

**FACTORS AFFECTING THE UTILIZATION OF REPRODUCTIVE HEALTH
SERVICES IN HEALTH FACILITIES BY IN-SCHOOL FEMALE ADOLESCENTS
IN OREDO LOCAL GOVERNMENT AREA, EDO STATE, NIGERIA**

BY

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DEDICATION

This project work is dedicated to God almighty for the gift of life, protection and providence.

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LIST OF ABBREVIATIONS

ARH	Adolescent Reproductive Health
ARHS	Adolescent Reproductive Health Service
ASRH	Adolescent Sexual and Reproductive Health
FMOH	Federal Ministry of Health
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development
LGA	Local Government Area
NGO	Non-Governmental Organization
PHCC	Primary Health Care Centre
RH	Reproductive Health
RHS	Reproductive Health Service
SRH	Sexual Reproductive Health
SRHS	Sexual Reproductive Health Service
STD	Sexually Transmitted Diseases
YFS	Youth-Friendly Services

DEFINITION OF TERMS

Adolescent: The World Health Organization (WHO) defines an adolescent as a person between 10 and 19 years of age.

Adolescent Sexual and Reproductive Health: Adolescent sexual and reproductive health refers to the physical as well as emotional well-being of adolescents, and includes their ability of be healthy and remain free from unwanted pregnancy, unsafe abortion, maternal death and disability, all forms of sexual violence and coercion, sexually transmitted diseases, including HIV/AIDS.

Reproductive Health: The United Nations (UN) defines reproductive health (RH) as physical, mental and social wellbeing in all matters relating to the reproductive system and functions at all stages in life.

Reproductive Health Services: According to the UN, reproductive health services include prevention, diagnosis and treatment as related to STIs and contraceptive service and counselling, pre and post-natal care, delivery care, safe abortion and post abortion care and access to information and education to the above issues.

Sexual health: According to WHO, sexual health is defined as “a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable safe sexual experience, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled”.

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ABSTRACT

Background: Adolescents constitutes a significant portion of any population and frequently experience underservice of their sexual and reproductive health needs in various societies due to lack of sexual health information and services which place them at risk. This study was conducted with a view to raising awareness of RHS available and ensuring better access and utilization in the community.

Aim: To assess the knowledge, access and utilization of reproductive health services (RHS) by female adolescents residing in Oredo Local Government Area, Edo State, Nigeria

Methods: The research employed a quantitative design. A total of 592 female adolescents participated in the study, and an assessment was conducted on six health facilities, evenly distributed between private and government sectors. Data collection utilized interviewer-administered structured questionnaires in English, adapted from existing literature, and health personnel were interviewed through recorded phone conversations. Significant associations between utilization and categorical variables were assessed using the Chi-square test. Knowledge scores were determined using a composite scoring system, and a multivariable logistic regression analysis was performed to identify factors independently associated with utilization. A statistical significance level of p-value below 5% was set for declaring statistical significance.

Results: The study involved adolescents aged 11-18 years, predominantly of Benin origin (50.7%), Christians (94.1%) who mostly lived with both parents (74.3%) and the majority of parents fell into the middle-income class (83.3%). The average age at menarche was 12.4 years, with 18.9% not having experienced first menstruation. About 11% reported their first sexual experience, and 3% were currently sexually active, with 38.9% using contraceptives, primarily oral contraceptive pills.

Regarding Sexual and Reproductive Health (SRH) knowledge, less than one-tenth were deemed to have good knowledge (6.2%) with main sources of SRH information being teachers (25.2%) and mass media (17.7%). Predictors of poor SRH knowledge included age 10-14 years (OR: 2.751; p=0.003; 95% CI: 1.400-5.407) and fathers with secondary education (OR: 0.370; p=0.008; 95% CI: 0.178-0.768). Only 26.2% were aware of Youth-Friendly Sexual and Reproductive Health (YFSRH), mainly through social media/internet (43.9%). Among those aware, 63.9% identified SRH information/education as the primary service, and 44.5% reported unavailability or inaccessibility of YFSRH services in their school/community. Among the 155 adolescents aware of YFSRH, 5.2% had utilized the services, mainly for information and education (50%), influenced by friends (25%), parents (25%), and partners (25%). Providers were perceived as judgmental (62.5%) but friendly (50%), with 100% affordability and 62.5% privacy maintenance. Friend/peer influence (53.5%) was the primary factor encouraging SRH service utilization, followed by parental decision (36.8%).

Conclusion: Adolescents generally had a poor level of knowledge and access to a wide range of ASRH services. The level of utilization of these services was also low, thus necessitating an urgent need to improve awareness focused on sources of SRH information and address the reported barriers/factors to availability and utilization of YFSRH services.

Keywords: Female adolescents, Utilization of health services, Reproductive Health Services, Health facilities, Edo State, Nigeria.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Adolescence is a critical developmental phase characterized by rapid physical, emotional, and psychological changes. It is a period when young people transition from childhood to adulthood, marked by increased interest in sexuality, autonomy, and identity formation. Globally, adolescents constitute about 1.2 billion people, nearly 16% of the total population¹. In Nigeria, adolescents (ages 10–19) account for over 22% of the population, with a substantial proportion residing in urban and peri-urban areas like Oredo Local Government Area (LGA) in Edo State⁶. The health and well-being of this demographic are crucial, not only for individual outcomes but also for national development. Therefore, addressing adolescent sexual and reproductive health (ASRH) has become a public health imperative.

Sexual and reproductive health services (SRHS) include access to accurate information and education on sexual health, family planning, prevention and treatment of sexually transmitted infections (STIs), pregnancy-related care, safe abortion (where legal), and counselling on sexuality and relationships. For adolescents, particularly females, the need for accessible and youth-friendly reproductive health services is paramount. However, they remain one of the most underserved groups in this regard, often due to systemic, cultural, and socio-economic barriers^{2,4,7}.

The challenges facing adolescent girls in accessing reproductive health services are multidimensional. These include limited access to age-appropriate information, lack of confidential and non-judgmental services, cultural taboos surrounding adolescent

sexuality, stigma from health providers and community members, poor policy implementation, and inadequate youth-specific health infrastructure ^{3,9,10}. Female adolescents are especially vulnerable due to early marriage, gender-based violence, unplanned pregnancies, unsafe abortions, and STIs, including HIV/AIDS ^{7,10,11}.

A study conducted in Woreta town, Ethiopia, found that utilization of reproductive health services among adolescents was low and significantly influenced by factors such as parental communication, peer influence, knowledge, and the presence of youth-friendly facilities ¹. Similarly, in Nigeria, findings from a study in Enugu State revealed that adolescents often avoid reproductive health facilities due to lack of privacy, judgmental attitudes from providers, and fear of being seen by community members ³. These findings highlight the universal nature of adolescent health service challenges in sub-Saharan Africa, including urban Nigerian settings like Oredo LGA.

The federal government of Nigeria has developed several strategies and policies aimed at improving adolescent health outcomes. These include the National Strategic Health Development Plan II (2018–2022), the National Health Policy (2016), the National Policy on the Health and Development of Adolescents and Young People (2019), and the National HIV/AIDS and Reproductive Health Survey (2018) ^{5,15,18,24}. These documents emphasize the importance of integrating adolescent-friendly health services (AFHS) into primary health care systems, promoting community awareness, and building the capacity of health workers to deliver youth-friendly care. However, gaps in implementation, funding, and monitoring persist, thereby limiting the reach and impact of these programs.

Despite these policy efforts, data from the Nigeria Demographic and Health Survey (NDHS) 2018 show that only a minority of adolescents use modern contraceptives, and many continue to face unplanned pregnancies and STIs ^{8,24}. In urban areas like Oredo, the availability of health facilities has not necessarily translated into increased access or utilization by adolescents. This discrepancy points to underlying factors beyond infrastructure, including cultural beliefs, parental attitudes, misinformation, and service delivery gaps.

Cultural norms in Nigeria often discourage open discussions about sexuality, especially with unmarried adolescents. In many households, sex education is either absent or limited to moral warnings, leaving young girls ill-equipped to make informed decisions about their reproductive health ^{6,9}. Additionally, societal expectations often place the burden of sexual abstinence and chastity on females, while males are given greater freedom. This gendered double standard contributes to the marginalization of female adolescents from health-seeking behaviors, including contraception and STI testing^{11,12}.

Furthermore, adolescents frequently encounter negative experiences at health facilities. Research has shown that many health workers are not trained to offer adolescent-friendly services, and some exhibit judgmental or moralistic attitudes toward young clients seeking SRHS ¹³. In some cases, adolescents are turned away or discouraged from using services due to their age or marital status. In Oredo LGA, anecdotal evidence suggests similar patterns, with female adolescents often avoiding health centers due to fear of shame, confidentiality breaches, and stigmatization by health personnel or peers.

Studies conducted in other parts of Africa support these findings. For instance, in East Gojjam Zone, Ethiopia, reproductive health knowledge was low among adolescents, and service utilization was affected by distance to facilities, parental involvement, and awareness of services⁴. These findings parallel those of Kassa *et al.*, whose systematic review identified determinants of adolescent pregnancy in Africa to include limited access to contraception, socio-economic disadvantage, and low educational attainment⁹.

The Challenge Initiative in Nigeria conducted a baseline assessment in 2020 that further reinforced the need for community engagement, provider training, and improved facility readiness to meet the unique needs of adolescents²³. The report emphasized that building trust between young people and the health system is essential for increasing service uptake. This trust hinges on confidentiality, provider attitudes, physical accessibility, and peer support systems—all of which remain inadequate in many Nigerian communities.

Additionally, adolescents are influenced significantly by their social environment. Peer pressure, community norms, religious teachings, and media exposure all shape their perceptions and behavior around SRHS. For female adolescents in Oredo, these influences may either empower or restrict them, depending on the prevailing cultural and social values. For example, communities that stigmatize contraception and sexual activity before marriage may inadvertently push adolescents into unsafe practices, such as clandestine abortions or untreated STIs^{2,6,10}.

Health literacy also plays a vital role in influencing adolescent behavior. Many adolescents are unaware of the range of services available to them or harbor

misconceptions about contraception and sexual health. For example, some believe that contraceptive use leads to infertility or that STIs can be cured with herbal remedies. Such beliefs not only reduce the likelihood of service utilization but also increase health risks. Awareness campaigns, peer education, and school-based interventions have been shown to improve knowledge and service uptake when properly implemented ^{12,14,21}.

Parental involvement is another critical factor. Adolescents whose parents or guardians are open to discussing sexual health matters tend to make healthier choices and are more likely to use available services ^{1,13}. However, in many Nigerian families, such conversations are considered taboo, and adolescents are left to learn from peers or the internet, which may not always provide accurate information.

In terms of access, although health facilities may be physically present in urban areas, factors such as cost of services, distance, lack of transportation, and inconvenient operating hours can discourage adolescents from utilizing them. Female adolescents, especially those in lower-income households, may prioritize basic needs over preventive health care, such as contraception or counselling ^{16,19}.

The growing burden of adolescent reproductive health issues—including rising rates of adolescent pregnancy, STIs, and gender-based violence—has prompted a call for localized data to inform interventions. While national surveys like the NDHS provide important insights, they may not capture the nuances and contextual factors affecting specific communities like Oredo LGA. Local assessments can identify unique barriers and enablers of service utilization, offering more practical and targeted solutions.

In this regard, Oredo LGA presents a valuable case study. As one of the urban LGAs in Edo State, it has relatively better infrastructure and higher educational attainment compared to rural areas. However, these advantages do not necessarily translate into better health outcomes for adolescents. Existing health services may not be tailored to meet the needs of young people, and cultural resistance may still prevent service utilization. A thorough assessment of the factors affecting reproductive health service utilization among female adolescents in this setting can bridge the gap between policy and practice.

Moreover, the Federal Ministry of Health and various non-governmental organizations have emphasized the importance of integrating adolescent perspectives in health program design. Participation of adolescents in planning and evaluating health services ensures that interventions are relevant, acceptable, and effective ^{17,20,22}. This approach also promotes a sense of ownership and responsibility among adolescents regarding their health.

Given the above, there is a clear need for research that explores the multifaceted barriers and facilitators influencing reproductive health service utilization among female adolescents in health facilities in Oredo LGA. This study aims to fill that gap by identifying individual, socio-cultural, and institutional factors affecting access and use of reproductive health services. Findings from the study will provide evidence to support policy formulation, enhance service delivery, and ultimately improve adolescent health outcomes in the region.

1.2 STATEMENT OF PROBLEM

Adolescents represent a critical segment of the population whose health and well-being significantly influence the social and economic trajectory of any nation. In Nigeria, female adolescents are particularly vulnerable to adverse reproductive health outcomes due to early sexual debut, low contraceptive use, high rates of unintended pregnancies, unsafe abortions, and sexually transmitted infections (STIs), including HIV/AIDS¹⁻⁴. Despite multiple efforts at policy and programmatic levels, reproductive health service (RHS) utilization among this demographic remains alarmingly low, particularly in urban communities where services may be available but underutilized⁵⁻⁷.

The World Health Organization emphasizes that access to adolescent-friendly reproductive health services is essential in promoting safe and healthy sexual behaviors, reducing maternal morbidity and mortality, and enhancing long-term reproductive outcomes². However, multiple studies have highlighted that female adolescents in Nigeria face considerable barriers in accessing and utilizing RHS. These barriers range from societal norms and cultural taboos to health system challenges such as inadequate provider training, lack of privacy, and judgmental attitudes from health workers^{3,8-10}.

In a mixed-method study conducted in Enugu State, Nigeria, adolescents reported feelings of shame, fear of exposure, and judgment from health providers as primary reasons for not seeking care from health facilities³. Similar findings were echoed in studies across Ethiopia and other parts of sub-Saharan Africa, where adolescents perceived health centers as unfriendly and inaccessible, resulting in poor health-seeking behaviors^{1,4,11}. While there are clear policy guidelines such as the National Strategic Health Development Plan II (2018–2022) and the National Adolescent

Health Policy (2019), there exists a significant gap between policy formulation and practical implementation ^{5,18}.

Data from the Nigeria Demographic and Health Survey (NDHS) 2018 revealed that adolescent fertility remains high in the country, with minimal improvement in contraceptive uptake among unmarried adolescents ⁸. In Edo State, although urban LGAs like Oredo have relatively higher numbers of health facilities, reproductive health indicators for adolescents remain suboptimal. This suggests that the mere availability of services does not guarantee their accessibility or acceptability to adolescents, especially females ^{6,9}.

Several social determinants contribute to the underutilization of RHS by female adolescents. These include parental attitudes, religious beliefs, peer pressure, misinformation, fear of confidentiality breaches, and limited autonomy in making health-related decisions ^{10,12-14}. Cultural expectations often discourage open conversations about sexual health, leaving many adolescents to rely on peers or the internet for information, which may be inaccurate or incomplete ¹⁵. Such a context increases their vulnerability to risky sexual behaviors and adverse health outcomes.

Moreover, gender norms in many Nigerian communities disproportionately affect female adolescents. Girls are expected to maintain chastity, and any expression of interest in reproductive health services is often viewed as immoral or inappropriate. This societal judgment, coupled with the stigma associated with adolescent sexuality, creates a hostile environment for girls to access care ^{6,12,16}. As a result, many suffer in silence, lacking accurate information and access to preventive or curative reproductive health services.

