therefore, facing the risks of morbidity and mortality which is higher amongst these populations (Aziken et al., 2003; Ireti et al., 2010). The articles looked at the early sexual activities and the age at the first sexual encounter in Nigeria and how the use of contraceptives was low. Some studies in Western and Southern Nigeria found that the rate of contraceptive use among adolescents was about 30% which if compared to developed countries use, is lower at 95% (Aziken et al., 2003). The lower rate in Nigeria is said to be due to perhaps inadequate knowledge or access and impulsiveness of sexual

activities among teenagers (Ireti et al., 2010). Teenagers in Nigeria reflect on the idea of abortion for unwanted pregnancies rather than using contraception (Alabi & Oni, 2017).

Ebuehi et al. (2006) and Aziken et al. (2003) agreed that healthcare providers in Nigeria as a country do little to educate teenagers on the use of contraception especially emergency contraception, leading to a lot of misconceptions about its use. The misconceptions lead to more than 610,000 abortions annually credited to young people. Female teenagers are unfortunately the receiver of the consequences of unprotected sex but there is not enough education on contraceptives and emergency contraceptives with the correct use, therefore, warranting an urgent need to educate providers and teenagers while stressing the correct use timing, and available methods. Unwanted pregnancies amongst undergraduate student of Lagos Nigeria reflects negatively on their reproductive health which most of the time results in complications from abortion and gives a permanent fatal consequence (Alabi & Oni, 2017). Ebuehi et al. (2006) concluded that there is also a need for health facilities that would be friendly to teenagers to use and provide health information.

Afolabi et al. (2015) and Olugbenga-Bello et al. (2011) identified that among women of various stages of reproductive age in Lagos, contraceptive use has been advocated: to stop STIs, unwanted pregnancies, and unsafe abortions which contribute to high maternal mortality in Nigeria. Unwanted pregnancies have been found to have caused many terminations to the education of young women (Afolabi et al., 2015). The key to designing adequate prenatal care and preventing unwanted pregnancy could be the

knowledge of the use or nonuse of contraceptives. The data from the study of Afolabi et al. (2015) could be used in this study to design health education, teaching teenagers how to live healthy reproductive life and make pregnancy safe or avoid pregnancy, thereby filling the literature gap.

Izugbara (2015) examined and documented the socio-demographic cause and risks of unwanted pregnancy among Nigerian unmarried adolescents. The result of unwanted pregnancy among unmarried adolescents is caused by maternal and childhood mortality and shortened education opportunities. The method used was univariate and multivariate statistical analysis drawn from the 2008 Nigeria Demographic and Health Survey to assess the relationship between pregnancy and socio-demographic factors concentrating on sex, age, household wealth, and educational success using STATA version II. The findings state that adolescents that were not pregnant had older household heads or were wealthy with highly educated parents and households with a female as the head have less unwanted adolescent pregnancy.

Oyebode et al. (2015) reported that one of the major causes of maternal mortality and morbidity in Nigeria was unsafe abortions. The study's purpose was to appraise the effect of unsafe abortion on gynecological emergencies and complications among women in Jos University Teaching Hospital (JUTH). The method used was to review 120 cases of patients with unsafe abortions attended to in the hospital from January 2001 to December 2005 and analyzed using EPI info statistical software version 3.3. The high morbidity and mortality due to unsafe abortion are mostly among adolescents, therefore,

education in improving contraceptive use would result in a positive outcome. The study would support the literature on unsafe abortion among teenagers in Nigeria.

Individual/Person

Tayo et al. (2011) showed that one of the contributory factors in teenagers' sexual behavior in Nigeria is age. This was a qualitative study of 1500 female students' ages 9–19 years in Lagos, in which three secondary schools were researched to determine the use of contraceptives among them. Tayo et al. (2011) found that despite the high sexual activities among these groups, the use of contraceptives was low and that there is a need for a more aggressive distribution of information for different types of contraceptive methods.

Yaya and Bishwajit (2018) investigated early sexual activities among women ages 15–49 years in Nigeria with a survey total of 60,611 by using a cross-sectional analysis. The study concluded that Nigerian women experienced sexual debut by or before the age of 15 years hence associated with having multiple sexual partners and by the time, they marry they have been exposed to increased risks for STIs and unwanted pregnancies. The authors reported that people interested in working in the health care system in the country need to be conscious that early sexual activities can be associated with unsafe sex which can lead to negative health outcomes like HIV and STIs, unwanted pregnancy, and abortion. Therefore, it would be of great benefit to design a real intervention that encourages girls to delay sexual introduction to prevent unwanted pregnancies and avoid negative outcomes.

Family/School/Peers

Mmari and Blum (2009) reported that two studies were examined to find that adolescents that lived with their families and have moved more than twice in their childhood have a higher probability of participating in sex before marriage. However, another three studies found that adolescents that lived away from home are even at higher risk of premarital sex and the ones in boarding schools were twice as higher as those that lived at home. The family is the central background on which adolescents developed which could be either a source of risk or protection.

Adeoye et al. (2012) investigated the prevalence of premarital sex and the factors that influence the frequency of premarital sex. It was a descriptive study of 300 randomly selected students, 176 boys and 124 girls in a private post-secondary school in Nigeria. The authors reported that family experience was one of the factors that contributed to premarital sexual activity, which ranged from ages 14–25 years. Compared with family influence on premarital sexual activity, which is high, both age and gender are lower in influence. Therefore, it was not a surprise to find a relationship between family influence and premarital sexual activity, because of its foundation in society's success.

Peer Pressure

Kirby (2001) reported that the sexual behavior of teens is influenced by peers. The perception of sexual activities by teenagers is central to the influence of whether or not their friends are sexually experienced (Mmari & Blum, 2015). Kirby (2001) reported that ten studies were examined and found a relationship between adolescents' perceptions

and experience of sexual activities of their peers but could not determine if it was due to peer pressure, however, found that those that are sexually active were inclined to be influenced by friends that are sexually active too. Kirby (2001) went further to report that the misperceived behavior of teenagers' peers may also lead to increased sexual behavior.

Shittu et al. (2007) and Okereke (2010) reported that some researchers found that peer pressure contributes significantly to adolescent sexual behavior but concluded in their studies that it was not true. Shittu et al. (2007) in a quantitative study of 580 secondary school students ages 12–18 years old in Oworonshoki, Lagos, Nigeria, reported unwanted pregnancies and STIs as negative health outcomes of sexual behavior but found no connection between peer pressure and adolescent sexual activity. Okereke (2010) in a quantitative study of 896 adolescents aged between 10–19 years old in Owerri, Nigeria found no connection between peer pressure and adolescent sexual behavior.

Lack of Reproductive Education

Cortez et al. (2015) reported that Nigeria is the most populous country in sub-Sahara Africa, and has more than half of its population as young people of 25 years and under. The journal presented the result of a study in Nigeria that examined the causes of teenagers' sexual behavior focusing on the attitude and behaviors of the adolescents (10–19 years) in the local government of Karu an urban area near the federal capital Abuja. The recommendation was for the government to cater to its youth's health and focus on sexual and reproductive health education in showing the effect on their future. The study

used mixed methods by using the data from the Karu local government, three years of Demographic and Health Surveys (2003-2013), and a focus group survey.

Etenikang et al. (2017) a study about knowledge, practice, and perception of contraception by educated teenagers in Calabar, a big city like Lagos, identified that teenagers spent valuable time with their parents at home but seldom do they discuss issues about sex and contraception and to some families, it is considered a taboo but when unwanted pregnancy happens, the teenage girl is treated as an outcast and could be banished from the family. The study concluded that teaching of contraception should be in high schools and also at the start of undergraduate studies, therefore parents should be brave to discuss sex education, contraceptives, and sexually transmitted disease rather than letting them find out from sources like the internet or peers who may give misleading information.

Williamson et al. (2009) study was a systematic review of qualitative research to study the limits to modern contraceptive use identified by young women in developing countries. The study mentioned how developing countries' maternal mortality is becoming high and how the abortion of unwanted pregnancy-related to 90% of the mortality. The study gave data that 14 million unintended pregnancies recorded in sub-Saharan Africa occur among women aged 15–24 years. The study reported that not one sexual health intervention would work and to increase contraceptive use in developing countries, it would take multifaceted interventions and the intervention of condom use could seemly be targeted for the prevention of pregnancy and STIs like HIV. The study

could support one of the interventions to be proposed by the dissertation in the use of condoms and provide statistical data for the mortality rate. WHO data indicates that Nigeria's Maternal Mortality Ratio (MMR) is 814 (per 100,000 live births). Nigerian women are at a 1 in 22 chance of dying during pregnancy, childbirth, postpartum, and after abortion, in comparison to 1 in 4900 in developed countries (WHO, 2019).

Media Influence

Bajoga et al. (2015) is a cross-sectional survey article that investigated the relationship between exposure to contraceptive use over the media like newspapers, television, radio, and mobile phones and the real use of contraception among women ages 15–24 years living in six cities in Nigeria. A logistic regression model was used to predict how exposure to media would affect sexual experiences and methods of sexual expression. The study reported that 71% of the sample participants were exposed to contraception through one of the media outlets and the main source of the media outlet is mobile phones (48%). The study further explained that many researchers have found mass media as the common source of reproductive health information for youths in Nigeria and that there was an association between media and contraceptive use.

Do et al. (2020) investigated the impact of media exposure to contraceptives or family planning on contraception use. It was a cross-sectional survey of young people (men and women) ages 15–24 years old in three urban centers of Nigeria- Lagos, Kaduna, and Kano. The study was to evaluate the television-based drama shown to improve contraceptive use. The sample was 777 young men and women who were

sexually active and found that there was an associated increase in the use of contraception with the media message.

Ajaero et al. (2016) investigated the relationship between mass media and the use of family planning in Nigeria. The study used univariate, bivariate, and binary logistic regressions were used to interpret the data collected from the 2013 demographic and health survey of Nigeria conducted in all 36 states. Results indicated that there was a significant but weak direct relationship between access to mass media and the use of contraceptives $p<0.0001$ with television messages. The study concluded that access to media increases the use of contraceptives but only for people at a higher socioeconomic status and that socioeconomic status needs improvement so all could have access to the media.

Economic Status

Alabi and Oni (2017) focused on the frequency of unwanted pregnancies among Nigerian teenagers (ages 13–19 years) and explored the causes, effects, and prevention of this act. Descriptive methods were used to identify the factors and the effects on the country's teenagers, the root cause being poverty, peer pressure, social media, the effect of early-age drinking, date rape, and having a young mother who earned a low income. The results of the study were to introduce the religious leaders to moral teachings of not having sex at an early age, parental care should be encouraged, and stopping the use of children for food trades on the street.

Okpani and Okpani (2000) investigated 768 randomly selected single senior secondary school girls from Port Harcourt (mean age 16.32 years) on characteristics of sexual activity and contraceptive use. The study showed that 210 pregnancies (24 deliveries and 186 induced abortions) had occurred in 142 out of 605 girls (78.8%) who admitted to being sexually exposed (Okpani & Okpani, 2000). The youngest ages mean for sexual activities was 15.4 and among the girls surveyed 190 girls (24.7%) were sexually active, and 72.2% of their male partners were older men working which suggested that there are financial gains involved as motivation for the girls (Okpani & Okpani, 2000).

Durowade et al. (2017) reported that one of the factors that contribute to early age debut is family economic disadvantages and large family size. The study investigated early sexual debut: prevalence and risk factors among secondary school students in Ido-Ekiti, Ekiti state, South-West Nigeria. It found that housing overcrowding with concomitant poor sanitation reflecting low socioeconomic status can lead to having sex for monetary gain.

Ankomah et al. (2011) investigated a qualitative study to investigate reasons for delaying or engaging in early sexual initiation among adolescents in Nigeria, the study used 30 focus groups of adolescents aged 14–19 years from four states in Nigeria. The study showed that poverty and sex trade was part of the factors for early sex engagement as participants discussed how they got financial and material rewards from sex trading. Participants indicated that among the rewards that motivated them to have sex, were cash,

gifts, and mobile phones. They also reported offers of admission into the universities and examination success as part of their motivation to trade in sex.

Cultural Influence

Otoide et al. (2001) reported that in many cultures in Nigeria, it is an abomination for girls to marry while pregnant or marry a girl who had a child outside of wedlock, therefore, this increases the rate of abortions which are mostly unsafe because abortion is illegal in Nigeria unless medically indicated to save the mother's life. The major religions in Nigeria teach against abortion and others preach against contraception because it is equal to abortion. Abiodun and Balogun (2009) reported that the clergymen of those religions do not want to preach family planning, unfortunately, the girls turn to abortion with possible negative outcomes like uterine perforation, uterine infection, heavy bleeding leading to hemorrhaging and death which accounts for 20%-40% of maternal deaths in Nigeria (Abiodun & Balogun, 2009).

