FACTORS INFLUENCING YOUNG WOMEN'S ACCESS TO SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS INFORMATION AND SERVICES IN NORTHERN NIGERIA

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A thesis submitted in partial fulfilment of the requirement for the degree of

Master of Science in Public Health

by

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Nigeria

Declaration:

Where other people's work has been used (from either a printed or virtual source, or any other source), this has been carefully acknowledged and referenced in accordance with academic requirements.

The thesis **"Factors influencing Young Women's Access to Sexual and Reproductive Health and Rights Information and Services in Northern Nigeria"** is my own work.

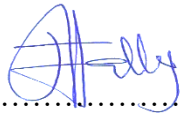

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Table of Contents

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
AGYW	Adolescent Girls and Young Women
ASRH	Adolescent Sexual and Reproductive Health
AYP	Adolescents and Young People
CSE	Comprehensive Sexuality Education
DREAMS	Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe
FCT	Federal Capital Territory
FLHE	Family Life and Health Education
FMOH	Federal Ministry of Health
GBV	Gender Based Violence
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development
LGA	Local Government Area
MHM	Menstrual Health Management
MMR	Maternal Mortality Ratio
NDHS	Nigeria Demographic Health Survey
NGO	Non-Governmental Organization
NHActs	National Health Act
NHP	National Health Policy
NRHP	National Reproductive Health Policy
PHC	Primary Health Care
SRH	Sexual and Reproductive Health
SRHR	Sexual and Reproductive Health and Rights
SSA	Sub-Saharan Africa
STIs	Sexually transmitted Infections
USAID	U.S. Agency for International Development
YFHS	Youth Friendly Health Services

DEFINITION OF TERMS

Adolescence - Adolescence is a period between childhood and adulthood, and the period is marked by the beginning of puberty. Adolescents are categorized into early adolescence from age 10 to 14 and older adolescence from age 15 to 19 (1).

Adolescents – The United Nations defines adolescents as persons aged 10-19years and youth as those between 15- 24years and young people as those between 10-24years (2).

Access – 'is seen as resulting from the interface between the characteristics of persons, households, social and physical environments and the characteristics of health systems, organizations and providers' (3).

Comprehensive sexuality education (CSE) – 'a rights-based approach that seeks to equip young people with the knowledge, skills, attitudes and values they need to determine and enjoy their sexuality–physically and emotionally, individually and in relationships' (4).

Digital Health – 'Digital health is the use of mobile phones and other wireless technology to promote health objectives' (5).

Early marriage/child marriage – 'Any marriage carried out below the age of 18 years, before the girl is physically, physiologically, and psychologically ready to shoulder the responsibilities of marriage and childbearing'. According to the 2003 Child Rights Act (CRA), under civil law, the age of marriage as 18 for both sexes (6).

Early sexual debut – 'having had first sexual intercourse at or before the age of 14years' (7).

Family Life and Health Education - 'a planned process of education that fosters the acquisition of factual information, formation of positive attitudes, beliefs and values, and development of skills to cope with the biological, psychological, socio-cultural and spiritual aspects of human living' (8).

Northern Nigeria – states in North-central, North-west, and North-east region of Nigeria (9).

Out-of-school youth: **'**Out-of-school youth is any adolescent or young person that dropped out of primary or secondary school; never attended primary or secondary school; completed primary school but did not continue with secondary school' (10).

Reproductive health – 'a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and its functions and processes' (11).

Sexual Health - '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' (12).

Sexual and reproductive health 'is a state of physical, emotional, mental, and social wellbeing in relation to all aspects of sexuality and reproduction, not merely the absence of disease, dysfunction, or infirmity' (13).

Sexual and Reproductive Health and Rights - is “a state of physical, emotional, mental, and social well-being concerning all aspects of sexuality and reproduction, not merely the absence of disease, dysfunction, or infirmity” (13).

Sexual and Reproductive Health and Rights information - information’s on and access to services such as testing and treatment of sexually transmitted infections (STIs), including Human Immunodeficiency Virus (HIV), modern and emergency contraception, safe abortion, menstrual health management, services related to pregnancy, counselling and referrals (14).

Youth Friendly Health Service – ‘They are able to attract young people, responsively meet their needs effectively, and succeed in retaining these young clients for continuing care. Youth-friendly services should offer a wide range of SRH services relevant to adolescents’ (15).

Adolescent girls – older adolescent girls between 15 – 19years (16)

Young women – older adolescent girls and young females between 15–24years (16)

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ABSTRACT

Introduction - Young women in Northern Nigeria are at a higher risk of sexual and reproductive health and rights (SRHR) related problems. They lack adequate access to comprehensive SRHR information and services, making them vulnerable to taking uninformed decisions, leading to poor sexual and reproductive health outcomes and adverse social consequences. This study explores factors influencing young women's (15-24years) access to SRHR information and services.

Methodology – This study used a review of literature and policy documents. The findings of this study was analysed using the social-ecological model.

Result – Access to SRHR information and services is limited among young women in Northern Nigeria. Healthcare service provider attitudes, religion, taboos, socio-cultural practices, gender norms, social demographic factors related to age, education, marital status, place of residence, socio-economic status were the major factors accountable for this limited access.

Conclusions - Multiple, interconnecting obstacles limits young women's access to SRHR information and services at individual, interpersonal, organizational, community and policy levels. Furthermore, in Northern Nigeria, young men and women's disposition to accessing SRHR information and services are deeply rooted in religious, socio-cultural, and gender norms.

Recommendations – The government and relevant stakeholders should use a comprehensive, multilevel approach in designing interventions that will respond to layered barriers to access to SRHR information and services at all levels. Continuous advocacy targeted at community and religious leaders, raising community awareness and support is required to mitigate many of the factors that result in young people's poor SRHR outcomes, especially young women in Northern Nigeria.

Keywords: "Young women", "access", "sexual and reproductive health and rights", "information", "Northern Nigeria".

Word count: 13170

INTRODUCTION

Adolescence is marked by the beginning of puberty, and this period is between childhood and adulthood. Adolescents are individuals between 10–19years, youths are 15-24years, and young people are between 10–24year (10). There are approximately 1.8million adolescents and young people (10–24years) globally, and 89% live in developing countries (17,18). Adolescents and young people (AYP) represent 62% of Nigeria's population. In contrast, this significant proportion of AYP represents a great potential for the future, if healthy and well resourced. AYPs current poor SRHR status poses a huge national challenge. Nigeria has a high burden of adolescent's health problems because they are vulnerable and have unmet SRH needs (19,20).

I have been working in the field of SRHR with a focus on HIV/AIDS, gender-based violence and adolescent sexual and reproductive health for over five years in various capacities with multilateral organizations and (NGOs). My interest in this study was borne out of my work experience building capacities and providing life skills for AYP in schools, National Orientation Camps for Youth Corps members in Nigeria. My participation in the UNICEF "ALL IN" project on young people's involvement in HIV programming and several interventions for young people revealing issues young people face in accessing SRHR services, especially young women who experience a greater SRHR related problems, was my reason for choosing to write on this topic.

This thesis presents a literature review that explores factors influencing young women's (15-24years) access to SRHR information and services in Northern Nigeria. The thesis is organized into seven chapters. Chapter one is an overview of background information about Nigeria with a focus on Northern Nigeria. Chapter two covers the problem statement, justification, objectives, methodology, a description of the analytic framework used and limitation of the methodology. The conceptual framework adopted for the analysis is the social-ecological model. Chapter three presents the result based on the objectives and model. Chapter four describes existing health policies in Nigeria targeting young people's SRHR in Nigeria, focusing on adolescent girls and young women (AGYW). Chapter five presents evidence-based interventions that have been successfully implemented both at the national and international levels. Chapter presents the usefulness of the conceptual framework, describes the findings and limitations of the study. Chapter seven is the final chapter and covers conclusions and recommendations for action.

CHAPTER ONE BACKGROUND

This chapter presents Nigeria's profile, geography and population, social-cultural, religious norms and gender roles, education, health situation, health systems, and young women's sexual and reproductive health and rights (SRHR), with a focus on Northern Nigeria.

1.1 Geography and population

The largest country in Africa is Nigeria, and the country is the 7th largest globally, with over 200 million people (21). The country has a young demographic composition with a median age of 18 years. One-third of the population are adolescents and young people; thirty-three per cent are young people (10-24year), and about 49% are females. Fifty-one per cent of the female population are women of reproductive age 15–49years (22).

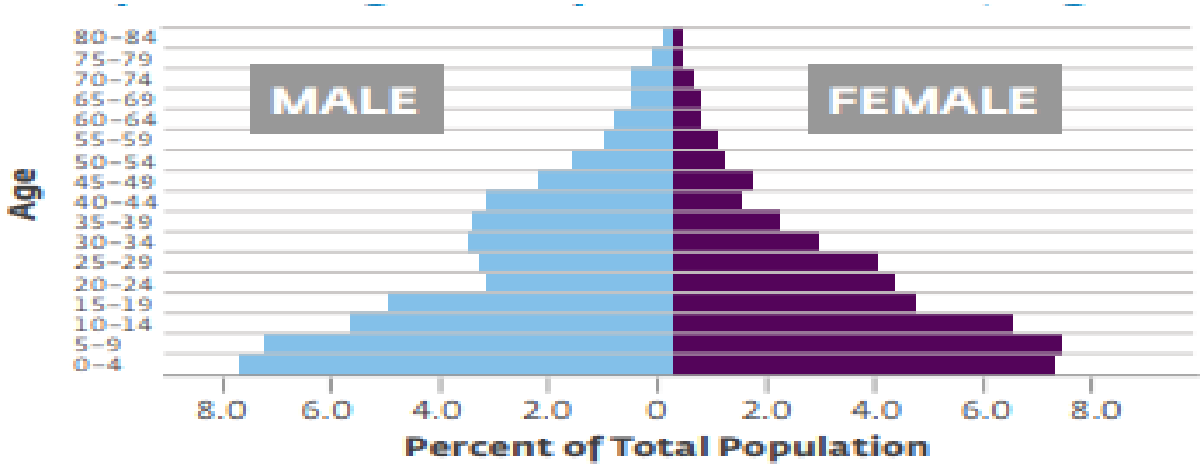

Figure 1: Age-sex Pyramid of Nigeria's Population (23)

Nigeria shares boundaries with Cameroon, Niger Republic, Chad republic and Benin Republic and is located on the west Africa coast with an area of 923768km^2 (24). Administratively, the country runs a three-tier system of government at the federal, state and local levels. Nigeria is composed of 36 states and the Federal Capital Territory (FCT), and the country is divided into 774 Local Government Area (LGA) and 9,565 political wards. The seat of government is in FCT-Abuja, which is the capital of the country. The states are further grouped into six geo-political zones: North-Central, North-West, North-East, South-South, South-West, and South-East, for administrative and political purposes (25).

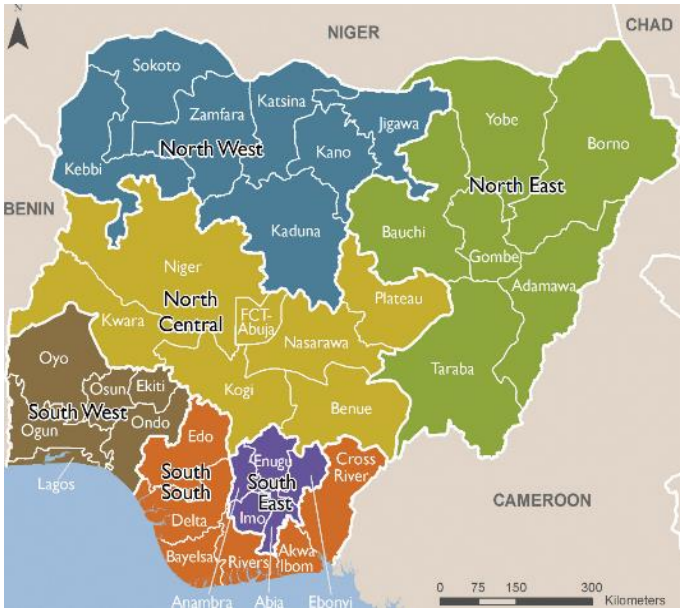

Figure 2: Map of Nigeria showing Geo-political Zones (26)

1.2 Socio-cultural, religious norms and gender roles

The states and regions in Nigeria are distinct with their population density, ecology, language, norms, settlement patterns, economic opportunities, and historical background. The primary language spoken officially in Nigeria is English. There are approximately 374 ethnic groups who speak over 500 languages (27). Three ethnic groups are predominant; Igbo in the South-East, Yoruba in the South-west and Hausa in the Northern region, which comprises about 60% of the country's population. Slightly above half of the population are Muslims (54%), and slightly below half are Christians (46%), with a minority as traditional worshippers (less than 1%).