Evidence from a systematic review by Kassa *et al.* shows that early pregnancy in African adolescents is strongly associated with low educational attainment, poverty, poor access to services, and sociocultural influences ⁹. Early and unintended pregnancies in female adolescents are a significant concern in Nigeria, often resulting in school dropout, unsafe abortions, complications during childbirth, and perpetuation of the cycle of poverty ^{13,17}. These outcomes also place additional burdens on the health care system and increase the risk of maternal mortality.

Health system factors further exacerbate the issue. Many health facilities lack dedicated adolescent-friendly spaces, trained personnel, or essential supplies for reproductive health services ^{11,19}. Adolescents who attempt to access services are often met with bureaucratic hurdles, long waiting times, and unfriendly staff. A baseline study conducted by The Challenge Initiative found that adolescents value confidentiality, respectful treatment, and timely services, all of which are often lacking in public health facilities in Nigeria ²³.

Another challenge is the low level of reproductive health knowledge among adolescents. Studies have shown that misconceptions about contraception, fear of side effects, and lack of awareness about available services contribute significantly to the low uptake of RHS ^{10,20-22}. For example, some adolescents believe that contraceptive methods can lead to infertility or encourage promiscuity, making them hesitant to seek care even when services are available and affordable.

There is also the problem of inequity in service delivery. While urban areas like Oredo LGA are better resourced in terms of infrastructure, the adolescent population is not a homogenous group. Disparities in income, education, and parental support

affect access to services even within the same geographic region ²⁴. For example, female adolescents from low-income households may lack transportation, time, or parental approval to access RHS. These inequities are rarely addressed in blanket health interventions, further marginalizing the most vulnerable groups.

In Ethiopia, a study by Abajobir and Seme found that reproductive health knowledge and service utilization were significantly lower in rural and low-income adolescents ⁴. Although this study focused on a different setting, its findings are relevant to Nigeria, where economic status remains a key determinant of health service utilization. In Nigeria, even urban-based adolescents may encounter similar limitations if they reside in low-income or underserved neighborhoods.

The implications of low reproductive health service utilization among female adolescents are far-reaching. Not only do they face increased risks of morbidity and mortality, but they are also likely to suffer psychosocial consequences such as stigma, depression, and reduced life opportunities ^{6,16,25}. This situation undermines global and national commitments to achieving universal health coverage and the Sustainable Development Goals, particularly those related to health, education, and gender equality³⁴.

Given the complex interplay of individual, societal, and health system factors, there is a critical need for context-specific research to better understand the challenges faced by female adolescents in accessing RHS. While national surveys provide useful overviews, localized studies offer more nuanced insights that can inform tailored interventions. In Oredo LGA, where the presence of health facilities does not

correspond to high utilization rates among adolescents, it is imperative to identify the root causes of underutilization and develop targeted, culturally sensitive solutions.

Therefore, this study is essential to explore and assess the factors affecting the utilization of reproductive health services in health facilities by female adolescents in Oredo LGA, Edo State. By identifying barriers and facilitators of service use, the findings of this research can guide policymakers, health practitioners, and community leaders in designing interventions that are both effective and sustainable. Ultimately, improving adolescent access to RHS will enhance their health outcomes, reduce public health burdens, and contribute to broader social and economic development in Nigeria.

1.3 JUSTIFICATION OF STUDY

Adolescents constitute a significant proportion of Nigeria's population and face unique challenges in accessing reproductive health services (RHS) that meet their needs. Female adolescents, in particular, are at heightened risk of adverse reproductive health outcomes such as early and unintended pregnancies, unsafe abortions, and sexually transmitted infections (STIs), including HIV/AIDS ^{1,7,10}. Despite the availability of RHS in various health facilities across Nigeria, utilization remains critically low among adolescent girls, especially in urban centers like Oredo Local Government Area (LGA), Edo State ^{8,14}.

Existing studies have consistently demonstrated that adolescents face multifaceted barriers when seeking reproductive health care. These include lack of confidentiality, judgmental attitudes from healthcare workers, poor knowledge about services, socio-cultural taboos, financial constraints, and fear of stigma ^{2,3,6,13}. In Enugu State,

adolescents were reluctant to access services due to unfriendly service environments and fear of being recognized by community members ³. Similar findings have been reported in other Nigerian and African settings ^{1,4,11,12}.

While the Nigerian government has developed several policies and strategies such as the National Strategic Health Development Plan II (2018–2022) and the National Policy on the Health and Development of Adolescents and Young People in Nigeria (2019) to improve adolescent health, implementation gaps continue to limit their effectiveness ^{5,18}. Furthermore, national surveys like the Nigeria Demographic and Health Survey (NDHS) 2018 indicate persistent low contraceptive uptake and high rates of adolescent fertility ^{8,24}. These findings underscore a major disconnect between service availability and utilization, suggesting that adolescents' unique needs are not being adequately addressed.

Oredo LGA, despite its urban status and concentration of health facilities, has not been the focus of substantial adolescent health service research. Existing data often generalize findings across broader regions, failing to capture local socio-cultural and systemic dynamics that may influence service uptake. Therefore, localized research is essential to understand the peculiar factors affecting RHS utilization among female adolescents in Oredo and to guide context-specific interventions ^{6,14,23}.

Research has shown that adolescent girls experience significant cultural pressure that limits their autonomy in making reproductive health decisions. Societal norms in Nigeria often discourage female adolescents from seeking SRH services, labeling such behavior as immoral or inappropriate ^{9,16,29}. This moral framing contributes to shame, fear, and misinformation, all of which suppress the demand for essential

services. Additionally, poor communication between adolescents and parents or guardians often leads to reliance on peers or inaccurate media sources for sexual health information^{1,13,15}.

Health systems factors also contribute to underutilization. Many health facilities are not adolescent-friendly, lacking trained personnel, dedicated spaces, or protocols to ensure privacy and confidentiality^{3,11,22}. Adolescents in previous studies have expressed the need for services that are respectful, non-judgmental, and tailored to their needs^{23,28}. However, providers often lack the training to communicate effectively with adolescents, and some exhibit discriminatory attitudes that discourage future engagement with health facilities^{6,13,27}.

Furthermore, adolescents in urban areas like Oredo are not a homogeneous group. Socioeconomic disparities, varying education levels, and differing family dynamics create layers of vulnerability that a one-size-fits-all approach cannot adequately address^{24,30}. Female adolescents from lower-income households are more likely to face structural barriers, including transportation costs, indirect service fees, or lack of awareness about free public services^{4,10,26}.

The consequences of inadequate reproductive health care for adolescents are severe and wide-ranging. Unintended adolescent pregnancies often result in school dropout, early marriage, unsafe abortions, and increased maternal mortality^{17,31}. Additionally, adolescent girls who lack access to contraceptive services are at higher risk of contracting STIs, including HIV^{7,10,19}. These challenges not only affect individual health outcomes but also have long-term implications for national development and population health.

Despite numerous international and local efforts to promote adolescent reproductive health, the evidence base on the factors that affect utilization of services in urban LGAs like Oredo remains insufficient. Most existing studies focus on rural or general youth populations without emphasizing the specific needs and experiences of adolescent girls in urbanized, culturally diverse settings ^{4,9,22}. Thus, there is a pressing need to conduct targeted research that disaggregates data and identifies local determinants of health service utilization.

Additionally, recent initiatives such as The Challenge Initiative's baseline report emphasize the importance of gathering local evidence to design impactful adolescent and youth-friendly health services (AYFHS) ²³. To be successful, these interventions must be grounded in a deep understanding of the contextual realities and lived experiences of the adolescents they are meant to serve. This includes investigating institutional practices, provider attitudes, peer dynamics, family relationships, and socio-cultural expectations ^{21,34}.

This study is therefore justified by the urgent need to bridge the evidence gap regarding reproductive health service utilization among female adolescents in Oredo LGA. It seeks to generate localized, gender-sensitive, and culturally relevant data that can inform policy, enhance service delivery, and improve health outcomes for adolescent girls. Findings from this study will provide health planners, program managers, and policy makers with actionable insights into how to improve service accessibility, acceptability, and quality for this vulnerable group.

Furthermore, the study aligns with the national and global agenda of achieving universal health coverage and the Sustainable Development Goals (SDGs),

particularly SDG 3 (Good Health and Well-Being) and SDG 5 (Gender Equality) [34]. By highlighting the barriers and facilitators of service use among female adolescents, this research contributes to building a more inclusive and responsive health system in Nigeria.

In conclusion, the continued neglect of adolescent girls in reproductive health planning has far-reaching implications. To achieve meaningful progress, there must be a shift toward evidence-based, adolescent-centered programming informed by local data. This study will help fill that gap by offering a comprehensive assessment of the factors influencing RHS utilization among female adolescents in Oredo LGA, thereby supporting the development of interventions that are both effective and sustainable.

1.4 RESEARCH QUESTIONS

1. What is the level of knowledge of RHS among female adolescents in Oredo LGA?
2. What sexual and reproductive health services are available to female adolescents in public health facilities in Oredo LGA?
3. What factors affect the access to reproductive health services by female adolescents in Oredo LGA?
4. What are the factors affecting utilization of ASRH services by female adolescents seeking reproductive health services in Oredo LGA?

1.5 AIM AND OBJECTIVES

1.5.1 GENERAL OBJECTIVE

To assess the knowledge, access and utilization of reproductive health services in health facilities by female adolescents residing in Oredo Local Government Area.

1.5.2 SPECIFIC OBJECTIVES

1. To assess the knowledge of RHS among female adolescents in Oredo Local Government Area.
2. To identify the RHS available for female adolescents in health facilities in Oredo Local Government Area.
3. To determine factors associated with access to RHS by female adolescents in Oredo Local Government Area.
4. To determine factors associated with the utilization of RHS by female adolescents in Oredo Local Government Area.

CHAPTER TWO

LITERATURE REVIEW

2.0 Conceptual Framework

The ecological framework has been adapted to describe the key themes affecting the access and utilization of ASRH by adolescents in this study. This model is widely applied in understanding determinants of a wide range of health behaviours and outcomes, including barrier and enabling factors. It identifies a comprehensive network of interconnected determinant factors affecting the SRH behaviours and outcomes for adolescents.³⁹

Health behaviours are determined by an individual's relationships and the environment in which they live. To this extent, the ecological framework is based on four core principles. It recognizes the multiple influences on health behaviours and outcomes including associated factors that operate at five (5) levels. These include the individual, interpersonal, organizational, community, and public policy levels.

Furthermore, it suggests that these highlighted influences interact across these different levels. In addition, it encourages focusing on definite health behaviours and outcomes, recognizing the factors that are most likely to influence the target behaviour or outcome at each level of the framework. The framework suggests that a multifaceted approach that takes on the multiple levels are generally more effective compared to those that only focus on single-level interventions.^{39,40}

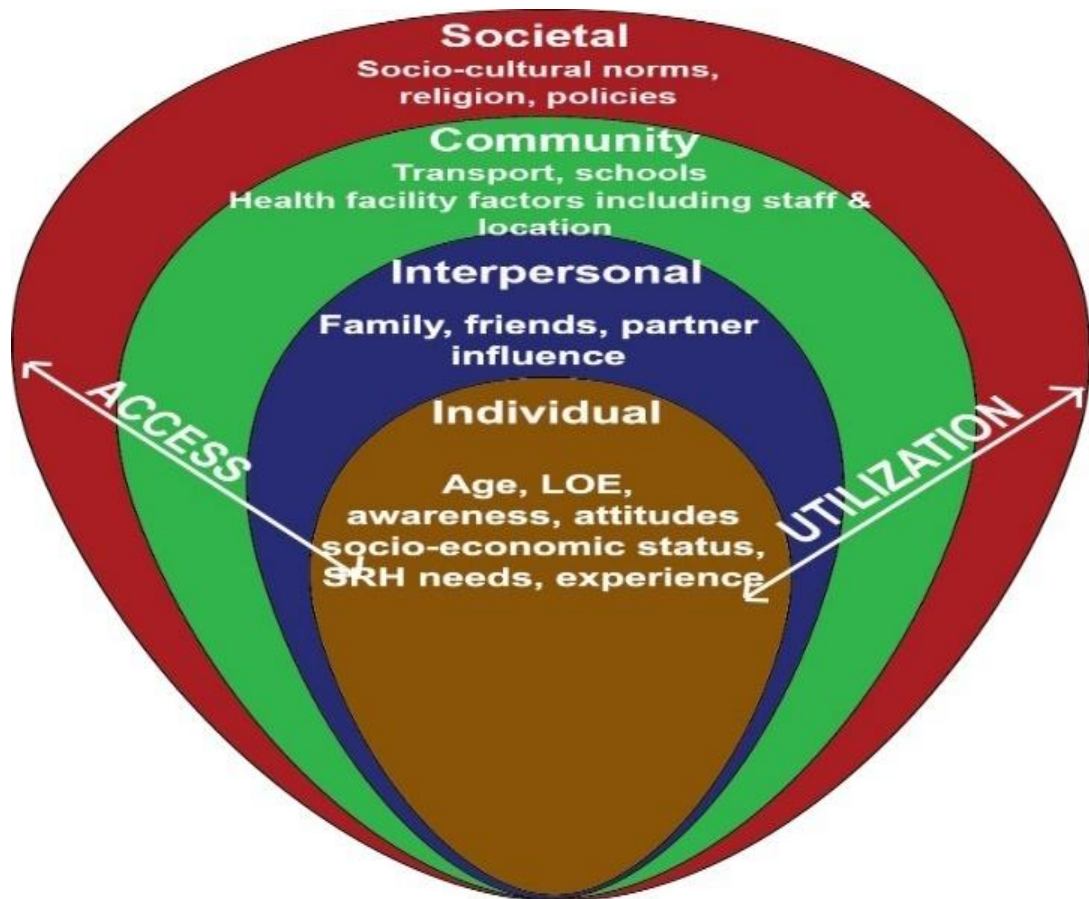


Figure 1: The ecological model for determinants of health behaviours and outcomes

Despite the significant impact of the socio-ecological theory in understanding the factors associated with the utilization of health services, some perspective is needed in adapting its principles to a culturally rich society like ours with a wide prevalence of alternative, traditional-based health sources. This theory was originally developed to understudy healthcare services utilization in the developed economy of North America, where only orthodox medicine was relevant. With contextual adaptation however, the socio-ecological theory is still quite relevant in exploring healthcare services utilization in diverse settings, including Nigeria.⁴¹

Although there has been momentum in implementing sexual and reproductive health services (SRH) services in most countries, young people typically remain underserved by these services despite their demonstrated need. In a study of 70 low and middle income countries (LMICs), almost all the countries reported that only 10% or fewer of all adolescent women had visited a health facility in the past 12 months and were informed about family planning.⁴² Moreover, 20 to 25% of married adolescents reported an unmet need for contraception according to data from 41 countries.⁴³ Although adolescents are at an increased risk for STIs and HIV infection in comparison to any other age group, they face major barriers in accessing HIV testing and treatment. In sub-Saharan Africa, only 10% of young men and 15% of young women were aware of their HIV status.⁴⁴ Even when young people are able to access services, they may feel embarrassed, face stigma on sexual matters, or have concerns about judgmental providers,⁴⁴ which may hinder them from utilizing available services. Youth-friendly health services (YFHS) are a promising approach to delivering health services to meet the SRH needs of young people.⁴³

Young people require services that support their physiological, cognitive, emotional, and social transition into adulthood. Delivering quality services that are tailored to young people may improve service use, adherence to contraceptive methods, and increase the likelihood of obtaining ongoing care.⁴⁴ Therefore, understanding how to best deliver services to young people and evaluating the impact of service delivery essential to improving youth SRH outcomes. According to the World Health Organization's (WHO) 2001 Global Consultation on Adolescent Friendly Health Services, SRH services for adolescents should aim to achieve at least one of three goals:

- (1) Provide a supportive environment,

- (2) Improve reproductive health knowledge, attitudes, skills and behaviours, and
- (3) Increase utilization of health and related services.

