TEENAGE PREGNANCY AND ITS INFLUENCING FACTORS IN NIGERIA - LITERATURE REVIEW

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

Master of Science in International Health

by

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Nigeria

Declaration:

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

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Signature: 

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Abbreviations

CDC	Centre for Disease Control
SEM	Social Ecological Model
TP	Teenage Pregnancy
SRHR	Sexual Reproductive Health and Rights
SRHS	Sexual Reproductive Health Services
SRH	Sexual Reproductive Health
NMPDC	Naval Medicine Professional Development Centre
WHO	World Health Organisation
NHIS	National Health Insurance Scheme
NSHDP	National Strategic Health Development Plan
LMICs	Low- and middle-income countries
PHC	Primary Healthcare Centre
NPE	National Police on Education
UBE	Universal Basic Education
UNESCO	United Nations Educational, Scientific and Cultural Organisation
EFA	Education For All
NDP	National Development Plan
NHP	National Housing Programme
VAPPA	Violence Against Persons Prohibition Act
VAPP	Violence Against Persons Prohibition
TSRH	Teenage Sexual Reproductive Health
CSW	Commercial Sex Work
SW	Sex Work
NYP	National Youth Policy
NYSC	National Youth Service Commission
sSA	Sub-Saharan Africa
NHA	National Health Act
GBV	Gander Based Violence
FGC	Female Genital Cutting
FGM	Female Genital Mutilation
NNSMSP	Nigeria National Standards and Minimum Service Package
NACA	National Agency for the Control of AIDS
FLHE	Family Life for HIV/AIDS Education
UNICEF	United Nations Children's Fund
NDHS	National Demographic Health Survey
SDG	Sustainable Development Goals
OR	Odds Ratio
STIs	Sexually Transmitted Infections
TSRHS	Teenage Sexual Reproductive Health Services
LSI	Life Skill Intervention
9JA	Nigeria
BTP	Better Together Programme
NLNG	Nigeria Liquified Natural Gas
GEP3	Girls Education Project 3

DFID	Department for International Development
FP	Family Planning
UNFPA	United Nations Population Fund
CPR	Contraceptive Prevalence Rate
FPBp	Family Planning Blueprint
FMOH	Federal Ministry of Health
NFPC	National Family Planning Communication
NHPF	National Health Promotion Forum
MC	Modern Contraceptive
NHGSFP	National Home-Grown School Feeding Programme
SE	Sexuality Education
GDP	Gross Domestic Product

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TEENAGE PREGNANCY AND ITS INFLUENCING FACTORS IN NIGERIA - LITERATURE REVIEW

Abstract

Introduction

Notwithstanding the decline in teenage birth rate, Nigeria is still considered as one of the countries with the highest teen birth rates in the world. An increasing percentage of teenagers aged 15-19 are engaged in sexual activities with associated consequences of pregnancy, abortion, HIV/AIDS, and other health problems. Moreover, the risk of dying and the complications associated with pregnancy are doubled in teenage girls compared with women in their twenties. This thesis examined factors of influence on teenage pregnancy (TP) in Nigeria, identified effective interventions and provided actionable recommendations.

Methods

A literature review, examined factors of influence on TP in Nigeria, using the social ecological model (SEM). Relevant articles were identified using PubMed and Google scholar search engines and databases Due to paucity of articles on TP in Nigeria, articles of up to 40 years were accommodated. Only articles in English language relevant to teenage pregnancy were selected.

Results

The described factors contributed to TP in Nigeria using the SEM, were mostly found among individual and community factors, followed by relationship factors, and societal factors. The prominent factors were, age at sexual debut, child marriage, lack of formal education of youths, adults/parents, poor teen sexual reproductive health services (SRHS). "Baby factory", contributed to TP but with limited information about the extent to which it contributed. Covid-19 pandemic compounded the challenges of TP in Nigeria. Interventions to improve teen SRHS, formal and sexuality education as well as economic empowerment etc were identified.

Conclusion

Teenage girls could be protected from pregnancy if they are provided access to safe, affordable, and acceptable modern contraceptives, formal and sexuality education, and life skill intervention. Also, engaging religious/traditional heads, teachers, health educators in TP prevention campaigns could be an effective strategy.

Key words: teenage, pregnancy, Nigeria, Africa.

Word count: 13094

General Introduction

Following my graduation as a medical doctor from the Abia State University Uturu, Nigeria, and completing one year internship, I proceeded on a year compulsory national youth service. The national youth service programme creates a platform for Nigerian youths to embrace a selfless attitude to community service. The scheme also helps the youths to focus on unity in diversity and brotherhood irrespective of culture, tribe or religion.[1] Upon completing the national youth service programme, the health and hospital services of the Nigerian Ministry of

Defence offered me a job as a medical officer. As a medical officer, I had mentoring and leadership training, as well as various work exposures, and gradually, I progressed to the position of a principal medical officer. In the course of the job, my interest was drawn to public health due to its classical approach in protecting and improving the health of people and their communities. To be a better and informed professional, I took additional courses at the Navy Medicine Professional Development Centre (NMPDC), Bethesda Maryland, USA, and the Royal Tropical Institute (KIT) Amsterdam. These studies lead to the acquisition of a certificate in military tropical medicine and Diploma in global health and tropical medicine at NMPDC and KIT, respectively. In the quest for more public health skills and knowledge, I am pursuing a master degree, in international health at KIT, Amsterdam. As a principal medical officer, in addition to providing leadership and management to promote the interest and development of health facilities, through strategic planning, ensuring cohesion of the centres, also, clinical duties are part of my responsibilities, as well as facilitating public health programmes. I also oversee maternal & child health care services and coordinate routine medical outreach for indigent communities. I have more than 12 years job experience in clinical care and hospital administration; both at a national and international level. My participation in United Nations peace support operations in post crises periods in Liberia and Sudan provided me with some experience on public health programme implementation.

My interest is drawn to conducting a literature review thesis on teenage pregnancy because of what I have seen teenagers go through due to unplanned pregnancy in their age. My first sad experience as a young medical officer about 16 years ago, was when a 17-year-old secondary school girl was brought to own facility, moribund and semi-conscious due to overwhelming sepsis caused by unsafe abortion. Another was a female teen who presented to me in the out-patient clinic asking for assistance to get rid of a pregnancy she did not bargain for. Abortion is legal in Nigeria only when it is done to save the life of the pregnant woman.[2] Legal restrictions,[3] and other factors, including fear, stigma,[4] and religion predispose pregnant school girls to unsafe abortion, with its associated consequences. I had also conducted evacuation of retained product resulting from unsafe abortion in a teen. I also provided blood for her, while I conducted the procedure because she was anaemic. In all these cases, a common solution would have been prevention of teen pregnancy. Moreover, a pregnant girl child in school must choose either to drop out of school or go for abortion to remain in school. Meanwhile, abortion in Nigeria is a hard nut to crack due to the position of the law and religious belief. It is therefore, pretty "expensive" for a schoolgirl to become pregnant in Nigeria. Thus, this thesis explored factors influencing teenage pregnancy in Nigeria and provided actionable recommendations on prevention.

1. Background

This section beams light on background information on Nigeria with respect to geography, demography, education system and funding, health system and funding as well as health indicators. This is to position Nigeria in the context of factors influencing teenage pregnancy.

1.1 Geography

Nigeria is in west Africa, with arid to humid equatorial climates,[5] and 36 states besides a federal capital territory, Abuja,[6] (see figure 1). The country has a diverse population with hundreds of languages, mainly Hausa, Igbo, Yoruba, and English as the official language for teaching and instruction in schools in Nigeria.[7] Nigeria also has variety of natural resources mainly petroleum and natural gas.[5]

Figure 1 Nigerian map with border countries and landmarks

1.2 Demography

The first and latest Nigerian population and housing census was conducted in 2006 putting Nigeria total population at 140 million with 51% male and 49% female.[8] Although, based on world population prospects, 2012 revised, Nigeria had an estimated population of 162 million people. Notwithstanding the declining fertility, this population is projected to rise to 239 million and 440 million by 2025 and 2050 respectively attributable to demographic transition.[9] The 2018 Nigeria demographic health survey (NDHS) shows a gradual decline of total fertility rate from 6.0 children per woman in 1990 to 5.3 in 2018.[10] Prior to the COVID-19

catastrophe, about 4 in 10 Nigerians lived in poverty. This could be attributed to Nigeria being a LMIC and slow economic growth.[11]

1.3 Education System and Funding

The administration of educational institutions in Nigeria is a responsibility shared among the federal, state, local government, private organisations, and the communities guided by the national policy on education (NPE). The policy was introduced in 1982,[12] with its latest update in 2013.[13] Nigeria is currently operating 1-9-3-4 system of education. The number "1" represents early child education, elementary and Montessori schools, "9" represents basic education, which means 6 years in primary school and 3 years in junior secondary school; while 3 and 4 years are spent in senior school and university respectively.[14,15] The six years primary school education is compulsory and became free in 1999 following the introduction of the universal basic education (UBE) programme.[16]

In Nigeria for the past five years education financing has been dwindling. It is below the UNESCO member states agreed investment in education of 15 to 20% of public expenditure.[17]

1.4 Health System and Funding

The national development plan (NDP) structured the healthcare system for service delivery across three levels of care in the public sector.[18] The three levels of care are, primary, secondary and tertiary healthcare system. This arrangement links the three levels of care to the Local, State and Federal tiers of government administration, respectively,[19] (see figure 2). Although, the Nigeria health care system is largely public sector driven, it has a significant private sector participation in health care service delivery.[20] The efficiency of health service delivery in Nigeria is hampered by political instability, corruption, unstable economy and weak institutional structures.[21]