Fagbamigbe and Idemudia (2017) reported that in religious settings like Islam in Nigeria which betroths girls early has been found to affect the age of first sexual experience. Also, socio-cultural differences were found in current studies to influence the first sexual experience. The Northern part of Nigeria, predominantly Muslim, practices child marriage and was more likely to initiate sex earlier than people from the South West and the Eastern part of the country, who were mainly Christians.

Summary

Relevant peer-reviewed professional journals, published health reports, organization websites, and government websites using many databases, books, and other topic searches related to the research were reviewed and consulted. This chapter presented the literature search strategy, theoretical foundation, conceptual framework, and literature review. The HBM was discussed with the factors contributing to the non-use of contraceptives among teenage girls in Nigeria. Peer pressure, family, socio-economic status, school, parents, and cultural influence were discussed, and factors that affect teenagers getting unwanted pregnancies and the consequences of abortion were also discussed. The negative outcome of adolescent sexual activity includes but is not limited to unplanned pregnancy, STI, abortion, and related complications were discussed. The negative effects of adolescent sexual activity on individuals and society were also discussed. The gap in the literature was addressed by the study to provide an understanding through the lived experiences of the teenagers in Lagos about why they choose not to use contraception and the early sexual behavior from the perspective of the teenagers.

Chapter 3: Research Method

Introduction

Through this study, I sought to explore and understand the lived experience and perceptions of sexual activity among teenage girls in Lagos in relation to their decision to use contraception or not, knowing the effects of STIs and unwanted pregnancies, which can lead to abortion and possible maternal mortality (Otoide et al., 2001). The plan is to share the results and findings of the research with NGOs working to improve contraception use in Nigeria such as the Bill and Melinda Gates Foundation, and state and local health departments, to discuss programs that can enhance the use of contraception in the community. The goal of this study was to provide the basis for an educational program to promote the use of contraception among the teenagers of Lagos and a program that can intervene to change behavioral attitudes towards unprotected sexual activities.

Research Design and Rationale

The study addressed teenage girls' experience and perception of contraceptive use in Lagos, Nigeria. The study focused on teenage girls 18–19 years of age engaging in unprotected sexual activities leading to STIs, unwanted pregnancies, and unsafe abortions. To investigate this phenomenon, the purpose of the study was outlined in the following three research questions:

RQ1. What are the lived experiences and perceptions of teenage girls in Lagos regarding the use of contraceptives?

RQ2. What are the perceptions of Lagos teenage girls regarding the use of male condoms to reduce the risk of STIs?

RQ3. What are the experiences and perceptions of teenage girls in Lagos regarding the risk of unwanted pregnancy and possible abortion?

To produce data to answer the research questions, this study utilized a qualitative design using the grounded theory approach with in-depth interviewing methods while drawing on perceptions by social groups, individuals, and cultural competence frameworks to inform the analysis and research methods (Watts et al., 2015). The use of grounded theory is required to understand human existence and behaviors. Qualitative research is concerned with the socially made nature of reality and involves an effort to understand the social experience and perceptions of a targeted population. Therefore, in qualitative research, targeted population perspectives are important (Watts et al., 2015). Data are collected in qualitative research using observations and interviews conducted with individuals or groups, which include questions that allow for probing the participants such as open-ended questions (Creswell & Creswell, 2018). Additionally, inductive methods are employed in analyzing data to determine common patterns, themes, or categories.

For this study, interviews were conducted to explore the perceptions and experiences of teenage girls regarding the use of contraceptives and the decision to engage in early sex that might result in negative outcomes. Quantitative studies use mostly predetermined closed-ended questions, which limit participants' or sample

answers, as results may be generalized and replicated (Creswell & Creswell, 2018). Quantitative research tests for objective theories by examining the relationships between variables resulting in numerical data that is analyzed by statistics. Qualitative research does not have formal standards for methods for numeric measurement of outcomes like quantitative research (Guba & Lincoln, 1981). The study used a qualitative research design as it is appropriate for the research because the qualitative design is socially made for reality and it tries to understand the social experience and perception of the targeted population.

The study was grounded on the HBM which is useful for intervention when used to change health behaviors based on earlier work of researchers in the early 1950s. The HBM is central to prevention programs and health promotion for public health and has become the object of research (Rayner & Lang, 2012). The grounded theory supports the use of the HBM approach that was used to explore the perceptions of teenage girls in Lagos in choosing to use contraception. Based on the HBM, to fully understand that perception, it was necessary to understand the context of those participants' experiences (Buse et al., 2018). Thus, the consideration of the HBM was appropriate when developing the research questions and interview protocol to ensure that the data collected allowed for consideration of the broader scope of participant perceptions during analysis (Buse et al., 2018).

I developed the interview questions using different types of interview guidelines. The interview questions outline the wide areas of the research question and provide

relevant answers. The questions were developed within the areas of research that fit well for the participant kind of response; the goal was to tap into the experience and perception of the participants. The questions were developed in language that would be easy to understand by an eighth grader, which is the standard of reading (Lazarus, 2020). Questions that motivated complete and honest answers were asked—for example, questions asking "how" rather than "why," getting a story out of the answer. The questions were sent to five girls between 18 and 19 years of age who reviewed and piloted the recruiting and interview questionnaires to determine whether the questions resulted in the requested information.

Role of the Researcher

I analyzed all of the data collected and performed participant recruitment, facilitated interviews, procured the interview site, and recorded participant observations. I was unable to record observations of body language, which was nonverbal during the interviews, while collecting participants' verbal responses. Unfortunately, face-to-face interviews were not possible due to the risk of Covid-19 pandemic exposure/infection and the strike of the university professors. Therefore, all interviews were conducted by phone. My role as the researcher in this study was to collect data and be responsible for the analysis of the data.

I then coded the interview transcript using NVivo software to ensure the accuracy of the interpretation of the data. I analyzed and identified portions of data for comparative purposes to process the final presentation and interpretation of the research results. I left

Lagos as a teenager almost 40 years ago; therefore, I had no personal connections with participants or the community, and I was not aware of any relationship with participants' families.

Participants often perceive power as inherent in the relationship between the researcher and themselves; a researcher can reduce perceived inequality by collaborating with participants, by explaining how participants can have a voice to empower them in participating in the research, and by developing an understanding with the participants (Creswell, 2007).

In qualitative research, the study is seen as a data collection instrument mediated through human instruments rather than machines or inventories (Denzin & Lincoln, 2003). Researchers describe themselves and their assumptions, biases, expectations, and experiences in conducting research. All participants must be telling the truth for the data to be accurate, and the participants must be willing to participate voluntarily. Unfortunately, without any monetary or gift compensation, it might have been difficult in this community to get voluntary participants. Therefore, participants were offered a monetary sum of 2000 naira ($5) each after completing the interview for them to buy data and airtime credit for their phones.

Methodology

Qualitative information technology was used to examine the information gathered. A qualitative design with a grounded theory approach was necessary because of its abstract methodology with a categorical information variety strategy (Graue, 2015). A

content investigation was used, as this assisted with understanding the subjects from the subjective information (Zamawe, 2015). Qualitative research is used mainly when a researcher seeks to develop an in-depth understanding of an issue or problem identified by individuals or social groups, because the complication of that problem has not adequately been developed in the existing literature (Creswell, 2009, p. 4).

The collection of information investigated and created an understanding of the perception and experience lived by Lagos teenage girls regarding the use of contraceptives. The grounded theory approach was used to distinguish the thinking about these populations in having unprotected sex prompting unwanted pregnancy and STIs. The population was girls aged 18–19 years in universities and polytechnic institutions in Lagos, excluding non-sexually-active girls. The study adopted an interviewer-administered questionnaire in collecting data from 20 girls (or until saturation occurred; Ajayi et al., 2018).

The plan was to interview 20 girls from three colleges across the city of Lagos. The grounded theory approach in developing the research questions was used to allow the targeted population to collect and share information that would show the effects of the five main concepts of the HBM that guide developmental growth. In assessing the association between the sociodemographic variables and the use of contraceptive methods among teenagers, a focused group model of questioning was used to explain participants' opinions and attitudes toward contraceptives (Ajayi et al., 2018).

Participant Selection Logic

The primary data source was interviews of 20 girls aged 18–19 years. The sample of 20 girls was chosen because in qualitative research, there is a point at which a sample has diminishing returns; having more data at that point does not mean new information will be collected (Mason, 2010).

This study explored the lived experiences and perceptions of teenage girls aged 18–19 years in Lagos, Nigeria, with regard to the decision to use contraception in protecting themselves from unwanted pregnancies and always using condoms to protect against STIs. I looked at lived experiences of the use of contraception or the effect of not using contraception. Boys do not generally use contraception, except for condoms—hence their exclusion from the study (Kimport, 2018). The interviews were individually conducted one on one and were recorded and kept confidential. In the interviews, I used open-ended questions to gather data, noting the lived experiences and perceptions of the girls regarding the use of birth control. All data were then analyzed using the framework concept analysis and NVivo software.

Instrumentation

Qualitative instruments were used in this study, consisting of a structured interviewer-administered questionnaire to obtain information on sociodemographic features, knowledge, and the use of contraceptives, which I developed. I visited the colleges to collect the initial data from participants. The questionnaire addressed knowledge, source of knowledge, use of contraceptives, and factors that affect access and

use in the community. Five girls aged 18–19 years were asked to complete the recruitment and interview questionnaires as a pilot to determine whether the questions resulted in the requested information.

Data were collected by using an interview protocol for the individual participants. The protocol for the interview included the basic recording of individual interviews on a small recorder. Then the research questions were organized, firstly by a brief reminder of the purpose of the study and the interview prompts made by me. The interview prompts were open ended because sexual activity is a sensitive topic in the culture. An icebreaker question that was related to sex and pregnancy was included.

Ajayi et al. (2018) recommended including up to 20 people in a qualitative study to accommodate the logistics and time that affect overseas data collection. 20 participants were recruited, with a random selection of sexually active girls. Studying the entire population was impossible; thus, sampling a portion or section of the population for an observational study was required (Etikan & Bala, 2017). A group of teenage individuals in an area or city is not likely to reflect the opinions of all teenagers in the population in the area, and for this reason, randomization was employed to achieve an unbiased sample (Etikan & Bala, 2017).

There are three common random sampling designs: simply random, stratified random, and multistage random sampling. For the study, simple random sampling was used by selecting a group subject (teenagers in Lagos); the teenagers were chosen by chance, and every individual had the same chance of selection (Emerson, 2015).

As explained earlier, the 20 girls were recruited from three colleges/universities in Lagos, using flyers and posters placed in school clinics, and I walked around the school with flyers collecting consent and girls' contact information. The information on the flyer and poster focused on the study eligibility criteria for the selection of participants and provided contact information for those interested. When a potential participant contacted me, screening questions were asked on the phone to determine qualification and criteria eligibility. Qualified participants were invited for a phone interview.

Open-ended questions in the literature review about data collection methods in qualitative studies were used when developing the methodology for this study. Open-ended interview questions are helpful when collecting data about participants' opinions, experiences, perceptions (Creswell, 2009, pp. 181–182), and impressions concerning a phenomenon (Donnelly, 2017). Individual interviews allow interaction with participants and follow-up immediately to ask for clarification or to probe for additional details (Donnelly, 2017). This characteristic of open-ended interviews was beneficial because it allowed me to compensate for any weaknesses in the original interview questions. The study was planned to be qualitative research to explore participant experiences and perceptions rather than measure a social construct and determine the instrument's content validity; however, the concept of validity will be discussed in more detail later in this chapter.

Procedures for Recruitment, Participation, and Data Collection

The immediate settings for this study (sites for data collection) were the chosen colleges/universities in Lagos, Nigeria. During recruitment, consent was also signed by those girls who were interested and who eventually qualified. A date was set for each interview, and verbal consent was given again on the interview day. The participants from the three colleges were dealt with one at a time, as data were collected by phone within a day or two for each college.

Data were collected within 2 days from each college participant, and no setback could not be corrected within the stipulated time. The interviews were conducted with a phone attached to a recorder that was secured for confidentiality.