In Northern Nigeria, most people practice Islam, and six in ten young women between 15-19 years live in this region. Majority of the states in the Northern part of Nigeria function predominantly under a set of Islamic laws and norms known as the Sharia law, which governs the political, economic, religious and social conducts (25,28).

Patriarchal and patrilineal social systems dominate most Nigerian cultures and communities, with beliefs and customs perpetuating women's inequality (29). Despite globalization's growing impact, traditional, socio-cultural norms and practices remain strong in many Nigerian communities. The tension between traditional values and modernization is visible in many areas, especially in gender and human rights issues, young people's development and behaviour, health beliefs and health-seeking behaviour at the community and household levels (22).

1.3 Economy

Oil export is the primary source of national revenue; it accounts for 90% and 75% of export earnings and government revenue. Nigeria has a Gross National Income of 4,910 per capita, and the country's Gross Domestic Product (GDP) ranks 30th in the world (30). The impact of the Corona Virus, drop in oil price and GDP, has widened the fiscal and external position of the country. This has led to a significant requirement of public finances, including health expenditures which had an implication on healthcare because state and LGA financing depends on the funds allocated by the federal government (30,31).

Nigeria ranks 161 out of the 189 countries with a low Human Development Index (HDI) value. despite an increase of 15.9% (0.465 in 2005 versus 0.539 in 2019) (30). According to the African Development Banks, more than 80% of young people in Nigeria are impoverished, with young women and youth living in rural areas being the most affected. The unemployment rate is high, with an estimated 26.06 million people not having a job (32). In 2011, the international poverty line was $1.90 per person per day. There has been a slight decrease in extreme poverty per head from 53.5% in 2009 to 40.1% in 2019, and poverty levels remain high. This translate to 82.9 million people living below national standard (33,34).

1.4 Education

The Ministry of Education supervises the education system in Nigeria. Local Governments are responsible for implementing policy for state schools and state-controlled public education on a regional level. The education system comprises of kindergarten, primary, secondary and higher education. Government-funded education is free, but it is not compulsory to attend at any level, and certain groups like people living with disabilities and nomads are underserved (35).

Sixty-eight per cent of Nigerians are literate, with a higher literacy rate among men (72%) than women (53.1%). Literacy is highest in the South-west (80.6%) and lowest in the North-west

(29%); it is also significantly higher among urban dwellers (86.4% men and 74% women) compared to rural dwellers (59.5% men and 35.4% women) (25).

1.5 Health systems

The Federal Ministry of Health (FMoH) coordinates the health systems. The National Health Act (NHAct) defines the healthcare system organization and service provider's relationship between the federal, state, and local government levels (36). The three government levels, which also serve as the public health care system and the private sector, share healthcare responsibility in Nigeria. NHAct provides the legal framework for implementing the National Health Policy (NHP). NHAct also provides the framework for the standard and regulation of health services. Primary healthcare is the bedrock of the health systems, and the FMoH is responsible for strengthening the PHC to achieve universal health care (37). The LGAs are accountable for providing the first level care at the primary health care centres (PHC) located in the political wards; the state government offers the secondary level care, while the federal government provides tertiary care for its services (22).

1.6 Health situation

Communicable, maternal, neonatal, and nutritional diseases are the leading cause of most death and disability in Nigeria (38). Life expectancy is 54 years and 57 years for men and women, respectively, which is lower than the average of 59 years in SSA (39). Nigeria is making progress towards the sustainable development goals (SDGs). The total fertility rate is 5.3 birth per woman, and the contraceptive prevalence rate is 36%. Maternal Mortality Ratio (MMR) is 512 per 100,000 live births, under-five and infant mortality is 132 and 39 per 1000 live births, respectively.

Nigeria is one of ten countries with the highest MMR and contributes about two-third of MMR in West and Central Arica (40). Although maternal and childhood mortality have declined since 2003, there are major concerns about geographical disparities in distribution and reduction rates. Data shows an unacceptable high regional inequality with a maternal death rate of almost ten and six times greater in the North-east and North-west than in the South-west part of the country with the lowest rate (22). Young women in Northern Nigeria are at a higher risk of reproductive health problems because of gender inequality deeply rooted in their culture and accepted norms (41).

Despite a decrease in the HIV prevalence from 3.0% in 2015 to 1.5% by 2019, 1.9 million people are living with HIV, and Nigeria has one of the highest rates of new infections (60%) in Sub-Saharan Africa (SSA) and contributes 38% of new infections in West Africa (42,43). Malaria is still a life-threatening disease and contributes 23% of all malaria deaths globally at the end of 2019 (44). Overall young women are more likely to acquire HIV than their male counterparts. Among adolescents (15-19years), HIV prevalence was 0.2% (women 0.3% and men 0.1%), and 0.8% among young adults (20-24years) (1.3% in women and 0.3% in men) (45).

1.7 Security situation

Nigeria continues to experience increasing levels of insecurity and unrest, especially in Northern Nigeria. Boko Haram incidence in the North-east and the Fulani herdsmen and farmers clash in North-Central has left this region of Nigeria in a fragile state. Adolescent girls and women are often disproportionately affected by restiveness and instability, worsening their already poor sexual and reproductive health (SRH) status. The militancy issue in the Niger delta, insurgency and the unstable situation has severe implications for the health systems, including poor health

outcomes of individuals, loss of health facilities, death of healthcare workers, rape and abduction of adolescent girls (46,47).

1.8 Young women's sexual and reproductive health and rights

Adolescents and young people (AYP) represent one-third of Nigeria's population, yet their SRHR needs and priorities are often neglected. The poor SRHR status of adolescents and young people generally represents a huge national concern (48).

The median age at first sex for AYP (15-24years) is 17years. Twenty per cent of young women (15-24 years) have had sex before age 15. Nineteen per cent and 30% of adolescent girls between 15-19years have started to give birth and were married, respectively (49). The likelihood for young women to start giving birth in Northern Nigeria is fivefold more than in other regions (28% vs 6%). The adolescent fertility rate is 106 per 1000 live birth and is highest in Northern Nigeria, with 6.6 children per woman in North-west, which is higher than the national average. One in five young women age 15-19 are already mothers or pregnant with their first child, and the likelihood for young women in rural areas to have started childbearing is three times more than those in urban areas (27% versus 8%). Married young women are less likely to use contraceptives and only 12% of young women today use a modern contraceptive type (25).

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CHAPTER TWO PROBLEM STATEMENT AND JUSTIFICATION

This chapter consists of the study problem statement, justification, objectives, methodology used, search strategy, analytical framework and limitations of the methodology.

2.1 Problem statement

Young women, especially those in Northern Nigeria, are at a higher risk of SRHR problems. Many young women do not have adequate access to SRHR information, counselling and services, making them vulnerable to taking uninformed decisions, leading to poor reproductive health outcomes and adverse social consequences (21,50). Young women in Northern Nigeria (15-24years) experience a higher disproportionate burden of SRHR issues than young men of the same age (51,52). The problems they face include early motherhood resulting from early marriage, low contraception use, gender-based violence (GBV), incorrect and inconsistent use of condoms which may lead to unintended pregnancy and unsafe abortions. The outcomes of these SRHR problems may shorten their productive lives or have a lifetime effect on young women's health (53,54).

Previous studies in Northern Nigeria have shown consistently higher rates of child marriage, higher adolescent fertility rate, lower contraceptive use, and fewer childbirth deliveries in health facilities than young women in the Southern part of Nigeria (25,55,56). Like countries in SSA, adolescents in Nigeria are reaching puberty early and starting to have sex before age 15, especially among adolescent girls (45) due to lack of information on SRHR, sexual coercion and early marriage (57–60).

The median age of sex is highest in Northern Nigeria (15years) compared to those in Southern Nigeria (20years) (7). Several studies have associated starting sex at an early age with an increased risk of having multiple sexual partners, engaging in risky sexual behaviours and unprotected sex. This increases young women's risks to sexually transmitted infections (STIs), including Human Immunodeficiency Virus (HIV) and unintended pregnancy (61–65). HIV infections are highest among AYP, and adolescent girls and young women (AGYW) are twice as likely to be infected than their male counterparts. Risky behaviours, sexual coercion, low-risk perception, transactional sex, and gender inequality among adolescents, especially girls, drive the prevalence of HIV (42,45).

Like many countries in Africa, restrictive laws and policies such as abortion law and age of consent hinder AYP, particularly young women, from accessing SRHR services (66). Unsafe abortion contributes significantly to the burden of maternal and morbidity in Nigeria. Recent evidence indicated that nearly 2million abortions occur annually, equivalent to a rate of 45.8 abortions per 1000 women age 15-49. Teenage pregnancy is prevalent in Northern Nigeria, and unintended pregnancies are why most abortions occur (67). About two-third of the abortions were unsafe and highest amongst young women (68,69).

Young women want to avoid pregnancy but are not using modern contraceptives because of cultural beliefs, limited access, and inadequate information on contraception methods (70). Married and sexually active unmarried adolescents unmet need for family planning is lower than the national contraceptive prevalence rate (36%). The proportion of young women among the over 200 million Nigerians with an unmet need makes this a challenge for many young people (51).

A lack of access to comprehensive SRHR information and services for young women results in poor menstrual health management, high rates of untreated STIs, adolescent girls becoming mothers and dropping out of school, and unsafe abortions, leading to maternal and child morbidity and mortality (71–73). One in twenty-two women has a lifetime risk of maternal death, which is higher for adolescent girls in Northern Nigeria who are married as teenagers and give birth early (25,74). There is a higher risk of maternal death for women in rural areas in Northern Nigeria than Southern Nigeria because of poverty, low level of education, limited access to health facilities, religion, socio-cultural and gender norms and (25,40).

Young women require access to accurate, comprehensive SRHR information and services to cope with the changes they are experiencing in their sexual and reproductive lives. This study explores the factors influencing young women's access to SRHR information and services in Northern Nigeria.

2.2 Justification

Young people, especially young women, have a widely accepted right to comprehensive and accurate information, education and assistance on reproductive health. However, not enough is done to support young women to achieve this right and get the needed SRH services (75). Lack of SRHR information, level of education, poverty, gender inequality, the attitude of service providers, tradition, and social norms all play an essential role in influencing young women's access to SRHR information and services (53,76). Limited access to adequate reproductive health education programmes and friendly services are major contributors to the poor SRHR knowledge and behaviour among young people in Nigeria.

The challenge of young people's health problems, especially young women's SRHR health needs, has become increasingly well known in Nigeria and must be addressed. The challenges and implications of early sexual debut, early marriage, unsafe sexual behaviours, teenage pregnancy, unsafe abortion and increasing rates of STIs, including HIV, have been reported by several local and national surveys of young people (41,54,56,61,77).

Since the early 2000s, Nigeria has developed the necessary policies and introduced plans to enhance young people's access to adolescent's sexual reproductive health (ASRH) information and services, mainly through Youth Friendly Health Services (YFHS) initiatives and school-based Family Life and Health Education (FLHE). These interventions, however, did not meet the desired results despite their potential because of challenges in implementation and technical inadequacies that restrict coverage and impact. (78,79). Several barriers at the individual, family, community, health systems, national and sub-national policy levels hinder access to SRHR information and YFHS. About two-third of Nigerians live in the rural and peri-urban areas, which are poorly reached by interventions targeting ASRH, increasing the burden of SRHR in Nigeria.