The WHO guidelines for providing YFHS recommends services that are accessible, acceptable, equitable, appropriate and effective.

In considering the historical and current state of ASRH in Nigeria, the National Reproductive Health Policy and Strategy,²¹ paved the way for Nigeria's largest SRH education program – the Family Life and HIV Education (FLHE) Programme. It was pivotal in determining the direction the country has taken in recent times. It was also the first to provide an overarching framework for addressing SRH. The Family Life and HIV Education (FLHE) program was the central piece of the government's efforts to improve ASRH outcomes in Nigeria. Initiated in 2003, the FLHE program targeted in-school adolescents, ages 10-17 years. Although it was implemented country-wide, overall evaluation data showed that it reached only 13 percent of in-school adolescents.⁴⁵ Hence the need for newer more robust policy frameworks to navigate contemporary challenges in ASRH services programming in Nigeria.

The National Adolescent Health and Development Policy 2020 to 2024,⁴⁶ which is currently in effect has a multi-faceted focus for interventions and programmes in mental health, violence and injury, sexual and reproductive health and rights, nutrition and physical activity, non-communicable diseases, disabilities, communicable diseases, oral health and system performance, among others. Other important policies include the National Monitoring and Evaluation of Adolescent and Young People's Health in Nigeria Monitoring and Evaluation Plan 2021-2025,⁴⁷ designed to provide a framework for assessing progress made in the implementation of the National Adolescent Health and Development Policy, the National Youth Policy 2020,⁴⁸ and the National Standards and Minimum Package for Adolescent and Youth-friendly

Services 2018.⁴⁹ (Despite these general guidelines, there is a lack of consensus on what aspects of YFHS are most relevant and important to meet the health needs of young people.⁴⁴ Furthermore, several systematic reviews of youth-friendly interventions found insufficient evidence to support the effectiveness of youth-friendly health interventions.⁵⁰

Understanding how YFHS are defined and measured may clarify not only how to deliver appropriate services, but also how to assess if these services are effective and to compare different YFHS programs. Although a previous systematic review has assessed the measurement of youth-friendly services at the primary and tertiary levels from a youth-only perspective, no studies to our knowledge have focused specifically on the measurement of SRH services for young people, which may have specific needs,⁵¹ such as stigma and embarrassment, associated with sexual activity in this age group.⁵² This study expands on previous literature to focus on how youth-friendly SRH services are measured worldwide and to identify commonly used indicators from the selected studies that potentially could be used to help develop a standardized method for in the assessing youth-friendly SRH services.

It has been projected that the population of young people in Nigeria will exceed 57 million by the year 2025, a large proportion which will be made up of adolescents.³⁰ Adolescents constitute an important proportion of the population of Nigeria, they are in a delicate developmental stages that presents with challenges especially that of sexual and reproductive health. It is important that they experience safe and pleasurable sexual life, the absence of which may expose them to reproductive health challenges. Presently, about one quarter of Nigerian adolescents are sexually active with age of sexual debut ranging from 10 to 15 years.⁵³ Unsafe sex is a common practice among adolescents including inconsistent and incorrect condom use resulting

in unintended pregnancy that ends in unsafe abortion and its complications. This practice also exposes them to STI and HIV with a prevalence of 17% among adolescents in the south-eastern part and 14% in the northern part of the country.⁴⁴ In south-western Nigeria for example, 27.4% unintended pregnancy among adolescents in a secondary school all ended in abortion while other studies recorded about 60%.⁵¹ Getting pregnant may not even be the most disturbing problem for some adolescents in Nigeria but the fact that in most cases it interferes with their education. Evidence from studies has shown that those who are pregnant as students either dropout of school or are dismissed from school, majority of whom may never get back to school again while others are forced by their parents into child marriage as a result of the pregnancy.⁵³ Recently, Nigeria has been identified as a hot spot zone where child marriage is widely prevalent, especially in northern Nigeria.³⁰ Child marriage remains a major problem across the country. The National Demographic and health Survey (NDHS) 2018⁵⁴ revealed that 28.8% of females between ages 15 and 19 were currently married. The rate is as high as 76% in the North and 10% in the South Eastern part of the country and adolescent fertility rate is 122 per 1000 women; amidst the low contraceptive rate among adolescents.³⁰ The rate of unintended pregnancy and STI among adolescents is increasing becoming a major problem in Nigeria, however the sexual and reproductive health challenges of adolescents have been greatly neglected in Nigeria and not very well understood despite the magnitude.⁵⁵ This study aims to explore some of the reproductive health challenges that adolescents face in order to inform positive interventions to address the challenges including advocacy to the relevant stakeholders.

2.1 Knowledge of Reproductive Health among Adolescents

A study was done to explore the level of knowledge, attitudes, and practices (KAP) of SRH among college-going older adolescent girls in Chittagong district, Bangladesh. The findings depicted that two-thirds of study participants had an accurate knowledge of physical and psychological changes occurring in the adolescence period, while 285 (36%) answered correctly about whether menstruation is a kind of disease. Pertaining to the knowledge concerning HIV/STIs, half of the respondents knew that STIs may be unintentionally transmitted in sexual relationships. Most of the respondents reported their mothers to be their primary source of SRH information. Considering that no qualitative data collection method was employed in this study, it is debatable that this study could have possibly obtained a better explanation and more in-depth insight into such a socio-culturally sensitive topic.⁵⁶

A recent study done to determine the knowledge, personal attitudes and peer influences related to pregnancy, sexual and reproductive health among adolescents who attended maternal health services in a district hospital in Ugu, KwaZulu-Natal, South Africa revealed that less than half (43.9%) of the participants answered 50% or more of the knowledge questions on pregnancy and HIV/AIDS and STIs correctly. Adolescents' knowledge of pregnancy and sexual and reproductive health was found to be deficient as, even with repeat pregnancies, their levels of knowledge concerning pregnancy and sexual and reproductive health did not get better. This suggests that apart from the SRH information itself, social determinants, modes and platforms of delivery of adolescent sexual and reproductive health education are also important, especially in this age of modern media.⁵⁷ Data from the 2018 Nigerian DHS revealed that 11.6% of female adolescents aged 15-19 had comprehensive knowledge of HIV prevention in comparison to 14.0% of female adolescents aged 20-24 who had such

knowledge, while they also rank lowest in the correct knowledge of fertile period during the ovulatory cycle at 15.1%.⁸

In evaluating the awareness of menstrual pattern, and use of modern contraception among female adolescents in Abakaliki Nigeria, it was found that very few (7.7%) respondents were ignorant of their cycle length. Premenstrual syndrome and dysmenorrhea were identified by respondents as major menstrual issues, which resulted in 69 (14.3%) and 59 (12.2%) of respondents resorting to self-medication and absenteeism from school, respectively. Mothers were the main source of their daughters' adolescent education, while friends and mass media were the main source of contraceptive information. The reported high level (75.7%) of awareness of contraceptive information among the girls however was not seen to translate to improved utilization patterns (8.9%).³⁵The findings of sub-optimal SRH knowledge and awareness in this study are in keeping with that of the NDHS 2018, as earlier described.⁸

A study to examine the challenges of adolescents' sexual and reproductive health in North-western Nigeria, was carried out using qualitative methods. Thirty- six focus group discussions (FGDs) were conducted among adolescents aged 15-19 years, stratified by sex, marital status, fertility status and residence; and 48 in-depth interviews (IDIs) with community- resident adolescents who have ever been married or/and have begun childbearing. The female groups, particularly the single girls in urban areas mostly recognized condoms and pills as methods of contraception. Similarly, more than half of them made reference to abstinence and to "local herbs and charms." Injectables were most mentioned by the groups of currently married girls and currently mothers while only one respondent mentioned withdrawal method

as a method of contraception. Generally, the most widely recognized method for avoidance, delay and spacing of pregnancy among teenage women in north-western Nigeria was abstinence from sex and local herbs and charms. Females were more likely than male participants to claim ignorance of any methods of contraceptive.

This study reflects the significance of socio-cultural factors including religion, and communal traditions as key determinants of knowledge and attitude towards sexual and reproductive health among adolescents, especially adolescent girls.⁵⁸ It is also in keeping with the findings of a study done in south-western Nigeria where it was determined that the use of modern contraception was positively associated with exposure to information about contraception, perceived social support for contraception, among others.⁵⁹

2.2 Reproductive Health Services (RHS) Available for Female Adolescents in Health Facilities

An increase in reproductive health services utilization is one of the fundamental ways that can effectively work in curbing under-served female adolescents.

A cross-sectional study was conducted in Woreta town, South Gondar, North east Ethiopia in 2018 to assess reproductive health service utilization and its associated factors among secondary school students aged 15–24 years old, of 345 students, 53% females with a mean age of 17.8 were selected by simple random sampling technique. The result showed 85 (24.6%) of them utilized reproductive health services in the past 1 year. Voluntary testing and counselling for HIV/AIDS and Family planning services were utilized by 47 (55.3%) and 43 (50.6%) of youths respectively.⁶⁰ This study was conducted in a single secondary school, the findings thus may not be generalizable to all secondary schools or to young persons that are out of school.

In 2016, a case study was carried out in Ilala Municipal in Dar es Salaam city to assess adolescents 'awareness of youth friendly reproductive health services in Public Health facilities among 90 adolescents by random sampling technique and structured questionnaires, in-depth interviews, documentary reviews and observation. The findings showed that the YFRHS is present in the health care facilities in Dar es Salaam and services offered includes, care and treatment, counselling, information and education and HIV testing. Currently, most YFRHS for adolescent are offered only from the clinics or government hospitals. Findings further shows that majority of respondents were aware of the available youth friendly services and reproductive health services.⁵⁵

This was largely in keeping with a cross-sectional study that was conducted in Karemo and Wagai divisions, Siaya County in 2014 amongst 168 adolescents aged 15-19 years, 41 service providers and 23 health facilities to evaluate the provision of SRH services to young people using focus group discussions to collect qualitative and quantitative data. Results revealed that none of the 23 selected health facilities provided all 21 essential SRH services and only 30% provided more than 80% of the essential SRH services. FGD participants reported that lack of services; personnel, facility environment, and marketing and provider attitude are barriers to SRH services. Eighty percent (80%) respondents said the facilities' environment, waiting area and location were welcoming, comfortable and convenient. Some 90% boys' and 98.3% girls' respondents said they would visit the facilities once more for similar or related services.⁶¹

A similar descriptive cross-sectional survey was carried out in Enugu state, Southeast Nigeria in 2018 to assess the availability and accessibility of SRHS for adolescents in

Enugu State, Nigeria. A total of 1447 adolescents (between 12 and 22 years) completed the questionnaire correctly. Among these adolescents, males constituted 42.9% while females were 57.1%. The majority (86.7%) of the adolescents reported availability of safe motherhood services, and 67.5% reported availability of services for prevention and management of STIs and HIV and AIDS. The majority reported that these services were geographically accessible but few were financially accessible to adolescents.⁴ This study was conducted among male and female youths. Interviewing the female youths categorically to determine the utilization and knowledge of RHS could have given an in-depth meaning to the study being that females are known to be underserved than males.

Another cross-sectional study carried out in Ikenne Local Government Area, Southwest Nigeria in 2015 to assess adolescents' knowledge, services utilization, and associated factors pertinent to the design of appropriate program interventions among 714 eligible Nigerian adolescents using simple random sampling, interview and self-administered questionnaires.⁶² The result showed that about half of the respondents were knowledgeable about sexually transmitted infections while 31% were knowledgeable about fertility issues. The overall mean score for sexual and reproductive knowledge was 28.08 ± 9.70 . Almost two thirds, (64.7%), of the respondents, had ever heard about sexual and reproductive health services while 51.0% had ever used SRH services while 29.7% of them had gained access to SRH services in the preceding six months.⁶² One of the service predictors used for assessing service utilization; regular access to telephone could be a major flaw as female adolescents can pose as adults to gain access to any RHS of her choice.

2.3 Factors associated with access to Adolescent Sexual Reproductive Health (ASRH) by female adolescents

Over the years, there has been several attempts at arriving at a generally accepted concept of healthcare access. Some of these attempts have managed to incorporate certain elements of previous works, focusing on fine-tuning and elaborating on what should be considered as the core components of access. Others have tried to envision healthcare access as a continuum concept, with there being a seemingly thin delineation between “access” and “utilization”. Health care access has been described as dependent on individual factors, factors associated with general living conditions in society, and to the structuring of health services.⁶³ General conditions encompass the overall pool of economic, manpower, and health facility resources, how they are mobilised, and transport systems to reach them. Organization of health services refers to the manner in which services are structured into primary and secondary care, staffing arrangements at various levels, location of services, as well as an insurance system that works. Individual factors represent people’s awareness about health care services, financial ability to cover service fees and transport, as well as the cultural eligibility required to successfully navigate the system.⁶³

Levesque et al,⁶⁴ proposed a conceptual framework that was based on a comprehensive review of existing literature on healthcare access. Access to health care was seen as being dependent on people’s ability to identify healthcare needs, to seek healthcare services, to reach, to obtain or use health care services, and to actually have a need for services fulfilled. These dimensions of abilities were believed to interact with those of accessibility: approachability, acceptability, availability and accommodation, affordability, and appropriateness. Access was consequently seen as

a continuum spanning the opportunity to identify health-care needs; to reach, obtain, or use health-care services; and to have the need for services fulfilled. Thus, while a service may be available, there may be multiple factors that limit access to it. One of such is inadequate transportation, with the poor state of public transportation for instance believed to negatively impact access to care, even though it might be available.⁶⁵

Gulliford et al viewed access in terms of health service availability, health service utilisation, and health care outcomes. They considered equity to be a key indicator of 'access'. A theoretical distinction was made between "having access", and "gaining access". Having access was seen as an adequate supply of available services, which then affords people the potential to obtain health care. On the other hand, the extent to which a population 'gains access' depends on financial, organisational and socio-cultural factors that limit the utilisation of services.⁶⁶

A qualitative study was carried out to explore the barriers to accessing ASRH services as perceived by youth in Lao People's Democratic Republic. Adolescent respondents were interviewed using semi-structured questionnaire, while information was collected from ASRH providers via semi-structured interviews. The key barriers to accessing sexual and reproductive health services by young people were correlated to cognitive accessibility and psychosocial accessibility. The cognitive accessibility barrier factors included poor sexual knowledge as well as a poor level of awareness of services. Identified barriers in psychosocial accessibility included the feelings of shyness and shame triggered by prohibitive cultural attitudes to premarital sex, and the fear of parents getting to know about visits to public sexual and reproductive health services. This can be linked to the perceived absence of confidentiality in the

services and among health providers. Other barriers were related to geographical accessibility, and limited numbers of youth-friendly health clinics.⁶⁷

A case control study to determine the factors that affect adolescents' access to adolescent-friendly health services in the area of Sangkrah and Kratonan in Surakarta District in Indonesia.⁶⁸ There were 162 respondents (who accessed the services by guidance from health professionals and peer educators) and 162 controls (those who did not) who were chosen using total sampling and proportionate random sampling technique, respectively. Access to adolescent-friendly services was found to be mostly determined by knowledge of the program and perceived demand. The low level of adolescents' access was mostly due to insufficient knowledge.