Data Analysis Plan

The method of content analysis after data collection from the interview, for the grounded theory analysis, was interpreted by identifying the central themes, which gave room to the description of the participant experience (Agresti & Kateri, 2011). The Hycner method is a process that is designed to build on elements for establishing analytical methods (Hycner, 1985). Hycner's (1985) method includes several steps for analyzing data collection, a few of which are summarized below:

1. *Transcribing*: Hycner explained how to note verbal cues and record interview data that may be used by the researcher to interpret data.
2. *Bracketing and phenomenological reduction*: Hycner stated that the researcher should look into the participant with openness to gain an understanding of the

phenomenon and what it means to the participants. Researchers should be able to suspend their assumptions as identified so that the meaning of the data collected can emerge with very little bias from the researcher (Hycner, 1985).

3. *Listening to the interview for a sense of the whole*: This is the listening part of the research, where the researcher listens to all recorded interviews many times to pull out the data that are meaningful to the research (Hycner, 1985).
4. *Delineating units of general meaning*: This involves expressing the essence of the meaning of words, phrases, sentences, paragraphs, or significant nonverbal communication, which crystallizes and condenses the answers of the participants but uses words close to the original words; a researcher may now use their transcript notes to form coherent meanings of the expressed data (Alase, 2017).
5. *Delineating units of meaning relevant to the research question*: This is where the researcher begins to examine the meaning of the research questions through the answers given by the participants, noting as relevant meaning to the study. Hycner suggested that it is safe to record statements that are only relevant to the study.
6. *Determining themes from clusters of the meaning*: This is where the researcher carefully determines the possible central themes that express the importance of the clusters (Hycner, 1985). Themes may change during

interwoven inspection of the information collections and the potential themes start (Hycner, 1985).

7. *Ensuring dependability*: The dependability of results is ensured by engaging a second coder in the data analysis process (Alase, 2017). At this point of the process, the researcher needs a second coder to analyze the data to determine the themes. The researcher then discusses the data collected with the second coder to compare with the first to see the outcome, and this is where discrepancies are noted and adjustments are made accordingly (Hycner, 1985).
8. *Contextualizing themes*: In the final step, the researcher examines the themes with consideration of the phenomenological context in which the data were collected and arranged to understand the phenomenon's role (Hycner, 1985).

The above procedure allowed me to analyze the data collected into themes that addressed the social change question. Therefore, I was able to organize the transcript into themes and codes arranged into theme clusters based on the topic of the research. After reading the transcripts, I made a line-to-line coding of the data using NVivo.

Issues of Trustworthiness

To establish the credibility of coding, a researcher asks another researcher to code the study transcript and then compare the similarities and differences in the results making it two sets of coding which can help to clarify or confirm the research findings and can serve as a revision to the original codes, this is called theming (Sutton & Austin,

2015). All of these were put together and named a narrative with the name “experience of the study sample” for example the experience of children on the rooftop garden (Topper, 2014). The importance of the theme was that it presents the data from interviews, using quotations from transcripts to explain the researchers' interpretations (Sutton & Austin, 2015). Each theme became the heading of a section when the findings are arranged and organized for presentation, under each theme were the codes and the researcher's meaning of the themes, and the implications for social change was given (Sutton & Austin, 2015).

Qualitative research does not have formal standards for methods for numeric measurement of outcomes like quantitative research (Guba & Lincoln, 1981). The validity of qualitative research could not be adjudicated by the same parameters as that of quantitative, therefore, qualitative research is evaluated based on the use of ethical practices, meaningful conclusions, and the usefulness of the results of the study (Trochim & Donnelly, 2007). In quantitative research, trustworthiness and validity are with traditional elements of internal and external validity, reliability, and objectivity but qualitative trustworthiness is validated by credibility, transferability, dependability, and conformability (Lincoln & Guba, 1981).

To establish the trustworthiness of the research, reflexivity is used, that is, the researcher acknowledges that her actions and decisions unavoidably impact the meaning of the perceptions and experience under investigation (Lietz et al., 2006). Instead of trying to hide behind a false sense of objectivity, the researcher made her sociocultural

position obvious and known (Lietz et al., 2006). I analyzed self, and beliefs and identify interconnection of the two with the participants throughout the research.

Credibility

Credibility is the truth value that refers to the use of participant experience in providing a good understanding of the phenomenon studied (Lincoln & Guba, 1981). The assumption was that participants have an accurate account and a good understanding of the qualitative research that was studied, compared to researchers who explore the external perspective of the study (Lincoln & Guba, 1981). An example is the interpretation of the rooftop garden study in Hong Kong, the interpretation was for children who live in countries without outdoor openings can still do outdoor activities (Topper, 2014). To achieve credibility in the study, during the meeting with participants, I asked them to listen to the interpretations of the analyzed data and tell me if they thought I understood their general perceptions of their experiences correctly. Repeating questions and clarifying answers before recording the data accurately reflect the conditions that I captured and described the participants thought well.

Transferability

Transferability is the applicability that refers to the degree to which the study can be generalized to other contexts or populations studies could not be generalized to another population because qualitative studies are unique and most human behavior change and social change (Lincoln & Guba, 1981). The assumption was that other studies may be discussed to fit other similar populations (Lincoln & Guba, 1981). This study

might not generalize its results to other populations but will only fit similar populations to be relevant and appropriate.

Dependability

Dependability is the understanding that the study could be used by other studies as long as the study has enough information from the research report to do so and obtain similar findings as the study did use the second researcher to audit (Morrow, 2005). To establish dependability, I hand-coded the data twice during the process.

Confirmability

Confirmability is the degree to which other researchers can confirm that study results are not based on the researcher's bias but on research findings from the participant's responses and not on the researcher's motivation for the result (Lincoln & Guba, 1981). Confirmability is developed by using data auditing and disclosing potential researcher biases and plans to reduce any (Lincoln & Guba, 1981). Reliability of the intercoder is the extent to which an external coder gets the same results as the researcher of the study and this process is used to measure the level of how the content analysis is constant and therefore, validate the study (Trochim, 2005). In this study, I shared the study decision information track, for the readers to evaluate the soundness of the study in a better position and to draw their conclusion about the study's trustworthiness.

Ethical Procedures

Ethical research practices will always be adhered to while conducting the research. Request and permission were received from the Lagos State Ministry of

Education and Health Commission to conduct the research with university students. For this study, the National Code of Health Research Ethics developed by the Lagos University Teaching Hospital Health Research Ethics Committee (Federal Ministry of Health and Education, Nigeria) was read to determine that the study plans met the expectations of ethical research outlined in the document concerning social value, methodological validity, participant recruitment and selection, risk minimization for participants, informed consent, and to have the best interests of participants during the process. Permission to conduct the study was received from Walden University's Institutional Review Board (IRB) number 07-01-22-0182723 and it expires on June 30, 2023, before starting to collect any data.

Recruiting participants for the study, I posted flyers on arrival to Nigeria on the college's clinic boards as part of the recruitment process so that it allows for potential participants to self-select, and copies of the consent forms were made available to potential participants immediately upon request. To ensure the privacy of potential participants during recruitment, no clinic workers were directly involved in the recruitment process, the researcher handed the flyers with the phone number to call for a short survey to see if the participant qualified, a call card gift of 200 Naira (50cents) was given to make the call. All clinic workers are to direct any potential participant questions to the researcher. The researcher was available to answer questions by phone and text messages and started the onsite recruitment period during the first week of arrival to Nigeria.

The use of appropriate consent forms is critical when dealing with vulnerable populations. As defined by The Council for International Organizations of Medical Sciences (Macrae, 2007) vulnerable populations are those that are unable to safeguard their own personal or legal rights and interests and thus subject themselves to harm or exploitation, children are identified as vulnerable populations. The study worked with a vulnerable population, though the legal age of adulthood in Nigeria is 18 years, it recruited teenage girls between the ages of 18–19 years.

Walden University's consent form template was used to ensure all necessary information is included like the following: introduction of the researcher of the study, the purpose of the study, inclusion criteria explanation, participants' expectations, and the nature of the study. Included on the form was a participant privacy statement, university, and the researcher's contact information in case a participant has questions.

To be sure participants joined the study voluntarily as suggested by Council for International Organizations of Medical Sciences (CIOMS), ample time was allowed for the recruitment process, to be able to answer all potential participants' questions about the study, and to let them know that they do not need to participate if they do not want to. The approval of the IRB number 07-01-22-0182723 expiring June 30, 2023, and Lagos University Teaching Hospital Health Research Ethics Committee (LUTHHREC) number ADM/DSCST/HREC/APP/4904 expiring March 11, 2023, was received before the start of data collection.

Data collection ethical considerations include the confidentiality of participants and the study data. To ensure the confidentiality of the participants, participant-chosen aliases were used. Allowing the participants to choose their aliases served as an ice-breaking activity to put participants at ease and build trust. All the participants agreed to the name “Lag” then followed by numbers 1-20. At no time was the aliases appear with the participant’s personal information and all collected data remained de-identified. The de-identified preserves the confidentiality/privacy of the participants.

The data was kept secure to ensure the confidentiality of the study. The second coder was provided with a sample of the aliases' data for analysis and the researcher was the one with access to the data in storage. While in Lagos for the data collection, the researcher kept all electronic data on a password-protected computer. These safety procedures to secure the data were transferred to a flash drive which was locked in a secured box with the researcher and will be destroyed after 5 years, as required by Walden University.

Summary

The interview for qualitative research data collection was very important. Thoughts were put on paper and clear and precise questions were formed to interest the participant enough to extract information. It is important to respect the time of the participant; therefore, a reasonable time was found, and I tried not to go over the time or ask permission for an extension of the participant’s wants. Body language matters in interviewing an individual in order not to miss observation for interpretation (Laureate

Education Producer, 2016). However, due to Covid and the Federal university professors' strike in Nigeria, face-to-face interviews was not be performed, all interviews were performed on phone at the convenience of the participants where it was safe for them to talk.

Social change is to help a researcher to be the catalyst in their community for a historic push to make the area more resilient, healthier, and bursting with strong local livelihoods while also reducing its ecological footprint (Thomas et al., 2009). The transition movement is an example of a strengths-based approach to social change, rather than focusing on all the barriers we face in creating more sustainable communities, it focuses on opportunities and potentials and attempts to create the change we want to see in the community (Thomas et al., 2009).

This is a qualitative study, a grounded theory approach to collect data to develop an in-depth understanding of the experiences and perceptions of contraceptive use among teenage girls living in Lagos, Nigeria was used. A grounded theory approach used was helpful to generate data about the teenager’s decisions to engage in early sexual activity, unprotected sex activity leading to unwanted pregnancies, and impending motherhood or resulting in unsafe abortion which could have negative effects. Individual interviews to gather data from 20 teenagers (18–19 years of age) who live in Lagos were performed. The data was analyzed using Hycner's (1985) method of content analysis for grounded theory data, which was interpreted and organized by themes that emerged during the analysis. To determine the reliability of the analysis, intercoder reliability testing was

conducted and considered an 80% agreement index indicative of reliable analysis. Participants were protected from harm and confidentiality of personal information was maintained as well as ensuring the safe storage of all data.

Chapter 4: Results

Introduction

Through this study, I aimed to explore and understand the lived experiences and perceptions of contraceptive use among sexually active teenagers in Lagos. In addition, I explored participants' decision to use contraceptives or not, which could lead to STIs and unwanted pregnancies, which could lead to abortions (Otoide et al., 2001). The original plan was to explore the experiences and perceptions of girls aged 15–19 years using the phenomenological approach of Hycner, but due to changes required for IRB approval, I collected data from adults 18–19 years of age. The method of content analysis after collecting data from the interview used the theory of the HBM to analyze the data. Data were then interpreted by first identifying the central themes, which gave room to the description of the phenomenon of the participant experience (Agresti & Kateri, 2011).

The research questions that formed the foundation for the study were as follows:

RQ1. What are the lived experiences and perceptions of teenage girls in Lagos regarding the use of contraceptives?

RQ2. What were the perceptions of Lagos teenage girls regarding the use of male condoms to reduce the risk of STIs?

RQ3. What were the experiences and perceptions of teenage girls in Lagos regarding the risk of unwanted pregnancy and possible abortion?

This chapter contains six sections. The first section identifies the population of teenagers used for the research in Lagos, Nigeria. The next section presents data

collection procedures and the protocols for data collection using surveys and interviews to record information for select participants. The third section shows the demographic profile of participants, derived from the demographic survey (see Table 2, p. 67) completed by each participant. The fourth section presents the questionnaire data of qualified participants. The fifth section describes the data-analysis process. The final section presents a summary of the findings.