Although there are several studies of limitations of young people's access to SRHR information and services in Nigeria, these studies usually combine young men and young women, not considering the unique situation of young women (80,81). In addition, most studies and reviews carried out in Nigeria combined the Southern and Northern Nigeria reports, which does not reflect the state of things in Northern Nigeria due to their unique context. Hence, this study aims to review factors influencing access to SRHR information and services among young women and provide

recommendations for best practices that can be contextualised into the available platforms (YFHS, community, and school systems) in Northern Nigeria.

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2.3 Objectives of the study

To explore factors influencing young women access to SRHR information and services in order to provide recommendations for policymakers, relevant stakeholders and program implementers that will promote young women's access to information and services in Northern Nigeria.

2.3.1 Specific objectives

1. To describe the knowledge, awareness and preferences of young women regarding SRHR information and services in Northern Nigeria
2. To identify the social-economic, cultural and health system factors influencing young women's access to SRHR information and services
3. To describe existing health policies and guidelines regarding young people's SRHR
4. To identify evidence-based interventions in similar settings that address key barriers to young women's access to SRHR information and services
5. To provide recommendations to policymakers, relevant stakeholders and program implementers that will promote young women's access to SRHR information and services in Northern Nigeria.

2.4 Methodology

I used a descriptive review of literature and policy documents in this study. I retrieved peer-reviewed literature from PubMed, Cumulative Index to Nursing and Allied Health Literature, Scopus and Medline databases. I accessed search engines (Google, google scholar) and relevant websites such as United Nations International Children's Emergency Fund, World Health Organization, United Nations Population Fund, International Planned Parenthood Federation (IPPF), Joint United Nations Programme on HIV/AIDS, U.S. Agency for International Development (USAID), FMOH, National Agency for Control of AIDS, Guttmacher Institute, Population Council, and other NGOs working in Northern Nigeria for published grey literature. The search terms used were: access, adolescent girls, young women, sexual and reproductive health and rights, information, education, services, Northern Nigeria, Nigeria, West Africa, Sub Saharan Africa. I searched various terms with the different factors of the five levels of the conceptual framework used. Boolean operators "OR", "AND" were used to connect the search terms to retrieve literature per relevance and citations. See Annexe I.

I retrieved only English articles from 2001–2021 except conceptual models developed in 1979 and revised in 1988 and 1996. I used the snowball technique to search the reference list of all articles cited, prioritising primary source articles. I used literature from the last 20years because some reports and primary source articles were published in early 2000. Due to limited articles, particularly on young women's access to SRHR information and services in Northern Nigeria, publications from other regions in the country and SSA about access to SRHR information and services were included. I also included studies that examine the knowledge, attitude and perception of SRHR and the impact of Northern Nigeria's religion and culture on access to SRHR information and services. Most of the reviewed literature target population were AYP; I only used findings for young women (15-24years) relevant to this study. I excluded publications focusing on key

populations, AYP's health-related behaviours not associated with access to SRHR information and services and utilization of SRHR services.

2.4.1 Analytic framework

Two conceptual frameworks on the access of SRHR information and services were reviewed to identify a framework most suitable for analysing the study's objectives. The frameworks are;

Levesque et al. 2013 (patient-centred) conceptual framework – Levesque Framework considers the perspective of access from both the health systems or the health provider and the patient. The model considers the dimensions and determinants that combine the demand-side and supply-side factors, allowing for operationalising access to healthcare in receiving services (3).

Social-Ecological Model (SEM) - The SEM recognises that multilevel factors and interactions at these different levels influence human behaviour. There are several versions of the SEM (82–85). The model by Kenneth Mcleroy (1988) was adopted for this study as an analytical lens to explore the factors influencing young women's access to SRHR information and services at the individual, interpersonal, organizational, community, and policy levels and the intertwined relationship between the five levels (83).

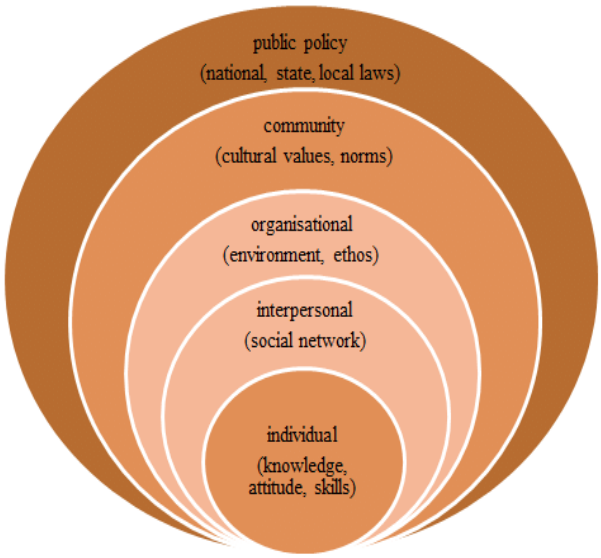

Figure 3: Social Ecological Model (83)

The model recognizes that several factors interact at the various levels that influence human behaviour; thus, practices and interventions for young women must consider their social environment and the embedded strata. The first layer is the individual level, which is at the core of the model and includes factors such as personal knowledge, attitudes, skills or behaviours that influence the person's behaviour. The interpersonal layer is the next level of the model and includes factors like social capital, social support, family support, peers, and relationship with healthcare service providers. The third layer represents the organisational level and includes social institutions with institutional characteristics such as schools, health systems with rules and regulations that promote or constrain a person's behaviour. The fourth layer illustrates factors at the community level, such as relations between organizations, institutions and resources, which constitute potential sources of communication and assistance. The outermost and fifth layer is the policy level which includes policies, guidelines and strategies at the national, state and local levels. All the model components are relevant for this study; however, the community level was adapted to reflect the community's religious beliefs, cultural values and social norms, as shown in Figure 3.

The social-ecological model was used instead of Lévesque because of its flexibility and comprehensive nature for understanding multiple influences on young women SRHR behaviour

and health outcomes. Other researchers have widely used the social-ecological model to explore access to sexual reproductive health services (86–89). The social-ecological model can be used to design multilevel interventions for the modification of health-related behaviour.

2.4.1 Limitation of the methodology

The study methodology had limitations worth highlighting. First, although the studies reviewed utilized different methodologies and sample sizes, most of the studies employed a cross-sectional study design. Hence, it was difficult to determine causality for the factors reported. Secondly, young women's SRHR topic is sensitive; this may have biased their responses. Thirdly, there is a possibility of missing relevant reports of small organizations working on SRHR in Northern Nigeria, which is not published.

CHAPTER THREE RESULTS

This chapter presents findings on the factors influencing young women's access to SRHR information and services in Northern Nigeria. The results are based on studies conducted in Northern Nigeria, other regions in Nigeria and developing countries for the following SRHR components; menstrual health, HIV, STIs, family planning, contraception, abortion and child marriage. The findings are presented based on the various layers of the social-ecological model.

3.1 Individual level

This level consists of young women's knowledge, attitude and behaviour of young women about SRHR information and services

3.1.1 Knowledge and perception of young women on SRHR

There has been an increase in awareness of SRHR since the 1990s, but knowledge and awareness regarding SRHR among young people are relatively low (55). Most adolescent girls reach puberty unprepared for menarche because they are uninformed, leaving them with misconceptions about menstruation, confused and unsure of where to go and who to reach for support. A descriptive study in Northern Nigeria showed that 87% of adolescent girls who had started menstruation did not know about the ovulation cycle (safe and unsafe period), and 47% knew that pregnancy could occur from first sex (90). Another study finding shows that only 7% of girls aged 15-19years were able to correctly identify the ovulation cycle when a woman can get pregnant (55).

Social demographic factors like age, education, residence, social-economic, and marital status vary across regions in Nigeria and influence young women's access to SRHR information and services. The majority of young women in Northern Nigeria have low education, live in rural areas and start sex at an earlier age compared to young women in Southern Nigeria with a higher level of education and who marry later (25). In the North-west, young women were married by age 15 and 18 (40% vs 81%), and two-thirds of young women in rural areas were married by age 15 (25). Studies showed that young women with increasing education and living in urban areas had more access to SRHR services and were more likely to use a condom at their last sex (25,91).

Most abortion is a result of unintended pregnancies. A study by Onukwugha et al. shows that abortion was more likely reported among young women in the Northern region than those from the Southern region (92). Another study by Bell et al. shows that women who were younger, had an education, and urban dwellers were likely to report an abortion than those older, with no education and rural dwellers (93). A study by Adegboyega et al. reported that 6.7% of young women have ever been pregnant, and all of them have had an induced abortion (94). Aderibigbe et al. also reported similar findings; 5.7% of the women were ever pregnant, and all of them claimed to have had an induced abortion by an unqualified person, while 87% of men who have gotten a girl pregnant told them to abort it (54). A study among AYP in the North-west shows that 72% of young women below age 19 died from abortion complications, and half (50%) of all mothers' deaths resulted from illegal abortion (95).

Correct and comprehensive knowledge about HIV is essential for the prevention, uptake of HIV services and sexual risk behavioural change. Eighteen per cent of adolescent girls and 20% of young women reported having sex before age 15year, and 43% of young women in Nigeria knows that condoms used consistently during sex and having one faithful, an uninfected partner can

prevent HIV. Among adolescent girls who were not married, 37.2% used condoms during their last sex compared to 49.5% of males (25,45).

STIs are associated with HIV, and people with STIs are at an increased risk of contracting HIV(25). No reliable data was found on the incidence of STIs; however, findings show that STIs were more prevalent among AYPs than adults and was higher among young women (25,96). The prevalence was also higher among young women aged 20-24years than those aged 15-19years (8.9 vs 7.9) (25). Secondary analysis from National HIV and AIDS Reproductive Health Surveys (NARHS) Plus in North-east Nigeria showed that 54% of the participants knew about STIs (97). More young women than men reported experiencing an STI or having symptoms of an STI (25). Another similar finding from the analysis of three NARHS (2002, 2007 and 2012) reports found that the prevalence of STIs is consistently higher for women than men (98).

The first step towards the use of family planning is knowing about it. A quantitative study found a high statistical significant ($p < 0.001$) association between young women's marital status and knowledge of contraception among women in North-west Nigeria. A higher proportion of married young women (89%) than unmarried young women (69%) had good knowledge of contraceptives (91). Health service providers were their primary source of information, and male condoms were the most common method used (87%). Participants in the study also had mixings about the perception of contraceptives. Despite most young women stating that contraceptives contradicted their religious beliefs, they believe they should be available to all women (91). Similarly, a qualitative study in Northern Nigeria shows that contraceptive use was low. Most participants who live in the urban areas reported they have heard about contraceptives methods, and the most common method mentioned was condoms (41). This finding is similar to the 2018 NDHS, which showed male condoms as the most common modern method of FP used by sexually active unmarried women, followed by pills and withdrawal (25).

3.1.2 The attitude of young women to SRHR

Lack of knowledge and awareness about SRHR is one of the major causes of women's vulnerabilities and negative attitudes resulting in poor SRHR outcomes. As stated earlier, young women are more likely to initiate sex than their male counterparts before 15 years. AGYW have different attitudes towards SRHR. The 2017 Multiple Indicator Cluster Survey in Northern Nigeria shows 60% of young women have had sex with a partner that is 10years older. Young women were less likely to use a condom with non-regular partners than young men (55% vs 80%) (99).

A study by Ameh et al. shows 54% (574) and 37% (391) engage in sex to please their boyfriends/girlfriends and experiment sex. Thirty-nine per cent (418) was due to peer pressure, 47% (507) for transactional sex (monetary gains), 22% of young women felt engaging in premarital sex was to stop menstrual pain. More Christians responded to peer pressure and transactional sex than Muslims ($P<0.05$) (100).

A qualitative study by Nmadu et al. (81) revealed adolescents' negative attitudes towards contraceptive use and premarital sex. Most of them felt that only married people should use contraceptives and thought adolescents shouldn't have sexual relationships. A participant said: *"The one [RHS] on sexual intercourse is not good for adolescents like us … condoms are good for some people but not for me because we are not up to age for sexual activities. It's not meant for us, it's meant for adults … husbands and wives [married people]"* (p.4).

3.2 Interpersonal level

This level consists of the influence of social networks such as parents, peers, teachers and health workers of young women on access to SRHR information and services.