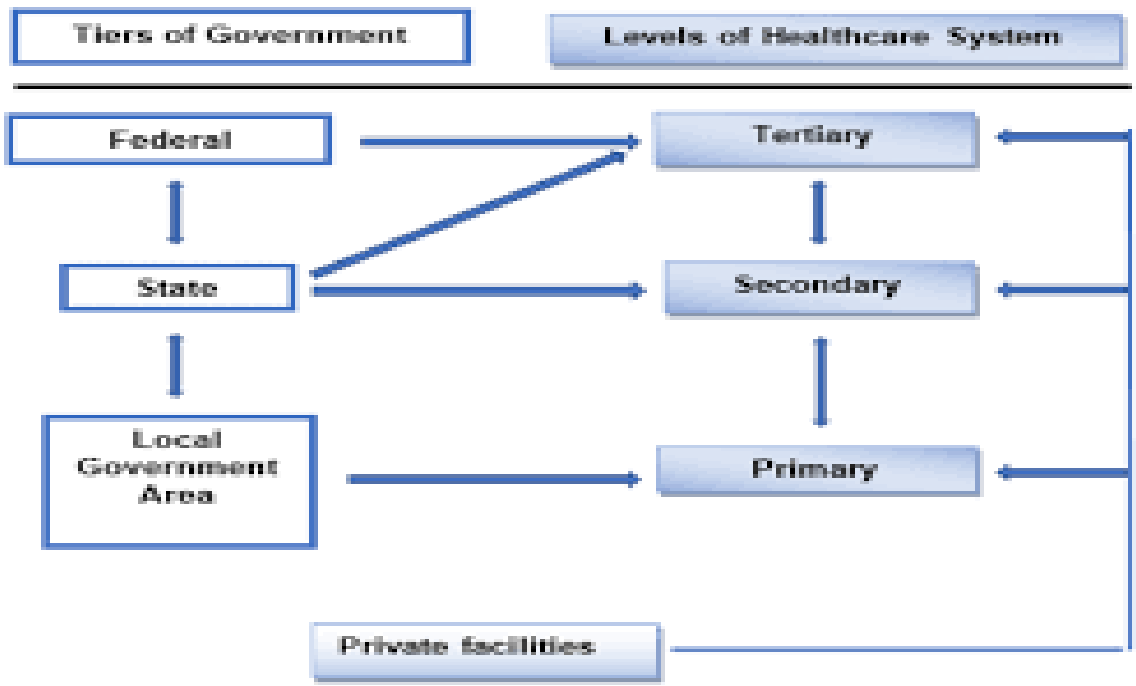

Figure 2 Three Levels of healthcare delivery in Nigeria

In a bid to align with the goal of universal health coverage, the national health insurance scheme (NHIS) was established under the NHIS Act (2004).[22] Health spending as a fraction of Nigeria GDP fell from 4.6 % in 2004 to 3.9 % in 2018.[23] (see figure 3).

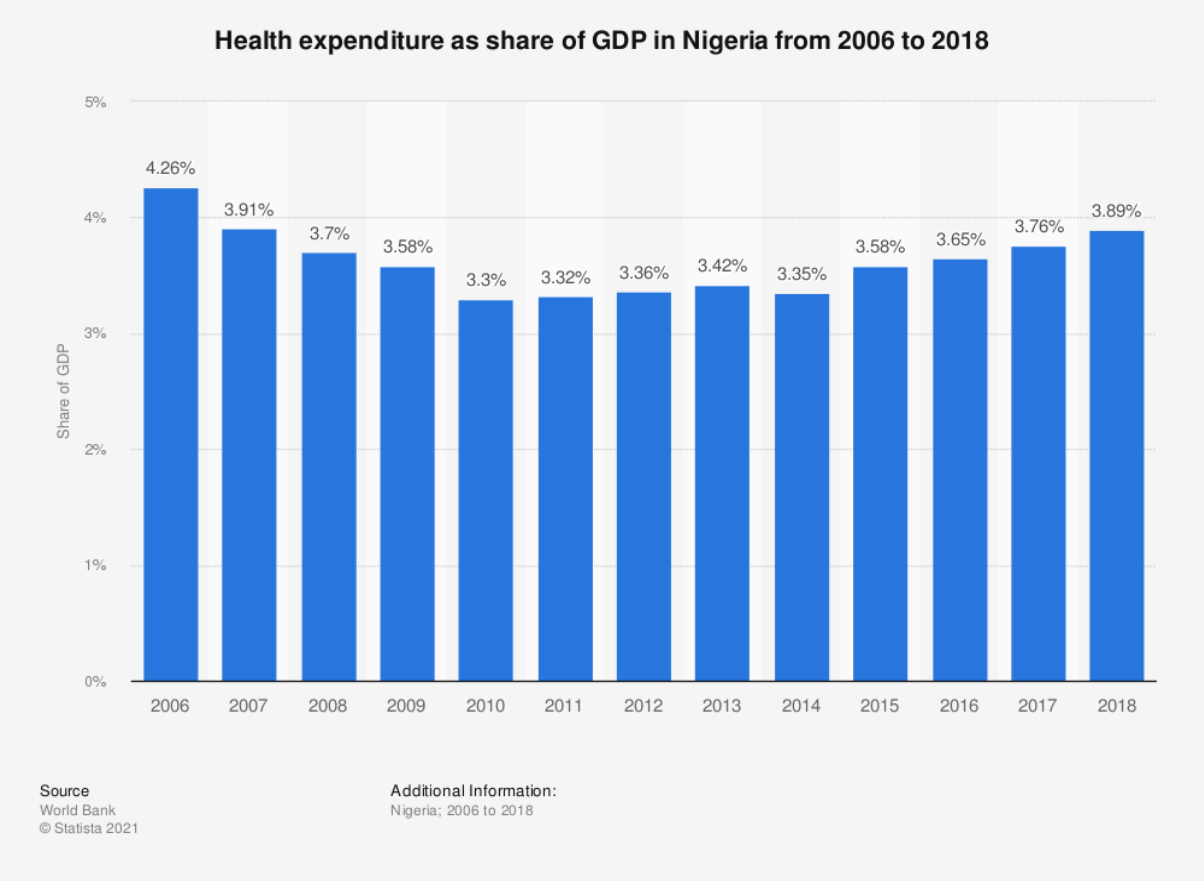

Figure 3 Health spending fraction of GDP for Nigeria from 2006 -2018

Nigeria has various health laws, policies, interventions, and strategies, aimed at improving health care service delivery for Nigerians. The few below are worth mentioning in relation to the reproductive health of women and girls. They include:

a. In a bid to encourage healthy lifestyle among young people, the Nigeria government was supported by the WHO to create the adolescent health and development policy 2021-2025. This policy comes with implementation plan and monitoring framework.[24]

b. The 2018, Nigeria National Standards & Minimum Service Package (NNSMSP) for Adolescent & Youth Friendly Health Services (AYFHS) was created to tackle gaps regarding minimum package of services and standards. In line with WHO, the NNSMSP ensures that AYFHS are accessible, acceptable, effective, appropriate and equitably distributed.[25]

c. As at 2016, prevalence of female genital cutting/mutilation (FGC/M) in Nigeria among women aged 15–49 shows 24.8%.[26] The practice of FGC/M in Nigeria is tackled by applying the 2013–2017 national policy and plan action for the elimination of FGC/M and the national gender policy of 2006. In addition, the national policy on the health and development of adolescents and young people 2007 and the national reproductive health policy 2017, are also employed.[27] Also in 2015, the Nigeria Violence Against Persons (Prohibition) Act (VAPP) was enacted. This is the first federal law aimed at prohibiting FGC/M nationwide and eliminating gender-based violence (GBV).[26]

d. In 2000, the Nigerian government established national agency for the control of AIDS (NACA), which was formerly known as national action committee on AIDS. NACA is charged with the responsibility of coordinating the various activities of HIV/AIDS in Nigeria.[28]

e. The proposal for including sexuality education (SE) in Nigerian schools was considered in 1999.[29] The SE curriculum in Nigeria is referred to as family life and HIV/AIDS education (FLHE) with emphasis on abstinence-only. Following the federal government approval of the curriculum in the early 2000s, FLHE has been integrated in the school curriculum and implemented across the states in Nigeria.[29]

1.5 Health Indicators

The Nigeria crude death rate gradually dropped from 22.49 deaths per 1000 population in 1971 to 11.42 deaths per 1000 population in 2020.[30] In Nigeria as at 2020, with an estimated population of 206,140,000, the under-five mortality rate was 113.8 per 1000 live birth.[18] According to WHO 2019 report on maternal health in Nigeria, the estimated Nigeria maternal mortality ratio in 2015 was greater than 800 maternal deaths per hundred thousand live births. In pregnancy, childbirth or postpartum/post-abortion, a Nigerian woman has a 1 in 22 lifetime risk of dying, compared to most developed countries, with 1 in 4900 lifetime risk of dying in these circumstances.[31] The In 2022, the life expectancy for Nigeria is 55.44 years, being 0.57% higher than 2021.[32]

With an estimated population of 200 million, Nigeria is the most populous African country, and among the countries with the highest absolute youth population globally,[33] and half of the population is below 19 years old.[34] Approximately 43 percent women between 25 – 29 years old got married before age 18 years while, 8 percent of girls between 15-19 years of age got married by age 15 years. Also, One in 5 teenage girls are pregnant with their first baby or already mothers.[35] The prevalence of teenage pregnancy was reported as 22.9 percent in a 2014 study conducted in South West Nigerian rural community.[36] This is comparable to 25.5 percent teenage pregnancy prevalence indicated in a different study in a rural community in Jos, North Central Nigeria in 2014.[37] A multi-level analysis in 2022, indicates that high percentages of teen pregnancy are found in Bauchi, Kebbi, Kano, Katsina, Niger and Sokoto states in Northern Nigeria.[38]

2. Problem Statement, Justification, Objectives, Methods, and Conceptual Framework

2.1 Problem Statement

Teenage pregnancy (TP) is a global public health challenge occurring in high income countries, middle-income countries, and low-income countries.[39,40] It is also called adolescent pregnancy.[41] The WHO describes it as pregnancy among adolescents aged 10 to 19 years.[42] Teen pregnancy when considered as unintended pregnancy, could be unwanted or mistimed; unwanted if it occurs when a child or more children were not desired and mistimed if it occurs earlier than desired.[43] Currently, about 1.2 billion teenagers aged 10-19 years constitute 16 per cent of the global population.[44] Annually, about 16 million girls aged 15–19 years, give birth, accounting for almost 11 percent of all births globally, while 2 million girls below 15 years old give birth. Also globally, 1 in 5 girls around 18 years old, has given birth.[45] The global teenage birth rate in 2020 according to United Nations Population Division was placed at 43 births per 1000 teenagers; with variation among countries, from 1 to more than 200 per 1000 teenagers. Due to the complications, as well as mortality resulting from unsafe abortion and huge disparities across regions, the problem associated with teen pregnancy remains high. Moreover, the primary cause of death globally is complications resulting from pregnancy and childbirth.[46,47] Additionally, notwithstanding that women are having less babies globally, high fertility rates persist in some regions of the world.[48]