Pilot Study

A pilot activity was conducted to check whether the designed questionnaire worked. Five girls aged 18–19 years were asked to complete the recruiting and interview questionnaires to determine whether the questions resulted in the requested information. They all returned with positive feedback, though they thought the questions had too many parts. I explained that this was due to the type of research and that I needed the participants to talk as much as possible to extract answers. There were no changes made to the interview questions as per the pilot study, as all five girls agreed to the questions.

Setting

The study data were collected over 4 weeks between July and August 2022, but due to the strike of the professors of federal colleges and universities, the University of Lagos and Yaba College of Technology had fewer students than usual. Lagos State Polytechnic professors were not on strike because this institution is state owned. Students were all on campus getting ready for end-of-year examinations. Recruiting took place at

the University of Lagos, Yaba College of Technology, and Lagos State Polytechnic, all on the mainland of the state; there is no university on Lagos Island.

In this study, I aimed to explore and understand the lived experiences and perceptions of contraceptive use among sexually active teenagers in Lagos. I recruited using purposive sampling. Due to the sensitivity of the study topic, approximately 1 week before the start of data collection (July 20, 2022), flyers were posted on school clinic notice boards, but because few students were on campus, most of them did not see the flyers. The recruiting flyers were then given to girls found on the campuses at random to fill out.

The consent was also given to participants with the recruiting survey to read because it described the study, eligibility criteria for participation, my contact information, and the proposed gift. After reading the consent during recruiting, the participants gave their verbal consent. The consent forms were used to help potential participants screen themselves, before their acceptance into the study, and their phone numbers and email addresses were collected for future contact. The participants who were eligible for the research were called and texted with an invitation to an interview. In their reply, they stated a time and day suitable for them out of the options that I outlined.

Data Collection

The criteria for inclusion in this study specified that the girls must be between the ages of 18 and 19 years old; unmarried; sexually active, living in Lagos, either on the mainland or the island; and able to speak English. The data collected were analyzed by

and grounded on the HBM instead of the planned phenomenological approach based upon IRB and committee recommendations. The sexually active criterion ensured that the girls made a self-decision about their sexual activity and in so doing, girls who were victims of rape or other forms of the forced sexual act were excluded, as the study focused on girls' decision-making regarding sex with or without contraceptives.

These criteria ensured that eligible participants would be able to provide data that would answer the research questions of the study related to defining factors perceived to contribute to adolescent decision-making regarding their sexual activity with or without contraceptives. The criteria ensured that participants had personal experiences regarding using protection to prevent STIs or unwanted pregnancy-related issues. Their perceptions of support might be helpful in teaching teenagers about a safe and healthy reproductive lifestyle.

All interviews were done on the phone; as explained earlier, the university professors were on strike, and students were not always present at the school. All the participants who met the criteria agreed to phone interviews. Their gifts were sent to them in form of phone credits. Interview questions links on Google Docs were sent to the participants so that they would have a copy of the interview when the interview call was made. Five interview calls were performed each day (from July 26–August 2, 2022) and transcribed immediately. The research questions were asked according to the questions on Google Docs, and the answers were written on the copy by me as the participants were

replying. All answers were then transcribed later in the day. All interviews were completed in 5 days from July 26–August 2, 2022.

Data Analysis Report

The analysis of the interview transcripts was conducted to explore and understand lived experiences and perceptions of contraceptive use among sexually active teenagers in Lagos. The analysis was also conducted to explore the participants' decision to use contraceptives or not, which could lead to STIs and unwanted pregnancies that could lead to abortions.

The research analysis was conducted using Braun and Clarke's (2006) thematic analysis approach. Data analysis was made using the 12th version of NVivo software; the interview transcript file was imported into NVivo. A set of codes was created with the transcript file, and later a final set of themes, subthemes, and initial codes was developed using the research questions and objectives. After the data analysis, a codebook was generated, followed by project maps and summary tables through the NVivo software (Table 1).

Table 1

Codes From the Transcript

Name	Files	References
01. Lived experiences regarding the use of contraceptives	0	0
01- Age for sexual experiences	0	0
01- At the age of 15–17	1	18
02- At the age of 18–19	1	18
02- Use of contraceptives	0	0
01- Use of condoms	1	6
02- Use of pill	1	6
03- Use of salt	1	5
04- Sticking to one method	1	4
05- No use of contraceptives	1	7
06- To avoid unwanted pregnancy and diseases	1	6
03- Experience of birth control services	0	0
01- No services at school	1	17
02- Helpful community health services and pharmacies	1	12
03- Pharmacists might be judgmental and harsh	1	3
04- Experience of emergency contraceptives (Plan B)	0	0
01-Use of post pills to avoid pregnancy	1	10
02-Use of salt	1	7
02. Experience regarding STIs, sex education, and condoms	0	0
01- Experience of male condom usage	0	0
01- No use of male condoms	1	6
02- Frequent use of male condoms	1	5
03- Not frequent use of male condoms	1	9
04- Use because of partner	1	20

Name	Files	References
05- Use because of influence of family & friends	1	17
02- Experience regarding STIs	0	0
01- A sexually transmitted disease	1	5
02- No experience of STI testing	1	18
03- Experienced STI testing	1	2
03- Experience of sex education	0	0
01- Never attended any program	1	3
02- Adequate level of sex education	1	16
03- Require more information	1	1
03. Experiences & perceptions regarding risks of unwanted pregnancy & possible abortion	0	0
01- Accessibility of contraception	0	0
01- Easily accessible	1	10
02- Available at pharmacies	1	8
03- Expensive contraception	1	5
04- Economical contraception	1	13
05- Recommended by family & friends	1	15
06- Accessibility issue because of attitude of the provider	1	4
02- Expected relations of parents regarding unwanted pregnancies	0	0
01-Disappointment and displeasure	1	18
02-Disowning me	1	2
03- Recommended sources of information about unwanted pregnancies & STIs	0	0
01- Guidance opportunities at school	1	3
02- Sex education awareness programs	1	17
03- TV shows & online resources	1	2

The analysis of the data showed that participants shared their lived experiences and perceptions regarding the use of contraceptives. In this way, the first objective of the first research question was met, and the first main theme of the study emerged. Participants also shared their experiences regarding STIs, sex education, and the use of condoms, which emerged in the form of the second main theme of the study. Perceptions regarding risks of unwanted pregnancy and possible abortion were also observed in the data analysis that came up in form of the third main theme of the study to meet the objective of the third research question.

Demographics

The participants ranged in age from 18–19 years old. There were 20 participants in total: Seven were 18 years old, and 13 were 19 years old. While the majority of the girls lived on the mainland of the city, only five out of the 20 girls were from the island, which is the affluent area of the city. All of them were unmarried, spoke English, and were in their 1st to 2nd year of college in Lagos. All participants were born and raised in the city of Lagos. Participants' names were removed and substituted with pseudonyms agreed upon by the participants (Table 2).

Table 2

Demographics of Participants

Participant	Age	Where do you live?	Are you unmarried?	Do you speak English?
LAG 1	19	Mainland	Yes	Yes
LAG 2	18	Mainland	Yes	Yes
LAG 3	19	Mainland	Yes	Yes
LAG 4	18	Island	Yes	Yes
LAG 5	18	Mainland	Yes	Yes
LAG 6	18	Island	Yes	Yes
LAG 7	19	Island	Yes	Yes
LAG 8	19	Island	Yes	Yes
LAG 9	18	Mainland	Yes	Yes
LAG 10	18	Mainland	Yes	Yes
LAG 11	18	Mainland	Yes	Yes
LAG 12	19	Island	Yes	Yes
LAG 13	19	Mainland	Yes	Yes
LAG 14	19	Mainland	Yes	Yes
LAG 15	19	Mainland	Yes	Yes
LAG 16	19	Mainland	Yes	Yes
LAG 17	19	Mainland	Yes	Yes
LAG 18	19	Mainland	Yes	Yes
LAG 19	19	Mainland	Yes	Yes
LAG 20	19	Mainland	Yes	Yes

Note. Participants were students in colleges in Lagos.

Evidence of Trustworthiness

Credibility for the study was achieved using the process of member checking. After transcribing all responses, I called all the participants and conducted member checking with each of them. With the copy of the transcribed interview, I read through my interpretations of the analyzed data and ask each girl if what was written was correct and reflected a correct understanding of what they had told me about their perceptions and experiences of contraceptive use, unwanted pregnancy, and their understanding of STIs. They were asked if there was a need for corrections or adjustments. Three participants needed a minor correction of where they lived, which was corrected immediately.

Dependability of study results was achieved by sending the analyzed report first to my chair to check that I was on the right track with the data process; this was done to audit my findings. Dependability was established by recording the collection of data (participant interviews), then transcribing the interview and hand-coding the data during analysis so as to have a record of the processes as captured by me.

Confirmability in this study was established by discussing my potential bias against early sexual activities, but this was reduced by bracketing my presuppositions and staying open to the data. The study results are not based on my bias but are based on research findings from the participants' responses. As the researcher, I will share the study decision information track so that readers can evaluate the soundness of the study in a better position and draw their own conclusions about the study's trustworthiness.

The study result might not be able to be generalized to other populations but the study may be transferable (fit) to other similar populations. This study might not generalize its results to other populations but will only fit similar populations to be relevant and appropriate.

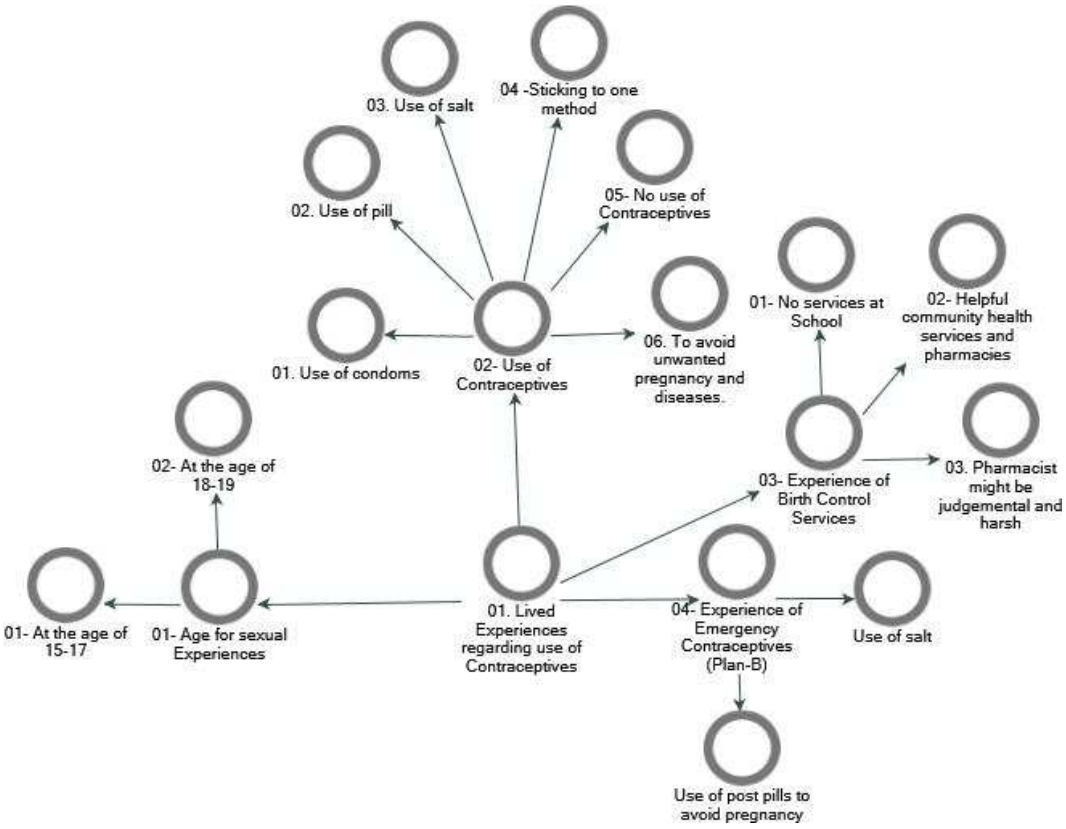
Results

Lived Experiences Regarding the Use of Contraceptives

Participants shared their lived experiences regarding the use of contraceptives that fall into four sub-themes. The first sub-theme indicated their age for sexual experience, the second sub-theme denoted the use of contraceptives, the third sub-theme indicated the participants' experience regarding birth control services, and the fourth sub-theme belonged to the participants' experience of emergency contraceptives (Plan B; Figure 2).