3.2.1 Parents

A significant problem with young women's access to SRHR information and services is that they receive most of their information from informal sources. There is growing evidence showing that young people get information from sources that are not formal (101,102). Parents hardly communicate with their adolescent girls about their sexuality and do not provide comprehensive sex education, only when mothers talk to them about menstruation. In most situations, parents have deferred the responsibilities of sexual education to their teachers (102,103).

Findings from a study in the South-west of Nigeria showed parents only talked about sex education with their children older than 15years (102). This is similar to Northern Nigeria findings that show 74% of mothers only initiate discussions about sexuality education when their daughters begin menstruation (102). In another study in North-west where mothers started discussions about sexuality education, daughters were not allowed to respond or give feedback. Young women talking about sexual issues were regarded as been disrespectful. The study further showed that; also mothers with formal education were more likely to discuss SRHR issues with their daughters than those without formal education. From two studies, sexuality education was a common approach to instil fear and give warnings to discourage young women from engaging in sexual activities (104,105).

A study among in-school youths in Northern Nigeria shows that over half of the young women who knew how to prevent pregnancy got the information from radio/television, followed by the teachers (90). Seventy per cent of young women from another study considered their teachers as the major source of SRHR information, followed by their mothers and peers (55).

3.2.2 Peer Influence

Peers significantly influence young women's access to SRHR information because it is easier to talk with peers than openly discuss SRHR issues with parents, teachers, and health workers. A study among 989 in-school youth in Northern Nigeria showed that friends (33%) were the persons they discussed SRHR experiences with, followed by their parents (26%) and teachers (23%) (90). Another study by Adegbenga et al. (106) showed a similar finding where 23% reported getting information from friends, while 18.3% obtained information from their parents. Another result also showed that friends and the internet were the primary sources of contraceptives information (91). Nigeria has over 180 million mobile subscribers (107), and AYP between 15-24years actively use about one-third of the mobile subscriptions. Although many young women are using mobile phones, only a few access SRH information (108,109).

3.2.3 Healthcare service provider

The attitude of healthcare service providers (HSP) influence young women access to SRHR information and service. Findings show negative attitudes such as unfriendly, hostile and inconsiderate HSP attitude towards young women accessing SRHR services (81). Other results show that most health facilities offering SRHR services, such as family planning and maternal and child health services, often target married and older women, and are inappropriate for young and

unmarried women (110). Similar findings in the South-west of Nigeria show that over half (58%) of the HSP reported that unmarried adolescent sexual promiscuity would be promoted if provided with contraceptives. Above one-third of the HSP said that the Nigerian culture is against premarital sex, so they don't offer unmarried young people contraceptives (111). This is also the case for Northern Nigeria that is deeply rooted in culture (personal experience). Findings also show that some healthcare service providers lack the expertise to counsel young women. Transportation costs, young women's inability to pay for service and staff disapproval of young unmarried women using contraceptives were barriers to accessing SRHR information and services (81,112).

3.3 Community level

3.3.1 Cultural beliefs and religion

Culture and religion play a vital role in shaping community members lifestyles and education. In Northern Nigeria, the lifestyle and education of the people are shaped and defined by their religion and cultural beliefs (113,114). SRHR related issues are considered sensitive topics and were not discussed in Islamic societies. Certain social behaviours such as pre-marital or extra-marital affairs are considered unacceptable or prohibited even among those practising Christianity (113,115).

Cultural beliefs and religion contribute to the low use of contraception in Northern Nigeria. Findings from this region show a consistent picture of a conservative community with cultural and religious norms that encourage large family sizes and discourage contraceptive use (116). Nmadu et al. (81) reported that culture and religious norms were the most significant factors preventing AYP from openly accessing and discussing SRHR issues. A participant said that: *"Adolescents do not normally talk freely to each other about contraceptives, it is a very secretive matter, and it is not culturally acceptable"* (p.4). The same study revealed that religious beliefs limited discussions about and the use of contraceptives among adolescents: another participant said *'Like cases like contraceptives, the religion [Islam] does not allow it [the use of contraceptives], … or as an adolescent, you bring up the issue of contraceptives, and they will say you are spoilt [immoral], where did you learn it from?')* (p.4). Similar to this finding is the disapproval of contraceptives use for young unmarried women based on morals and health concerns. It was perceived as encouraging illicit and premarital sex, and by extension, encouraging immorality. For those married, the reason for non-contraceptive use was fear and because their parents, husbands and community leaders were against it, and their religion discourages it (41).

Nigeria accounts for 40% of child brides in West and Central Africa and has the highest number of child marriages below 15years in the region (117,118). Child marriage, to a large extent, is more prevalent among the Northerners. They are mainly from the ethnic group of Hausa-Fulani's and predominantly Muslims than the Southern part of Nigeria (119). Child marriage is influenced largely by their religion and cultural beliefs, such as preserving girls' virtue (virginity), protecting family honor by preventing premarital sex and pregnancy, and being associated with poverty. (114,120). A participant in a similar study in Southern Nigeria said: *"Every parent would like to see the daughter married. It's normal practice among the Hausa that at the age of 15 or so, one should get married. This reduces the burden on the family and brings peace to the family"* (121) (p.13).

3.3.2 Social norms

A culture of silence is created due to the taboos and social norms regarding sexuality, gender, and SRHR issues, especially for young women in Northern Nigeria. Young women find it difficult to talk to the adults in their community and their family about their SRHR issues. It is rare for parents or even taboo for them to speak about SRHR issues with their adolescent children, especially girls (100). There is limited agency and mobility among many young women, a judgment-free environment to express themselves, which leaves them to obtain SRHR information from peers, the media, and any other available informant. Not having an environment free from judgment and the lack of confidentially has been a barrier for young women in obtaining SRHR information, discussing and expressing their concerns about life and SRHR issues (50,86).

3.4 Organisation level

3.4.1 Schools

Basic education is free in Nigeria, yet enrollment is low in Northern Nigeria. Over half of the young women are not going to school, and most of them live in rural areas. Several factors, including poverty, early marriage, socio-cultural practices, and gender norms, drive formal education deprivation and discourage school attendance, particularly for girls (122).

Although the Nigerian government agreed in 1991 to integrate CSE into the national school curriculum, there is low coverage of comprehensive sexuality education (CSE) in schools in Northern Nigeria. Oppositions from religious and political organizations continue to be the major challenge threatening the program's implementation (78). These organizations believe that sexuality education promotes promiscuity and encourages sexual activity among young people. These beliefs lead young women to lack information on sexual issues and prevent them from accessing SRH services (54). In addition, CSE implementation is mostly in public schools in urban areas, which excludes a large proportion of young women who are out of school and live in rural areas. This gap results in limited access to correct information on SRHR issues for young women and making uninformed choices that may affect their adult health (123).

Better SRHR outcomes have been repeatedly associated with education, particularly with secondary education (25,124,125). A study of ASRH risk and protective factors in developing countries indicated that young women currently enrolled in school are more likely than those who leave school early to delay sex. Moreover, the longer young women stay in school, the higher the chances of using modern contraceptives (126).

3.4.2 Health Facilities

Several individual and health systems constraints influence young women's access to SRHR services. Nigeria lacks youth-friendly facilities and skilled HSP with the capacity to offer youth-friendly services (127). Several studies reported lack of knowledge about SRHR, limited mobility, financial constraint, social stigma, restrictive laws, confidentiality and privacy concerns as barriers that limit AYP access to SRHR. In addition, the distance of health facilities, HSP bias for providing SRH services, wait time and operating hours were also reported in these studies (128–131). The opening hours of clinics were usually when young people were at school. This inconvenient opening hour was reported in a study similar to Envuladu et al. (132). A qualitative study participant also said: *"I don't know if they [health workers] can talk to the patients to ask what timing is convenient for them and make some of the clinic days evening hours like those of us going to school. Some of us usually miss school whenever it is clinic day"* (81) (p.5).

3.5 Public policy

The age of marriage and consent for sexual intercourse in Nigeria is 18 years (6,133). Similar to many settings in SSA, there are legal and policy barriers to access SRHR information and services in Nigeria; for example, parental consent is required for adolescents to access services, including testing for HIV and restrictive abortion law. In several settings in Northern Nigeria, spousal consent is required for women in early and forced marriage, which places them at an increased risk of HIV infection. There is a substantial contribution of low contraceptive use to unintended and teenage pregnancy among young people in developing countries and unsafe abortion because of restrictive abortion laws. This is also the case in Nigeria, especially in Northern Nigeria (53).

Nigeria is a signatory of many international conventions and ratifying human rights treaties. Examples are Beijing Platform for Action (Beljing+10), Convention of Elimination of all Forms of Discrimination against Women (CEDAW), International Conference and Population Development (ICPD, ICPD+25), Convention of the Child's Right (CRC), Protocol to the African Charter on Human and People's Rights on the Rights of Women (Maputo protocol). The countries commitment to addressing AYP's SRHR problems and upholding the rights of women and girls led to the development and formulation of several national policy documents. These documents include the National Policy on Health and Development of Adolescents and Young People (2007) that emphasizes access to information and youth-friendly services, National HIV Strategy for Adolescents and Young People (2016-2020) and National Reproductive Health Policy (2017-2021) (50). The national policies related to AYPs SRHR are described in the next chapter.

CHAPTER FOUR EXISTING HEALTH POLICIES IN NIGERIA AND THE SRHR OF YOUNG WOMEN

This chapter describes the existing health policies, guidelines, and strategic frameworks that impact the SRHR needs of AYP. Each subsection highlights the policies' relevant contents with a focus on SRHR issues affecting young women.

4.1 National Health Policy (NHP), 2016

The National Health Act 2014 provides the legal framework for the implementation of NHP 2016 (36). Before this policy, Nigeria had a comprehensive NHP developed in 1988 and then revised NHP in 2004. The NHP defines the health system of Nigeria, its function, stakeholder's roles and responsibilities for the implementation of the policy and setting health priorities. The NHP 2016 considers the implementation gaps from the revised NHP 2004, emerging health problems, trends and new realities in the country, Millennium Development Goals unfinished agenda, SDGs, and renewed commitment in making progress towards universal health coverage. The policy has implications for the SRHR of young women and improves their access to health information and services, ensuring awareness and access to comprehensive reproductive health services. The areas of SRHR listed are HIV/AIDS, reproductive, maternal, neonatal, child and adolescent health (134).

4.2 National Policy on the Health and Development of Adolescents and Young People (NPHDAYP), 2007

The economic cost and social consequences for the overall development of Nigeria from the challenges faced by AYP led to the development of NPHDAYP 2007. The policy is all-encompassing, cutting across the different issues and aspects of young women's life. Stakeholders were drawn from relevant line ministries at national and state levels and international and local youth-led organizations (129). Nine key areas of intervention were highlighted, including SRHR. A key strategy for this policy in line with this study is providing AYP access to a range of adolescent and youth-friendly comprehensive information, counselling, and healthcare services, including school health services. A strategic framework for four years was developed simultaneously to complement the implementation of the strategy in the policy (77). Subsequently, to boost the performance of this policy, in 2010, an Action Plan for Advancing Young People's Health & Development was developed. This action plan's essential elements were derived from the NPHDAYP, National Youth Policy and their respective implementation framework, all-inclusive involvement of relevant stakeholders, young people (including youth-led organizations), government, and its agencies at the national, state, and local level (135).

4.3 National HIV Strategy for Adolescents and Young People, 2016

The National Agency for the Control of AIDS facilitated the development of this document to respond to the HIV needs of AYPs. While previous policy documents (NPHDAYP) addressed AYPs issues, this document was developed specifically to provide different organizations and stakeholders with strategic actions to scale up the HIV national response for AYPs to achieve the desired goal of reducing HIV infection rates among AYPs. This strategic document highlights that AYP was disaggregated into age groups (10-14years, 15-19years, 20-24years) and different target groups. Evidence-based guidance is provided for programming across the age groups, in-school and out-of-school AYP, and key populations. This document also highlighted that special consideration and efforts should be targeted at AGYW across the target groups vulnerable to HIV

compared to boys and young men. Gender-responsive programming and AYP involvement are some of the documents guiding principles. It highlights concerns about gender equality to be taken into account in programs for AYP, and their needs should be addressed in the program, and active involvement of AYP in the design, implementation and evaluation of policies and initiatives concerning them. One of the key focuses of this strategic document is the review of age consent of AYPs to increase the uptake of HIV services. Other strategic focuses of the document associated with this study are: increase community knowledge on HIV and SRHR, use of social and mass media to educate AYP about HIV and SRHR, a combination of teacher-led activities with peer-led activities to promote sexual health education and using media to communicate messages, adequate support and counselling on preventing HIV/STI and family planning (10).