A qualitative study carried out in Nepal in 2019 attempted to present an in-depth account of the barriers associated with adolescents' access to SRH care from Adolescent-Friendly Health Services in Nepal.⁶⁹ It involved six focus groups with 52 adolescents and in-depth interviews with 16 adolescents, 13 key informants, and 9 health care providers from six adolescent-friendly health facilities in Nepal, using purposive sampling, key informants (KIs), and in-depth interviews. The results revealed that institutional healthcare barriers and socio-cultural factors, including moral values, maybe hindering adolescents' access to SRH services. Some other identified barriers included access issues due to travel, perceived lack of privacy and confidentiality, and the unprofessional attitudes of staff towards the sexual health needs of adolescents. Interview responses indicated that health care providers take a policing role in prescribing adolescents' conformity to this moral framework in their delivery of reproductive health care and services.^{69, 70}

Another qualitative study done in Malawi to explore the perspectives of youth and adults about the drivers and barriers to youth accessing family planning and their ideas to improve services involving 34 Focus Group Discussions with 255 youths aged 15 - 24 and 40 parents or legal guardians of female youth in 3 districts in Malawi. The result revealed that youth participants felt motivated to use family planning to protect themselves from sexually transmitted diseases and to prevent unwanted pregnancies. Female youth focused on the consequences of unplanned pregnancies and believed family planning services were targeted primarily at them. Identified barriers to youth accessing family planning included contraception misconceptions, the costs of family planning services, and negative attitudes. Parental views on family planning among the youth were mixed, such that while many of them acknowledged they could play a supporting role, most said they are reluctant to support youth using family planning.⁷¹

A similar cross-sectional study was conducted among pastoral communities in Kenya in 2015 to find out the level of access to sexual and reproductive healthcare services among adolescent girls in pastoral communities in Narok County, Kenya aged 15-19 using simple random sampling technique and Interviewer administered Semi-Structured questionnaires, Key informant interviews, and Focus Group Discussions. The study revealed that the factors that affect access to SRH services by the adolescent girls included socio-cultural factors: cultural beliefs (27%) and restriction by family members (73%); individual barriers: shyness (14%) and fear (86%); unfriendly service providers (19.6%); economic factors: financial constraints (39%), long distances (32%) and lack of transport (29%); information barriers: ignorance and illiteracy (58%) and no knowledge of where services are offered (42%).⁷² This study clearly reveals that family, the members of the community as well as health workers

can contribute to the factors influencing access and utilization of SRHS by female adolescents.

A study adopting a case study design was conducted in 2017 in Ghana to explore perceived barriers to accessing and using adolescent health services amongst 24 adolescents recruited from four adolescent health facilities in Tema, a suburb of Ghana, using convenient sampling and In-depth interviews.⁷³ Adolescents in this study perceived four main types of barriers that restrict their access to or use of adolescent health services. The barriers were found at the facility level, provider level, community level and personal level.⁷³ They included the fear of being chastised and discriminated by the carers, their peers, society and their parents/caregivers, lack of information, financial challenges, inadequate privacy amongst others. Fourteen adolescents and three RHS providers were interviewed in this study, hence the results may not be generalisable to the wider population.

These findings in the above study were in keeping with the outcome of a study done to explore the barriers hindering adolescents' utilisation of RHS in primary healthcare centres in Kaduna North Local Government, North-western Nigeria in 2017. An exploratory qualitative study was conducted, aimed at exploring the factors influencing adolescents' access RHS among 14 adolescents and 3 adolescent reproductive health service providers. Convenience sampling, individual in-depth interviews and key informant interviews were used. The findings of the study indicate that adolescents' access RHS was low in Kaduna North Local Government Area. An interplay of several individual, social and health system factors influenced adolescents' access to RHS. Individual level factors like inadequate knowledge about type of RHS, poor attitudes towards RHS and certain risky behaviours of adolescents themselves

negatively influenced their access to RHS. Significant social level factors such as parental influence, financial constraints and the stigma attached to adolescents' utilization of RHS also contributed to poor uptake of RHS. Health system factors such as poor health worker attitude and inconvenient opening hours were also found to hinder adolescent access RHS. It was further noted that a sense of commitment to religious values was one of the most prominent of the social factors that affected adolescents to the extent that they felt constrained to freely utilise RHS.³⁷

The findings of an in-depth exploration of perceived barriers to utilization of contraceptive services by adolescents was conducted in six communities in Ebonyi state, southeast Nigeria, using focus group discussions and in-depth interviews.⁴¹ Findings revealed that individual level factors that limit access to contraceptives for adolescents include lack of awareness and poor knowledge, fear of side effects, low self-esteem, and inability to afford cost of services. Interpersonal (family-related) barriers include constrained parent-child communication of sexual and reproductive health matters as well as negative attitude of parents towards sexuality education for adolescents. Health systems barriers to accessing contraceptives for adolescents include failure to assure privacy and confidentiality, stock-out of contraceptive commodities, judgmental attitude of health workers. Others include insufficient staffs that are adequately skilled in adolescent sexual and reproductive health, gendered cultural norms, social stigmatization and religious sentiments. Wider societal factors such as negative peer and media influence, dearth of sexuality education in schools, lack of social networks in communities; and macro level determinants such as poor economic conditions were also perceived to preclude access to contraceptives for adolescents.⁴¹

2.4 Factors Associated with Utilization of Adolescent Sexual Reproductive Health (ASRH) by Female Adolescents

Health care utilization refers to the use of health care services. People use health care for many reasons including preventing and curing health problems, promoting maintenance of health and well-being, or obtaining information about their health status and prognosis.⁶³

Typically, health-care services utilization reflects a need for care. Many factors apart from need for care however affect health-care utilization. Contact with and the utilisation of health care services form a continuum and access might be defined as some point on this continuum. There are many potential events in the process of contact and utilisation of services that may indicate access. Despite this apparent blurring of the fine lines, this distinction remains relevant in terms of assessing the benefits of services which typically reflect on utilisation, whereas many of the associated costs are correlated with the availability of the service.⁶⁶ Exploring the factors associated with the utilization of RHS seeks to assess the challenges that female adolescents face in this regard as well as the driving factors that promote uptake of services.

The results of a systematic review of existing literature that have explored factors influencing adolescent's utilisation of youth-friendly sexual and reproductive health services (YFSRHS) identified structural barriers including health workers poor attitude and being unskilled. Individual barriers included lack of knowledge among youth regarding YFSRHS. Primary enabling factors were community outreaches, health education and improvement of the quality of services in the clinics for adolescents/young people's needs.⁷⁴

A series of multifaceted barriers currently prohibit good sexual and reproductive health for adolescents. At the political level, ASRH is low priority and there are often restrictive laws and policies in place.⁷⁵ Various societal, cultural, and religious factors create an inhibitive environment for discussion of ASRH as many societies hold a deeply embedded sense of disapproval of adolescent sexual activity; this is often demonstrated through the stigmatization of sexual health concerns, in particular STIs/HIV. Judgmental attitudes about sexual activity abound, especially for those out of marriage and sexually active girls and women. In some regions, accepted practices of early marriage and childbearing, age differences between partners, and societal pressure prohibiting use of contraceptive methods may also exist. Poor ASRH can be further confounded by conflict, migration, urbanization, and lack of schooling.⁷⁶

With regard to service-related barriers, poor health systems for sexual health, family planning, and maternal health are common, with both married and unmarried adolescents ignored in some cases, and an overall deficiency of youth-friendly services. Lack of integration is seen where services that might address counselling and family planning fail to include HIV/STI care, etc. Services may also be hampered by corruption and lack/erratic availability of supplies and equipment. Economic and physical accessibility restrict adolescents' access to services where they do exist. On a personal level, young people's care-seeking behaviour may be restricted because of fear (of people finding out and other confidentiality issues that may result in violence), embarrassment, lack of knowledge, misinformation and myths, stigma, and shame. A range of people have an influence on adolescents' access to information and services, including peers, parents, family members, teachers, and healthcare workers. Some argue that the single most important barrier to care is provider attitude.⁷⁶ Many healthcare workers deter adolescents from using services because of their lack of

confidentiality, judgmental attitudes, disrespect, or not taking their patients' needs seriously.⁶⁹

A similar study was conducted in Mexico in 2018 to examine adolescent simulated clients' perceived barriers to quality care as they sought information on contraceptives in public-sector healthcare facilities and pharmacies among 8 young women who posed as simulated clients at health centers and pharmacies in Mexico City, using semi-structured interviews. The result revealed that barriers to receiving information about contraceptives included healthcare professionals who gave administrative pretexts to avoid providing services. Simulated clients also felt judged by healthcare professionals and reported a lack of simple, understandable and pertinent information. Healthcare professionals did not ensure clients understood and had no further questions about using contraceptives, which resulted in clients' poor perceived self-efficacy, as well as a lack of confidence in the healthcare system to help them.⁷⁰

A cross-sectional survey of 362 systematic randomly selected adolescents from Bhaktapur district, Nepal, was conducted, with the aim of identifying the relationship between utilization of Adolescent Friendly Services (AFS) and associated factors. There was a low level of utilization of services with only about a quarter (24.7%) of the respondents having utilized the adolescent-friendly services. Factors positively associated with the utilization of services included adolescents aged 15-19 years, being female, having heard about AFS, lack of fear of being seen while getting SRH services, not being shy about receiving SRH services, and the perceived need for SRH services as soon as illness became apparent. Lack of awareness about the services, socio-cultural barriers, lack of confidentiality, non-feasible service hours, and the preference for same-sex service providers were identified as the barrier factors limiting utilization.⁷⁷

A community based cross-sectional study was carried out in 2017 in East Ethiopia to assess the reproductive health service utilization and associated factors amongst four hundred and two adolescents aged 15-19 years in Anchar District, West Hararghe Zone, Oromia Region, East Ethiopia, using simple random sampling method, semi-structured open-ended interview and FGD. The study revealed that Forty-two (39.3%) female adolescents have ever used family planning. One hundred eight four (45.8%) adolescents have ever used voluntary counselling and testing (VCT) services. Males were 5.25 times more likely to use VCT than females (AOR = 5.25, C.I = 1.07, 25.87) and those perceived themselves as high risk for HIV were 8.22 times more likely to use VCT than their counterparts (AOR = 8.22, C.I = 1.065, 35.49). Lack of adolescent reproductive health services, Harmful Traditional Practices, lack of privacy and inconvenient service hour were reasons for not utilizing the service.⁷⁸

Another study was done to assess the socio-cultural norms, attitudes, values and practices that hinder or facilitate the sexual and reproductive health and rights (SRHR) of adolescents and young people in Swaziland. Socio-cultural factors influencing utilization of sexual and reproductive health services among youth in Swaziland were identified as encompassing family, peer, religious and community values and norms. Youth who perceived their families, communities and peers to be liberating towards uptake of SRH services were more likely to use those services compared to youth who perceived the opposite.⁷⁹

A similar finding was observed in a 2019 study aimed at investigating factors influencing accessibility and utilization of reproductive health services among adolescents in Ga East Municipality, Ghana.⁸⁰ A structured questionnaire was administered to 242 students to assess knowledge and factors influencing accessibility

and utilization of reproductive health services among adolescents. Knowledge of Adolescent Sexual Reproductive Health, advertisement and posters were significant driving factors in service utilization, while poor attitude of health workers was found as a potential barrier.⁸⁰

A study was carried out in, Zaria, Nigeria in 2018 to find out the factors influencing access to information and utilization of contraceptives among 281 female adolescents secondary school students in some selected secondary schools at Samaru community, Zaria, Nigeria using a multi-stage cluster and questionnaire. The findings revealed that 40.2% of the respondents believed it was wise for them to use contraceptives while 49.1% believed that modern contraceptives prevent pregnancy in later life. 27.0% respondents mentioned religious belief, only 21% have used contraceptives prior to the study of which, oral pills (11%), condom (9.3%), traditional method (7.8%) and emergency contraceptives (6.4%) were mentioned. 30.2% mentioned prevention of unwanted pregnancy as one of the factors that influenced their use of contraceptives, 29.5% said lack of counselling services in the school, while 27.0% said lack of adolescent health friendly services/centres among others.⁸¹ The study is commendable as there was a thorough assessment of factors influencing access to information and utilization of contraceptives. The findings are similar to those of the qualitative study done in Malawi, as earlier highlighted, which revealed that the barriers to youth utilizing family planning included contraception misconceptions, the costs of family planning services, and negative attitudes.⁷¹

A qualitative study was conducted in six communities in Ebonyi state, southeast Nigeria to provide an in-depth exploration of perceived barriers to utilization of contraceptive services by adolescents using the socio-ecological model. Eighty-one

in-depth interviews and six focus group discussions were conducted with respondents comprising policy makers, community leaders, health service providers and parents of adolescents. Individual level factors found to limit contraceptives uptake amongst adolescents included lack of awareness and poor knowledge, fear of side effects, low self-esteem, and inability to afford cost of services. Interpersonal (family-related) barriers include poor parent-child communication of sexual and reproductive health matters and negative attitude of parents towards to sexuality education for adolescents. Health systems barriers to making use of services include lack of privacy and confidentiality, unavailability of contraceptive commodities, poor attitude of health workers, and insufficient skilled staff that. Gendered cultural norms, societal shaming and religious intolerance were also identified as additional barriers to adolescents accessing and using contraceptive services. Wider societal factors such as negative peer and media influence, absence of sexuality education in schools, lack of social networks in communities; and macro level factors such as poor economic conditions were also perceived to limit access to contraceptives for adolescents.⁴¹

The findings of the above study are in tandem with that of a 2019 study that investigated the utilization of reproductive health services among youths in Owerri, South-Eastern Nigeria.⁸² This study revealed that the major reasons for non-use of the RHS services include fear of being seen by parents at the health facility, shyness and lack of awareness. Also based on the perspective of the study group, barriers to the use of RHS. Similarly, other limiting factors found in this study include non-availability of RHS, fear that the health worker will be biased, unfriendly and hostile, fear of hospital procedures, anxiety about the potential side effects of contraceptives and others.⁸²

A descriptive cross-sectional study was conducted, involving 543 adolescents to determine the factors affecting utilization of government and non-governmental youth friendly facilities in Lagos state, Nigeria in 2019. Respondents were consecutively recruited from 10 (five government and five non-governmental) youth friendly health facilities. Findings revealed low level of utilization. Marital status, school attendance, having a baby, satisfaction with visit, perception that information shared was kept confidential and accessibility of the youth friendly services were factors associated with utilization of these services. The predictors of utilization of services included confidentiality and access to facilities. There is poor utilization of both government and non-governmental youth friendly services in Lagos, Nigeria.⁸³

Abiodun et al⁶² researched into adolescents' knowledge, services utilization, and associated factors via a school-based cross-sectional study of 714 eligible Nigerian adolescents in 2016, using self-administered questionnaires. The predictors of service utilization were knowledge, regular access to telephone and parent-adolescent communication.⁶²

CHAPTER THREE

METHODOLOGY

3.1 Study Area

Benin City is one of the oldest cities in Nigeria dating back to the pre-colonial times, the city used to be the capital of the old Bendel State until this was divided into Edo and Delta States, in 1991, with Benin City becoming the capital of Edo State.⁸⁴ The city is situated at latitude 6.34°N, longitude 5.63°E,⁸⁵ and 80-meters elevation above the sea level.⁸⁶ Benin city is located approximately 40.23 km north of the Benin River and 321.36 km by road east of Lagos. It is the centre of Nigeria's rubber industry and also possesses palm nuts for oil in the traditional industry.⁸⁷ Its population projection for 2022 is 1,841,084.⁸⁸ The City is made up of mainly three (3) Local Government Areas namely: Oredo, Egor, and Ikpoba-Okha Local Government Areas.⁸⁹ Oredo Local Government has a land mass of 249 Km,⁹⁰ with latest projections putting the population at 560,505 in 2022, based on the 2006 census.^{91, 92} Its administrative headquarters is in Benin City, the capital city of Edo state, which is regarded as the spiritual home and origin of all Edo speaking People.