Figure 2

Theme 1: Lived Experiences Regarding the Use of Contraceptives



Note. Participants shared their lived experiences regarding the use of contraceptives, which fell into four subthemes.

All participants expressively mentioned that their age for sexual experience was around 18 years old. However, eleven of the participants indicated that their age for sexual experience was before the age of 17 years and the second set of responses denoted the age between 18–19 years. As one participant mentioned that she was sexually active at the age of 15 years, while many of the other participants (about 50%) said they were active at 18 years (Table 3).

Table 3

Participants' Sexual Experiences at the Age of 15–17 Years and Sexual Experiences Now at 18–19 Years

Participant	Sexually inactive	Sexually active	Current age
LAG 1	Up to age 17—No	18	19
LAG2		17	18
LAG3		16	19
LAG4		15	19
LAG5	Up to age 17—No	18	18
LAG6	Up to age 17—No	18	18
LAG7	Up to age 17—No	18	19
LAG8	Up to age 17—No	18	19
LAG9		17	18
LAG10		16	19
LAG11		16	18
LAG12		14	19
LAG13		17	19
LAG14	Up to age 17—No	18	19
LAG15	Up to age 17—No	18	19
LAG16	Up to age 17—No	18	19
LAG17		16	18
LAG18	Up to age 17—No	18	19
LAG19		15	19
LAG20		15	19

Note. Participants' initial sexual experiences up to 17 years of age and sexual experiences after 17 years of age.

While sharing the information about contraceptives, participants gave mixed responses, mentioning that they used condoms, pills, and salt in hot water. Other participants declared that they never use any contraceptives. Four of the participants highlighted that they stuck to one method of contraceptive only and they use contraceptive methods to avoid unwanted pregnancy and STIs (Table 4).

Table 4

Theme 1: Lived Experiences Regarding the Use of Contraceptives

Themes	Frequency	Initial codes	Ideas expressed from the interviews
01- Age for sexual experiences	18	01- At the age of 15–17	I was sexually inactive at the age of 15–17 (Lag # 2–4, 9–13, 17, 19, and 20)
	18	02- At the age of 18–19	Active at age 18. I am 19 years now (Lag # 1, 5–8, 14–16, and 18)
02- Use of contraceptives	6	01- Use of condoms	I use condoms all the time (Lag # 1, 2, 5, 12, 18, and 19)
	6	02- Use of pills	I take the emergency pills after intercourse (Lag # 3, 4, 5, 10, 17, and 18)
	5	03- Use of salt	I also use salt in hot water also as influenced by my friends (Lag # 10, 11, 12, 15, and 17)
	4	04 -Sticking to one method	No other contraceptive was used (Lag # 1, 2, 18, and 19)
	7	05- No use of contraceptives	I don't use contraceptives (Lag # 6, 7, 8, 9, 11, 13, 16, and 20)
	6	06- To avoid unwanted pregnancy and diseases	Use to avoid unwanted pregnancy and diseases (Lag # 2,3,4,5,15, and 18)
03- Experience with birth control services	17	01- No services at school	My school does not provide birth control services (Lag # 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 19, and 20)
	12	02- Helpful community health services and pharmacies	The community facility is the local pharmacy where my friend took me and the pharmacist recommended Postinor for birth control (Lag # 1, 2, 4, 5, 6, 7, 9, 10, 11, 12, 13, and 18)
	3	03- Pharmacist might be judgmental and harsh	For the community, it is the pharmacies. Not expensive but the staff can be harsh sometimes (Lag # 6, 16, and 20)

Themes	Frequency	Initial codes	Ideas expressed from the interviews
04- Experience of emergency contraceptives (Plan B)	10	01-Use of post pills to avoid pregnancy	I use Plan B (post pills) every time after sex to prevent pregnancy. It has been working well for me (Lag # 1, 3, 4, 5, 6, 7, 9, 10, 17, 18)
	7	02-Use of salt	I use hot water and salt as emergency contraception if I do not have the Postinor immediately after intercourse. My friends taught me to use this and said it works (Lag # 4, 6, 10, 11, 12, 15, and 17)

Note. Participants shared lived experiences regarding the use of contraceptives that fell into four subthemes.

Concerning birth control services, participants shared their views that there was no service in their colleges for birth control but community services had been helpful to them like the pharmacies. As Lag # 7, one of the participants stated '*The community facility is the local pharmacy where my friend took me and the pharmacist recommended Postinor for birth control.* But few of the participants expressed the view that getting birth control in pharmacies is not expensive however sometimes pharmacy staff can be harsh and observe the participant from a different angle.

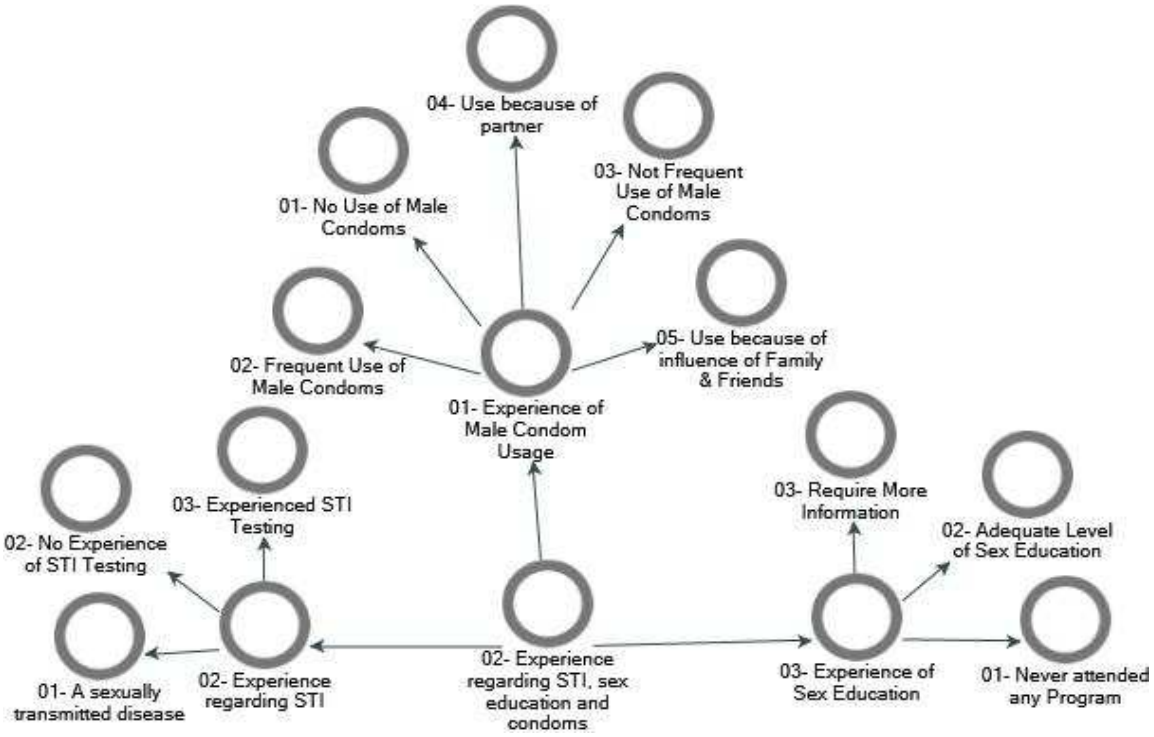
Participants also contributed their views while sharing their experience with emergency contraceptives, where one participant expressed that she used Plan B pills every time to avoid pregnancy. She also added to the comment that the pills always worked for her. But some of the responses that were also analyzed in regards to the emergency contraceptive like the use of salt in hot water. One of the participants mentioned that this plan worked as she was told to her by her friends.

Experience Regarding Sexually Transmitted Infections, Sex Education, and Condoms

The second main theme of the study was identified from the data analysis given the details and experiences of the participants regarding STIs, sex education, and the use of condoms (Figure 3).

Figure 3

Theme 2: Experience Regarding Sexually Transmitted Infections, Sex Education, and Condoms



Note. While sharing their experience with male condom usage, six of the participants highlighted that they did not use condoms; however, several participants mentioned that they frequently used male condoms.

While sharing their experience with male condom usage, six of the participants highlighted that they don't use condoms, however, several participants mentioned that they frequently use male condoms, according to the participants it protects them from unwanted pregnancy and STIs. Thirteen participants responded that they don't use male condoms frequently but are aware that it protects them from unwanted pregnancy. A large number of participants agreed that they use condoms because of their partners. They explained that their partners were in support of the use of condoms. Participants reported that apart from their partners, their family and friends also influence them and provide support to participants. They reported that they were told by their parents that if they ever want to have sex, they should use protection. As Lag # 7 one of the participants stated, *"My family members are supportive of me that if I want to be sexual, I should always protect myself*".

Analysis of the study also revealed the information that participants were aware of STIs. Lag # 6 one of the participants gave the meaning of STI in her words "*STIs means Sexual Transmitted Diseases transfer from men to women".* Almost all of the participants know the meaning of STIs, but most of the group identified from the data analysis that they don't have any experience with STIs testing as they never had been tested for STIs. However, one of the participants shared her views about her experience regarding STIs and stated that she got tested accidentally when she was seen at a hospital with a complaint of low abdominal pain but the test was negative.

The analysis of the study also identified the experience of the participants regarding sex education. Three of the participants mentioned that they never attended any program neither in school nor at home. Seventeen of the participants expressed their views that they had an adequate level of sex education in their secondary schools, but not from home or community as Lag # 3 one of the participants stated "*My experience of such a program is at my secondary school, and I learned a lot. That is where I originally heard about the use of contraceptives".* Participant Lag 17 shared her experience with sex education as she was aware of the program but she mentioned that still she wants to know more about sex education (Table 5).

Table 5

Theme 2: Experience Regarding Sexually Transmitted Infections, Sex Education, and Condoms

Themes	Frequency	Initial codes	Ideas expressed from the interviews
01- Experience of male condom usage	6	01- No use of male condoms	I don't use condoms at all (Lag # 3, 6, 11, 13, 16, and 17)
	5	02- Frequent use of male condoms	I always use condoms because I am always comfortable with them. It protects me from unwanted pregnancy and STIs (Lag # 2, 4, 9, 10, and 19)
	9	03- Not frequent use of male condoms	I use condoms sometimes but not all the time. It protects against pregnancy (Lag # 1, 5, 7, 8, 12, 14, 15, 18, and 20)
	20	04- Use because of partner	My partner is in support of any protection we used (All the participants)
	17	05- Use because of the influence of family & friends	My family members are supportive of me that if I want to be sexual, I should always protect myself (Lag # 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 18, and 19)
02- Experience regarding STIs	5	01- A sexually transmitted disease	STIs means sexual transmitted diseases transfer from men to women (Lag # 1, 6, 10, 18, and 20)
	18	02- No experience of STI testing	Never been tested for STIs. No experience (Lag # 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, and 20)
	2	03- Experienced STI testing	I was asked to test for STIs because of a complaint of lower abdominal pain

Themes	Frequency	Initial codes	Ideas expressed from the interviews
			that I had. The test came back negative (Lag # 1 and 15)
03- Experience of sex education	3	01- Never attended any program	None. I have never attended any sex education either in school or at home (Lag # 5, 6, and 14)
	16	02- Adequate level of sex education	My experience of such a program is at my secondary school, and I learned a lot. That is where I originally heard about the use of contraceptives (Lag # 1, 3, 4, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, and 20)
	1	03- Require more information	My experience with the program about sexual harassment is okay but I still need to know more about sexual education (Lag # 2)

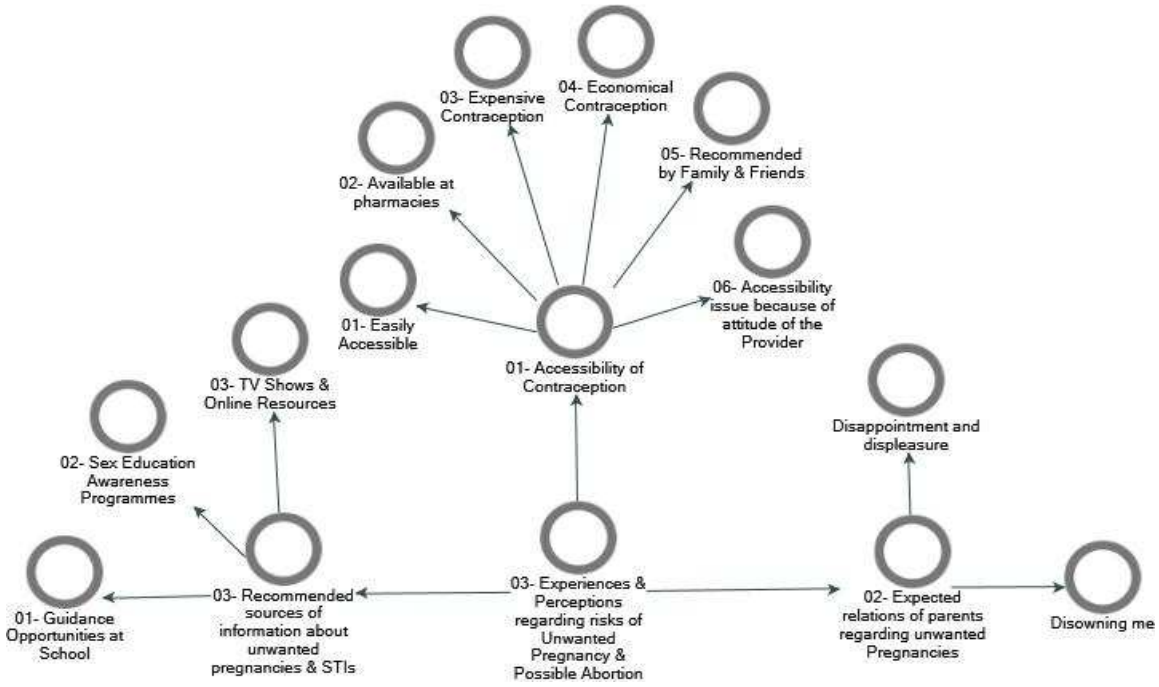
Note. The second main theme of the study was participants' experiences regarding STIs, sex education, and the use of condoms.