Although, since 1990 the decrease in teenage birth rate is almost universal, there is still high teenage fertility in many developing countries, including in Africa.[49] In 2018 a systematic review and meta-analysis conducted on the prevalence and determinants of teenage pregnancy in Africa reported varying prevalence ranges in its regions with the highest 21.5% and lowest 9.2% in East and North Africa respectively. In all, the pooled prevalence of teenage pregnancy in Africa as reported in the study was 18.8%, indicating the percentage of teens that become pregnant yearly in Africa. Also, some sociodemographic factors were associated with teenage pregnancy in Africa in the study. These factors include teens and parents' educational status, place of residence, marital status, and parent to teenage girl communication on sexual reproductive health (SRH)/teen pregnancy.[50] In sub-Saharan Africa (sSA) nearly 10% of girls become mothers by 16 years old, tagging this age group with the highest teenage pregnancy rates in Africa. Thus, teenage pregnancy is a significant public health challenge in sSA.[51] Notwithstanding the decrease as noted above, the challenges of teen pregnancy remain huge as the susceptibilities of teenage mothers in LMICs frustrates strategies aimed at enhancing maternal and child health outcomes. Besides, these teen mothers are confronted with myriad challenges which further make them prone to inexplicable higher risks of unfavourable health outcomes.[52] Moreover, a United Nations, Department of Economic and Social Affairs 2020 report, noted that the rates of early teenage fertility are generally higher and more diverse especially in Central and Western sSA, including Nigeria. In this report Nigeria was considered as one of the three countries in sSA, and one of the four in the world with an estimated 10 births/1000 teen girls aged 10-14 years.[53]

The 2018 Nigerian Demographic Health Survey (NDHS) revealed teenage birth rate in 2018 to be 106 births per 1,000 women; Imo and Bauchi states are the

least and highest at 20 and 198 respectively with a variation of 178. This means that some states of Nigeria belong to the areas with highest prevalence in the world, indicating how big the problem of teen pregnancy exits in Nigeria. Teenage births generally appear higher in the Northern Nigeria, especially North-west, where the average age of first marriage and debut intercourse is around 16 years old.[54] In Nigeria since 2003, teenage birth rate has progressively reduced from 126 to 106 birth per 1,000 teenage girls. Since 1990, the 2018 teenage birth rate is the lowest. The survey further noted that, TP rate among girls in urban communities dropped from 17% in 2003 to 8% in 2018.[54] Studies seem to attribute this to improved levels of education. Despite the decline in prevalence of teen pregnancy, the problem of teen pregnancy is still significant due to the rebound impact on the health and socioeconomic needs of the affected teen population,[55] as well as the multiplier effect on the health care system incumbered with Nigeria poor health budget when compared with other African countries like South Africa and Kenya.[56,57] Also, Nigeria, is still considered as one of the countries with the highest teen birth rates in the world;[58] An increasing percentage of these teens between ages 15 and 19 years are involved in sexual activities with its associated consequences of pregnancy, abortion, HIV and other health problems among teens.[59] Additionally, in Nigeria termination of pregnancy among ages 15-24 years increased from 4.2% in 2013 to 4.9% in 2018.[60] Though, poor reporting and poor documentation of abortion due to restrictions could affect this data. The teens who are also sexually active fall within this age group. Due to the punitive abortion laws in Nigeria, women including teens secretly patronise abortion services in private facilities where providers are often quacks and provide unsafe services with resultant dare complications even death at times.[61,62] These could further worsen the health challenges of the teenage population in Nigeria. Also the Covid-19 pandemic has been shown to impact the provision of SRH services, including access to contraceptives as well as availability, information and access of such services to teenage girls in Nigeria,[63] thereby deepens the teens SRH challenges.

2.2 Justification

The risk of dying and the complications associated with pregnancy are doubled in teenage girls compared with women in their twenties.[64] Teenage pregnancy is associated with obstetrics and significant health issues as well as socioeconomic with psychosocial consequences for the baby, the teenage mother and the society in general. These include but not limited to, low birth weight, preterm birth, high peri- and post-neonatal morbidity and mortality as well as poverty, delayed prenatal care, unsafe abortion. Others are pregnancy induced hypertension, eclampsia and second teenage pregnancy.[65,66] It stops a teenage girl from attaining her full potential and applying her fundamental human rights.[67] Teenage pregnancy negatively influences future productive ability of a teen resulting in age long poverty.[68] Teenage girls suffer psychological challenges resulting from social stigma, encounter physical and domestic violence as they struggle to cope with the demands of pregnancy and motherhood.[69,70] There is high probability of these girls dropping out of school, with little chance of returning.[71] These undesirable outcomes, persist throughout the entire life of a teenage girl, with a sustained generational consequences.[72] Moreover, especially in countries where

contraceptive use is poorly practiced, teen pregnancy contributes to rapid population growth and increase in individual fertility for entire life.[49]

Early pregnancy in girls comes with dare and age-long physical, psychological and socioeconomic consequences, therefore teenage pregnancy should be handled as one of the major challenges in the healthcare system.[73] The LMICs including Nigeria, would have to employ their scarce resources to provide the demands of teenage pregnancy, and the needs of teen mothers and their children.[74] Among the targets of sustainable development goals (SDGs) is stopping preventable maternal mortality by reducing maternal death lower than 70 per 100,000 live births globally by 2030.[75] Since teenage pregnancy is linked to unfavourable maternal and child health consequences, with increased possibility of death in pregnancy, teenage pregnancy prevention could contribute in achieving this SDG target and others like gender equality and poverty eradication.[76] Based on the aforementioned, the impact of teenage pregnancy on Nigeria health system, as well as its colossal havoc on the socioeconomic, psychological and general health status of Nigerian teenage girls, the issues of teen pregnancy cannot be overemphasised. Moreover, recent overview of factors influencing teenage pregnancy is not available in Nigeria. Therefore, this literature review thesis aims to explore the factors of influence on teenage pregnancy in Nigeria with a view to provide evidence informed recommendations for the prevention of teen pregnancy and its negative consequences.

2.2 General and Specific Objectives

2.2.1 general objective

To explore factors influencing teenage pregnancy with a view to provide evidence informed recommendations for prevention of teenage pregnancy and its negative consequences in Nigeria and related settings.

2.2.2 specific objectives

1. To examine the influence of personal, relationship, community, and societal factors on teenage pregnancy in Nigeria.

2. To identify effective interventions to address factors of influence on teenage pregnancy in Nigeria.

3. To provide actionable recommendations.

2.3 Methods

2.3.1 search approach

This is a literature review of factors of influence on teenage pregnancy in Nigeria. Relevant articles were initially identified using PubMed and Google scholar search engines and databases such as UN, World bank, Nuffic, WHO, UNESCO and Nigeria governors' forum digital repository (Ngfrepository). For a wider coverage, articles of up to 40 years were accommodated. Key words used include, but not limited to teenage, pregnancy, Nigeria, prevalence, Africa, global; the combinations of the words were also used (See table 1). More articles were hand-searched from the reference list of previously retrieved articles. Only articles in English language relevant to the subject matter were selected.

Table 1 Summary of Search Engine/Database and Search Term

S/No	Search Engine/Database	Search Term and Combination
1.	Google scholar	National youth service corps Nigeria Geography of Nigeria Nigeria land mass. Official language in Nigeria schools Presidential term length in Nigeria. Fertility rate in Nigeria. Education financing in Nigeria. Levels of health care delivery Nigeria. Legislations and policies on female genital cutting in Nigeria. Teenage pregnancy global perspective. WHO definition of teenage pregnancy. Teenage pregnancy in Africa. Teenage pregnancy in Nigeria. Sexual education and teenagers in Nigeria. Substance abuse, teenage in Nigeria. Peer pressure, teenage in Nigeria. Child marriage and Nigeria. Partners characteristics. Teenage partner characteristics and Nigeria. Family influence, rate of teen pregnancy in Nigeria. School and teen pregnancy Nigeria. Prostitution, teen in Nigeria. Teenage prostitution and pregnancy Nigeria. Baby factory in Nigeria. Nigeria Teenage life skill Contraceptive education Nigeria. Nigeria contraceptive teenage programme. Life skill school program, Nigeria. Reality shows in Nigeria. Nigeria TV and Teen pregnancy.
2.	PubMed	Teenage or adolescent pregnancy and Nigeria. Teenage pregnancy and Nigeria. Factors and teenage pregnancy and Nigeria. Age at debut and teenage and Nigeria. Teenage pregnancy and Interventions and Nigeria. Health system and Nigeria. Health Financing and Nigeria. Teenage and alcohol and Nigeria. Contraceptive and teen and education.

		Sexual education and teenagers and Nigeria.
3.	Database	
a.	https://population.un.org/wpp/ https://www.unicef.org/nigeria/stories/supporting-big-sister-big-heart	Demography Nigeria Life skill programme Nigeria
b.	https://ngfrepository.org.ng:8443/jspui/ bitstream/123456789/3145/1/NDHS%202018.pdf	Nigeria demographic health survey 2018
c.	https://www.who.int/data/gho/data/themes/ topics/topic-details/GHO/world-health-statistics https://www.afro.who.int/news/who-reiterates-commitment-improve-adolescent-health-nigeria	Life expectancy Nigeria Adolescent health in Nigeria.
d.	http://databank.worldbank.org › poverty › AM2021	Nigeria poverty ranking 2021.
e.	https://www.nuffic.nl/sites/default/files/2020-08/education-system-nigeria.pdf	Education system in Nigeria.
f.	https://en.unesco.org/news/unesco-member-states-unite-increase-investment-education	UNESCO percentage of national budget in education

2.4 Conceptual Framework

There are considerable and interwoven factors of influence on teenage pregnancy. The Social Ecological Model (SEM) offers a natural theoretical framework to address the various levels of influence.[77] The model created in 1970s by a sociologist, is used to describe the multifaceted relationships between social and structural factors, individual practices, health and physical environment.[78] It contextualizes behaviours of individuals by using elements such as intrapersonal, interpersonal/network, community and public policy to create a framework which explains the interactions existing among the levels.[79] SEM is a theory-based framework for understanding, exploring, and addressing the social determinants of health at many levels. It encourages researchers to go further than focus on behaviours of individuals and toward an insight into a variety of factors of influence on health outcomes. It broadens researchers approach on achieving improved results for diverse populations, such as pregnant and parenting teenagers, as well as discriminated youths.[80,81] The four-level social ecological model as modified and adopted from Centre for Disease Control and Prevention (CDC), was employed for the analysis in this literature review,[82] (see figure 4). It identifies four levels of influence which are individual, relationship, community and societal factors of influence.[83]

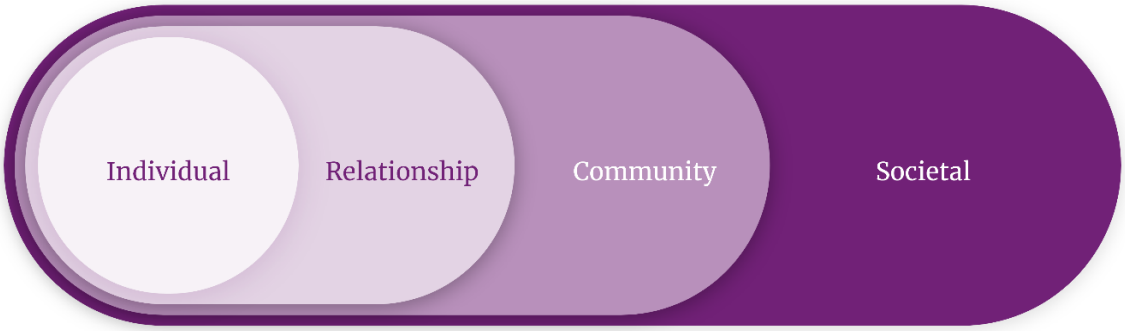

figure 4 Socio-ecological model adapted and modified from CDC

Through an explorative review, relevant factor for each level were identified and used in the search strategy. In table 2, these factors are summarized.