Temperatures typically range from 27⁰C to 32⁰C, with a mostly bipolar annual season system: the rainy season from March to November, characterized by moderate temperatures and high levels of precipitation, and the dry season, from December to February, characterized by extreme temperatures and low levels of precipitation. Between seasons, there is a brief harmattan caused by the North East Trade Wind, with intensified coldness and dryness creating dust and haze.⁸⁴

The main town here is Ogbe town, with villages including; Abiala, Egbaton, Ekehuan, Gelegele, Ughoton, and others. In terms of political demographics, Oredo Local

Government Area is made up of twelve wards, they are: Government Reservation Area (G.R.A)/Oko, Ogba, Ogbe, Ogida, Uselu, New Benin, Ogbeson, Etete, Ologbo, Irimwinhin, Ugbekun, and Oka wards.⁹⁵ Situated within the Benin city centre, there has been a trend towards urbanization, with banks, schools, market, and modern houses, shopping complexes and businesses springing up around the core of the town. The Oba of Benin, Omo N'Oba Ewuare II's palace is also located here. Subsistence farming is practiced in the adjoining villages with yam, cassava, vegetable, maize, cocoyam, etc as their main agricultural products. There are also craft men known for their bronze casting in an area called Igun-eromwon off Sokponba road. There are twenty two (22) Government-owned primary health facilities in the state, with five (5) at the secondary level.²⁰

3.2 STUDY DESIGN

This study was conducted using a descriptive cross-sectional study design.

3.3 STUDY DURATION

The study duration was for 12 months (December 2021 to November 2022). It was conducted as follows:

- Proposal development
- Development and pre-testing of data collection tools
- Training of research assistants
- Data collection
- Data collation and data analysis
- Results

3.4 STUDY POPULATION

The study population comprised female adolescents, healthcare workers and healthcare centres in Oredo Local Government Area of Benin City, Edo state, Nigeria.

3.4.1 SELECTION CRITERIA

3.4.1.1 Inclusion Criteria

Female adolescents aged 10-17 years residing in Oredo Local Government Area at the time of this study who assented to and whose caregivers gave consent to participate in this study as well as adolescent girls aged 18-19 who consented to being interviewed were selected for this study.

3.4.1.2 Exclusion Criteria

Female adolescents aged 10 – 19 years who were too ill to be interviewed were excluded from participating in this study.

3.5 SAMPLE SIZE DETERMINATION

The Cochran formula⁹⁶ used for descriptive studies was used to determine the minimum sample size for this study, factoring in the design effect for multi-stage sampling.

$$N = \frac{Deff * z^2 pq}{d^2}$$

Where:

N = minimum sample size

Deff = Design effect = 1.5 (assumed design effect for multi-stage sampling)

Z= standard Normal Deviate (1.96 at 95% confidence interval)

p = prevalence of characteristic of interest in the population

= 57.8% (proportion of adolescent girls that know a place where, or a person from whom she would feel comfortable accessing contraception in Ogun state)⁵⁹

=0.58

q = 1-p = 1- 0.58= 0.42

d = degree of precision (5%) = 0.05 (at 95% confidence interval)

n = $\frac{1.96^2 \times 0.58 \times 0.42}{0.05^2}$

n = $\frac{3.8416 \times 0.58 \times 0.42}{0.0025}$

n = $\frac{0.9358}{0.0025}$

n = 374.32

Therefore, calculated minimum sample size for the study was 374 respondents.

To allow for 10% non-response rate, this formula will apply

$n_f = n / 1 - n_{rr}$

Where n_f = final minimum sample size

n = minimum calculated sample size

n_{nr} = non response rate = 10% = 0.10

$n_f = 374 / (1 - 0.1)$

$= 374 / 0.9$

$= 415.5$

$= 416$

Thus, final minimum sample size for this study was; $Deff * 416 = 624$.

3.6 SAMPLING TECHNIQUE

This study employed a combination of probability and non-probability sampling methods through a three-stage multi-stage sampling technique to select the study location, wards/communities, and respondents. The procedure was as follows:

Stage 1: Selection of Local Government Area

Benin City comprises three main Local Government Areas (LGAs). Among them, Oredo LGA was selected using a simple random sampling method by balloting. The names of the three LGAs were written on identical slips of paper, thoroughly mixed, and one slip was randomly picked without replacement.

Stage 2: Selection of Wards

Oredo LGA is subdivided into twelve (12) wards, namely: Ogbe, GRA/Etete, Uzebu, Urubi, Ihogbe, New Benin I, New Benin II, Oredo, Ikpema, Unueru, Ogbelaka, and Ibiwe/Ugbague. A simple random sampling technique (balloting method) was used to select five (5) wards for inclusion in the study. The selected wards were:

- GRA/Etete
- Urubi
- Ihogbe
- Unueru
- Ogbelaka

Stage 3: Selection of Clusters and Respondents

In each of the five selected wards, boundaries were delineated with the help of community leaders and local maps. Each ward was then divided into two clusters (Cluster A and Cluster B) using a prominent geographical landmark—such as a road, market, school, or town hall—as the dividing line.

From the two clusters in each ward, one cluster was selected at random using a simple coin toss. The selected cluster in each ward was then used for the final stage of respondent selection.

Within each selected cluster, all eligible female adolescents who met the inclusion criteria (e.g., aged 10–19 years, residing in the area, and consenting to participate) were approached. A non-probability consecutive sampling method was applied, whereby all eligible respondents in the selected clusters were surveyed until the required sample size was achieved.

Selection of Health facilities: Eligible primary and secondary public and private health facilities within the study area who agreed to participate in the study were sampled.

Selection of Key Informants: Purposive sampling technique was used to select key informants (health providers), that were present at the sampled health facilities during the period of this study.

3.7 DATA MANAGEMENT

3.7.1 DATA COLLECTION

Data was collected using an interviewer-administered, structured questionnaire in English, which was adapted from existing literature [97] and modified by the researcher to align with the specific objectives of this study. The questionnaire was administered to the respondents and included both open-ended and close-ended questions.

This mixed-question format was employed to ensure comprehensive data collection. The close-ended questions provided structured responses that allowed for easy quantification and statistical analysis, while the open-ended questions offered respondents the opportunity to elaborate on their experiences, perceptions, and opinions in their own words. This approach enhanced the depth and richness of the data and allowed for both objective measurement and qualitative insight. The questionnaire was structured to cover the following key areas:

Section 1: Socio-demographic Characteristics

This section included questions relating to the socio-demographic characteristics of the respondents.

Section 2: Knowledge of SRH-Related Topics

This section sought to assess the basic knowledge of SRH amongst the respondents (Fertility, Contraception, STIs/HIV/AIDS, Counselling and Testing).

Section 3: RHS Available in Health Facilities for Female Adolescents

This section assessed the RHS services available in public and private health facilities for female adolescents. It comprised questions relating to different RHS accessed by female adolescents in the past one year, as well as the different RHS rendered by health facilities.

Section 4: Factors Affecting Access to RHS by Female Adolescents

The fourth section was aimed at finding out the factors that affected access to RHS by female adolescents residing in Oredo Community. These will include both facilitating factors and barrier factors.

Section 5: Factors Affecting the Utilization of RHS by Female Adolescents

The fifth section was aimed at finding out the factors that influence utilization of RHS by female adolescents residing in Oredo Community. These also included both facilitating factors and barrier factors.

Key Informant Interviews:

Key informant interviews were conducted with ten (10) health workers; four (4) Community Health Extension Workers (CHEWs), four (4) nurses/midwives/nurse-midwives, and two (2) medical doctors who were purposively selected from within the study area, preferably from the sampled 1⁰ and 2⁰ health facilities.

Health Facility Checklist:

The health facility checklist was used to assess the types of RHS available in the health facilities under consideration. It was adapted from the WHO Adolescent-friendly health services supervisory/self-assessment checklist.⁹⁸ Information so obtained was verified from relevant clinic registers and records by the researcher or research assistants and the resident health personnel.

3.7.2 DATA ANALYSIS

Quantitative Data Processing and Analysis: Data was edited for accuracy, readability, consistence and completeness. Thereafter it was coded and then entered into a computer using the SPSS software (IBM Statistical Package for the Social Sciences) version 26 to yield descriptive statistics on socio-demographic information including percentages, proportions and frequencies. Inferential statistics showing associations between groups of categorical data including SRH services offered to adolescents in Oredo, factors influencing access to these SRH services and challenges adolescent girls face in accessing them were presented via the use of Chi-square test, or Fischer's exact test as appropriate. Regression analysis and Analysis of variance (ANOVA) was used to determine predictors of knowledge, accessibility, and utilization. For SRH knowledge-based questions, each answer was scored a maximum of 1 point and a minimum of 0 points. Final assessment was classified as percentages based on a composite scoring system. Statistical significance was set at $p < 0.05$ and 95% confidence interval (CI). Results are presented in tables and graphs.

3.8 PRETESTING

Questionnaires were administered to 30 female adolescents in Government Science Technical College, Egor Local Government Area, a neighbouring Local Government

to Oredo LGA. Five (5) Key informant interviews were also conducted as part of pre-testing. The outcome of the pre-test was used to modify the final tools for data collection. The pre-tested questionnaires and interviews were not be included in the final study as they fall outside the study period.

3.9 ETHICAL CONSIDERATION

Ethical approval was sought and obtained from the Research and Ethics Committee of the State Ministry of Health Edo State, Benin City with protocol number- **Ha.737/5/T¹/027**. Approval was gotten from the Oredo Local Government Area, Edo State, as well as Departmental clearance from the Public Health and Community Medicine Department, University of Benin. Consent and assent were obtained from respondents and their guardians respectively, explaining the purpose and given assurance of utmost confidentiality before commencement of the study.

3.10 LIMITATIONS OF THE STUDY

This study was limited as is usual of cross-sectional studies by the difficulty in determining specific causal relationships between the different variables. The relatively high number of participants could possibly help in that regard.

The validity of the results could have been influenced by inaccurate or socially desirable answers, and recall bias from participants. To overcome these limitations, timelines were introduced to help them recollect better. Going into the schools/community to get more information also helped to reduce the problem of low turnout and low response and mitigated the adolescent participants concern about giving accurate answers.

Finally, since only a few communities were included in this study, the findings may not be generalizable to the entire population of adolescents in Edo State, or Nigeria at large, owing to the diverse ethno-traditional, socio-economical and religious characteristics.

CHAPTER FOUR

RESULTS

4.1 Demographics

In total, five hundred and ninety-two (592) female adolescents were recruited to participate in this study, with a 94.9% response rate, while four (4) health facilities (2 private, 2 government) were assessed. Six (6) health provider interviews were also conducted.

Table 1: Socio-demographic characteristics of respondents

Variable	Frequency (n=592)	Percent
Age group (years)		
10–13	260	44.0
14-17	330	55.7
≥ 18	2	0.3
Mean ± SD Age (years)	13.7 ± 1.2	
Ethnicity		
Benin	300	50.7
Esan	63	10.7
Afemai	63	10.6
Yoruba	60	10.1
Urhobo/Isoko/Ijaw	42	7.1
Igbo	34	5.7
Hausa	13	2.2
Igbanke	9	1.5
*Others	8	1.4
Religion		
Christianity	557	94.1
Islam	35	5.9
Residing with		
Both parents	440	74.3
Mother only	61	10.3
Relatives	55	9.3
Father only	34	5.7
Boyfriend	1	0.2
Husband	1	0.2

*Others: Asante, Ibibio, Idoma, Igala and Lala.

Table 1 describes the socio-demographic characteristics of student respondents whose ages ranged from 11 – 18 years with mean of 13.74 (\pm 1.2) years. The respondents were mainly of Benin Origin 300 (50.7%) with less higher percentages of Esan 63 (10.7%), Afemai 63 (10.5%) and Yoruba 60 (10.1%). Most respondents practice Christianity 557 (94.1%) with approximately one-twentieth of them being Muslims 35 (5.9%). While most of the respondents resides with both of their parents 440, (74.3%), approximately one-tenth lives with their mother 61 (10.3%) and with relatives 55 (9.3%).

Table 2: Socio-economic Characteristics of Respondents' Parents

Variable	Frequency (n=592)	Percent
Father's Level of Education		
Primary	35	5.9
Secondary	263	44.4
Tertiary	294	49.7
Mother's Level of Education		
Primary	92	15.5
Secondary	306	51.7
Tertiary	194	32.8
Father's skill level		
Skill level 0	6	1.0
Skill level 1	15	2.5
Skill level 2	503	85.0
Skill level 3	12	2.0
Skill level 4	56	9.5
Mother's skill level		
Skill level 0	20	3.4
Skill level 1	0	0.0
Skill level 2	536	90.5
Skill level 3	0	0.0
Skill level 4	36	6.1

Table 2 describes the socio-economic characteristics of respondents. Approximately half of the fathers reported to have tertiary education 294 (49.7%) with few of them having primary education 35 (5.9%). Mothers on the other hand, were mostly reported to have secondary education 306 (51.7%) while they least have primary education 92 (15.5%).

Reporting on parents' skill level, Fathers mainly belong to skill level 2, 503 (85%) while a substantial few, less than 10% were on level 4, 56 (9.5%). Similarly, mothers were majorly found to be on level 2, 536 (90.5%) with a substantial few on level 4, 36 (6.1%).

Table 3: Gynaecological History of Respondents

Variable	Freq. (n=592)	%
Age at Menarche (years)		
None	112	18.9
≤ 10	6	1.0
11 – 12	255	43.1
13 – 14	217	36.7
≥ 15	2	0.3
Mean ± SD	12.4 ± 0.9	
Age at Coitarche (years)		
None	527	89.0
≤ 10	1	0.1
11 – 12	21	3.6
13 – 14	16	2.7
≥ 15	27	4.6
Mean ± SD	13.0 ± 1.6	
Currently in an intimate relationship		
Yes	29	4.9
No	563	95.1
Sexually active		
Yes	18	3.0
No	574	97.0
Contraceptive Use (n=18)		
Yes	7	38.9
No	11	61.1
Types of contraceptives used (n=7)		
Oral contraceptive pills	6	85.7
Condom	1	14.3

Table 3 describes the gynaecological history of adolescents in this study. With an average age at menarche of 12.4 ± 0.9 years, a little below one-fifth of the respondents had not experienced first menstruation 112 (18.9%). Others mostly experienced first menstruation at ages 11 – 12 years 255 (43.1%) or at ages 13 – 14 years 217 (36.7%). On first sexual experience, only on approximation, one-tenth of the adolescents had been involved 65 (11%) with most age at coitarche being 15 years or more 27 (4.6%) and between 11 – 12 years, 21 (3.6%).

Not more than one-of-twenty 27 (4.6%) of the adolescents were currently in a relationship with lesser percentage 18 (3%) of them being sexually active. Of the sexually active adolescents, less than half 7 (38.9%) use contraceptives during sexual activity and their choice of contraceptive was oral contraceptive pills 6 (85.7%).