Experiences and Perceptions Regarding Risks of Unwanted Pregnancy and Possible Abortion

The third major theme of the study that was identified from the data analysis provided information regarding the participants' experiences and perceptions about the risks of unwanted pregnancies and possible abortions (Figure 4).

Figure 4

Theme 3: Experiences and Perceptions Regarding Risks of Unwanted Pregnancy and Possible Abortion



Note. The study's third major theme identified the participants' experiences and perceptions about the risks of unwanted pregnancies and possible abortions.

The first sub-theme identified how the participants have access to contraceptives, here the participants shared their experiences mentioning that contraceptives were easily accessible to them from local pharmacies. They mentioned that every local pharmacy sells contraceptives, mainly Postinor (Plan B). Lag # 2 and 13 of the participants highlighted that condoms are expensive ranging from 270 Naira per 1 pack of 3 to 500 Naira (50 cents to $1). There was another point of view of thirteen participants who acknowledged that contraception is economical and they are not expensive. Seventeen of

the participants had gotten recommendations to use contraceptives from their friends and schoolmates/roommates. Participants mentioned that to control unwanted pregnancies they use condoms but those are available only at the pharmacies. Participants also highlighted condom accessibility issues by stating that when they got to the pharmacy to get the condoms, the staff sometimes make it difficult to purchase as they give attitudes, especially the technician/auxiliary nurse *(as pointed out by Lag # 19 of the participants).*

Another sub-theme identified from the data analysis provided information about parents' expected reactions to unwanted pregnancies. All the twenty participants described the expected reactions as that disappointment and displeasure if their parents get to know about their unwanted pregnancies. Two of the participants described that their parents will disown them if they get out to know that they got pregnant. As Lag # 1 stated "*My parents will be very disappointed and sad due to my education and life change"* and Lag # 11 added, "*My parents would probably disown me. People in the community would probably laugh at me".*

Describing the main theme, participants recommended that information resources about unwanted pregnancies and STIs will benefit them. Participants recommended that they want to be provided with guidance and opportunities at school with information that educates them about sexual issues (Table 6).

Table 6

Theme 3: Experiences and Perceptions Regarding Risks of Unwanted Pregnancy and Possible Abortion

Themes	Frequency	Initial codes	Ideas expressed from the interviews
01- Accessibility of contraception	10	01- Easily accessible	It is easily accessible (Lag # 1, 2, 3, 5, 12, 13, 14, 16, 17, and 18)
	8	02- Available at pharmacies	Every pharmacy sells contraceptives (Lag # 4, 6, 9, 10, 11, 15, 19, and 20)
	5	03- Expensive contraception	Condoms are expenses ranging from 270 Naira per 1 pack of 3 to 500 Naira (50 cents to $1; Lag # 2, 4, 10, 13, and 14)
	13	04- Economical contraception	They are not expensive (Lag # 1, 3, 5, 6, 7, 9, 11, 12, 15, 16, 17, 19, and 20)
	15	05- Recommended by family & friends	My friends told me about birth control and condoms but you can only get them from the pharmacy (Lag # 2, 3, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 17, 18, and 20)
	4	06- Accessibility issue because of an attitude of the provider	Anytime I go to the pharmacy to get condoms, the staff there makes it difficult to purchase due to their attitudes especially the tech/auxiliary nurse (Lag # 4, 6, 7, and 15)
02- Expected relations of parents regarding unwanted pregnancies	18	Disappointment and displeasure	My parents will be very disappointed and sad due to my education and life change (Lag # 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 16, 17, 18, 19, and 20)
	2	Disowning me	My parents would probably disown me. People in the community would probably laugh at me (Lag # 11 and 15)

Themes	Frequency	Initial codes	Ideas expressed from the interviews
03-Recommended sources of information about unwanted pregnancies & STIs	3	01- Guidance opportunities at school	Yes. I think the school should educate us more about sexual issues (Lag # 2, 12, and 20)
	17	02- Sex education awareness programs	Yes, we need a program that will teach female sexual life and things to do and not to do about sex life (Lag # 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, and 19)
	2	03- TV shows & online resources	Sex education programs on TV, and online will be helpful (Lag # 8 and 9)

Note. Accessibility of contraceptives, pharmacist reaction, parents' reactions to the knowledge of sexual activities, and sex education awareness table.

All the participants wished that they will like to see an arrangement of sex education awareness programs for both females and males teaching them about their sexual life in things to do and things not to do. They also wished that sex education programs could be taught through tv shows and online sources like a podcast.

Summary

In this chapter, the purpose and research questions of the study, the research setting, methods of data collection and analysis, and evidence of trustworthiness were all described. The demographics and characteristics of study participants and the results of the research question interviews were also presented. Finally, the principal themes emerging from the data were presented. In Chapter 5, the analysis of the study, and the interpretation of the findings in the context of the ground theory will be discussed and summarized.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

Through this study, I aimed to explore and understand lived experiences and perceptions of contraceptive use among sexually active teenagers in Lagos, and their decision to use or not to use contraceptives. The goal of the research was to present findings that would potentially lead to a decrease in STIs through behavioral change. This behavioral change would involve the increased use of condoms and long-term or oral contraceptives among teenage girls in Lagos. If men are not going to use condoms, girls can supply and insist on the use of condoms. The study's findings will be used to plan an intervention created in the form of sex education, which will be taught as self-prevention of unwanted pregnancy and STIs. The plan is to standardize care throughout the state and, if effective, across the nation.

The research used a qualitative design and HBM theory because these allowed for the development of a deep understanding of the experiences and perceptions of the participants, thereby addressing a gap in the literature concerning the experience and perception of the use of contraceptives among teenage girls 18–19 years of age in Lagos, Nigeria.

Interpretation of Findings

The decision to not use proper contraceptives or not use contraceptives at all in this study was influenced by (a) participants' age, (b) peer pressure, (c) participants' partners and parents, (d) concerns about unwanted pregnancy, (e) needs for STI

prevention and testing, (f) accessibility of contraceptives, and (g) participants' lack of knowledge about reproductive health, especially the proper use of contraceptives.

Age: The age of initiating sexual activity was a factor of nonuse of contraceptives, as reported by Aziken et al. (2003) and Ireti et al. (2010). Girls 15–19 years of age are more than 4 times more likely to experience sex than those younger than 15 years. This is possibly due to the period of puberty and sexual awakening; it is not surprising that age was a factor in the data collection for this study (Ireti et al., 2010). Nigerian women experience sexual debut by or before the age of 15 years, as reported by Yaya and Bishwajit (2018). Hence, by the time they marry, they have been exposed to increased risks for STIs. This study confirmed that the teenagers studied were at high risk for STIs but never got checked to know their status.

Peer pressure: One of the contributing factors to initiating teenagers' sexual activity is peer pressure, as reported by Shittu et al. (2007) and Okereke (2010). Peers tend to share sexual experiences and information among themselves in school, but most of the time, the shared information is not accurate. The study showed how peers influenced themselves by giving names and methods of contraceptives to use such as hot salt water and Plan B. It is noted that most of the participants thought that Plan B was a proper contraceptive. Though it is a type of contraceptive, it is for emergencies only and is not advisable to be used frequently; it sometimes does not stop pregnancy if the embryo has already been implanted (Wilks, 2000). A very comprehensive sexual education program sponsored by universities and the government will be beneficial and

give accurate information about the use of birth control. Getting accurate information on the use of contraceptives would promote behavioral norms and encourage necessary change (Tankard & Paluck, 2016). Without this type of education, individuals engaged in the unsafe use and dangerous situations of Plan B contraceptives described in the study.

Most of the Lagos State Polytechnic girls talked about using salted hot water for emergency birth control while thinking that Postinor (Plan B) is a real contraceptive. They must have circulated the news among themselves that the homeopathic medication of hot saltwater works to prevent pregnancy, as most of them mentioned its use as an emergency contraceptive.

Partner and parent influence: As reported by Mmari and Blum (2009), adolescents who lived away from home were at higher risk of premarital sex, and those in boarding schools were twice as likely to engage in premarital sex as those who lived at home. Most of the participants in this study reported that their partners influenced their decision to use or not to use condoms or any type of contraceptive. If their partners were in support, then they would use the contraceptive, and if not, they would not use it. They all agreed that they did not want to get pregnant but were very unsure about STI testing. All the participants except one had never tested for STIs or felt the need for testing. All the participants reported that there would be negative reactions from their parents and family members if they ever found out about their sexual activities or if they ever got pregnant. These pieces of information have been reported in some works of literature as stated in Chapter 2's literature review, but not to the extent of this study in Lagos, which

is deeply disturbing. This was a unique study of this type in which contraceptive use, STI testing, and unwanted pregnancy were all discussed at once. This was especially unique in the study location, Lagos, and possibly in Nigeria as a country. This finding is important for further research studies, policy formulation, and informing program interventions on teenagers' sexual behavior in relation to the use of contraceptives and getting tested for STIs from time to time.

The participants identified their parents as sources for some kind of sex education in this study, though the extent of the education is not known, as this could have served as a protective factor for this teenage population. Some expressed that their parents were not aware of their sexual activities. The general understanding of sexual education among Nigerians, especially the Yorubas where Lagos is located, is that most people regard sex as a sacred topic that should not be discussed with teenagers unless they are ready for marriage because this could result in sexual promiscuity. Whenever the topic is discussed in families, it is usually directed to the girls within the family, with the instruction, "if you are touched by a boy, you will get pregnant," and this does not give enough information for the prevention of pregnancy or disease. Therefore, family teaching of sex education may not be a reliable source of sexual health education. Further, if sexual activity occurs, it may keep the girls away from discussing it with family and may therefore prompt them to rely on peers' and friends' advice, which may have contributed to the problem under discussion in this study.

Concerns about unwanted pregnancy: All the participants expressed concerns about being pregnant and their parents knowing about it. They all expressed that they would likely stop schooling if their parents got to know that they were pregnant. Most of them reported that their parents wanted them to finish their education first and get married before pregnancy. They reported that their parents and family would be disappointed in them for getting pregnant because it would disgrace them. There is no explicit study that explained this phenomenon of Lagos teenagers' parents' feelings about impending motherhood that can occur due to unprotected sex and the neglect of contraceptives. Otoide et al. (2001) agreed that in many cultures in Nigeria, it is an abomination for girls to marry while pregnant or to marry a girl who had a child outside of wedlock; this increases the rate of abortions, which are mostly unsafe because abortion is illegal in Nigeria unless medically indicated to save the mother's life (Adeoye et al., 2012).