Table 2 Summarised factors of SEM

Individual factors	**Relationship**	**Community**	**Societal**
Age at sexual debut	Peer group	Schools & Schooling	Social, cultural, and religious norms
Education	Child marriage	School dropout	
Employment and Income	Partner characteristics	Employment status	Health policies
Substance use	Family members; mother, father, elder siblings, and family size	Job type. and media	Nigeria national youth polices and Nigeria policy on marriageable age
History of abuse		Residence and Neighbourhood	Educational policies
		"Baby factory"	Social policies
		Contraceptive knowledge, access, use and misconceptions	

3. Factors of Influence on Teenage Pregnancy in Nigeria

In this chapter, the results of the literature search were analysed using the Social ecological model adopted from CDC.[83] The analysis was done outwards from inner most layer, though there were overlaps on the layers. The analysis focused on individual factors, relationships, community factors, and societal factors.

3.1 Individual Factors

They are age, education, income, substance use, or history of abuse.

3.1.1 Age at sexual debut

In 2022, a multi-level analysis using data obtained from NDHS 2018, showed that in Nigeria, the likelihood of teen pregnancy was high among teens with first sexual intercourse between ages 15 – 19 years [aOR = 1.49; 95% (CI = 1.16-1.92.[38] The poor knowledge of safe sex during early sexual debut due to poor knowledge, access and use of modern contraceptives (MC); as well as the challenge teens encounter in providing their basic needs, could expose them to having sexual relationship, including transactional sex with older men who may provide these needs. Also, peer pressure to experience sex and lack of parental counsel on the dangers of risky sexual behaviour could have contributed to exposure of teens to early sex with older men.[84] Due to unmet social and basic needs, teens could be exposed to transactional sex, which is having sex in exchange of needs; often it is associated with unprotected sex due to poor access to MC. A study from Northcentral Nigeria published in 2017, recorded a sexual debut at younger teen age 10-15 years, almost similar for both female and male teens. And reasons advanced for early sexual activities in this study ranged from pleasure/fun, peer pressure to coercion and transactional sex for in-school and out-of-school teens respectively.[85] The findings of a study conducted in five African countries including Nigeria published in 2020, noted that prevalence of teen pregnancy is about 2/3rd higher among older teens, 18-19 years old when compared with younger teens, below 18 years.[86] Also, a study in Enugu Southeast Nigeria, implicated age as a prominent sociodemographic factor which influences teenage access to SRH services. It noted that older teens, 17 years and above, accessed SRH services more than younger teens, 16 years and below.[87] In comparing teens with any other age, a study in Southwest Nigeria, noted that more unintended pregnancies were reported among teenagers, including married teens than among any other age. A greater number of the pregnant teens in this study did not know how to use condom correctly when compared with any other age. Also, observance of fertile period to avoid pregnancy was less commonly practiced among teens than any other age group.[88]

3.1.2 Education

The educational accomplishment of teenagers and parents affects the likelihood of teenage pregnancy. Also level of educational attainment could predispose or assist in preventing TP,[89] as well as influence the needed good sexual and productive health of teens.[90] A study from Ogbomosho Southwest Nigeria, published in 2014, noted that the low level of education attainment among the teens in the study, could negatively impact on the knowledge and exposure towards reproductive health information.[91] The effect of educational level of the

respondents in this study, collaborated the position of a study from Northern Nigeria, published 2011. In the Northern Nigeria study, the researcher stated that little or no education could further escalate the risk for early pregnancy and marriage among teens and further worsen the unmet social needs which predispose to early marriage and pregnancy. It could also reduce the eligibility for good employment that provides good income.[92] The 2018 NDHS, also restated the impact of teen education on pregnancy. It noted that teenagers with more than secondary education, are inclined to starting childbearing later than those with no or little education.[10] Also absent or poor educational accomplishment could be both a cause and an outcome of teen pregnancy.[54] A mixed method study, conducted in Enugu Southeast Nigeria, published 2018, spotlighted education as one of the major factors that affects teenage access to sexual and reproductive health services (SRHS). It noted that teens with secondary education accessed SRHS more than teens with any other educational attainment including tertiary education.[87]

3.1.3 Employment and income

In Southwest Nigeria, a study in 2012, noted that employment in established organisation, significantly protects teens from unintended pregnancy.[88] In 2022 a multi-level analysis using the 2018 NDHS reported that employed teenagers were less likely to be pregnant.[38] Higher teenage birth rates are related to some social determinants such as unemployment, and low income.[93] Income could be described as the amount of money remaining after subtracting expenses from the sum generated from sales and or services.[94] The wellbeing and education of teens are substantially affected by the financial condition of parents. In some instances, teens with poor parents are compelled to become breadwinners for their families by engaging in menial jobs.[95] Teenage girls with poor family background are more likely to become pregnant.[96] A comparative analytical cross sectional study in a rural town Southwest Nigeria, noted that teens from low socio-economic status were 4 times more likely to be become pregnant than those from high socioeconomic status.[88] A second study in Ibadan, Southwest Nigeria on parental factors and teen pregnancy, noted that parental income level is one of the prominent factors contributing to teen pregnancy among secondary school students.[97] Parents with poor income could result in inability to meet the socioeconomic needs of the teen daughter. This could compel the teen girl to fend for herself which may in turn expose her to transactional sex, multiple sexual partners and unwanted pregnancy.[98] In Nigeria secondary school age is between 12 – 17 years,[99] which forms a good proportion of teenage population. A study in Southeast Nigeria, noted that the income status of a teenage girl could influence her access to SHR services, even in the abondance of such services. In this study, teens with low income were not able to access some SHRS due to financial cost associated with such services.[87]

3.1.4 Substance use

Substance use is considered a challenge when it causes dangerous influence on an individual's life, such as troubles at school, or home, damaging effect on mental and or physical health et cetera.[100] Teenagers who engage in substance use and are sexually active, have elevated rates of unintended pregnancy and recurrent

unplanned pregnancy.[101] A study from Southeast Nigeria, published 2016 showed prevalence rate of 32.9% substance abuse among secondary school teenagers as alcohol and cocaine were the highest and least used respectively, although with sex variation.[102] A study in Nigeria published in 2020, reported that 32.5% and 33.4% male and female students respectively, who participated in the study had used drugs. And about half of the respondents admitted being involved in sexual intercourse and had two or more sexual partners. The study further noted that continuous exposure of school going youths, including teens to drug use, may predispose to risky sexual behaviour with its resultant consequences such as pregnancy and STIs.[103]

3.1.5 History of abuse

The mechanisms said to influence sexually abused teenagers are early onset sexual interest, and early sexual activity. Also, experimental study proposes that the probability of involving in sexual intercourse at young age rises with exposure to all forms of abuse.[104] A community based study from Southwest Nigeria on child abuse published in 2018, reported 27.5% prevalence of teenage sexual abuse. Although, in Nigeria the true situation of the burden of teenage sexual abuse is not known but estimated to be in the range of 5% to 38% across the country.[105] A cross sectional study in 2015, combining two states in Southeast Nigeria, reported overall teenage sexual abuse prevalence rate of 40% with one time prevalence rate of 11.5% with male perpetrators.[106] The findings of a study from Southwest Nigeria, published in 2012, on child abuse and teenage pregnancy; noted that if all forms of child abuse is addressed, especially sexual abuse, the rate of teenage pregnancy and its associated impacts on teens could be reduced.[107]

3.2 Relationship factors

The factors are discussed below.