4.4 Revised National Reproductive Health Policy (NRHP) 2017

The revised NRHP 2017 is the third reviewed NRHP since the first developed in 2001 and its strategic framework developed in 2010. The NRHP policy built upon the achievements of previous documents and considered the implementation gaps identified, trends, new realities and emerging health problems in the country. The NRHP 2017 was developed within the framework of the Revised NPH 2016 goals (134,136). Key to the policy principles and values is that it is adolescent-focused, gender and age-appropriate (including adolescents aged 10years and above). The policy, among other interventions, focuses on adolescent health with an objective to increase access to quality reproductive health information and services for AYP (136).

In summary, the existing policies were remodelled and developed in line with the country's commitments with the ICPD Programme of Action 1994 to effectively address the significant SRHR challenges. Twenty-five years after ICPD (ICPD25), women, AYPs, and other vulnerable groups still lack information, agency, education and access to critical SRHR services. Gaps still exist in implementing the existing policy guidelines. The documents have not been reviewed to accommodate the new realities AYPs experience, especially in the COVID19 situation; insufficient political will and leadership in improving women's access to SRHR, education and services.

CHAPTER FIVE EVIDENCE-BASED INTERVENTIONS

This chapter provides a detailed description of evidence-based interventions (national and international) that have been successfully implemented and scalable to meet the needs of young women. The focus of the interventions for this study are the strategies and approaches adopted that empower women and address some of the major factors that influence young women's access to SRHR information and services.

5.1 Promoting Menstrual Health for Adolescent Girls and Young Women (PMHAGYW) project

Education as a Vaccine (EVA) initiated the project funded by Amplify change and was successfully pilot tested in two communities in Makurdi and Gboko LGA, respectively, in Benue state in North-Central Nigeria. The project reached the targeted 2000 AGYW aged 10 – 19years. The project was initiated to increase understanding and awareness of the community on Menstrual Health Management (MHM) and SRHR and engage in larger discussions with their parents, teachers, and other stakeholders in the community to address gender norms, stigma, and discrimination. The project was aimed at both in-school and out-of-school AGYW, and it featured SRHR sessions for adolescent girls, puberty, menstruation, SRHR, and sexual and gender-based violence. A baseline survey was conducted to guide the project implementation, and an endline survey was conducted to evaluate the project's impact (137).

The project objectives was achieved by training young women on SRHR and menstrual health management. Existing health clubs were leveraged upon in schools to integrate SRHR and menstrual health information with the existing studies for sustainability after the project ends. Out-of-school AGYW were mobilized, outreach and edutainment were used to train mobilized out-of-school AGYW on SRHR and menstrual health management. Community theatre was used to initiate discussions and raise awareness on SRHR and menstrual health management. EVA introduced a free mobile app, "DIVA", developed to provide young women with a phone with information about menstrual health and learn more about their bodies. The enthusiasm for downloading the App lead to the introduction of other mobile apps developed by the organization like "FRISKY" and "LINKUP" in accessing SRH information and services. More focus on using the app was given to out-of-school AGYW because they were more likely to have a phone than those in school. The app creates a safe space where young women can ask questions related to menstrual health management and SRHR for free and get correct answers in a confidential and nonjudgmental manner. Community dialogues were held with active participation from school teachers and key influencers (parents, traditional leaders, religious leaders, young boys and young men) to improve the communities' understanding of SRHR and menstrual health management of young women (137).

Comparison data results between baseline and endline surveys showed a significant increase in young women's knowledge about SRHR and menstrual health management problems. There was improved positive changes in their behaviour, perception, and beliefs about SRHR and menstrual health management, and improved behaviour in seeking healthcare. For example, compared to 94.5% at baseline, 99.5% at endline agreed to the statement *"One should take her bath twice or thrice a day during menstruation"* (p,21) (137). There was an increase from 75% at baseline to 99.5% at endline in their knowledge about protecting themselves from unintended pregnancy, HIV and STIs by using a condom. The results showed that sexual health behaviours had greatly improved. Contraceptives use increased from 58.3% at baseline to 70% at endline, while HIV

testing increased from 68% at baseline to 91.2% at endline. There was a remarkable increase from 15.1% at baseline to 59.4% at endline among young women who could access SRHR and menstrual hygiene information and services using mobile phones and mobile app (137).

The outcome for parents was similar as comparison data showed that they had more knowledge about menstrual health management and SRHR, and are more eager to support their girls during their menstruations. For example, compared to 60% at baseline, all parents expressed being more comfortable discussing menstrual health management issues with their daughters. They were more willing to support their daughters during menstruation (137).

The intervention led to changes in community members' knowledge, attitudes, and behaviors. There was a declaration by the communities and parents to abolish harmful norms towards young women's menstrual health, and young women demonstrated a greater understanding of their SRHR and menstrual health management at the end of the project (137). The before and after impact data is presented in Annexe III.

5.2 USAID Determined, Resilient, Empowered, AIDS-Free, Mentored and Safe lives (DREAMS) Project

DREAMS is a multi-sectoral partnership project funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), Bill & Melinda Gates Foundation and the Nike Foundation, implemented in 15 countries excluding Nigeria in SSA (see Annexe IV) (138). The project aims to curb HIV infection among young women and halt the persistent pattern of HIV among them in SSA through opportunities to live Determined, Resilient, Empowered, AIDS-Free, Mentored and Safe lives. DREAMS uses a layered approach intervention to reduce young women's vulnerability to HIV, improve individual agency and safety.

'Layering is the concurrent delivery of multiple interventions unique to vulnerable AGYW, intending to create a synergistic impact in reducing their HIV vulnerability' (129) (p.2). The highlight of this layering strategy is that it considers that no single intervention can reduce AGYW vulnerability to HIV infection but addressing the multiple needs of AGYW will have more impact on individual risks behaviours. Key to the layering of intervention is the disaggregation of young women by age group (10-14years, 15-19years, 20-24years) and tailoring interventions to the specific age group (138).

The project is context-specific and provides a combination of HIV prevention packages designed to target multiple sources of risk for AGYW, e.g. behavioural, biomedical, social, cultural, and structural factors that increase AGYW's risk of HIV infection. Data on risk factors on AGYW such as HIV prevalence by age, school dropout, early marriage and pregnancy are used by DREAMS country teams to determine which AGYW to be selected and where the program should be implemented. Key to the success of DREAMS is the continuous involvement and participation of AGYW in planning and implementation (138–140).

The core package of DREAMS aims is presented in figure 4 below:

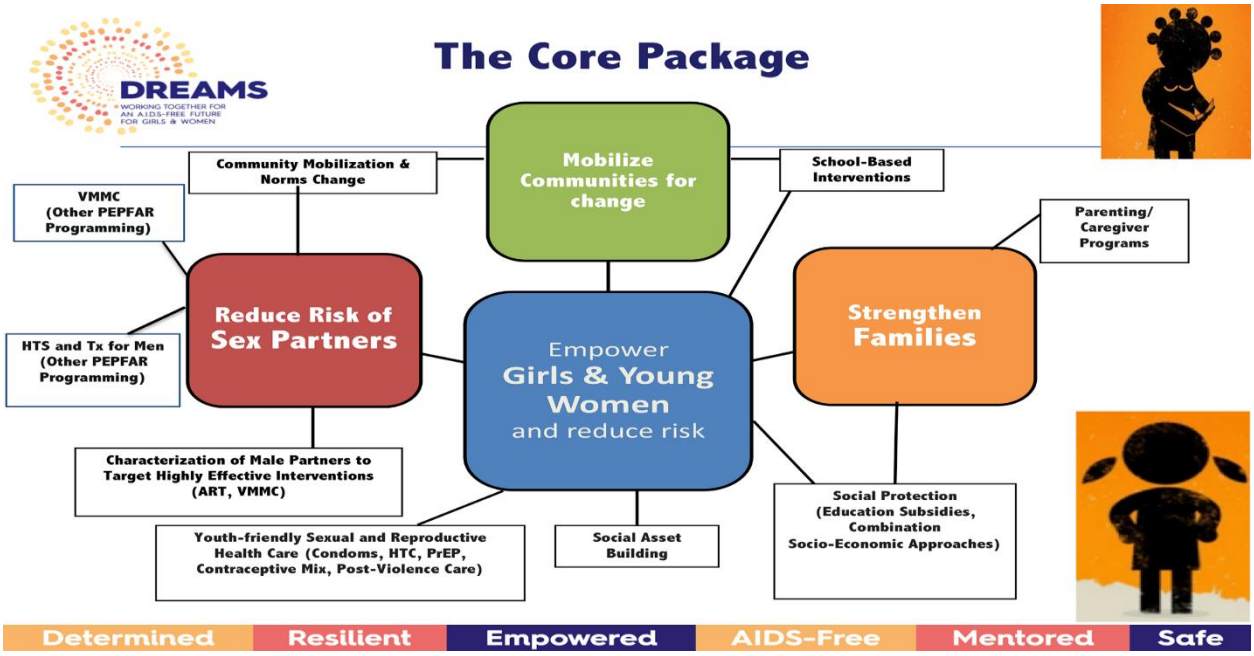

Figure 4: Dreams Core Package (138)

Due to the impact of COVID19 on project implementation across countries, the program was adapted by USAID innovation teams and implementing partners to keep people safe by providing virtual support, responding to the pandemic, and continuing to deliver services. While this virtual approach worked well for urban dwellers and older AGYW, rural dwellers faced the challenges of access to mobile phones and cellular network coverage. This challenge was overcome by developing a model - SRH referral network that linked a DREAMS ambassador with a project field worker, GBV response provider, clinic nurse and other providers as required in each village. The DREAMS ambassador was given a phone with airtime and were responsible for safe one-on-one interactions to share information, menstrual hygiene commodities, condoms with DREAMS participants and coordinating appointments for clinical services to the villages (141).

Empowered AGYW provided with sewing machines and supplies to generate income to afford menstrual hygiene products and stop missing schools in Zambia as part of their DREAMS project started to produce cloth face masks for sale and donate to those vulnerable in the community (141). The summary of DREAMS projects challenges and opportunities for multi-sectoral programming is presented findings in Annexe IV.

The impact of DREAMS partnership within two years of implementation shows over 2.5million young women has been reached with critical comprehensive prevention interventions. There was a remarkable decline in new HIV diagnoses in almost all 63 districts implementing DREAMS across the first ten countries. Most (65%) of the highest-HIV-burden communities achieved 25% to 40% or greater decrease in new HIV diagnoses among young women across the first ten countries implementing DREAMS.

5.3 A360's project in Northern Nigeria (Matasa Matan Arewa).

The project was implemented by Society for Family Health Nigeria and led by Population Services International in two states in Northern Nigeria (Kaduna and Nasarawa). MMA collaborates with A360 young leaders and public health facilities across Nigeria to help rural married girls (15-19years) and their spouses access contraceptives and plan for their future. MMA aims to provide a unique experience for a married teenage girl in Northern Nigeria. The initiative stimulates curiosity, explores life goals and desires, helps participants feel secured and respected when accessing services, and supports girls and their husbands to be consistent with using contraception for as long as desired (142).

The initiative adopts a targeted one-one outreach strategy where female mentors engaged married adolescent girls, and their husbands were engaged by male interpersonal communication agents (IPCAs) and provided with the interventions. Female mentors were selected from the community, trained and coached to deliver the unique message of MMA when they led "Life, Family, and Health" (LFH) sessions and during mobilization. Mentors make home visits at a time convenient for girls to introduce and explain MMA to girls and key influencers with social and cultural authority over their attendance, including co-wives and mother-in-law. Female mentors mobilize young women to attend four mentorship sessions with a cohort of their peers or access voluntary counselling and contraception directly for the health facility. Male IPCAs meet husbands in public gatherings to provide them with important information about pregnancy's healthy timing and spacing and its benefits. The male IPCAs also conducts community sensitization about contraception and dispelling myths (142).