As such, the results of this study can be used to develop program interventions for parents' sex education guidelines. As reported by Adeoye et al. (2012), families influence the socioeconomic consequences of unwanted pregnancy, which include termination of education and broken relationships with family. This agreed with Oke (2004), who reported that teenagers who get pregnant are more likely to be undereducated, which leads to living in poverty. Etenikang et al. (2017) identified that teenagers spent valuable time with their parents at home but seldom discussed issues about sex and contraception. Additionally, to some families, it is considered taboo to discuss such topics, but when

unwanted pregnancy happens, the teenage girl is treated as an outcast and could be banished from the family.

Needs for STI prevention and testing: Almost all the participants did not understand the concept or the effect of STIs if having unprotected sex. They all agreed that STIs can be contracted during unprotected sex, and some girls agreed that condoms could protect them from the disease, but only one out of the 20 girls in the study reported testing for STIs, not because she wanted testing performed, but due to a complaint of abdominal pain in the hospital. Fifty percent of participants reported the use of condoms because they understood that it protected them from unwanted pregnancy and STIs; the other 50% did not use condoms but understood that condoms offer protection from unwanted pregnancy, with no mention of STIs. They all reported that they had no reason to test because they only had one boyfriend and did not sleep around. To most of the girls, STIs meant HIV/AIDS and gonorrhea. They had no understanding of other STIs such as Hepatitis B, C, herpes, chlamydia, and trichomoniasis.

There is a big gap in the literature, in that there has been no research that has ever studied all these diseases together in the Lagos area. This finding will need a reliable government-funded education program for teenagers in the city. The lack of education about STIs may have contributed to the result of the study showing that teenagers from Lagos need a scientifically designed program and the facts of the education must be evaluated for accuracy and appropriateness for age. For effective implementation of such programs, universities, schools, and government policymakers will be needed to create

the policy/curriculum that will guide the design, evaluation, and implementation of such programs.

Accessibility of contraceptives: Eighteen participants reported that their access to birth control was through community pharmacies. Condoms and contraceptives were all available in the pharmacy, and no prescription was needed. They reported that most of the pharmacy assistants or the pharmacists were nice and not judgmental and it was easy for them to obtain contraceptives, but a small number of the pharmacists were judgmental and nasty to them. This could hinder girls from going to obtain contraceptives and serve as a barrier to use. Going to the pharmacy to obtain Postinor (Plan B) was an indication that the participants were willing to protect themselves from unwanted pregnancy, irrespective of the negative reactions from the pharmacy staff. All participants reported that there was no contraceptive support in their colleges.

Lack of knowledge about reproductive health: This study indicates that there is a need for good, reliable sex and STI education programs for Lagos teenagers. Most of the participants reported that they did not have any form of professional and well-planned sex education. The study found that government-funded sex and STI education programs in the schools and communities around Lagos would be greatly appreciated, as all the participants endorsed that an education program is needed. Though all participants reported sex education by parents, peers, and media, the accuracy of the information received from these sources was not known, and inaccuracy may result in the nonuse of contraceptives. The work of Shittu et al. (2007) confirmed that a high level of sexual

activity in the teenage population in Nigeria created a high risk of STIs and unwanted pregnancy due to a lack of accurate sex education information. The lack of sex education in Nigeria is the cause of the high prevalence of teenage pregnancy, STIs, and HIV/AIDS. Therefore, sex education should be a priority, as reported by Olubunmi (2011).

The study findings were that the participants relied on partners, friends, parents, and peers and very little on media, which are not very reliable. The study confirmed a lack of proper knowledge of risky sexual activities and reproductive health, which was also identified by Okereke (2010). Many of the girls reported no STI testing or continuous use of contraceptives. All of them mentioned the use of Postinor, which is a Plan B contraceptive and not for daily use. If sex/STI education is made available in schools, on media, and in communities with parent permission for girls under 18 years, the education program should also be geared toward and focused on guiding girls toward the free clinics by the Bill and Melinda Gates Foundation all around Lagos.

Findings in the Context of the Health Belief Model

This study was grounded on the HBM, which proposes to guide the perception and understanding of risky behaviors of exposure to unwanted pregnancy and STIs when they could be prevented by the simple use of contraceptives. It proposes an approach to human behavior and shows the association between multiple levels of its concept. The HBM focuses on the responsibility of inspiring factors in health behavior change and prevention programs. Adaptations to behavioral change will include the family and peers,

which may highlight the understanding of the social norm that exists and shapes the concept in which they were rooted (Pulerwitz et al., 2019).

The HBM has factors influencing the development of human beings, as considered by the four levels of the organization—perceived susceptibility, perceived benefits, perceived barriers, and cues to action, which may help to activate the behavioral change decision process (Hall, 2012).

Perceived susceptibility: This is the perceived threat of risk of exposure to unwanted pregnancy and its consequences such as abortion or parenthood, which can motivate the use of contraception. This concept may include teenagers worrying about quitting school, and this can impact the prospect of contraceptive use (Jaccard et al., 2003). All the participants in this study expressed their concerns about getting pregnant, as most of them reported that their parents and family would not like the idea of them getting pregnant in school, which might stop schooling for them. Some even expressed that their parents might disown them. Most of the participants perceived that lack of condom protection use can increase susceptibility to STIs and unwanted pregnancy, though the use of condoms among them was minimal.

Perceived barriers: Most of the participants in this study used Plan B (emergency pills) because they felt that taking oral contraceptive pills daily was inconvenient. For condoms, the complaint was that they were hard to apply before intercourse and most of their partners did not like their use. This was the negative aspect of using contraception, as some girls felt that some of the side effects of contraceptives were weight gain, blood

clots, and mood swings (Rosenberg & Waugh, 1998). These disadvantages would have constrained contraceptive use.

The cost of condoms as contraceptives was perceived as a barrier by me, but most of the participants answered that they could afford them. Most participants acknowledged that contraception was economically feasible and not expensive. However, a few of the participants highlighted that condoms were expensive, ranging from 270 Naira per one pack of three to 500 Naira (50 cents to $1).

In the study, all the participants reported that there was no provision for contraceptives on their campuses or in the health clinic. They had to sort out the acquisition of contraceptives outside their campuses. This could have caused a delay in use, especially in the case of Plan B if not readily available within 72 hours of sexual intercourse.

Perceived benefits: Many of the participants reported that they knew the benefit of contraceptives as prevention against unwanted pregnancy, and half of them reported that they knew that condoms are for prevention of unwanted pregnancy and STIs. Peers and friends were part of the interpersonal relationships of the participants and influenced their behavior. In this study, peer influence was among the major reasons participants started to use Postinor (Plan B) and hot saltwater and the influence to use condoms from their partners. Other sources of information in this study were family members, but none of these sources of sex education appeared to be reliable. The girls believed strongly that Postinor is a form of contraceptive that can be used at any time but did not realize that it

is only used for emergencies and is not a proper contraceptive for daily or continuous use. Sadly, this could have been seen as a benefit, but the wrong use seen in this study shows that appropriate information about sex and sex-related issues is needed urgently, as lack of information is contributing to the problem of risky sexual behavior. As reported by Glei (1999), the benefits relate to the perceived advantages, effectiveness, and possibility of using contraceptives to prevent unwanted pregnancy versus the perceived barriers. The concept may include health-promoting benefits of the different methods and increased knowledge of the benefits that could increase and improve use.

Cues to action: This study revealed the pattern and attitude of participants regarding the use of protection. They all expressed concerns about unwanted pregnancy, but not all of them understood the protection against STIs. The risk of contracting STIs by not using contraceptives such as condoms was not expressed by the participants. Seventeen of the participants did mention that condoms protected them from unwanted pregnancy but not STIs. Only one participant mentioned that she had tested for STIs; the rest reported that they never had any reason to get tested, and surprisingly, many of them did not use protection. The decision not to use or use protection by participants was made mostly by their boyfriends, but unknown to the participants, this decision was not beneficial to them. The cue to action asks the question of whether the participants knew about all the risks of nonuse of contraceptives (mainly STIs and unwanted pregnancy) and if they knew, to what extent? As reported by Glanz et al. (2015), this will help in guiding the teaching content. If an individual does not know about a disease, it will be

difficult to teach prevention. The description of the influence of the individual's experiences, factors of the environment that influence health behaviors, and the effects of others on individuals. The participants expressed concerns about unwanted pregnancy and STIs, though many of them reported using some sort of contraceptive but inconsistently.

Using HBM for a prevention program, this study aimed to understand the factors that affect women's choices which would lead to behavior change and increased use of proper contraceptives. Lagos state-funded reproductive education will be needed to create a program that will direct teenagers to the centers that are funded by the Gates Foundation. These centers are available all-around Lagos where contraceptives, especially long-lasting contraceptives like IUD and Nexplanon, are inserted for free, and condoms are given out for free. This program will guide and teach the recommendation of the effective use of emergency contraceptives. The study reported by Herold (1998), states that research has shown that unmarried women of high educational status are more likely to use contraception, the statement is not very true in this study as all the participants are educated 18-19 years old in college.

There is no support for contraceptives in any of the three colleges. Although they all have school clinics, there is no contraceptive provision or even emergency contraceptive provision. This is an environmental factor contributing to improper or nonuse of contraceptives amongst the teenagers in this study. Education curriculums and programs are urgently needed for the design and implementation of a comprehensive

college and government-sponsored sex education program and seek accurate resources and facts for the evaluation of their appropriateness and effectiveness. This may be an effective way to improve Lagos teenagers' sexual health and the use of contraceptives. Also, a good education for them to know the proper use of contraceptives and take STIs issues seriously by getting tested from time to time. If the symptoms of STIs are known, then teenagers can be in tune with their bodies knowing signs and symptoms will lead to seeking testing. There is an understanding that resistance to the programs would be expected, especially regarding funding, but with the help of foundations like the Gates Foundation, which have a solid grounding in giving free contraceptives to the state, it would be possible.

Limitations of the Study

This study's main limitations were my limited exploration of why the participants are using Plan B medication as their main contraceptive and the specific types of information that girls received from their peers regarding the use of contraception, especially condoms. The need for more probing would have been necessary to get all the questions out.

Methodological limitations were during the period of (a) data collection all university professors were on strike in Nigeria and the campuses were scanty with students but the state polytechnic was in the section and getting ready for their end-of-year examinations, which may have contributed to the initial low recruitment of participants. (b)The telephone network problem of connecting on phones, in Nigeria is

very terrible sometimes it takes several attempts of phone calls to get through or to stay connected.

Recommendations

The findings from the study showed that additional research is needed to explore the lack of contraception use among the participants in the study location and the factors that influence their decisions toward the use of condoms and other contraceptives for sexual activity. Additional research is also needed on the factors that contributed to the lack of detailed sex education programs in the schools and community. Further research is also needed on the cultural factors that may have influenced the lack of sex education at home among parents and the community. In addition to this, research is needed using a different study design or the same design with a larger population to see if the findings of this study can be generalized.

Implications

The study has generated insight that could be used to increase sex education among teenagers living in Lagos, Nigeria. This can lessen the negative impact of unwanted pregnancy and STIs if applied and implemented. This study shed light on the idea that teenagers have no in-depth sexual education as the participants do not have in-depth knowledge of the contraceptives they are using. Most of the participants using condoms only thought about it as protection against unwanted pregnancy and not much was talked about STIs protection. These factors can be used to design sex education

programs that will focus on different types of contraceptives, the use of condoms for STIs protection, and the proper use of Postinor as an emergency contraceptive.

As suggested by HBM, the more serious the health problem, the more likely the individual will be keen to take proactive measures to prevent it. In this study, the girls need to be aware of the seriousness of the implications of the continuous use of emergency pills, which are not limited to the risk of delayed fertility in the future or not preventing pregnancy if pregnancy has already been implanted. According to Herold (1998), before taking preventive health activities, the individual considers the perceived benefits of the actions versus the cost of the proposed prevention program. The major costs of not using contraceptives include unprotected sex by not planning for intercourse will cause unwanted pregnancy and STIs, which as expressed by many participants will change the course of their life by mostly stopping them from schooling.

Social Change Implications

The social change implication of the dissertation was to potentially lead to a decrease in unwanted pregnancies and abortions through the behavioral change to the use of contraceptives. Additionally, the social change implication of this research was to potentially lead to a decrease in STIs by a behavioral change of having increased use of condoms among teenage girls in Lagos.

Educating teenagers about the negative outcomes associated with the wrong use of contraceptives or nonuse of them could help decrease the incidence of negative health-related outcomes like STIs, and negative social and emotional consequences of early

motherhood or abortion. The results from this study may motivate colleges to provide birth control on campuses or make resources easily available for the students both male and female that need the information. Ultimately, the result of the study would be examined and an intervention created in the form of sex education, which would be taught as self-prevention from unwanted pregnancy and STIs. The hope of the study is to standardize care throughout Lagos state, and if effective, can spread to the nation allowing the teenagers to lead a healthy sex life to reach their full potential as adults and not drop out of school.