3.2.1 Peer group

In decision making, two major features differentiate adults from teenagers. First, in early age, teens are attracted to the immediate rewards of a potential choice, with little attention to the likely risks. Second, teens are still developing skills in self-control, ability to make futuristic plans, and ability to resist pressure from peer group.[108] In 2015 a study on peer pressure and teenage pregnancy among teenage secondary school girls in Southwest Nigeria, noted that though peer pressure was low (Mean $=1.82 \approx 2$), but with significant ($R2 = 0.407$) influence on teenage pregnancy among teens in the school. The study pointed that peer pressure predisposed respondents to concede to have sex since age mates had already engaged in sex.[109] Related finding was reflected in study from Southeast Nigeria, published in 2019, which implicated teen pressure as a significant variable contributing to teen pregnancy. The teenagers were under pressure to make friends and fit into the relationship, as well as being under pressure to engage in unsafe sexual activities.[110] In a study in Southwest Nigeria, lack of dissuasion from friends not to have boyfriends was rated high at 66.1% as unmet social need contributing to teen pregnancy.[91] A study in Nigeria in 2013, noted that peer

pressures among other reasons, was indicated as reason for teens to engage in unprotected sex.[111]

3.2.2 Child marriage

Nigeria is the most populous country in Africa, with the highest number of child marriage in West and Central Africa. It accounts for 40% of all child marriages in in the region, with 22 million child wives residing in Nigeria.[112] Although, child marriage is practiced among many ethnic groups in the country, it is mainly prevalent among the Northern region in Nigeria.[113] A multi-level analysis in Nigeria, which was published in 2022 showed that the likelihood of TP was high among married teens [aOR = 67.00; 95% (CI = (41.27-108.76)]. This could be due to increased desire to become pregnant so as to fulfil partner's expectation.[38] A multilevel analysis published in 2022 on the prevalence and factors associated with female child marriage in Nigeria, reported its findings based on individual and community levels. At the individual level it noted that women with no education, unemployed, religious, of Hausa ethnicity, as well as having 4–6 children and not exposed to mass media were more likely to get married prior to age 18 years. At the community level, a young female in the rural, poverty, being in a male lead households, living in Northwest Nigeria, as well as low literacy and low socioeconomic position account for higher likelihood of child marriage.[114]

3.2.3 Partners characteristics

A study in Abia state Southeast Nigeria published in 2017, noted that current problem of a male suitor insisting on pregnancy before marriage as a confirmation that the teen girl is fertile and vice versa accounted; for 42% of factors contributing to teen pregnancy in the study.[115] A study among secondary school students from Ojo military barracks Southwest Nigeria, published in 2016, with a teenage population of 97.8%, aged 10-19 years; noted partner role in providing contraceptive. The study reported that the second most common source of contraceptives was the partner; where condom 33.3% and oral pills 20.8% were the most and second most popularly used contraceptives methods.[116]

3.2.4 Family members; mother, father, and elder siblings and family size

The needs of teenagers, such as food, clothing, emotional, education, skills, etcetera, besides the government and society are provided by the family, including father, mother, and older siblings to promote wellbeing. When these needs are unmet, could create functional impairment to the social and instrumental activities for day to day living.[117] In Nigeria studies have evaluated the impact of unmet needs on TP. A study in Ogbomosho, Southwest Nigeria and published in 2014, noted that the inability of parents of teens to provide the financial and material needs of the children which was rated highest at 43.1%. And the parents inability to sustain happy and unbroke home was at 28.2%, while inability of parents to discuss sexuality and unable to provide needful restriction against peer pressure were rated 16.6% and 12.1% respectively.[91] These unmet needs predisposed the teens to pregnancy as they fend for themselves as well as negotiate their needs. In 2018, a study in Nigeria on the effect of family on protective sexual behaviour, noted that family support and living with both parents, positively influenced protective sexual behaviours among teens and young adults. The protective sexual

behaviours included sexual fidelity, consistent condom use and sexual abstinence.[118] A study from Anambra Southeast Nigeria published in 2017, noted that family size contributed to high prevalence of premarital sex found among respondents, secondary schools students which was 66.6%. Teens from family size with more than or four children were 4x more likely be involved in premarital sex, than those from family size with three or less children. In the study, it was suggested that large family size could reduce intimacy, creates less interaction among siblings, as well as reduce parental supervision and resource distribution among children.[119]

3.3 Community factors

3.3.1 Contraceptive knowledge, access, use and misconception

A study among secondary school students from Ojo military barracks Southwest Nigeria, published in 2016, with a teenage population of 97.8%, aged 10-19 years; reported correct knowledge of condom use among 67.5% respondents. Also, it showed poor knowledge of the use and timing on the other contraceptives without a statistically significant difference between male and female respondents. In the first sexual intercourse, 6.5% of the respondents used some contraceptives and no statistically significant difference among male and female respondents. Among the sexually active respondents 12.3% and 18.2% regular and occasionally used contraceptives respectively.[116] The study further noted that 81.0% and 35.5% were aware of condom and have heard of oral pills respectively, while 19.5% knew of abstinence. The most and second most popularly used contraceptives methods were condom 33.3% and oral pills 20.8% respectively, while almost the same number of respondents 14.0% used withdrawal and safe periods. Also, the most and second most popular sources of contraceptives methods were patent medicine stores and girl/boyfriends respectively. The most and second most mentioned barriers to sourcing for contraceptives were embarrassment and lack of funds as noted by 85.1% and 79.9% of the respondents respectively. Others were fear of contraceptives side effects 55.8%, fear of disapproval from adults 47.4%, poor understanding on how contraceptives work 35.7% et cetera.[116] Some of the findings were shown in another study from Southwest Nigeria, on modern contraceptive (MC) use among teens, published in 2017. It was reported that in general, 45% of sexually active unmarried teenage girls aged 15-19 years used MC. Male condom 50.3% was the most used method among those using any contraceptive method, while emergency pill 16.7% was the second most used. [120] The reported proportion of 45% sexually active, was higher than the Nigeria national prevalence being 22.2%, as reflected in the 2018 NDHS.[10] Although, 36% of the female household population had no education, but the study was conducted in a region with relatively high income, high rate of urbanisation as well good acceptance and use of MC.[120]

A cross sectional study published in 2019, conducted in three secondary health facilities in Kaduna Northwest Nigeria; among women aged 12-57 years, with teenagers accounting for 3.6% of the total study population. The study showed that injectable contraceptives were the commonly used among teens 56.5%, while 23.1% and 11.6% teens used implants and pills respectively; 2.5% used condom, and none of the teens used IUD, sterilisation or natural methods.[121] In a different

study from Southeast Nigeria, published in 2021, it was noted that despite the appreciable knowledge on contraceptives and usage among a large number of teens, misconceptions still existed. These misconceptions among some of the teenagers, ranged from prevention of pregnancy with hard drugs, white chlorine, to the use of laxatives and boiled alcohol to prevent pregnancy. Also some teens especially males, believed that condom use reduces sexual pleasure, therefore withdrawal was preferred.[122]

3.3.2 Schools and schooling

In 2008 a study from Ilorin reported that sex education intervention programmes reduced at-risk sexual behaviour among school-going teenagers. As indicated in positive changes in attitude and increased knowledge in sexuality education.[123] The implication of lack of SRH knowledge among teens would have been demonstrated in a study from Ilorin, Northcentral Nigeria published in 2011. It reported high prevalence of pregnancy and induced abortion among in-school teenagers. The study suggested that lack of knowledge of SRH may have contributed to the high prevalence of TP.[124] In a survey among secondary schools in Kogi state in 2015, noted that besides other factors, schools with poor understanding and poor approach to sexuality education as well as having teachers who lack good rapport among themselves, students and parents were strong factors contributing to ineffective and non-impactful sexuality education.[125]

3.3.3 School dropout

Based on literature findings, school dropout seemed be to a factor with significant influence on TP in Nigeria. In a current UNICEF report in 2022, Nigeria has about 18.5 million out of school children, with 60% being girls, including teens.[126] Children who receive Qur'anic education are considered to be out of school; the Qur'anic education lacks basic literacy and numeracy skills thus officially, the children in such schools are regarded as out of school children.[127] In Nigeria the distribution of out of school children is worst in the Northeast. This could be due to targeted attacks and campaign on Western education by the Islamic terrorist group, Boko haram. These attacks have regularly disrupted schools mainly in Borno, Yobe, and Adamawa states as well as Zamfara in Northwest. This situation is worse in rural areas where poor school attendance is further compounded by poverty, nomadic farming where parents are on the move with their children.[128] The Covid-19 outbreak in 2020, further exposed Nigerian communities to socioeconomic, digital and educational divides.[129] According to a study in Abia state, Southeast Nigeria, published in 2017, illiterates and school dropouts, had the highest percentage (68%) of teen pregnancy.[115]

3.3.4 Job type, and media

Hawking is a kind of child labour, in this case a teenage girl who goes to solicit for patronage of her goods and services.[130] Also a sex worker engages in many transient sexual relationships especially for money.[131] In the light of this thesis, a girl sex worker soliciting for patronage of the sexual services she renders, could be predispose to TP. These job types required to be explored for the likelihood of predisposing teen girls to pregnancy. In Lagos state Southwest Nigeria, a study among female sex work aged 16-19 years, which was published in 2020, reported

that 7.2% of respondents were pregnant during the study, almost at par with TP rate among girls in urban communities in Nigeria, being 8.0%; 90,3% were never pregnant, 4.5% were pregnant once, and 0.3% were pregnant four times. The study noted that condom was not consistently used, because it was not be used if the client looked well dressed and neat, and was not used for regular clients.[132] A study from Ekiti state Southwest Nigeria among female teen Hawkers, published in 2020 further demonstrated how job type and job environment can influence TP in Nigeria. The study noted that respondents who were aged 8-19 years, about 69.9% reported of being inappropriately touched, Also, 55.8% respondents had started having sex, while 44.2% respondents never had sex. It was also indicated that 24.8% reported of previously being raped while 9.7% and 15.0% reported of being regularly. About 95.6% of the respondents, confirmed seen a girl who got pregnant while hawking. In the study, 63.7% indicated the use of condom during the last sex, while 36.3% did not use condom. It was also further reported that in the last one month prior to the study, 7.1%, 13.3%, 23% and 30.1% of the respondents had sex with more than three men, three men, two men and with one man respectively.[133] A study from River state, Southern Nigeria, conducted among female secondary school teenagers and was published in 2021; noted a significant influence of media on teen pregnancy. The study stated that romantic relationship, sex activities, and inappropriate exposure of body parts, and sexuality in the media could significantly increase risk sexual behaviour among teens with resultant early pregnancy.[134]

3.3.5 Residence and Neighbourhoods

Teenage girls in the rural are three times more likely to start giving birth earlier than teens in the urban at the ratio 27:8, as revealed in NDHS 2018.[10] This finding was further reflected in a comparative study among the unmarried in-school teens in Osun state, Southwest Nigeria, published in 2019, it showed that knowledge of contraceptives, access and uptake were more among the urban teens than their rural peers. Although, the teens in the urban were more sexually active than their counterparts in the rural.[136]

3.3.6 "Baby factory"