A pay-for-performance mechanism was adopted to pay female mentors who complete referrals, with an expectation that four cohorts with twelve girls recruited for each LFH session graduated per month. Young women were reminded about upcoming LFH sessions through follow-up calls (or in-person) and provided support to address any obstacle preventing them from attending the mentorship sessions (142).

Evidence shows that over 1600 married adolescent girls received modern contraceptives (January-June 2018), and four in five girls were using a modern contraceptive in June 2018 alone. Twenty-five per cent of girls chose a long-acting method – significantly higher than the national average of 0.1% for long-acting reversible contraceptive uptake among the same age group (15-19years) (142,143).

In summary, effective interventions to improve access to SRHR information and services require a multilevel approach to address key barriers young women face. Targeting young women alone is not enough to address their needs. Relevant stakeholders, especially young men and boys, should be involved in the programs to support their SRHR decisions. Promotion of CSE in and out of school, women empowerment, building community support to address entrenched gender norms, and providing SRHR services to young people are needed.

CHAPTER SIX DISCUSSION

This chapter consists of the usefulness of the conceptual framework, limitation of study and discussion of the findings from the literature review.

6.1 The usefulness of the social-ecological model

The model's structure allowed for the analysis of the factors influencing young women's access to SRHR information and services on all levels. It also helped with identifying factors interrelating at different level which influences young women's behaviour regarding SRHR. All the factors on the model layers were useful for this study and can be used for future studies to understand factors influencing individual health-related behaviours.

6.2 Individual level

Access to comprehensive and accurate information about SRHR and quality services facilitates a safe transition into adulthood. This study finding shows low knowledge about SRHR and limited access to SRHR information and services. Factors such as age, level of education, marital status and where young women lived influenced their knowledge, perception and attitudes regarding SRHR. Young women with more education and urban dwellers were more likely to know about SRHR than those with lower education and rural dwellers. These factors were also associated with the abortion rate among young women with the same characteristics. This can be attributed to urbanization and gaining better understanding of the implications of SRH outcomes.

The adolescence period is when young people are most vulnerable. Decisions taken at this stage influence their wellbeing. AYPs are easier influenced, especially by their peers and engage in risky behaviours such as alcohol and drugs that facilitate unprotected sex. This study finding shows that young women start sex earlier than their male counterparts. This can be attributed to the fact that most young women have low knowledge about SRHR, marry early, live in rural areas and are out of school compared to those in the Southern region.

Contraceptive use was found to be low, with more married women knowing about modern contraceptives methods than young unmarried women. This interlinks with religious and cultural belief factors at the community level, where married women cannot exercise their rights in making decisions about their sexual and reproductive lives. Young unmarried women can also not talk about their SRHR issues or access SRHR information and services for fear of being judged and the social stigmatization of promiscuity. This explains the high rate of maternal mortality, teenage pregnancy prevalence and the high rates of unsafe abortion in the region.

This study found that all young women who have ever been pregnant had an abortion, and an unqualified person carried out the abortion. This high rate of abortion may be because they do not want to drop out of school, disappoint their parents, and fear of social stigma and discrimination from the community. Lack of knowledge on safe abortion care, restrictive abortion law, and socioeconomic status could be the possible explanation for seeking unqualified people for abortion.

Many young women generally have misconceptions about menstruation and do not receive appropriate information before their menarche. This is the situation for most girls in developing countries (144,145). Most of them get information about menstruation a little too late from their

mothers and other females in the family who are not adequately informed and communicate their misconception about menstrual management and health, while others get such information from their teachers and peers. From personal experience, I got to know about menstruation from my peers in secondary school, who guided me on the sanitary pad to get and how to use it. When I informed my mother about the new changes I was experiencing, she was somewhat uncomfortable talking about it. She only told me to maintain proper hygiene and not let any boy or man touch me because I will get pregnant and drop out of school.

In Northern Nigeria, some cultures and religions perceive women as unclean (dirty and impure) during their menstruation and are often isolated. For example, in countries like India and South Sudan, some cultures perceive it taboo to talk about menstruation; young women were isolated and often discriminated against and stigmatized by their male counterparts. The findings in this study showed that most young women in Northern Nigeria who had started menstruating did not know the ovulation period and could not identify when a woman can get pregnant. This is similar to the findings in the 2018 NDHS (25), where young women's knowledge about the fertile period was low. This can be attributed to limited access to accurate, comprehensive information about their menstrual health before and after the start of menstruation. Evidence shows that social stigma and discrimination associated with menstruation were reasons for school absenteeism and exclusion from social interactions for many young women in developing countries (145–147).

The state of adolescents and young people is changing in recent times. This can be associated with an increased level of education. More AYPs are staying in school, and evidence has shown a delay in initiating sex early. The 2018 NDHS also show that increasing education was associated with increasing comprehensive knowledge about HIV and other SRHR services. Although evidence shows increasing education is a protective factor for HIV, at the same time, the risk is increasing.

Creating awareness about the usefulness of family planning and contraceptives through community engagement of relevant stakeholders (parents, teachers, religious and community leaders), including men who are young women's partners, will shift gender norms and increase contraceptive use in Northern Nigeria. Building life skills, women empowerment; promoting condom use and improving access to condoms and other contraception methods is a key strategy to preventing poor SRHR outcomes such as HIV, STIs, unintended pregnancy and decrease the burden of maternal and child morbidity and mortality for their families and the country at large.

6.3 Interpersonal level

This study found that the primary source of information for AGYW about sex and SRHR related issues was their friends, who played a key role in providing them with inaccurate information. Young women are more comfortable talking to their peers and friends about SRHR issues. Some of them are well informed by formal sources, while the majority get the information from informal sources from the internet and older peers/friends, and the information is inaccurate. This finding corroborates other findings in Nigeria, Ghana, Iran, South Africa, Zimbabwe, and Kenya (89,148–151).

This study reported that parents do not communicate with their adolescents about sexuality education until they are older. In other cases, mothers only talk to their adolescent girls when they have started menstruation. This is similar to findings in a study in Malawi where many mothers

and female guardians reported that they provided their girls SRH information at age 15 or as late as 18years (152). This could be the perception parents and guardians have about their girls being promiscuous and encouraging pre-marital sex when being provided sexuality education which is not the case. If provided the correct information from primary sources like their mothers, many young people will make informed decisions about their sexual and reproductive lives and practice safer sex. There is also an interlink with socio-cultural practices and religious beliefs that place moral values on pre-marital sex, which influences parents and teachers' attitudes towards talking about issues related to SRHR.

This study found ambivalent attitude of HSP towards providing contraceptives to unmarried young women was found in this study. On the one hand, their perspective is informed by the Nigerian culture that does not support premarital sex. More than half of them believed that providing contraceptives to unmarried young women will promote sexual promiscuity. Similar concerns have been expressed by HSP in other countries (111,153,154). Contrary to popular belief, unmarried young people who use contraception tend to practice safer sex and reduce their chances of unintended pregnancy or being infected with HIV/STIs. HSP bias could be because of the moral issue that stigmatizes premarital sex. On the other hand, HSP with more education and those that had continuous training on adolescent sexuality education and reproduction were likely to show more youth-friendly attitudes (155).

Addressing unmet needs by making contraceptives available to young women who do not want to get pregnant and improving access to condoms will significantly reduce unintended pregnancy and abortion, reduce the large family size and support economic growth. This will reduce maternal and child mortality, HIV transmission and increase women empowerment, enhancing the overall well-being and health of young women and their children. Consequently, raising community awareness and involving their male counterparts, parents, partners, religious leaders in interventions will build community support regarding access to SRHR services.

6.4 Organizational level

This study found that over half of young women in Northern Nigeria were not going to school and majority of them were rural dwellers. This can be attributed to socio-cultural and gender norms that prioritise the male child going to school over women, which interlinks with other factors discussed at the community level. As discussed at the individual level, young women with more education and urban dwellers were more likely to have good knowledge about SRHR than those with lower education and rural dweller. Evidence has confirmed the influence of globalization, urbanization and education on attitudes towards sexuality issues.

Distance of health facilities, operating hours, cost of services, negative attitude of healthcare service providers was found to influence young women’s access to SRHR information and services. The majority of health facilities were not youth-friendly and provided services for young married women because HSP lacked the necessary skills in providing services for adolescent girls and unmarried young women. The lack of privacy and confidentiality and the judgmental environment prevent young women from accessing SRHR information and services. Most young women are not financially capable because they are dependent on their guardians and cannot afford the transport cost to health facilities and pay for services. The social stigma and discrimination associated with being seen going into a health facility that provides SRHR services, for example, family planning or HIV services, also prevent young women from accessing SRHR information and services.

Despite the countries effort to implement FLHE in schools and provide YFHS in every PHC, funding and implementation gaps still exist. As a result, there is a wide knowledge and access gap in CSE for young people.

6.5 Community level

In this study, religious beliefs, gender norms, and cultural taboos were the key barriers to young women's access to SRHR information and services. These factors were found to interact with the different levels of the conceptual framework. One prevalent socio-cultural factor against young women's access to SRHR information and services is child marriage. Child marriage is viewed as a way of preserving adolescent girl's virginity and preventing pre-marital sex. Although prevalent in Northern Nigeria, it is also practised in other regions of the country. Due to power imbalance in child marriage, married adolescent girls are less likely than married older young women able to negotiate safe sex and discuss the use of contraceptives with their husbands (120). The study also found that there is an association between child marriage and early childbirth. This finding corroborates with reports and studies from SSA, where child marriage is prevalent, and adolescent girls give birth before age 18 (49,121,156,157). There are health and social consequences associated with child marriage(158). The likelihood of adolescent girls between the ages of 15-19years dying in pregnancy and childbirth is twice that of women aged 20 to 24. They are also at a high risk of complications during delivery because of their underdeveloped reproductive organs (157,159).

Religious beliefs, socio-cultural and gender norms have hindered AGYWs rights to education, sexuality, and health. Nigeria is predominately a patriarchal society where men are given more authority and power over women, and it exists both in the family and community. Married women and girls usually require their spousal consent to access and utilize SRHR services. From personal experience working in Northern Nigeria, women are not permitted to see or talk to anyone without third party authorization. Male visitors cannot enter their household (referred to as "Ba shiga"), and the women cannot talk about or give any information regarding their SRH without consent from the head of the household. This has prevented many women from accessing and seeking healthcare.

Multilevel interventions, strong advocacy to relevant stakeholders on the health benefits and overall wellbeing of women, children, families and communities are required to tackle the political, cultural and religious barriers women face in Northern Nigeria.

6.6 Public policy

Nigeria is committed to accelerating the successes of ICPD (ICPD25) and achieving the SDGs 2030. Existing policies consider young people's SRHR needs. Recent policies were remodeled to accommodate the ICPD Programme of Actions, although enaction and implementation continuously pose a challenge. The policies identified AYPs health needs, especially SRHR, but enacting and implementing laws and policies regarding the provision of SRHR services for AYPs are yet to be conducted. Most Northern states have refused to domesticate the Child Acts Article regarding preserving children's rights and prevent child marriage and other harmful traditional practices because it contradicts their religious point of view.

Nigeria signed and ratified the Convention on the Rights of the Child, African Charter on the Rights and Welfare of the Child, the "Maputo Protocol" to uphold children, girls and women's

rights. The country has been held accountable for the unlawful detention of women and ordered to compensate the applicants. The protocol has held governments accountable since its adoption by countries in the African Union, for example, granting girls access to education in Sierra Leone, 18years as the minimum age of marriage for both girls and boys in Tanzania and access to justice for forced marriage in Ethiopia. This is in the right direction of ensuring the rights of girls and women are protected. More needs to be done in enacting and implementing laws and policies for AYPs, especially young women.

6.7 Evidence-based interventions

The socio-ecological model recognises that multiple factors interact with different levels at the individual, interpersonal, community, organization and policy levels and these interactions influence individual behaviour. Hence, multilevel interventions involving relevant stakeholders at all levels, including young women and men, should be designed, planned and implemented to influence individual behaviour at all levels.