The use of condoms could be readily available to the people of Lagos, and then possibly the other parts of the state. The prevention of unwanted pregnancy and STIs would be best strategized by the promotion of the use of condoms or other forms of contraceptives. A lot still needs to be done to achieve at least 70% of contraceptive use at all times. This is a continuous challenge for public health practitioners especially, in developing nations, unwanted pregnancies and STIs consequences led to many teenagers' initial medical assistance or help (Latifi et al., 2017).

Recommendations for Action

The HBM is used to understand the factors that influence human development and human behavior. Given the findings from this study, teenage girls, in Lagos, need human behavioral change as they are in serious need of programs that provide sex education to improve their sexual lifestyles and reduce pregnancies and other negative outcomes of unprotected sexual behaviors.

The following are recommended:

1. An in-depth and age-appropriate sex-education program should be developed for college students and high school students irrespective of whether they are sexually active or not. A sex education curriculum should be developed in a joint venture with the government and non-governmental organizations (including schools, and religious groups), with input from families and the teenagers themselves. Such a program should teach both girls and boys about sexual risks, and how to protect themselves from pregnancy and STIs or total abstinence until they are old enough to understand full sexual commitments. In addition, such a program should provide information to teenagers about resources available to them in the community or school.
2. A reproductive health education media campaign should be designed and implemented as a joint venture of the school communities, government, and any media that is interested in the program to stimulate the broadcasting of accurate sex-related information in ways that are appropriate for the target groups. We are in a technology-dominant era. Therefore, this campaign should use every available communication channel in the school community to advance the discussion and spread essential information about teenagers' sexuality. This should include the message of risks taken if they are not protected and if they do not test for STIs.

3. The schools should work with the Ministries of Education and Health Departments to provide birth control and STIs testing centers around colleges. Counseling should be available there also for people diagnosed with STIs and social services to provide support for the girls that want to keep their pregnancy.

Conclusion

The findings from this study showed that the decision to not use protection with condoms and other contraceptives among Lagos teenage girls was influenced by multiple factors that include but are not limited to (a) their age, (b) peer pressure, and (c) their lack of knowledge about reproductive health, especially proper use of contraceptives. The nonuse of protection through condoms and other contraceptives by the teenagers in this study was further caused by inadequate education on contraceptives, barriers to safe sex, and risky sexual behaviors, such as the influence of sex partners on the use of condoms. All the participants in this study had little to no understanding of proper contraceptive use as most of them say yes to the use of contraceptives but name the contraceptive as Postinor which is a Plan B (Emergency) contraceptive.

All the participants did not know about risky sexual behavior as they reported that they do not use condoms nor do they get tested for STIs. This was a possible indication that they lacked a basic understanding of safe sexual behavior. All the girls showed negative emotions when asked about the possibility of getting pregnant and the anticipated negative reactions by their parents and community if they got pregnant. Their

perception was that if they ever got pregnant, they would be faced with stopping their education or risk being disowned by their parents.

There was no community support related to reproductive health available to the girls as all the participants reported that there is no school provision for birth control services and that the only community facility to get contraceptives is a pharmacy. Some of the participants reported some knowledge of previous sex education but they all asked for more detailed sex education to be taught in schools and communities and to be shared on the media. As a result, the teenage girls in this study are involved in risky sexual practices making them vulnerable to negative outcomes like STIs including HIV/AIDs, prolonged infertility in the future, and unwanted pregnancy. To help better the reproductive health of teenagers in Lagos, there is a call for a comprehensive collaboration between the schools and the government to sponsor effective sex education programs.

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Appendix A: Data Collection and Analysis Schedule

Days 1-8: Recruitment: On the first day after arriving in Lagos, I visited the two intended colleges to present the two approval letters (IRB and Local ethics committee) to the student affairs to start recruiting. I returned the next day (Day 2) to initiate the recruiting of participants by handing flyers out to female students to collect their information (Name, phone numbers, and email addresses) of interested students. The University of Lagos is one of the Federally owned, biggest, and oldest universities in Nigeria, its campus is very big and houses thousands of female students, but unfortunately, the professors are on strike and the school did not have enough students on campus. Due to the strike, I added Yaba Technology college which is another Federally owned college. The two federal schools provided enough participants that were expected from the University of Lagos. The Lagos state polytechnic is the only polytechnic owned by the state of Lagos.

Flyers would be posted on the announcement board outside the student's health clinic with the researcher's details. The recruitment questionnaire and consent will be emailed or texted to students that gave their details to the researcher. I will later call participants that meet the criteria and arrange for interview dates.

Days 9-15: Interview Days- All scheduled interviews began by phone. Recording and transcribing data. The interviews were staggered in 30-minute to 1-hour increments to accommodate run-over ones but were targeted for 1 hour. Interviews were 5 interviews a

day by phone to give room for the researcher to transcribe. Zoom at this time may not be private as I cannot control the interviewee's location.

Days 16-19: Analyze data, transcribe and code, and prepare summaries for memberchecking.

Days 20 and 22: Send the transcript and coding to my Chair and committee member to compare the coding and analysis outcomes. No name of participants would be on the transcript at this time, they would have been removed and replaced with an alias.

Step 6 Days 23 and 25: Adjust coded data as appropriate from My Chair and committee member feedback and prepare final summaries.

Days 26 and 28: Conduct memberchecking, and follow-up interviews with participants to double-check on the transcript and confirm with them that the transcript and interpretation were accurate. Phone interviews will be staggered every 15 minutes but not more than 20 minutes, to put down the feedback from the participants.

Days 29 to 30: Rap up and travel back to the US.

Appendix B: Inclusion and Exclusion Screener Questionnaire

Please I seek your truthful response to these questions. Also, I want you to know that this exercise is only for this research study, so your response to the questions will be treated with the utmost confidentiality. Also, attached is the consent form for you to sign and return to the researcher.

1. In what year were you born?

2. Do you live in Lagos? What part of Mainland or Island?

3. Do you understand and speak English well and are you able to read and write in English?

4. Are you unmarried?

5. Are you sexually active?

6. Are you aware that any of your relatives are acquainted with me?

Appendix C: Recruitment Flyer

You may be able to help make a difference in your community!

You can help if you:

- are you a girl between the ages of 18 and 19?
- live in Lagos, and single

You can help by:

- Sharing with a female researcher your experiences about being a sexually active teenage girl going to school in Lagos.

How will this help?

- Sharing your experiences will help the researcher better understand how to help other teenagers develop and have a healthy sexual lifestyle

What are the details of the study?

- The study details are described on the consent forms available for you to sign.

What consent forms do I need?

- The adult consent form will be attached to the recruiting survey for you to sign and both can be scanned back to the email or phone numbers below.

Whom do I contact?

- Kikelomo Omotoso- Phone number:
- By email

A $5 gift card or phone credit would be given to qualified participants.

Snacks and drinks would be provided during the interview.
Your Phone Number: …….
Your Email address: ……

Appendix D: Local Ethical Committee Approval

LAGOS UNIVERSITY TEACHING HOSPITAL

HEALTH RESEARCH ETHICS COMMITTEE

PRIVATE MAIL BAG 12003, LAGOS, NIGERIA
e-mail address: luthethics@yahoo.com

Chairman
PROF. N. U. OKUBADEJO
MB. ChB, FMCP

Secretary
E. U. LAWRENCE
Diploma (Computer Science)

LUTH

Chief Medical Director:
PROF. CHRIS BODE
FMCS (NIG) FWACS

Chairman, Medical Advisory Committee
PROF. W. L. ADEYEMO
FWACS, FMCDS (Nig.), PHD (Cologric), MPA (Lagos)

LUTH HREC REGISTRATION NUMBER: NHREC: 19/12/2008a
Office Address: Room 107, 1st Floor, LUTH Administrative Block
Telephone: 234-1-5850737, 5852187, 5852209, 5852158, 5852111

11th March, 2022

NOTICE OF EXPEDITED REVIEW AND APPROVAL

PROJECT TITLE: "EXPERIENCE AND PERCEPTION OF CONTRACEPTIVE USE AMONG TEENAGE GIRLS LIVING IN LAGOS BETWEEN THE AGES OF 15 AND 19".
HEALTH RESEARCH COMMITTEE ASSIGNED NO.: ADM/DSCST/HREC/APP/4904
NAME OF PRINCIPAL INVESTIGATOR: KIKELOMO OMOTOSO
ADDRESS OF PRINCIPAL INVESTIGATOR: DEPT. OF PUBLIC HEALTH, WALDEN UNIVERSITY, MINNESOTA, U.S.A.
NAME OF INSTITUTIONAL CO-SUPERVISOR: PROF. FEMI FASANMADE
ADDRESS OF INSTITUTIONAL CO-SUPERVISOR: DEPT. OF MEDICINE, LUTH.
DATE OF RECEIPT OF VALID APPLICATON: 13-01-2022

This is to inform you that the research described in the submitted protocol, the consent forms, and all other related materials where relevant have been reviewed and given full approval by the Lagos University Teaching Hospital Health Research Ethics Committee (LUTHHREC).

This approval dates from 11-03-2022 to 11-03-2023. If there is delay in starting the research, please inform the HREC so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of this dates. All informed consent forms used in this study must carry the HREC assigned number and duration of HREC approval of the study. In multiyear research, endeavor to submit your annual report to the HREC early in order to obtain renewal of your approval and avoid disruption of your research.

The National code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the code including ensuring that all adverse events are reported promptly to the HREC. No changes are permitted in the research without prior approval by the HREC except in circumstances outlined in the code. The HREC reserves the right to conduct compliance visits to your research site without previous notification.

CHAIRMAN

PROF. O. O. SOFOLA
CHAIRMAN, LUTH HEALTH RESEARCH ETHICS COMMITTEE

Appendix E: Interview Protocol

Time of interview:

Date:
Place:
Interviewer: Kike Omotoso
Interviewee (pseudonym):

Introduction: Thank you for accepting to participate in the study, I appreciate your time. Let me remind you, that the purpose of the study is about the Experience and Perception of Contraceptive Use Among Teenage Girls Living in Lagos between the ages of 18 and 19.
To explore your decision to use contraceptives or not.

Ice-breaker questions: Hello, how are you doing today, Miss? What name would you like to be called for this research (Not your real name)? At no time will aliases appear with your personal information and all collected data remained de-identified.

RQ1: What are the lived experiences and perceptions of teenage girls in Lagos regarding

the use of contraceptives?

1. What were your sexual experiences when you were 15-17 years old? What are sexual experiences now at 18-19?

2. Let us talk about your use of contraceptives. What method(s) of contraceptives are you currently using? (In your experience what was your reason(s) for the choice of that method(s)? Is this the first method used or have used others). If you have used others, in your experience what made you change method(s)?

3. What is your experience with emergency contraception (i.e., Plan B)? If used before, what led to the use, and what is your experience?

4. What is your experience of the birth control services provided at your school or community health facility? (How do you like the services, the health workers' attitudes, and the costs if any)

RQ2: What were the perceptions of Lagos teenage girls regarding the use of condoms to reduce the risk of STIs?

1. What is your experience with male condom use? What do you think they protect you from? Do you use it at all times?

2. In your experience, how supportive is your partner about using this method(s) of contraceptive? (Did your significant other support or discourage, who is supportive and non-supportive of this method, and how did you feel about these people and their views)

3. What is your experience with testing for STIs? Tell me what STIs means to you. Have you ever been tested for STIs? If yes, please explain why you got tested. If not, why? (If positive, were you treated, and did you follow up after the treatment)?

4. Tell me about your experience with programs that educate teenagers about sexually related issues in your community or school?

RQ3: What were the experiences and perceptions of teenage girls in Lagos regarding the risk of unwanted pregnancy and possible abortion?

1. In your experience how accessible are contraceptive methods to you? (What were they, are they too expensive, where did you obtain them from, how did you obtain them, who recommended them)?

2. What are your experience or perceptions of unwanted pregnancies and what would happen to you if you get pregnant? (Did you think you will or got pregnant due to access issues; costs of contraceptives; the side effects; or who influenced your decision of not using protections – your providers, peers, family, or significant others)

3. How would your parents, family, and friends in the community feel if you were to be pregnant? Please explain

4. In your experience do you think there should be programs to help prevent teenage girls from getting pregnant or getting STIs? If so, what kind of program would you like to see?