There is no constitutional definition of "baby factory" in Nigeria. However, it could be described as a place where young girls, most times pregnant teenagers are illegally harboured, or kidnapped young girls are kept and forcefully impregnated. The babies resulting from such pregnancy are sold or illegally adopted. The impact of "baby factory" on TP, was reflected in a study from rural communities in Abia state, Southeast Nigeria, published in 2017. The study noted that teens who voluntary submit themselves to the activities of "baby factory"; whereby such teens agreed and were impregnated for the purpose of exchanging the baby resulting from such pregnancy with money, had 100% influence on TP in the study communities. The heavy impact of "baby factory" on teen pregnancy could be attributed to the shady financial benefits; some teenage girls are forced to do this, some joined because they got pregnant unintended and were chased away from their homes.[115] Another study from Abia state, among teenage secondary school students, aged 13-19 years, published in 2021, The study reported that 51.7% respondent who were pregnant, was due to their plan to handover the babies to

motherless babies' homes which were used as "baby factories".[138] And following the handing over of the babies, the would be rewarded financially. In a study from Southeast Nigeria, published in 2016, the leading factors fuelling "baby factory" in Nigeria were, poverty (M= 3.43, SD = .72), childlessness, (M= 3.41, SD = .67), as well as disregard for medical professional ethics because some medical professionals are involved in "baby factory" business, (M= 3.40, SD = .89), and greed (M=3.37, SD =.77).[139] The activities of "baby factory," occurred in all the regions in Nigeria but seem prevalent in the Southeast states..[140] Teen girls from low socioeconomic status and girls who cannot stand the social consequences, stigmatization of TP and single motherhood are easy prey to "baby factory" operators/business.[141] Since 2006, there has been increasing disturbing discoveries on "baby factory" in Nigeria.[142]

3.4 Societal factors

3.4.1 Social, cultural/religious norms

A study conducted in three states in Nigeria, and published in 2020, noted that there were established societal norms which forbid sex among unmarried teens, regarding such as a taboo. This caused little or no acceptance of contraceptive use among unmarried teenagers and youths resulting in poor general use of MC, within the population.[143] In a study in four states in Nigeria, published in 2019, noted that religiosity among older teens and young adults provided a productive support for sexual abstinence.[144] The researchers in a study from Southwest Nigeria, published in 2016, noted that some respondents attributed teenage pregnancy to destiny which cannot be altered and others accepted it as a usual occurrence or natural phenoman.[145] In a study from Adamawa Southeast Nigeria among pregnant women attending antenatal clinic, published in 2011, revealed TP prevalence of 51% in a teen population of 72%. The study was conducted among three dominant tribes: Chamba 58.49%, Fulani 17.93%, and Hausa 12.26%. The study further noted that 26.42% and 11.32% had secondary and post-secondary education respectively, 33% had primary education, while 30% had no formal education, and 60% the women were housewives. The percentage of TP women among the tribes, Chamba, Fulani, and Hausa were 43.55%, 63%, and 84.6% respectively. In the study, the proportion of Christian and Muslim pregnant teens were 41.51% and 9.43% respectively.[146] The deep-rooted patriarchal social system in Nigeria is responsible for male dominance and relegation of woman and girls to the background. This has sustained and perpetuate gender inequality. This situation seems to make women and girls more susceptible to poverty, and harmful cultural practices, including child marriage. There are indicators for gender disparity in enrolment, retention, and completion of educational programme at primary, secondary and higher levels. The disparity in favour of boys is quite high in 15 Northern states..[147]

3.4.2 Health policies in relation to SRH services for youths

The importance of appropriate health policies to address some of the challenges confronting teens in accessing SRHS, was reiterated in a study from Kaduna Northwest Nigeria; among teenagers aged 15-19 years which was published in 2020. The study reported that besides individual factors, the teens encountered social and health system-level factors such as lack of comprehensive teenage-

friendly sexual reproductive health services (SRHS), lack of specific consulting sections/rooms for teens et cetera. The study noted that adopting policies and interventions to strengthen services created to cater for the unmet SRHS of teenagers could suffice.[148] Another study published in 2020, though from Plateau state Northcentral Nigeria explored the availability of sexual and reproductive health services for teens at the PHC facilities in Plateau state. The study noted that there was poor implementation of the national guideline on the provision of teenage sexual reproductive health (TSRH) services. The study reported that the necessary infrastructure for TSRH services, availability, and quality of SRH services for teens were inadequate across the various senatorial zones of the state. For instance, in the state, many PHC facilities do not have consulting or waiting spaces for TSRH services. Also, specific counselling areas are available in approximately one out of ten facilities, while examination room and equipment dedicated for TSRH services are available in about one in ten facilities.[149]

3.4.3 National youth policies: Nigeria national youth policy and Nigeria policy on marriageable age

The National Youth Policy (NYP) signifies a bold statement and sense of duty to the main concerns, guides and tangible provisions Nigeria intends to offer for the development of its young age group. In this document young people between the age of 15 – 29 years, are considered as youths. The NYP places premium on the development and active involvement of youths in the national development plans and strategies. It is in line with the commitment of Nigerian government and its well-meaning citizens to cater for the needs and aspirations of Nigerian youths as well as search and provide solutions to their challenges in the context of sustainable developmental goals.[150] Nigerian youths, including teenagers are encumbered by myriads of problems, such as restricted access to functional and quality education, limited access to employment, lack of access to business support funds, poor quality health care, disenfranchised from cherished cultural values, poor access to information technology, et cetera.[151]

The 1999 Nigeria constitution has a vacuum that creates the likelihood for the legality of girl child marriage. In Section 29 (4) of the 1999 constitution asserts 18 years as age of maturity. The same Section 29 (4) but (b) excludes girl children and declares that girl children mature at the point of marriage. Therefore, irrespective of her age, including a 2-year old girl child, only marriage determines her maturity.[152]

3.4.4 Educational Policies

These measures and policies include 2006 national policy in basic education, 2004 universal basic education Act, 2003 strategy for the acceleration of girls education in Nigeria, 1999 universal basic education policy, 1994 family support basic education programme et cetera.[153] The factors negatively affecting the implementation of girl child education policies in Nigeria were noted in a study from Enugu state Southeast Nigeria, published in 2019. The study noted that girl child enrolment and retention in Enugu state were hampered by negative peer influence, teen girl much interest in money. Others were unsafe school environment due to rape, kidnapping, and girl molestation as well as negative

social media influence, poor understanding of sex education et cetera.[154] A study from Kaduna Northwest Nigeria, published 2018, reported that poor and inconsistent implementation of education policies, such as the universal basic education (UBE) by successive governments in Nigeria, without due consideration to the peculiarities of a girl child; had contributed to poor girl child education enrolment. The study further noted that poor monitoring and implementation of education policy on girl child enrolment and retention by relevant government agencies, accounts for the predicament of girl child in Nigeria.[155]

3.4.5 Social policies

In a bid to end food insecurity in Nigeria, government designed several programmes. The programmes ranged from operation feed the nation, green revolution, lower river basin development authorities, to national agricultural and land development authority, and directorate of food, roads, and rural infrastructure. In Nigeria constant change of government in power had resulted in key changes in food and agricultural policies and abandonment of programmes. This created programme instability and hindered agricultural and food production, thereby frustrating efforts geared towards ending food insecurity and hunger in Nigeria.[156] A study from Lagos metropolis Southwest Nigeria, published in 2007, among commercial sex worker (CSW), with about 16.3% of respondent CSW being below 20 years of age. The study noted that besides poverty, the struggle for food insecurity was a significant contributing factor to joining the trade. In order to make more money and to put much food on the table, some of the CSW at times had sex with their regular customers without condom.[157]

4. Effective Interventions to Address Teenage Pregnancy in Nigeria

This chapter proffers effective interventions that address factors of influence on teenage pregnancy in Nigeria and similar settings. This is approached in no specific order, bearing in mind that the interventions could be interwoven.

4.1 Increasing contraceptive access, awareness, and use

In 2021, the Family Planning (FP) 2030 was launched in Nigeria; a programme Nigerian federal ministry of health partners with United Nations Population Fund (UNFPA). Based on projection by 2030, the FP 2030 plans to ensure that Nigerians including teenagers, vulnerable populations and young persons would be able to make informed choices, with affordable and equitable access to quality FP in an environment devoid of gender discrimination.[158] The 2020-2024 national family planning blueprint (FPBp) has a set goal of increasing the modern contraceptive prevalence rate (mCPR) to 27% in 2024. In Nigeria, the poor demand with low utilization of family planning (FP) services is a major obstacle to increasing contraceptive prevalence rate (CPR). This shows the importance of demand creation for FP services in FP programme in Nigeria. In a bid to re-strategize and increase FP services utilisation and in accordance with FPBp as well as other related health promotion policies; the Nigeria FMOH undertook some measures with a view to enhancing FP services demand.[159] The measures were, creation of national family planning communication (NFPC), reviving the national health promotion forum (NHPF) and introducing the new family planning logo. The new FP logo is known as the Green Dot. These measures are reported to have increased awareness and FP services demand among women including teenagers. This has been achieved through the spreading of accurate information and structured massages concerning the quality and safety of MC methods.[159] Additionally, making MC conspicuous available in the most convenient places teens are found such school library, kiosks, at highly reduced prices or at no financial cost, and creating teen friendly reproductive clinics could contribute considerably in prevention of TP.

4.2 Mass media and multimedia approach

The mass media is a two-edged sword because it can make, or mar teenage SRH depending on its content. Study findings showed that romantic relationship, sex activities, and inappropriate exposure of body parts, and or well-presented sexuality education programme in the media could significantly influence risky sexual behaviour among teens.[134] Mass media is communication that can reach large number of the population. It includes radio, television, movies, and advertising. Others are newspaper, magazines, internet et cetera.[160] In Nigeria, there are TV programmes which educate and inform Nigerian youths, including teens on the consequences of TP, one of such is a series run on Channels TV, GIST Nigeria. It documented the causes, challenges, and measures the teens and society could adopt to prevent TP in Nigeria and related settings.[161] A related TV programme is the MTV Shuga, it draws attention to some of the SRH issues that affect teens and youths; such as transactional sex, use and access to modern contraceptives, as well as pregnancy et cetera.[162] The content of these TV programme would assist teens with information on TP prevention.

4.3 Male teenage counselling programme

Pregnancy is a product of the duo, male and female, who had sexual intercourse. At times, sexual assault and rape which are some of the factors contributing to teen pregnancy are committed by male teenagers. Moreover, male teens initiate sex earlier than female teens, and are likely to keep more sexual partners over a lifetime. It has also shown that male methods of contraception, withdrawal and male condom are provided by males teens in the first sexual intercourse with female teens.[163] Therefore, getting the males involved in handling the factors contributing to TP could be a veritable measure in TP prevention. In Nigeria, a member of Ikorodu youth council, collaborated with Spotlight Initiative to enlighten his communities, especially males on sexual based violence (GBV) and its consequences. Spotlight Initiative is an international collaboration the United Nations had with European Union, aimed at ending all forms of violence that target women and girls.[164]

4.4 Economic empowerment of youths

This paragraph considers programmes that enhance youth empowerment, as a PT prevention strategy. The programmes focus on improving livelihood and school enrolment, girl's economic empowerment and life skill as well as girls' education project, cash transfer programme.