Promoting Menstrual Health for AGYW project was initiated to promote awareness and improve community understanding on SRHR and menstrual health management. The project engaged key influencers at the interpersonal, community and organizational level. Young women in the target location were involved to improve their understanding of SRHR. Key to the design of this project is the inclusion of programming for out-of-school AGYW who are often left behind in terms of interventions for AGYW. Scaling this project in other Northern zones will require high-level advocacy to key influential religious and community leaders because of the peculiarities and resistances to SRHR interventions that contradicts their values in some of the states in other zones to be feasible.

Nigeria is now an information technology hub in West Africa region, despite the country's harsh economic and political situation. In the 2021 Digital report, 90% of Nigerians use a mobile phone, and 50% have access to the internet. Ninety-three per cent of the 50% access the internet using a mobile phone (107). Evidence has documented in Nigeria and other countries in SSA, the impact of digital health and using mobile phones in accessing health information and services (108,109,160,161). The use of the “DIVA” mobile app, or similar like “FRISKY” and “LINKUP” for accessing SRHR information and services, can bridge the information gap, especially in contexts with taboos, socio-cultural norms and religious beliefs that hinder young women from accessing SRHR information and service. Mobile phones also create a safe space for young women to discuss their SRHR issues confidentially and free of judgment.

The DREAMS adopts a multilevel intervention through multi-sectoral partnership to reduce HIV infections among young women and drive attitudinal change at all levels. Despite the project's outcome and success stories, it is complex to measure DREAMS impact across countries because it is a multilevel approach embedded within a context that offers other interventions and services to young women. For example, DREAMS successes cannot be adequately described by one data source over time but rather by triangulating multiple data sources. Implementing this project in Nigeria is necessary because of the high number of new HIV infections the country contributes to the burden of HIV in SSA. Although the prevalence of HIV is low in Northern Nigeria compared to Southern Nigeria, some states in the region are PEPFAR priority states for HIV because of the high saturation and low unmet need (162).

The core intervention has the potential to address several barriers young women face in accessing information at all levels. For example, young women are provided with life skills and resources in an enabling environment that empowers them, increase school enrollment, increase their access to healthcare, and improve the socio-economic status of AGYW and families. The intervention builds HSPs capacity to deliver YFHS and build community support that addresses the entrenched religious and cultural beliefs.

The A360 project (MMA) adopts a distinctive outreach strategy to deliver interventions that increase demand for and voluntary uptake of modern contraception among married adolescent girls and their husbands. The intervention of A360 in Kaduna and Nasarawa provides lessons for similar ASRH programs to be scaled up to other states in the region by collaborating with state government and adolescents to design and implement a community-based and sustainable program that aligns contraceptive use with their family and life goals. MMA involves men and religious leaders in building a basis for supporting girls in deciding about their health. This intervention addresses the low contraceptive use, help reduce family sizes and the fertility rate of young women, which is responsible for the high prevalence recorded in the region. The intervention improves maternal and child health, increases households' economic status, and builds community support in addressing the myths and conceptions about contraception.

The ICPD Programme of Action continues to advocate for male involvement. Men are usually not included in SRHR programs. Observations from DREAM and PMHAGYW projects did not involve the young men in the programs. Male involvement and participation in reproductive health is essential for addressing their own SRH needs and for the interest of women's SRH status and wellbeing as captured in MMA case. Male involvement increases their knowledge about SRHR, improves their health-seeking behavior, increases acceptance, and enable them provides the necessary support for women's rights, needs, and choices.

Implementation of the evidence-based interventions presented is feasible, cost-effective and sustainable because it employs community engagement and participation that fosters community ownership and engages stakeholders at every level. Interventions can also leverage existing SRHR service delivery structures; in turn, strengthen those systems. When evidence-based best practices are combined with a diverse group that offers multiple perspectives, solutions that address the multilevel factors influencing young people's access, and utilization of SRHR can be scaled with significant impact.

6.8 Limitation of the study

There were limited studies found on AYPs, and young women access to SRHR information and services in Northern Nigeria. Most of the evidence found was from a zone and particular states in Northern Nigeria (Kaduna state and North-west), which is not generalizable to other areas. For example, in the North-East where insurgency, kidnapping of girls in school, and insecurity are highest. There was no age and sex disaggregation for some studies, while age category and gender are important factors. Most findings were for women and men aged 15-24 and 15-49. There may be contradicting results if this literature review is triangulated with primary or secondary data.

CHAPTER SEVEN CONCLUSION AND RECOMMENDATION

This chapter consists of the study's conclusions and recommendations.

7.1 Conclusions

Access to accurate SRHR information and services is key to improving young women's well-being as it empowers them in making the right decisions about their SRHR. This study shows a knowledge gap regarding SRHR information and services across regions in Nigeria, with Northern Nigeria having the lowest percentages. Young women's poor SRHR outcomes have been associated with lack of access to information and services, resulting in early sexual debut, risky sexual behaviour, higher risk of STIs, HIV, low contraceptive use, increased fertility during adolescence, unintended pregnancy, and unsafe abortion.

Young women face multiple, interconnecting obstacles to SRHR information and services at individual, interpersonal, organizational, community and policy levels. These factors are associated with their age, marital status, level of education, place of residence, socio-cultural and religious norms. The predominant factor influencing young women's access is deeply rooted in socio-cultural and religious beliefs, which interact with other factors in the five levels of the social-ecological model.

Existing policies and laws in Nigeria consider AYPs needs, especially in upholding AGYWs rights and prioritizing their SRHR need. However, enacting and implementation of the policies and laws continue to be a challenge. Accelerating progress to achieving the SDGs 2030 requires a multilevel approach to implement sustainable and scalable evidence-based interventions. Male involvement, community engagement, and participation are crucial to addressing the barriers that put AYP, especially young women, at increased multiple risks of poor SRHR outcomes in Northern Nigeria.

7.2 Recommendations

7.2.1 Research

- There is limited quantitative and qualitative research on AYP, young men, and young women in Northern Nigeria. More studies on ASRH, knowledge, attitude and perception of AYP and young women disaggregated by sex, age group, in and out-of-school, residence should be carried out across the three zones in Northern Nigeria. FMOH and relevant stakeholders should step up efforts to collect and analyze disaggregated data to cover the national, sub-national and local levels.

7.2.2 Policy

- Policymakers, legislators, and relevant stakeholders should advocate and take the actions necessary to enact and implement laws and policies, especially age of consent, and uphold young women's rights.
- Stakeholders should advocate state governments for the adoption and domestication of Federal Laws that protect young people
- There should be strong political will and leadership from the state government, religious leaders and key influencers in the community to address barriers entrenched in gender norms and socio-cultural practices to improve AYPs access and utilization of SRHR services

7.2.3 Interventions

- Condom promotion and other contraception methods remain a key strategy to preventing AYPs poor SRHR outcomes. Implementers should raise awareness about the usefulness of family planning and contraceptives through community engagement in Northern Nigeria.
- Program implementers should adopt a comprehensive, multilevel approach to design interventions that will respond to layered barriers to access to SRHR information and services at the individual, family, organizational, community and policy levels. Young women should be involved in the design, planning and implementation of programs concerning them.
- Over half of AYP have access to a mobile phone. While the concept of digital health can enlarge inequalities among AYP, there are benefits. Asides from bridging the knowledge gap, it creates a safe space for AYP accessing SRHR anonymously, free from judgement and social stigma. It can also reach young women with limited mobility and agency as in the context of Northern Nigeria. Programmers should integrate the concept into its initiative as adopted in the project by EVA.
- The school is an important platform for providing SRHR information. Evidence has shown a significant association between education and knowledge about SRHR. Government, FMOE, and relevant stakeholders should increase their commitment (technically and financially) to scale up the implementation of CSE curriculum across schools in Northern Nigeria to improve young women's knowledge and attitude regarding SRHR.
- The FMOH, should build the capacity of healthcare service providers to provide information and services that are responsive and tailored to meet the specific needs of different categories of AYP.
- Government should create a platform for networking and sharing best practices on SRHR intervention will also help with the implementation of SRHR projects.

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ANNEXE

Annexe I Search strategy

Table 1: Search strategy

	AND		
OR	Access	Young women	Northern Nigeria
	Sexual and reproductive health and rights	Adolescent girls	Northwest
	Sexual and reproductive health	Young girls	Northeast
	Sexual Health	Teenage girls	Northcentral
	Reproductive Health	Adolescent and young people	Nigeria
	Sexuality Education	Young people	West Africa
	Sexual health information	Adolescents	Developing countries
	Individual factors		LMICs
	Knowledge		Sub Saharan Africa
	Attitude		
	Perception		
	Opinions		
	Interpersonal factor		
	Parents		
	Peers		
	Friends		
	Social networks		
	Teachers		
	Attitude of Health workers		
	Healthcare Service Providers		
	Healthcare workers		
	Community factors		
	Cultural practices		
	Cultural beliefs		
	Cultural norms		
	Religion		
	Religious beliefs		
	Taboo		
	Socio-cultural practices		
	Socio-cultural norms		
	Socio-cultural beliefs		
	Social norms		
	Gender norms		
	Stigma		
	Discrimination		
	School		
	Education		
	Comprehensive information		
	Comprehensive sexuality education		
	Sexuality education		

	Health facilities		
	Health centers		
	Evidence-based interventions		
	Evidence-informed intervention		
	Successful projects		
	Child marriage		
	Early marriage		
	Early sexual debut		
	Teenage Pregnancy		
	Abortion		
	Family planning		
	Contraceptives		
	Condoms		
	STIs		
	HIV/AIDS		
	Menstrual Health Management		

**Note; "The keywords were systematically combined with clear phrases, truncation, wildcard and alternative spellings using Boolean operators".*

Annexe II Socio-demographic characteristics from the 2018 NDHS across Northern and Southern region

Table 2: Socio-demographic characteristics from the 2018 NDHS across Northern and Southern region (25)

	Northern Nigeria (N=25540)		Southern Nigeria (16281)	
	Frequency	Percent	Frequency	Percent
Age category				
15 – 19years	5511	55	2912	56
20 – 24years	4555	45	2289	44
15 – 24years	10066	100	5,201	100
Education				
No education	13411	53	987	6
Primary	3551	14	2832	17
Secondary	6840	27	9858	61
Higher	1738	7	2604	16
Religion				
Christian	6488	25	14018	86
Islam	18953	74	2006	12
Traditionalist	97	1	175	2
Marital Status				
Single	5392	21	5277	32
Married	18877	74	8964	55
Place of residence				
Urban	7505	29	9479	58
Rural	18035	71	6802	42

Annexe III EVA Project

Table 3: Comparison of baseline and endline survey results showing % distribution of participants' Menstrual Hygiene Knowledge, Practice and level of parental support (137)

Variables	(N=200)	BASELINE (%)	ENDLINE (%)
Ever experience menstruation	Yes	78.5	87.5
	No	21.5	12.5
Age at first menstrual period	10-14years	63.7	88.6
	15-19years	36.3	11.4
Did you discuss issues concerning your periods with your parents?	Yes	75.5	77.1
	No	24.5	22.9
Do your parents provide you with materials for your period?	Yes	80.3	79.4
	No	19.7	20.6
If yes, what kind of material did your parents provide you with for your period	Pad	99.2	99.3
	Towel	0.8	0.7
Who did you talk to about your first menstruation	Parent	65.6	71.2
	Teachers	5.7	2.2
	Neighbour	1.9	0.7
	Friends	5.7	7.9
	Siblings	9.6	11.5
	Nobody	8.9	4.3
	Others	2.5	2.2
Where/who do you trust would give you the correct information when you have questions about menstrual health or your body	Parent	89	91.5
	Teachers	2	2.5
	Siblings	2.5	2.5
	Neighbour	1	0
	Friends	2	0
	Internet	1	1.5
	Book	2.5	1
	Social media	0	1
Are there barriers preventing you from practising good menstrual hygiene	Yes	14.5	5.1
	No	85.5	94.9
Does menstruation prevent you from carrying out your day to day activities?	Yes	25.5	10.3
	No	74.5	89.7
Do you use adsorbent materials during menstruation	Yes	96.8	94.9
	No	3.2	5.1