Table 4: Knowledge of Adolescent Reproductive Health among Respondents

Knowledge-based statement	Frequency (n=592)	Percent
Knowledge of calculating menstrual cycle		
Yes	187	28.2
No	425	71.8
Method of calculating menstrual cycle (187)		
Calendar method	142	75.9
Phone applications	4	2.1
No method was mentioned	41	22.0
Knowledge of “risks involved in sexual activity at young age” *		
Can lead to unwanted Pregnancy	441	74.5
Can contact STI/HIV	145	24.9
Can lead to disruption in education	96	16.2
Can lead to social humiliation	24	4.1
Knowledge of HIV preventive behaviour*		
Avoid drinking from same cup with an HIV-infected person (No)	262	44.3
Abstinence from sexual activity (Yes)	167	28.2
Maintain Monogamy with a faithful partner (Yes)	115	19.4
Patronising commercial sex workers (No)	115	19.4
Use of condom during sexual intercourse (Yes)	99	16.7
Use of unsterilized sharp object (No)	62	10.5
STIs can be transmitted through*		
Mosquito bite (No)	583	95.1
Unprotected sex (Yes)	287	48.5
Oral sex (Yes)	136	23.0
Anal sex (Yes)	81	13.7
Mother to child transmission (Yes)	33	5.6
Kissing (No)	44	7.4
Family planning methods that prevent STI/HIV*		
Injectables	85	14.4
Condom (Male/Female)	63	10.6
Emergency contraceptives	51	8.6
Implants	42	7.1
OCPs	18	3.0
Don't Know	333	56.3
Single sex episode can lead to pregnancy		
Yes	226	38.2
No	366	61.8
Drug abuse is a risk for SRH		
Yes	266	44.9
No	326	55.1

*Multiple responses

Table 4 describes the questions that assess knowledge of youth/adolescents reproductive health and the response distribution among the adolescents. Female adolescents generally exhibited poor knowledge of statements that were used in assessing their Y/ASRH. Less than one-third 187 (28.2%) of the adolescents reported to have the knowledge of calculating menstrual cycle. Of this proportion, 41 (41%) could not identify a method of calculating menstrual cycle while others, mostly identify the use of calendar method 142 (75.9%) for calculating menstrual cycle.

On their knowledge of “risks involved in sexual activity at young age”, they mostly identified that sexual activity can lead to unwanted pregnancy 441 (74.5%). Other risks involved in sexual activity at young age include contacting STI/HIV 145 (24.9%), disruption of education 96 (16.2%) and social humiliation 24 (4.1%).

On knowledge of HIV preventive behavior, female adolescents largely identified “avoid drinking from same cup with an HIV-infected person” 262 (44.3%) as non-preventive behavior. Few of them also identified “patronizing commercial sex worker” 115 (19.4%) and “use of unsterilized sharp object” 62 (10.5%) as non-preventive behaviors while lower percentage identified abstinence from sexual activity 167 (28.2%), maintaining monogamy with a faithful partner 115 (19.4%) and use of condom during sexual intercourse 99 (16.7%) as preventive behaviors.

Assessing their knowledge on STI transmission routes, mosquito bite was mainly identified as a non-route for mosquito transmission 583 (95.1%) while on approximation, half identified unprotected sex as a route to STI transmission 287 (48.5%). Other identified routes for STI transmission included oral sex 136 (23%), anal sex 81 (13.7%) while they are least aware of the mother to child transmission route 33 (5.6%).

Not more than one-tenth of them could identify that condom is used as contraceptive and prevention in pregnancy 63 (10.6%), while about four-of-ten knows that a single sex episode can lead to pregnancy 226 (38.2%) and less than half knows that drug abuse is a risk for SRH 266 (44.9%).

Table 5: Composite Knowledge of Reproductive Health among Respondents

Knowledge	Freq. (n= 592)	Percent
Composite Knowledge		
Good Knowledge	37	6.2
Poor Knowledge	555	93.8
Source of Knowledge*		
Teacher	155	26.2
Mass Media	105	17.7
Friends	84	14.2
Parents	76	12.8
Internet	67	11.3
Health Facility	11	1.9

***Multiple responses**

Table 5 describes the composite knowledge of SRH and the source of information among the female adolescents. Female adolescents generally had poor knowledge on Sexual and Reproductive Health as less than one-tenth of them was adjudged to have good knowledge 37 (6.2%). The source of sexual and reproductive health information among the female adolescents were Teacher 155 (26.2%), Mass Media 105 (17.7%), Friends 84 (14.2%), parents 76 (12.8%), internet 67 (11.3%) and health facility 11 (19%).

Table 6: Relationship between Socio-demographic characteristics and Knowledge of Reproductive Health among Respondents (Adolescents and Parents)

Variable	Knowledge of RH		Test Statistic (Chi ² /Fisher's exact)	p- value
	Good Freq. (%) n=37	Poor Freq. (%) n=555		
Age group (years)				
10 – 14	20 (4.5)	424 (95.5)	9.235	0.003*
15 – 19	17 (11.5)	131 (88.5)		
Religion				
Christianity	36 (6.5)	521 (93.5)	0.731	0.507
Islam	1 (2.9)	34 (97.1)		
Residing with				
Both parents	27 (6.1)	413 (93.9)	6.866	0.026*
Relatives	0 (0.0)	55 (100.0)		
Others	10 (10.3)	87 (89.7)		
Fathers Level of Education				
Primary	1 (2.9)	34 (97.1)	7.981	0.015*
Secondary	25 (9.5)	238 (90.5)		
Tertiary	11 (3.7)	283 (96.3)		
Mothers Level of Education				
Primary	0 (0.0)	92 (100.0)	9.941	0.007*
Secondary	24 (7.8)	282 (92.2)		
Tertiary	13 (6.7)	181 (93.3)		
Socio-economic Classification				
Upper	5 (5.9)	80 (94.1)	0.248	1.000
Middle	32 (6.5)	461 (93.5)		
Lower	0 (0.0)	14 (100.0)		

*Significant

Table 6 describes the socio-demographic characteristics of female adolescents in relation to their knowledge of sexual and reproductive health. A significantly higher proportion of female adolescents aged 10 -14 years 424 (95.5%) had poor knowledge of SRH, when compared with those aged 15 – 19 years 131 (88.5%) ($p=0.003$). Significant proportion of female adolescents living with relatives had poor knowledge of SRH 55 (100%) when compared with those living with both parents 413 (93.9%) and those living with others 87 (89.7%) ($p=0.026$).

Female adolescents whose fathers had primary education (97.1%) and tertiary education 283 (96.3%) had poor knowledge of SRH when compared with those whose fathers had secondary education 238 (90.5%). Similarly, significant proportion of female adolescents whose mothers had primary education 92 (100%) reported poor SRH knowledge when compared with those whose mothers had secondary education 282 (92.2%) or tertiary education 181 (93.3%) ($p=0.007$).

Table 7: Relationship between Sexual History and Knowledge of Reproductive Health among Respondents

Variable	Knowledge of RH		Test Statistic	p-value
	Good Freq. (%) n=37	Poor Freq. (%) n=555		
Currently in an intimate relationship				
Yes	37 (6.6)	526 (93.4)	Fishers Exact Test = 2.033	0.246
No	0 (0.0)	29 (100.0)		
Sexually Active				
Yes	0 (0.0)	18 (100.0)	Fishers Exact Test = 1.238	0.619
No	37 (6.4)	537 (93.6)		

Table 7 describes sexual characteristics and knowledge of SRH among female adolescents in this study. Thirty-seven (6.6%) respondents who were currently in an intimate relationship had good knowledge of reproductive health compared with none who was in an intimate relationship. The association between having an intimate relationship and knowledge of reproductive health was not statistically significant (p=0.246).

No respondents who were sexually active had good knowledge of reproductive health compared with 37 (6.4%) respondent who were not sexually active. The association between active sexual status and knowledge of reproductive health was not statistically significant (p=0.619).

Table 8: Predictors of Knowledge of Reproductive Health among Respondents

Variable	Odds ratio	p-value	95% Confidence Interval	
			Lower Limit	Upper Limit
Age Grouped				
10 - 14 years	2.751	0.003	1.400	5.407
15 – 19 years (RF)	1.000			
Residing with				
Both parents	1.758	0.146	0.821	3.765
Relatives	1.227	0.321	0.819	1.839
Others	1.000			
Father's level of Education				
Primary	1.322	0.793	0.165	10.555
Secondary	0.370	0.008	0.178	0.768
Tertiary (RF)	1.000			
Mother's level of Education				
Primary	1.517	0.998	0.687	3.347
Secondary	0.844	0.635	0.419	1.700
Tertiary (RF)	1.000			
Currently in an intimate relationship				
Yes	1.328	0.742	0.245	7.213
No (RF)	1.000			
Sexually Active				
Yes	3.773	0.280	0.339	42.031
No (RF)	1.000			

***Reference category (RF)**

Table 8 described the predictors of SRH knowledge among the female adolescents studied. Female adolescents aged 10 – 14years are 2.7 times more likely to have poor knowledge of SRH when compared with those 15 -19 years old (OR: 2.751; p=0.003; 95% CI: 1.400-5.407) and those whose father's had secondary education are 37% less likely to have poor knowledge of SRH when compared with those who had tertiary education (OR: 0.370; p=0.008; 95% CI: 0.178-0.768).

Table 9: Awareness of Availability of Youth-Friendly Sexual and Reproductive Health Services in School/Community

Variable	Freq (n=592)	Percent
Aware of YFSRH		
Yes	155	26.2
No	437	73.8
Source of YFSRH Information* (n=155)		
Social media/Internet	68	43.9
TV/Radio	36	23.2
Teacher	33	21.3
Friends/Peer	26	16.8
Parents/Guardians	24	15.5
YFSRH services known (n=155)		
Yes	99	63.9
No	56	36.1
Types of YFSRH services known* (n=99)		
Information/Education	99	100.0
Pregnancy testing	44	44.4
Contraceptive/Family planning	26	26.3
STI testing/treatment	26	26.3
HIV Voluntary Counselling and Testing	11	11.1
Abortion/post-abortion care	5	5.1
Antenatal care	5	5.1
Delivery services	5	5.1
Availability of YFSRH services (155)		
Yes	86	55.5
No	69	44.5
Accessibility of YFSRH services (86)		
Yes	41	47.7
No	45	52.3

***Multiple responses**

Table 9 described the awareness and availability of Youth friendly sexual and reproductive health services among female adolescents. About one-fifth of the respondents 155 (26.2%) are aware of Youth-Friendly Sexual and Reproductive Health (YFSRH) with the main source of information on YFSRH being social media/internet 68 (43.9%), TV/Radio 36 (23.2%) and teacher 33 (21.3%).

All female adolescents who are aware of YFSRH 99 (63.9%) knows that SRH Information/education 99 (100%) is the main service offered. Other services known by the female adolescents includes pregnancy testing 44 (44.4%), contraceptive/family planning and STI testing/treatment 26 (26.3%). Few of them also identify HIV-VCT 11 (11.1%), abortion/post-abortal care, antenatal care and delivery services 5 (5.1%) as other services rendered in the program.

Some of the female adolescents identified YFSRH services are unavailable in their school/community 69 (44.5%) while more than half of those who affirmed the availability cannot access YFSRH services 45 (52.3%) in their school and or community.

Table 10: Location and information on Youth-Friendly Sexual and Reproductive Health Services Available as Reported by Respondents

Variable	Frequency (%) (n=86)
Location to Access to YFSRH services in community/school	
Government hospital/Clinic	36 (41.9)
Private hospital/Clinic	20 (23.3)
No knowledge	10 (11.6)
Information source on available YFSRH services	
Friends/Peer	41 (47.7)
Teacher	23 (26.7)
Parents/Guardians	13 (15.1)
TV/Radio	10 (11.6)
Health Centre awareness	4 (4.7)
*Multiple Responses	

Table 10 describes the location and information on YFSRH services available according to female adolescents in this study. Thirty-six (41.9%) respondents reported a government hospital/clinic as a location to access Youth-Friendly Sexual and Reproductive Health services in their communities while 41 (47.7%) respondents reported a friend/peer as their source of information availability of youth-friendly sexual and reproductive health services.

Table 11: Accessibility to Sexual and Reproductive Health Services Reported by Respondents

Variable	Frequency (%) (n=155)
Challenges in Accessing SRH services	
Yes	28 (18.1)
No	127 (81.9)
Types of Challenges Encountered* (n=28)	
Poor access roads	22 (78.6)
Parental restrictions	12 (42.3)
No privacy	12 (42.3)
Distance	3 (10.7)
Financial limitations	3 (10.7)
Meet someone familiar	3 (10.7)
Perception on accessibility of SRH to adolescents (n=155)	
A little	17 (11.0)
Somehow	33 (21.3)
A lot	8 (5.2)
No response	97 (62.6)
Recommendations to improve awareness of availability of SRH services* (n=155)	
Increased Education	14 (9.0)
Improved staffing	12 (7.7)
Increased awareness	10 (6.5)
School visits by health workers	5 (3.2)
Improved healthcare services	5 (3.2)
Free YFSRH services	4 (2.6)
Social media campaigns	4 (2.6)
Utilization of SRH services in the past 6 months	
Yes	8 (5.2)
No	147 (94.8)

*Multiple Responses

Table 11 describes the accessibility of SRH services by female adolescents. Of the one hundred and fifty-five female adolescents who were aware of YFSRH, less than one-fifth 28 (18.1%) of them identified challenges such as poor access roads 22 (78.6%), parental restriction 12 (42.3%) and lack of privacy 12 (42.3%) in accessing SRH services. They mostly do not show perception towards the accessibility of the services 97 (62.6%) and recommended increased education 14 (9%), increased staffing 12 (7.7%) and increased awareness 10 (6.5%) for the improvement of SRH service availability. Of the female adolescents who are aware of YFSRH services and location in their school and community 86 (55.5%), eight (5.2%) of them had utilized the service in the last 6 months prior to this study.

Table 12: Utilization of YFSRH services among Respondents

Variable	Freq. (n=8)	Percent
Types of YFSRH services utilized		
Information and education	4	50.0
Test and treat	2	25.0
Voluntary Counselling & Testing	1	12.5
Pregnancy testing	1	12.5
Factor that influence your decision to utilize YFSRH service*		
Friends	6	75.0
Parents	2	25.0
Partner	2	25.0
Rating of service provider*		
Judgemental	5	62.5
Friendly	4	50.0
Unnecessarily inquisitive	3	37.5
Professional	1	12.5
Harsh	1	12.5
Rude	1	12.5
Service-related factors*		
Affordability	8	100.0
Privacy	5	62.5

***Multiple responses**

Table 12 describes the utilization experience of YFSRH services among female adolescents. The major type of YFSRH services utilized by the eight female adolescents who utilized YFSRH services was information and education 4 (50%) while others utilized testing and treatment service 2 (25%) for STIs. One adolescent each 1 (12.5%), utilized VCT and pregnancy testing services. The female adolescents who utilized the services were influenced by their friends 6 (75%) and others by parents 2 (25%) and partner 2 (25%) to utilize the services.

The service providers were rated to be judgmental 5 (62.5%), friendly 4 (50%) and unnecessarily inquisitive 3 (37.5%) while the service offered was affordable 8 (100%) and privacy maintained 5 (62.5%).