4.4.1 Improving livelihood and school enrolment

The 2022 World bank report on Nigeria noted that, among every 10 Nigerian, 4 live below national poverty level. A good number of Nigerians mostly in the North, in addition to poverty, have no education, no access to electricity, lack wholesome drinking water, and improved sanitation. The wage jobs which are capable of lifting the people out of poverty, only 17% of Nigerian workers are holding such jobs.[165] In the 2021 corruption perception index by Transparency International, out of 100 points, Nigeria scored 24, ranking 154 out of 180 countries.[166] In 2016, the Nigeria national government launched a national home school feeding programme (NHGSFP) in the country's public primary schools. The NHGSFP provides a solid quality meal per day for pupils, as a measure to increase enrolment, lower dropout rate as well as provide quality learning.[167] An increase in school enrolment, and reduced school dropout especially in Northern Nigeria could be potential measures in delaying marriage, reducing child marriage and subsequently prevent TP. According to World Bank, each secondary school education year, could lower the likelihood of getting married prior to 18 years old by approximately five or more percentage values in some countries.[168] Also, quality learning could provide girls with communication and negotiation skills as well as assisting them in taking informed decision on sexual activity.

4.4.2 Girl's economic empowerment and life skill

Life skill intervention (LSI) could entail social and interpersonal skills such as communication, empathy, assertiveness negotiation. It could also include cognitive skills like decision-making, and self-evaluation. Another aspect of life skill is emotional coping skills which comprise stress management, and self-control.[169] Some of the features of LSI schemes are reflected in the objectives of Generation Unlimited 9JA (GenU 9JA), a Nigeria teen and youth skill acquisition

programme. The GenU 9JA with more than 20 implementing partners, was launched in 2022 in Lagos by the Nigeria vice president. The programme is designed to assist 20 million Nigerian school children, teens, and youths to transit from learning to earning; putting in perspective the current Nigerian youth unemployment rate placed at 37 percent. These categories of Nigerian population including the underprivileged rural and semi-urban dwellers, would be provided with internet access for digital learning and equipped with job-related life skills and livelihood opportunities. The objectives are projected to be fully achieved by 2030.[170] Some of the expected gains of this project could be seen in a similar project, the Better Together Programme (BTP) implemented in 2020 during the Covid-19 peak which posed health and socioeconomic challenges. The BTP was used to counter negative effects of Covid-19 pandemic among the Nigerian teens and youths in 2020. The global initiative, Generation Unlimited (Gen U), supported BTP which was conducted by social enterprise community Goodwall. The BTP was a seven-week online programme with the aim of supporting teens and young people to achieve their full potential and prepared for the post Covid-19 workplace challenges as well as being occupied with meaningful and productive activities in the pandemic period. Participants were exposed to challenges related to the SDGs such as women empowerment, racial equality, career development et cetera. This programme could be a veritable tool in TP prevention in Nigeria and related settings. Also, an indigenous Nigeria gas company, the Nigeria Liquified Natural Gas (NLNG) provide post primary school scholarship. This scholarship targets primary six pupils of the organisation's host communities in Bayelsa state. It started in 2012, and as of 2019 it had sponsored more than 300 secondary school students from the host communities.[172]

4.4.3 Girls' education project, cash transfer programme

The Girls' Education Project 3 (GEP3), Cash Transfer Programme lasted for 8 years, from 2012-2020. It was a package of intervention programmes with focus on five Northern states, Bauchi, Katsina, Niger, Sokoto and Zamfara. GEP3 was aimed at improving school access, retention and learning outcomes for girls; with one million girls expected to be enrolled into primary and integrated qur'anic schools. It was fashioned as a social protection programme, to ease the effect of poverty on a girl child school enrolment and attendance. The state governments who demonstrated commitment to the education initiative and provided operational funds in their state education annual budgets were supported by UNICEF and DFID to implement the programme.[173] The GEP3 increased the social and economic opportunities for girls, resulting to more girls completing basic education in the study states.[173] This has the potential of delaying marriage among girls and subsequently preventing child marriage and the associated teenage pregnancy. Although, study had suggested that attention should be given to the trauma associated with forced marriage which is prominent among teens in Northeast and Northwest. So, life skill programme with a psychological component may be an effective approach to ending child marriage.[174]

4.5 Reproductive health services for teens and sexuality education

The challenges teens in Nigeria encounter due to lack of or poor availability of teen friendly SRH services, have been demonstrated in studies in Nigeria. In a bid to

provide such services, in 2019, the Ogun PHC development board launched a teenage reproductive health strategic framework. The strategy, by 2022 should increase access to SRHS and information including sexuality education for teens and young people in the state.[175] This is in line with the WHO guidelines on the prevention of early pregnancy and poor SRH outcome among teens girls from LMICs.[176] Therefore, effective and efficient implementation of the Ogun state, Southwest Nigeria, teen SRH strategic framework would increase access to and use of MC, prevent teen marriage, enhance knowledge and information on the need to prevent teen pregnancy et cetera. The role of sexuality education being part of such interventions cannot be overemphasised. The impact of sexuality education on TP was further echoed in a study from Ilorin.[123] It reported that sex education intervention programme reduced at-risk sexual behaviour among school-going teenagers. The prominent findings were attitudinal change, increased sexuality knowledge, and comparative reduction in at-risk sexual engagements when compared with the control group. The attitudinal change was shown in a decrease in the opinions among teens that multiple sexual partners was not a risky sexual behaviour. A study from Edo-Ekiti Southwest Nigeria, published in 2010. This study noted that undergraduates, including teens and young adults who were subjected to sexuality education were found to be more easily engaged in discussions concerning sexuality, and displayed better understanding about SRH, complied with behavioural change in cutting down on sexual partners, as well as engaging in regular and correct condom use et cetera.[177] This study finding was further highlighted in a study from Ilorin, published in 2008. It reported that sex education intervention programme reduced at-risk sexual behaviour among school-going teenagers. The prominent findings were attitudinal change, increased sexuality knowledge, and comparative reduction in at-risk sexual engagements when compared with the control group. The attitudinal change was shown in a decrease in the opinions among teens that multiple sexual partners was not a risky sexual behaviour.[123] The findings of a study from Edo-Ekiti Southwest Nigeria, published in 2010, noted that undergraduates, including teens and young adults who were subjected to sexuality education were found to be more easily engaged in discussions concerning sexuality, and displayed better understanding about SRH, complied with behavioural change in cutting down on sexual partners, as well as engaging in regular and correct condom use et cetera.[177]

5. Discussion

Notwithstanding decline in prevalence of teen pregnancy, the challenge of teen pregnancy is still substantial in Nigeria due to the rebound impact on the health and socioeconomic needs of the affected teen population; as well as the burden it causes on the health care system, worsened by Nigeria poor health budget when compared with other African countries. The situation is caused by inequalities and poor access to sexual reproductive health and rights (SRHR). Good sexual and reproductive health of individual teens can be maintained if there is access to accurate information, safe, effective, affordable, and acceptable contraception method of their choice. They must be informed and empowered to protect themselves from STIs and pregnancy. And when they decide to have children, women must have access to skilled health care providers and services that can help them have a fit pregnancy, safe birth, and healthy baby. Every individual has the right to make their own choices about their sexual and reproductive health.[90] The situation is worse in Northern Nigeria, especially Northeast and Northwest; in Northern Nigeria the average age of first marriage and debut sexual intercourse is around age 16 years. This thesis examines factors influencing teenage pregnancy in Nigeria ranging from individual factors, relationship, community to societal factors. Its findings reveal that prominent factors contributing to TP in Nigeria are found in all the levels in the SEM, though there may be variations. The prominent factors are, age at sexual debut, child marriage, lack of formal education of youths, adults/parents, poor teen sexual reproductive health services (SRHS), "Baby factory", as specific phenomenon found in the literature, could contribute to TP but there is limited information about the extent to which it contributes.

5.1 Child marriage and education of teens

Although, teenage pregnancy is widespread among many ethnic groups in Nigeria it is prevalent in the Northern region of Nigeria. The high proportion of teen pregnancy in Northern Nigeria could be attributed to child marriage. Child marriage predisposes to early sexual intercourse and the risk of teenage pregnancy is high with early first sexual debut. In Northern Nigeria the average age of first marriage and debut sexual intercourse is around age 16 years. The likelihood of TP was high among married teens. This could be due to increased desire to become pregnant so as to fulfil family expectation.[38] Similarly a study reported that women who got married at less than age 18 years had more likelihood to experience childbirth than those who delayed marriage. And child marriage makes women eight times more likely to give birth to three or more children, than women who were married at or above age 18 years.[178] In addition the high proportion of teen pregnancy in Northern Nigeria, could also partly be due to the soaring population of out-school children. Studies have shown that the distribution of out of school teenage girls is worst in Northern Nigeria in both primary and secondary schools, especially Northeast and Northwest states such as Borno, Yobe et cetera and Zamfara, Sokoto respectively. Out of school teens would be poorly equipped with reproductive health information, including contraceptive knowledge and condom use, as well as lack of the basic sex negotiating skills. These factors would eventually predispose out of school teen girls to pregnancy. These factors, child marriage and out of school children,

including children with qur'anic education appear to centre around Islamic religion. The Islamic law which authorizes child marriage which runs parallel to the Nigerian constitution is revered, adored, and quoted in defence to child marriage by most of the Nigerian Northern Muslims. Also, the law seemed to have transcended the cultures and beliefs system of the Muslims in the Northern region unlike their counterparts in the Southern. In the light of the above, interventions to combat child marriage should incorporate Islamic leaders whereby Muslim clerics and traditional heads in Northern Nigeria would be made to champion such interventions. The importance of religious leader engagement, was demonstrated in polio eradication campaign, where the huge rejection and opposition to the polio vaccine was systematically reversed; through the active engagement of Islamic clerics to promote the campaign and vaccine uptake.[179] This approach provided huge success in the intervention geared towards polio eradication in Northern Nigeria, where the disease was predominant with high prevalence.