If yes, what type of absorbent materials do you use?	Disposable sanitary pad	94.7	73.1
	Reusable sanitary pad	0.7	2.3
	A clean piece of cloth/ towel	33	18.9
If you use disposable materials, how often do you change the absorbent (period) material?	Once a day	6.2	1.7
	More than once a day	93.8	98.3
Where do you get water to wash your absorbent materials?	Pond/stream water	57.7	16.4
	Well water	34.6	55.5
	Tap/borehole	7.7	28.4
Do you dry your reusable absorbent materials in the sun?	Yes	46.2	88.7
	No	53.8	11.3
How do you dispose of the used absorbent materials?	Dispose of a refuse dump	70.1	1.7
	Dispose of in latrine	6.4	15.4
	Bury in the ground	5.1	14.9
	Dispose of in a waste bin	15.9	18.3
	Burn it	2.5	49.7
How often do you clean your genitalia during menstruation?	Once a day	3.8	1.1
	More than once a day	93.7	98.9
What materials do you use in cleaning your genitalia?	soap and water	42	24
	water only	133	76
Did your parents educate you on menstruation before you started menstruating?	Yes	57	32.6
	No	118	67.4

Table 4: Comparison of baseline and end line survey results showing % distribution of parents' Menstrual Hygiene Knowledge and Practice (137)

Variables	**(N=40)**	**BASELINE (%)**	**ENDLINE (%)**
what age do girls usually start menstruation	9-14years	90.0	100.0
	15-19years	10	0
How often should period materials be changed?	Once a day	5	0
	More than once a day	94.5	100
Where do girls get water to wash your absorbent	Pond/stream water	25	7.5
	Well water	45	65
	Tap/borehole	22.5	12.5

	All the above	7.5	15
What is the disposal process of period absorbent materials	Dispose of in latrine	7.5	35
	Bury in the ground	25	37.5
	Dispose of in a waste bin	12.5	10.0
	Burn it	17.5	17.5
	Others (Flush in the toilet)	17.5	0
What does a girl need in order to bathe properly during their period	Soap and water	100	100

Annexe IV DREAMS project core package

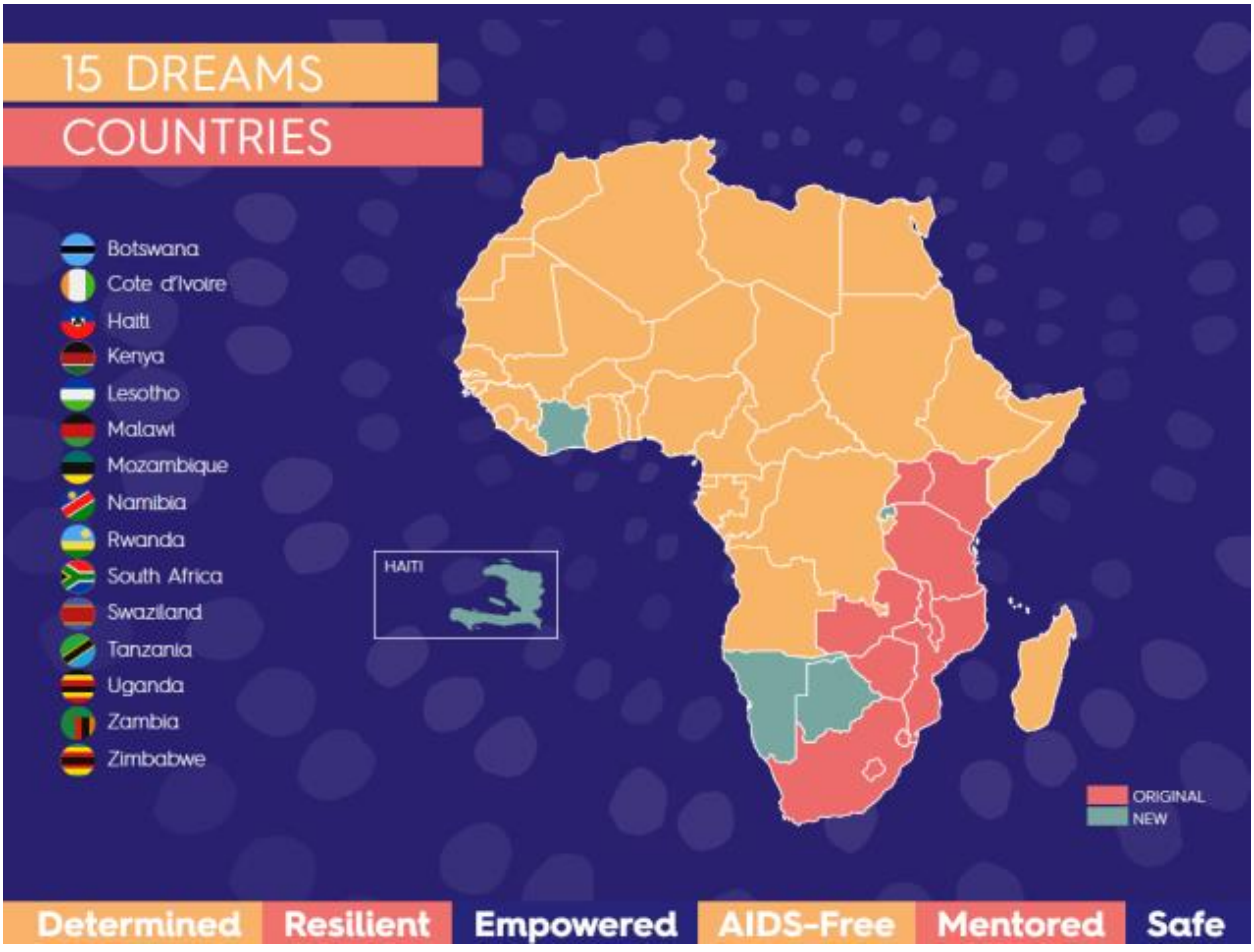

Figure 5: Map of Countries implementing DREAMS (163)

Table 5:Summary of challenges and opportunities for multi-sectoral programming (140)

Challenges	Opportunities
DREAMS was 'a big lift'–requiring a huge effort to get it off the ground	This has mobilised multiple sectors, ministries, and organisations to work together. DREAMS was generally well received and highlighted AGYW as a priority group (although there were concerns about those perceived to be excluded, especially boys and young men)
Expectations are ambitious and bold to implement and achieve impact in a quick timeframe	This created a momentum and urgency to find solutions to challenges and make DREAMS happen. The shared commitment fostered collaboration.
Coordinating multiple components of the DREAMS Core Package—at institutional level was challenging	New structures and strategies were used to coordinate multiple implementers and interventions; these can be strengthened and sustained for multi-sectoral collaboration and better communications going forward
A 'new way of working' was difficult given lack of existing systems, structures or incentives for organisations to link their services for AGYW	
Delivering all interventions in the Core Package in one geographic area was untenable in the time allocated	DREAMS led to the expansion of existing HIV services and strengthened health system delivery
	Creation of new programmes, including the introduction or expansion of PrEP availability, and improved human resource capacity for interventions promoting social norms, social assets and structural drivers. In some cases, this created new HIV prevention services where few existed before.
	Creative solutions emerged to adapt the PEPFAR guidance to each context. Further analysis can explore whether this strengthens or hinders the impact of DREAMS.
Layering services in the DREAMS Core Package–at individual AGYW level	Better integration of services–with tested models that can be applied to other population groups (beyond AGYW) and services (beyond HIV prevention).
	Strengthened screening and referral protocols; formalised linkages between organisations; use of passports, and badges were innovations that emerged from the opportunities DREAMS presented
	Recognition of high-risk populations (the highest risk), and appreciation for the unique and comprehensive needs of AGYW.
Tracking the layering of services	The use of a unique ID has strengthened information systems to monitor DREAMS services, but could be improved to track layering and primary packages, and services by individual risk profiles, e.g., to gauge whether higher risk AGYW and male partners are reached, and 'elite capture' can be avoided.

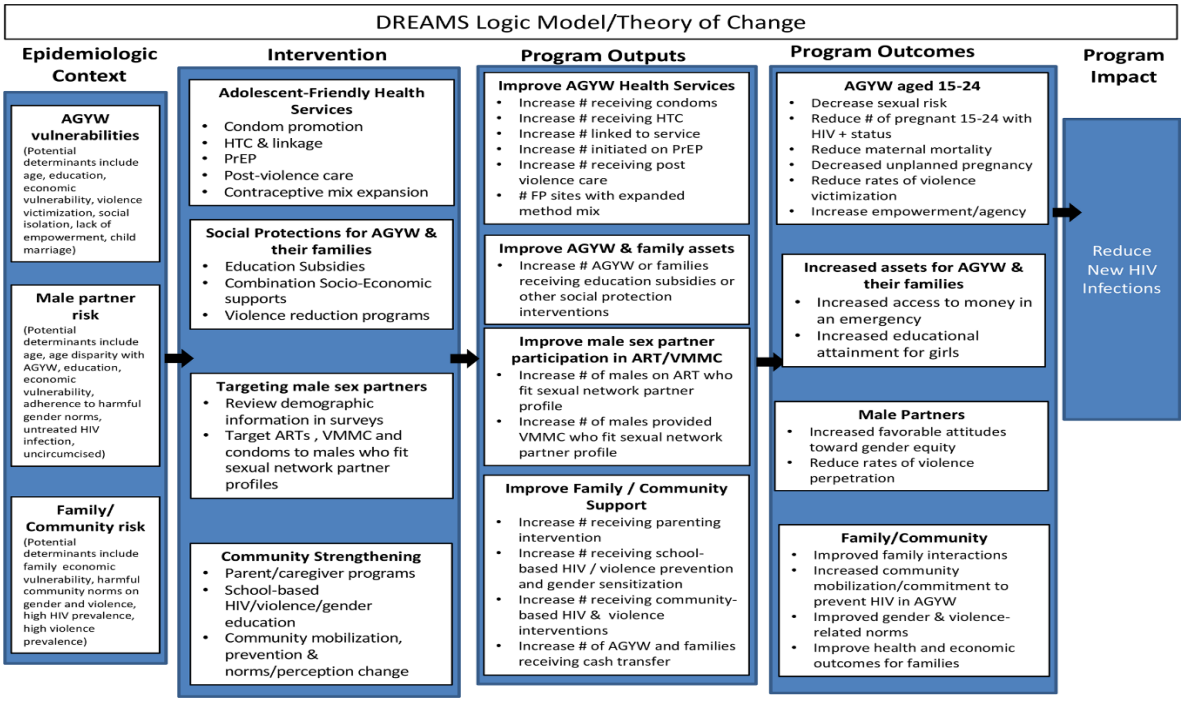

Figure 6: DREAMS theory of change (138)

	Empower AGYW and Reduce Their Risk						Mobilize the Community		Strengthen Families			Decrease Risk in Sex Partners	
Eswatini	X	X	X	X	X	X	X	X	X	X	X	X	X
Kenya	X	X	X	X	X	X	X	X	X	X	X	X	X
Lesotho	X	X	X	X	X	X	X	X	X		X	X	X
Malawi	X	X	X	X	X	X	X	X	X	X	X	X	X
Mozambique	X	X	X	X	X	X	X	X	X	X	X	X	X
South Africa	X	X	X	X	X	X	X	X	X	X	X	X	X
Tanzania	X	X		X	X	X	X	X	X	X	X	X	X
Uganda	X	X	X	X	X	X	X	X	X		X	X	X
Zambia	X	X	X	X	X	X	X	X	X	X	X	X	X
Zimbabwe	X	X	X	X	X	X	X	X	X	X	X	X	X
	Condom Promotion & Provision	HIV Testing & Counseling	PrEP	Post Violence Care	Social Asset Building	Increase Contraceptive Method Mix	School Based HIV & Violence Prevention	Community Mobilization & Norms Change	Parenting/ Caregiver Programs	Education Subsidies	Combination Socio-Economic Approaches	Characterization of Male Sex Partners	Linking Male Partners to Services

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Figure 7:Implementation of DREAMS core package, by country (138)