Table 13: Factors Influencing the Utilization of Sexual and Reproductive Health Services Reported by Respondents

Variable	Frequency (%) (n=155)
Factors Affecting Utilization of SRH services*	
Friends	83 (53.5)
Parental decision	57 (36.8)
Religious beliefs	23 (14.8)
Morals	18 (11.6)
Cultural beliefs	9 (5.8)
Cost of RHS services	8 (5.2)

*Multiple Response

Table 13 describes the factors influencing the utilization of SRH services b female adolescents. The main factor that influenced the use of SRH service by the adolescents was friends/peer 83 (53.5%). Other factors included parental decision 57 (36.8%), religious beliefs 23 (14.8%) and morals 18 (11.6%).

CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.1 DISCUSSION

The study revealed a significant gap in knowledge of reproductive health services (RHS) among female adolescents in Oredo Local Government Area. Only 6.2% of respondents demonstrated good composite knowledge of RHS, while an overwhelming 93.8% had poor knowledge. This reflects a critical deficiency in reproductive health literacy, which is a foundational determinant of health-seeking behaviour and the utilization of available services.

A closer look at specific knowledge areas showed that only 28.2% of respondents knew how to calculate their menstrual cycle, and a majority (71.8%) lacked this basic understanding. Even among those who claimed knowledge, most relied on imprecise methods such as general calendar tracking, with only a minority using technological tools like phone applications. Furthermore, knowledge of the consequences of early sexual activity was incomplete. While 74.5% recognized that it could lead to unwanted pregnancy, only 24.9% and 16.2% identified STI/HIV risk and educational disruption respectively, and a mere 4.1% were aware of the social humiliation often associated with early sexual activity.

This finding is consistent with earlier studies conducted across Nigeria. In a study in Enugu State, only a small proportion of adolescents had comprehensive knowledge of sexual and reproductive health (SRH), with most relying on peers and unverified sources for information³. Similarly, in Plateau State, Envuladu *et al.* reported poor knowledge of RH among adolescents, attributing it to insufficient sexuality education

both at home and in schools ³⁰. These findings suggest that poor knowledge is not unique to Oredo but part of a broader trend in Nigeria and other parts of sub-Saharan Africa.

Sources of information identified in this study were also limited. Teachers (26.2%) and mass media (17.7%) were the most cited sources, while health facilities accounted for only 1.9%. This reinforces the conclusion that formal health systems are not major contributors to adolescent knowledge of RHS in the study area. Femi-Adebayo *et al.* observed a similar pattern in Lagos State, where adolescents' primary sources of RH information were peers and the internet, rather than trained health professionals or structured school programs ⁸³.

Moreover, the findings revealed significant associations between reproductive health knowledge and certain socio-demographic factors. Adolescents aged 15–19 years were significantly more likely to have good knowledge than those aged 10–14 years ($p=0.003$), suggesting that age and school level may influence exposure to information. Also, the educational level of parents, especially mothers, was significantly associated with adolescents' knowledge of RH ($p=0.007$). These findings align with those from Ajah *et al.* in Ebonyi State and Onyeneke *et al.* in Southeast Nigeria, who concluded that higher parental education correlates with improved adolescent RH awareness ^{35,82}.

This study highlights a critical deficiency in the reproductive health knowledge of female adolescents in Oredo LGA. This deficiency is exacerbated by limited access to reliable information sources, inadequate parental guidance, and insufficient school-based RH education. The findings emphasize the urgent need to strengthen

reproductive health education through formal curricula, youth-friendly services in health facilities, and community outreach to bridge the knowledge gap and empower adolescents with accurate, age-appropriate reproductive health information.

This study found that awareness of available reproductive health services (RHS) among female adolescents in Oredo Local Government Area was relatively low. Only 26.2% of the 592 respondents reported being aware of youth-friendly sexual and reproductive health (YFSRH) services, and of this subgroup, just 55.5% could identify specific services available in their school or community. This suggests a substantial gap in awareness, which can limit service uptake and prevent adolescents from making informed reproductive health decisions.

Among those who were aware of RHS, the most frequently identified services were information and education (100%), pregnancy testing (44.4%), family planning (26.3%), and STI testing and treatment (26.3%). Fewer adolescents mentioned HIV counseling and testing (11.1%) or post-abortion care and maternal services like antenatal care and delivery (5.1%). These findings mirror those reported in similar studies from other parts of Nigeria. For example, Odo *et al.* found that adolescents in Enugu State had limited knowledge of the full range of RHS available in health facilities, with many unaware of critical services such as HIV counseling or STI treatment ³.

Importantly, very few adolescents in this study (only 1.9%) reported health facilities as a source of reproductive health information. This aligns with findings by Femi-Adebayo *et al.* who reported that even where services existed, awareness and promotion were weak, especially in school and community settings ⁸³. In a study in

Southeast Nigeria, Onyeneke *et al.* observed that adolescents often lacked access to youth-targeted information about available services in nearby clinics, which significantly limited their knowledge and willingness to seek care ⁸².

This study also examined the sources from which adolescents learned about RHS. The most cited sources were social media (43.9%), television/radio (23.2%), and teachers (21.3%). Peer groups and parents contributed 16.8% and 15.5% respectively. The limited role of parents and health facilities highlights a breakdown in both interpersonal and institutional communication. These trends reinforce findings from Envuladu *et al.* in Plateau State and Newton-Levinson *et al.* who emphasized that lack of targeted outreach to adolescents prevents them from becoming aware of available services ^{30,53}.

Furthermore, the distribution of service locations revealed that government hospitals (41.9%) and private hospitals (23.3%) were the most commonly known points of access. However, 11.6% of respondents had no knowledge of where to access RHS at all. This is concerning given that location awareness is a prerequisite for service use. Studies in Ghana and Kenya report similar challenges, where adolescents are often unaware of designated youth-friendly centers or hesitate to visit clinics due to fear of stigma ^{61,73}.

In summary, while some reproductive health services are available in health facilities within Oredo LGA, most adolescents are unaware of their existence or location. This limited awareness undermines national policy goals that emphasize youth-friendly service provision. It underscores the need for expanded community-based awareness campaigns, school health education, and better promotion of facility-based services

targeting adolescents. Without improved visibility and accessibility, existing services will remain underutilized, and reproductive health outcomes among adolescents will likely remain poor.

Access to reproductive health services (RHS) remains a fundamental determinant of adolescent sexual and reproductive health outcomes. In this study, access was notably limited. Of the 155 adolescents who were aware of RHS, only 86 (55.5%) reported that the services were available in their schools or communities, and less than half of these (47.7%) reported having actual access to these services. This limited access aligns with findings from Nmadu *et al.* in northwestern Nigeria, who highlighted that physical, cultural, and informational barriers significantly affect adolescents' access to RHS ³⁷.

The most common barriers reported by adolescents in this study included poor access roads (78.6%), lack of privacy (42.3%), and parental restrictions (42.3%). These factors suggest a mix of infrastructural, socio-cultural, and institutional limitations. Poor infrastructure, such as inadequate road networks and transportation challenges, often deters adolescents from visiting health facilities, particularly in semi-urban and rural parts of Nigeria, as was also observed by Ansha *et al.* in East Ethiopia ⁷⁸.

The influence of parental restriction is consistent with reports by Suleiman *et al.* who noted that Nigerian adolescents are often discouraged or forbidden by parents from visiting reproductive health facilities due to cultural norms that associate such visits with sexual promiscuity ⁸¹. This perception not only prevents adolescents from seeking care but also reinforces stigma surrounding the use of RHS. Similarly, Abuosi and Anaba found that adolescents in Ghana were heavily influenced by parental

attitudes, which significantly affected their willingness and ability to access available services ⁷³.

Privacy concerns emerged as a significant factor in this study, especially among those who feared being recognized by someone familiar in the clinic or questioned about their presence. This finding supports Newton-Levinson *et al.* who emphasized that perceived and real breaches of confidentiality are major deterrents to adolescent health service access, especially in settings where services are not specifically designed to be youth-friendly ⁵³.

In terms of information flow, many adolescents were unaware of where to access services, despite their availability. Only 41.9% mentioned government hospitals, and 23.3% named private clinics as known locations. Alarming, 11.6% reported having no knowledge of where RHS could be accessed at all. This knowledge gap is similarly reflected in studies from Southeast Nigeria and Plateau State, where adolescents lacked adequate information on facility-based services due to insufficient school and community health education programs ^{3,30}.

Additionally, accessibility perceptions varied. While a few respondents believed access to RHS was available “a little” (11%) or “somehow” (21.3%), the majority (62.6%) did not respond, which may indicate discomfort or lack of clarity about access. This indifference reflects low engagement and trust in health systems, as similarly observed in studies by Govender *et al.* where adolescent girls cited negative provider attitudes and logistical difficulties as reasons for non-utilization ⁵⁷.

This study identifies multifactorial barriers—ranging from poor infrastructure and lack of privacy to parental and societal restrictions—as key factors limiting access to

RHS among adolescents in Oredo LGA. These findings reinforce the need for structural improvements in health service delivery, increased youth-centered outreach, and community sensitization to reduce stigma and encourage supportive environments for adolescent health-seeking behaviour.

Despite the existence of reproductive health services (RHS) in some health facilities within Oredo Local Government Area, their utilization by female adolescents remains extremely low. This study found that only 5.2% (8 out of 155 respondents who were aware of RHS) had accessed any reproductive health service within the previous six months. This poor utilization rate is consistent with studies from other regions of Nigeria and sub-Saharan Africa, which have reported similarly low engagement with available services among adolescents ^{30,82}.

Among those who utilized RHS, the most commonly accessed service was reproductive health information and education (50%), followed by pregnancy testing (12.5%) and voluntary counseling and testing (12.5%). These trends suggest that adolescents are more likely to seek services that involve minimal clinical procedures or judgment from providers. A study conducted by Odo *et al.* in Enugu State similarly reported that adolescents preferred information-based services over medical or diagnostic services due to fear of being stigmatized or misjudged by healthcare workers ³.

Key personal and social factors influencing utilization were peer encouragement (75%), parental influence (25%), and partner influence (25%). This suggests that adolescents are significantly affected by their social environment when deciding whether to seek RHS. Govender *et al.* observed similar dynamics among adolescents

in South Africa, where peer networks served both as enablers and barriers to service utilization depending on group norms and perceptions ⁵⁷.

Service-related factors also played a critical role. All 8 respondents (100%) who accessed services identified affordability as an important factor. Additionally, privacy was a consideration for 62.5% of them. These findings highlight the importance of youth-friendly service attributes such as confidentiality, affordability, and non-judgmental care. Newton-Levinson *et al.* stressed that adolescents are more likely to use services that respect their privacy and treat them with dignity, particularly in culturally conservative environments ⁵³.

Perceptions of service providers further illustrate the barriers to utilization. A majority of the adolescents who visited facilities described staff as judgmental (62.5%) or unnecessarily inquisitive (37.5%), while only 12.5% found them professional. This aligns with findings from Suleiman *et al.* and Femi-Adebayo *et al.* who reported that adolescents in Lagos and Zaria avoided RHS facilities due to fear of being harshly treated or ridiculed by providers ^{81,83}.

Moreover, broader sociocultural constraints such as parental disapproval, religious norms, and societal stigma continue to undermine utilization. As noted by Abuosi and Anaba in Ghana, many adolescents perceive health facilities as unsafe spaces for discussing or managing reproductive health, especially in the absence of youth-specific service models ⁷³.

In summary, the utilization of RHS by female adolescents in Oredo LGA is significantly constrained by a combination of social, personal, and systemic factors. Peer and parental support, service affordability, privacy, and provider attitude

emerged as critical determinants of service use. Addressing these barriers will require a multifaceted approach that includes community engagement, provider training on adolescent-friendly care, and expansion of accessible and confidential reproductive health services tailored to the needs of adolescents.

5.2 CONCLUSION

This study assessed the knowledge, availability, accessibility, and utilization of reproductive health services (RHS) among female adolescents in Oredo Local Government Area, Edo State. The findings revealed significant gaps in knowledge and awareness of RHS, with the vast majority of adolescents demonstrating poor understanding of key reproductive health concepts and services. Despite the presence of some youth-friendly reproductive health services in health facilities, awareness of their availability was low, and actual utilization was critically limited.

Barriers to access and utilization were both structural and socio-cultural. These included poor infrastructure, lack of privacy, negative provider attitudes, parental restrictions, and fear of social stigma. Peer influence and parental support were notable factors influencing whether or not adolescents sought care. The quality of service delivery—especially the friendliness, confidentiality, and professionalism of healthcare providers—emerged as essential to improving adolescents’ willingness to use available services.

Overall, the study underscores an urgent need for targeted interventions to improve reproductive health literacy among adolescents, promote awareness of available services, and create supportive environments for service uptake. This requires a multisectoral approach involving schools, healthcare providers, parents, community leaders, and policy makers to ensure that adolescent girls are equipped with the

knowledge, access, and confidence to seek and use reproductive health services safely and effectively.

5.3 RECOMMENDATION

The findings of this research shows that there is a huge lacuna in the awareness, accessibility and utilization of AFSRHS among female adolescents, who are indeed the leaders and builders of tomorrow. In most cases, when young people are unable to access these services in a timely fashion, they resort to harmful practices which both place an increased burden on societal resources, and could in fact lead to increased mortalities. The following are recommendations from the findings of this study.

1. Improve Knowledge of Reproductive Health Services

- Integrate comprehensive sexuality education into the school curriculum, especially at the junior and senior secondary school levels, to improve menstrual knowledge, contraception, STI prevention, and safe sexual practices.
- Organize school-based reproductive health seminars and outreach programs in collaboration with local health authorities and NGOs.
- Train teachers and peer educators to serve as informed, non-judgmental sources of reproductive health information.

2. Strengthen Awareness and Availability of RHS in Health Facilities

- Establish and publicize adolescent/youth-friendly corners in existing public health facilities across Oredo LGA.
- Ensure consistent availability of essential adolescent RHS such as family planning, STI testing/treatment, counseling, and HIV testing.
- Use social media, school bulletins, and local radio/TV to increase awareness about the types and locations of RHS available to adolescents.

3. Address Barriers to Access

- Improve the physical accessibility of health facilities by addressing road conditions and ensuring that facilities are located within reasonable distance of adolescent populations.
- Enhance privacy and confidentiality in service delivery to build adolescents' trust in health systems.
- Engage parents and community leaders to reduce cultural and moral restrictions that hinder adolescents from accessing RHS.
- Train healthcare providers on adolescent-friendly standards, including communication, confidentiality, and non-discriminatory care.

4. Promote Utilization of RHS

- Make RHS services free or highly subsidized to eliminate financial barriers to use.
- Create adolescent peer support and referral groups to encourage uptake through positive peer influence.
- Conduct regular evaluations of service providers to monitor and improve adolescent satisfaction with healthcare interactions.
- Develop mobile health outreach services and school-based clinics to deliver RHS directly to adolescents in underserved areas.

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APPENDIX 1:

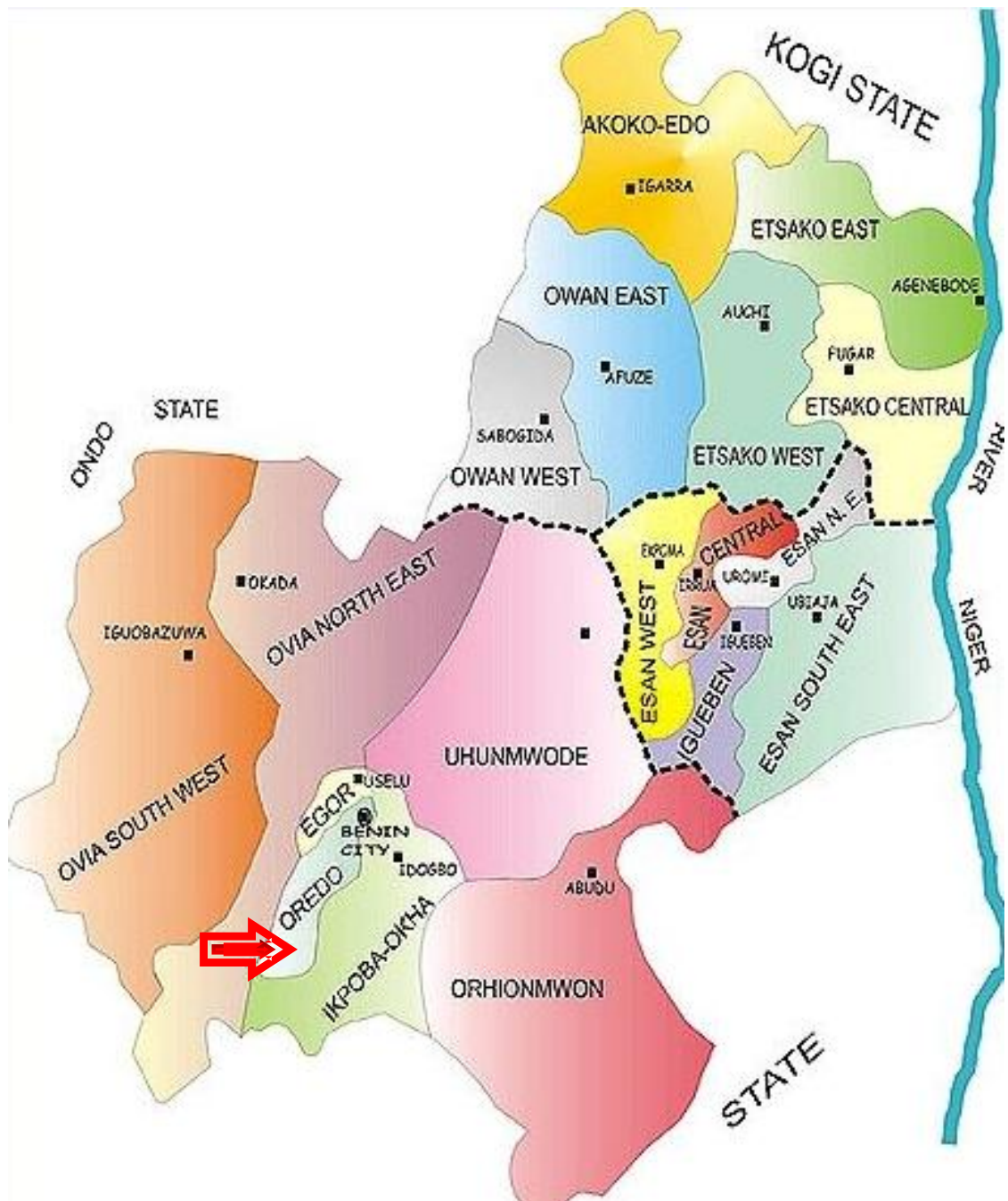


Figure 2: Map of the Local Governments in Edo State Showing Oredo LGA ^{93, 94}

APPENDIX 2:

INFORMED CONSENT FORM

Greetings, my name is Enobong Stanley Uwah and I am a postgraduate student of the Community Health Department, College of Medical Sciences, University of Benin, Benin City (Masters of Public Health). I would like to ask for your participation in this study. This information will be used in the research to find out the “Knowledge, access, and Utilization of Sexual and Reproductive Health Services in Oredo, Benin City”.

We very much appreciate your participation in this survey. Your identity will be kept completely safe, and any information that you provide will be used only for this research, and cannot be traceable back to you.

Participation in this survey is voluntary and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this survey since your views are important.

Kind Regards

I voluntarily agree to be part of this research

.....

.....

(Researcher sign)

(Participant sign or

thumbprint)

APPENDIX 3:

ETHICAL APPROVAL LETTER



MINISTRY OF HEALTH

P.M.B. 1113
Benin City, Edo State,
Nigeria.

Tel.....
Fax.....
E-Mail.....

Our Ref: Ha.737/5/T¹/027
Your Ref:

19th April, 2022

Attention: Uwah Enobong Stanley

Dept of Medical Laboratory Science,
School of Basic Science,
College of Medical Science,
University of Benin,
Benin City.

RE: APPLICATION FOR RESEARCH ETHICAL CLEARANCE

I am directed to acknowledge the receipt of your request on the above stated matter.

Sequel to the review of your proposal and recommendations by the state ethical clearance committee, you are hereby given approval by the Honourable Commissioner to conduct the research on **Assessment of the Factors Affecting the Utilization of Reproductive Health Services in Public Health Facilities by Female Adolescents in Oredo Local Government Area, Edo State, Nigeria.**

You are to ensure confidentiality of the respondents and make available to the library of the Ministry of Health, a copy of your research findings.

Accept the assurances of the highest regard of the Honourable Commissioner.

Dr. Iraoya M. Howiks
(Director, Health Planning Research and Statistics)
For: Honourable Commissioner.

APPENDIX 4:

APPROVAL FOR DATA COLLECTION



EDO STATE
MINISTRY OF
EDUCATION

P.M.B. 1058 BENIN CITY, NIGERIA
Email: mln.edu @edostate.gov.ng
Hotline: 08182737088

Our Ref: STT/1465T2/143

28th November, 2022

Enobong Uwah,
Department of Community Health,
College of Medical Sciences,
University of Benin,
Benin City.

**RE: APPROVAL TO COLLECT DATA FROM STUDENTS IN
SECONDARY SCHOOLS**

I am directed to refer to your letter dated 17th November, 2022 on the above subject matter and to convey to you the Ministry's approval to collect data for your research work Titled "Assessment of Factors Affecting the Utilization of Reproductive Health Services In Public Health Facilities by Female Adolescence in Oredo L.G.A With QUESTIONNAIRES ONLY from the following Schools; Idia College, Emotan Girls College and Imaguero College, Benin City.

2. Consequently, you are thereby advised to keep the result of your findings confidential as it would be very unethical to disclose them to the public.
3. Accept the assurances of the Honourable Commissioner for Education.

Aigbe E. (Mrs.)
For: Fn. Permanent Secretary

APPENDIX 5:

ADOLESCENT QUESTIONNAIRE

SECTION 1: PERSONAL PARTICULARS

Date.....

1. Designation/ID
2. Age of respondent: [] (In years)
3. Ethnicity:
4. Religion:
5. Who are you living with? Both Parents [] Mother Only [] Father Only []
Relatives [] Husband [] Boyfriend [] Other
[mention].....
6. Level of Education: (Father).....
(Mother)
7. Occupation: (Father).....
(Mother)
8. Level of Education: Primary Education [] Secondary Education [] Tertiary []
9. What is your occupation? Student [] Unemployed [] Civil Servant [] Business []
Other [Mention]
10. Average monthly income of
respondent:

SECTION 2: KNOWLEDGE OF YOUTH/ADOLESCENT REPRODUCTIVE HEALTH

11. At what age did you attain menarche (When you started seeing your period)?.....
N/A []
12. Age at coitarche (first sexual exposure) N/A []

13. Are you able to calculate your menstrual cycle? Yes [] No [], If YES, Indicate.....
14. Are you currently in an intimate relationship (with a boy)? Yes [] No []
15. Are you sexually active (last 6 months)? Yes [] No []
16. If YES, do you use any method of contraception? Yes [] No []
17. If YES in (11) above, specify which method(s) (i) Injectables (ii) OCPs (iii) Male condom (iv) Female condom (v) Emergency contraceptive (vi) Implants
18. What are the risks of engaging in sexual relationships at a young age?
-
19. HIV preventive behaviours includes (i) Avoiding drinking from the same cup (ii) Abstinence (iii) Monogamy with safe partner (iv) Use of Condom where necessary (v) Commercial sex work (vi) Use of unsterilized sharps
20. STIs can be transmitted via (i) mosquito bite (ii) unprotected intercourse (iii) Kissing (iv) oral sex (v) Anal sex (vi) Mother to child
21. Family planning methods that can also help to prevent STI/HIV (i) Injectables (ii) OCPs (iii) Male condom (iv) Female condom (v) Emergency contraceptive (vi) Implants
22. Is it possible for pregnancy to result from a single sexual episode? Yes [] No [] I don't know []
23. Is drug abuse a risk behaviour for sexual and reproductive health? Yes [] No [] I don't know []

24. What is your source of Sexual/reproductive health knowledge? Parent/Guardian
Friend/Peer Teacher Television/Radio social media/Internet Health
centre awareness Other.....

SECTION 3: AWARENESS OF YOUTH-FRIENDLY SEXUAL AND REPRODUCTIVE HEALTH SERVICES

25. Have you ever heard about youth-friendly and reproductive health services? No
Yes I don't know

26. If YES, from whom or where did you hear from? Parent/Guardian Friend/Peer
 Teacher Television/Radio Social Media/Internet Health centre
awareness Other.....

27. What kind of youth-friendly sexual and reproductive health services do you know?
– **Tick the one(s) that you know.** I don't know any Information and education
 HIV Voluntary Counselling and Treatment STI testing/treatment
Pregnancy testing Abortion/post-abortal care Contraception/Family planning
 Antenatal care Delivery services

28. Do you have such kind of services in your school/community? No Yes I
don't know

29. What kind of youth-friendly sexual and reproductive health services do you have
available in your community? Tick the one(s) available. I don't know
Information and education HIV Voluntary Counselling and Treatment STI
testing/treatment Pregnancy testing Abortion/post-abortal care
Contraception/Family planning Antenatal care Delivery services

30. Who told you about it? Parent/Guardian [] Friend/Peer [] Teacher []
Television/Radio [] Social Media/Internet [] Health centre awareness []
Other.....

31. Where can one access these services in your community? Government hospital or
clinic [] Private hospital or clinic [] NGO [] Drug shop or pharmacy [] I do not
know of any [] Other
(specify)

**SECTION 4: ACCESSIBILITY TO SEXUAL AND REPRODUCTIVE
HEALTH SERVICES**

32. Are the SRH services accessible to adolescent between the ages 15 to 19 years in
your community? No [] Yes [] I don't know []

33. Any challenges to accessing these services? Yes [] No []

34. If YES, what is/are the challenge(s)? Too far [] Bad roads [] Too exposed []
Can't afford [] Long ques [] Unfavourable operating hours [] I will meet known
people there [] My parents will not allow me [] SRH services are only meant for
adults []
others.....
.....

35. To what extent are the services accessible to adolescent? A little [] Somehow []
A lot [] others (specify).....

36. Has there ever been a time when you had a sexual/reproductive health need, but
did not know how to go about it? (*Give reasons if YES*) Yes [] No []
Reason(s).....
.....

37. What do you recommend to improve adolescent awareness of the available SRH services for youth/adolescents here?.....

SECTION 5: UTILIZATION OF SEXUAL AND REPRODUCTIVE HEALTH SERVICES

38. Which of the following do you think influences the utilization of adolescent reproductive health services? (**select as many as may apply**) Parental decision Morals Cultural beliefs Religious beliefs Influence from friends Partner Cost of reproductive health care services

39. Have you sought for any sexual/reproductive health service(s) in past 6 months? Yes No

40. If YES above, what services did you utilize? Information and education HIV Voluntary Counselling and Treatment STI testing/treatment Pregnancy testing Abortion/post-abortal care Contraception/Family planning Antenatal care Delivery services

41. What factor(s) influenced your decision? Parents/family Friends Partner Church Cultural beliefs Cost others (specify).....

42. How would you rate the service provider who attended to you? Friendly Professional Harsh Rude Judgemental Asked too many questions I was shy because of the sex of the health care provider Other (specify)

43. Was there enough confidentiality/privacy? Yes No

44. Did you find the services affordable? Yes [] No []

Other.....

APPENDIX 7:

HEALTH PROVIDER INTERVIEW GUIDE

Facility

ID.....

Welcome. Thank you for taking your time to come for this interview. I would like to talk to you about yourself, your experience with Youth- friendly sexual and reproductive health and your knowledge about sexual and reproductive health issues. Some of the issues we cover may be sensitive and you may feel embarrassed or uncomfortable answering the questions, feel free to express any concerns you may have. Now, let's start our discussion.

1. Age
2. Designation
3. Religion
4. Ethnicity
5. Level of Education
6. Duration / Length of Service
7. Have you received any training on AFHS/ASRH?
8. Do you feel confident dealing with adolescent clients?
9. What is the level of knowledge of SRH among female adolescents visiting this centre?
10. What is your own view about RHS awareness by female adolescents/youths?
11. What is your own view about RHS accessibility by female adolescents/youths?
12. What is your own view about RHS utilization by female adolescents/youths?

13. How much do you think SRHSs are accessible to adolescents?
14. What are the challenges or limitations to adolescent awareness?
15. What are the challenges or limitations to adolescent access to ASRH services?
16. What are the challenges or limitations to utilization of RHS among female adolescents?
17. What do you think could be done to promote awareness, access to and utilization of RHS among adolescent?

APPENDIX 8:

HEALTH FACILITY CHECKLIST

Facility

ID.....

1. Do you offer Youth friendly reproductive health services (RHS) in this facility?
Yes [] No []
2. If YES, what RHS do you offer in your facility? - **Tick the correct option(s)**
 - a. Information/advice on sexual and reproductive health concerns
 - b. STIs/RTIs treatment as per the national protocols
 - c. Provision of condoms free of cost
 - d. Provision of contraceptives incl. emergency contraceptive pills free of cost
 - e. Provision of iron folic acid (IFA) tablets
 - f. Provision of referral services
 - g. Adolescent Health services (like above) through outreach activities
3. Which of these services is/are most utilised by female adolescents?
 - a. Information/advice on sexual and reproductive health concerns
 - b. STIs/RTIs treatment as per the national protocols
 - c. Provision of condoms free of cost

- d. Provision of contraceptives incl. emergency contraceptive pills free of cost
 - e. Provision of iron folic acid (IFA) tablets
 - f. Provision of referral services
 - g. Adolescent Health services (like above) through outreach activities
4. What are your operating hours?.....
5. Which day(s) of the week do you offer RHS? (**Tick all the days applicable**)
 Sunday Monday Tuesday Wednesday Thursday Friday Saturday
6. How long is the typical waiting time? Short (less than 1 hr) Very short (less than 30 mins) 1hr and above
7. Can adolescents be seen in the facility without the consent of their parents or spouses?
 Yes No
8. Are the following conditions met? (**From observation and Interview**)–**Tick all that apply**
- a. Signboard with clinic information and policy on confidentiality on display
 - b. Consultation/examination room ensures privacy
 - c. Separate reception/entrance for adolescents to access services?
 - d. Records of adolescent clients kept under lock and key
 - e. Clean and functional toilets available
9. What is the average age of the young persons seeking RHS in this centre?
10. Is there a feedback mechanism to receive comments and complaints? Yes No

11. If YES above, what mode of feedback is available? Feedback box Telephone
E-mail Face-to-face Others
(specify).....
12. What level of anonymity is allowed in feedbacks? None Full anonymity
Partial anonymity
13. Are there specific SRH-focused training programmes organised for health care
workers in this facility? YES NO
14. If YES, how often does it happen in a 12-month period? 1-2 times 3-4 times
 ≥ 5 times