5.2 Education attainment and sexuality education

The findings reveal this as one of the major factors that could influence the prevalence of TP in Nigeria and related settings. No education or low level of education attainment among teens could be associated with poor knowledge on modern contraceptive methods, poor knowledge on dangers of risky sexual behaviour and poor exposure towards reproductive health information and sexual reproductive health services. These were reflected in a study from Ogbomosho Southwest Nigeria,[91] and further reiterated in a study from Northern Nigeria. The study from Northern Nigeria noted that no or little education could predispose teen girls to early marriage and pregnancy. It could also worsen the economic empowerment of teen and parents, which in turn worsen the provision of basic needs, knowledge and access to contraception and use, as well reduces access to SRH information.[92]. Teens with no or little education tend to get married earlier than their educated peers. Meanwhile, teens with secondary school education according to the 2018 NDHS were more likely to delay childbearing than their counterparts with little or no education accomplishment. Moreover, lack or poor educational attainment could be both a cause and outcome of TP. A study from Southeast Nigeria, reported that teens with secondary education accessed SRH services more than teens with any other educational attainment including tertiary education.[87] This could suggest that, may be the population used in the study, who had secondary education were exposed to sexuality education; while may be the undergraduates' used in the same study, were not exposed to sexuality education (SE) during their secondary school educational period because SE was mainly incorporated into Nigeria secondary educational curriculum. It could still be that their exposure to SE was not adequately done by qualified teachers and or were poorly implemented in the schools most of them attended. Also, if the undergraduates' population used in the study was taken from a federal public institution, not a state owned, therefore there would have been the likelihood that the undergraduates who were enrolled were mostly from other states in Nigeria, so may not have had SE during their secondary school education like the ones in the state where the study was conducted. The findings of this study differed with the results of a study from Edo-Ekiti Southwest Nigeria. This study noted that undergraduates, including teens and young adults who were subjected to sexuality

education were more grounded in SRH.[177] Although, this was not as a result of the teenage students being thought sexuality education in their schools, but by just being exposed to SE during the study period by the researcher. In other words, they have not been taught SE in their schools prior to this study, thus an indication that SE curriculum seem not to be well implemented or taught in Nigeria schools. This, could therefore, suggests the need to teach and fully implement the curriculum in Nigeria schools. This further highlights the need for restructuring and full implement SE in Nigeria schools, especially in secondary schools. The Nigeria sexuality education curriculum could be more effective and efficient if it is restructured with the components such as contraception, abortion prevention, sexual development, gender roles, et cetera. The benefits of fully implemented SE was demonstrated in a-2015 UNESCO global review report on comprehensive sexuality education (CSE) which revealed that, CSE enhances SRH with resultant reduction in STIs and unintended pregnancy globally. Besides promoting gender equality, it enhances safe sexual behaviour, discourages early sexual debut and promotes condom use.[180]

5.3 Contraceptive knowledge, access, and use

These also have significant impact on the prevention of TP in Nigeria and in related settings. Poor or lack of knowledge of contraception, limited access and non or inconsistent use of modern contraception methods could predispose to unsafe sexual intercourse and could result in unintended pregnancy and STIs among teens. This has been demonstrated in various studies in Nigeria. Also, poor use of contraceptives could be attributed to lack of interest which may partly be due to poor, or lack of the knowledge on how modern contraceptives (MC) work which may escalate the beliefs that condom use reduces sexual pleasures. And poor availability of the commonly used MC such as male condom may be due to lack of fund, limited access points because most times, MCs are mainly sold in private owned patent medicine shops while lack of friendly shops or clinics where MC could be freely provided to teens are either not available or are in highly limited numbers and mostly found in the cities. Additionally, access to MC could be further worsened by disapproval by older persons as well as the stigma or embarrassment associated with condom use in many societies, including Nigeria where sex among unmarried teens is a taboo. Misconceptions where infertility is attributed to injectable MC, as well unnecessarily attributing prolonged and heavy menstrual bleeding to the injectable contraceptives could result in unwarranted fears. This could encourage the use of unreliable contraceptive methods such as withdrawal and menstrual cycle timing. Misconception could also fuel wrong and harmful practices including using hard drugs, chemicals like white chlorine, and the use of laxatives and boiled alcohol to prevent pregnancy. These would directly or indirectly contribute to pregnancy among teens. Therefore, sound formal education infused with sexuality components would be a veritable strategy in TP in Nigeria and in related settings. Moreover, establishment of teenage friendly clinics for SRHR services which are widely distributed in Nigeria communities especially rural areas could be a good strategy effort towards TP prevention.

5.4 "baby factory"

This thesis also found a factor, referred to as "baby factory" that seem to escalate sexual abuse, exploitation and TP in Nigeria as indicated in a study from rural

communities in Abia state Southeast Nigeria. The "baby factory" has two forms; the form in which teens are kidnapped, sexually abused to get them pregnant and kept in a secluded camp until they are delivered, and their babies are taken away from them and sold. The other form is where the teen girl with unintended pregnancy or who intentionally become pregnant hands over her baby to "baby factory" operators in exchange for money. These operators could be motherless homes, maternity homes et cetera that run "baby factory" in disguise of such homes. Teens who are from poor background, school drops, sex workers, hawkers or out of schoolgirls and teens from rural communities are likely prey of "baby factory" operators.[181] Therefore, factors of poor or non-availability of social support, poverty, poor or lack of sexuality education could still be huge contributing factors which predispose the teens to be involved in the "baby factory" trade. Good knowledge of sexuality education would have exposed the teens to the dangers and consequences of TP and subsequent impact of such on their SRH. This further reiterates the importance of implementing effective sexual education in Nigerian secondary schools because most of the teens were either secondary school holders or were still in school. Also, massive enlightenment campaign in the affected communities and other rural communities in Nigeria on the dangers of allowing the existence of such trade or running a "baby factory" business. The childless couples should be discouraged from patronising "baby factories" but to follow laydown procedures for child adoption in Nigeria. Also, government agencies responsible for providing child adoption services should be re-strategized with a view to providing effective and efficient services. Moreover, perpetrators of "baby factory" business should be apprehended and prosecuted, including medical professionals, while such centres or homes should be shutdown.

5.5 Limitations

The thesis has some limitations. Teenage pregnancy in Nigeria has literatures that are widespread apart in years. Thus, to accommodate the thesis topic, the literature search yielded wide range of old articles and new articles. These huge old literatures could have data that are not relevant with the current prevailing TP factors in Nigeria. Some of the literatures reviewed in this thesis used facility-based data which are prone to report falsification and documentation errors and may not reflect the true picture of TP in the general teenage population in Nigeria. Also, some of the facility-based data contained in the literatures that were analysed in this thesis, were data of married teens who accessed maternal and childcare services. These set of data are prone to biases and the associated errors and may not truly represent the single teens who bear more burdens associated with TP; due to poor access to SRH services, non-availability, or limited number of SRH facilities dedicated to single teens. Besides most of the literatures contained data and analysis obtained from older teens 15-19 year, this in turn downplayed the prevailing TP challenges prevalent among the younger teens aged 10-14 who may be more vulnerable due inexperience and age-related naivety with poor sex negotiating skills. Moreover, the data for cross sectional research which were originally collected for a different purpose other than TP, could be unable to involve data on confounding factors as well as other variables that may influence the association between presumed cause and effect. Due to publication bias, resulting in the exclusion of some factors in the referenced literatures, such factors

also would have been missed in this thesis. The SEM employed in this review, provided flexible search approach in exploring wide range of factors using its four domains of individual, relationship, community and societal level factors.

6. Conclusions

This thesis examined factors of influence on teen pregnancy in Nigeria and related setting; the factors include personal factors, relationship, community, and societal factors. In addition to identifying interventions which could be effective on TP prevention, the thesis also provided evidence informed recommendations that could assist in the planning of TP prevention programme. Although, indices show decline in the prevalence of teenage pregnancy in Nigeria, yet the socioeconomic and reproductive health challenges it causes, remain prominent. The persistent and worsening challenges of TP in Nigeria could be attributed to the associated impact of TP on the health and socioeconomic needs of teen girls. Also contributing to these challenges is the burden of TP on the health care system in Nigeria. This is further compounded by poor health budgeting in Nigeria which is low compared with other African countries. These demonstrate the need for this thesis, examining factors of influence on the prevalence of TP in Nigeria. In this thesis, the factors found to have influence on the prevalence of TP are not limited to age at sexual debut, child marriage, lack of formal education of youths, adults/parents and poor teen SRHS. However, these factors seem to have major/significant impact on the prevalence of teenage pregnancy in Nigeria. Also, "Baby factory", which is a specific phenomenon found in the literature, could contribute to TP but there is limited information about the extent to which it contributes TP in Nigeria. Therefore, could be a focus of further research on the effort to preventing IP in Nigeria and related setting. Child marriage though, widespread in Nigeria but appears to be predominant in Northern Nigeria due to due to its inseparable relationship with Islamic law which supports child marriage. Meanwhile, Islam is a predominant religion with huge followership in the North. Moreover, conditions which could fuel child marriage such as poverty, lack of formal education, with resultant poor knowledge, access, and poor use of modern contraceptives, are found to be worse in Northern Nigeria than in the South. Also, no, or low formal education attainment with poor sexuality education predisposes to TP due to its negative influence on the knowledge of modern contraception, access, and use. Although, hawking, sex work and "baby factory" trade could predispose to high-risk sexual behaviour, "baby factory" trade seems to predispose to 100% likelihood of becoming pregnant because it is solely concerned with getting a teenage girl pregnant, while the baby resulting from the pregnancy is sold for financial gain. As such, no form of contraceptive is used, which further exposes the teen STIs, including HIV/AIDS. The above-mentioned factors which could have huge negative influence on TP in Nigeria seem to be fuelled by poverty, religion, lack of accessible and non-availability of formal education, poorly implemented sexuality education with poor content, with associated poor knowledge, access, and use of MC. The proposed effective preventive measures were to accommodate the background factors and the prominent factors. target these factors. Therefore, the measures were to focus on increasing contraceptive access, awareness, and use, mass media and multimedia approach, male teenage counselling programme, economic empowerment of youths through improving livelihood and school enrolment and Girl's economic empowerment and life skill; as well as focusing on girls' education project, cash transfer programme and enhancing reproductive health services for teens and restructuring sexuality education for youths/teens.

Based on the findings of this thesis, and the insight provided by the effective preventive measures, this thesis would contribute to the body of knowledge on the prevention of teenage pregnancy in Nigeria and related setting.

7. Recommendations

Based on the findings of this thesis and the insight provided by the effective interventions geared towards TP prevention in Nigerian and related settings, the following measures are recommended for respective stakeholders. These measures target the major factors influencing teenage pregnancy in Nigeria and related setting, including child marriage, hawking and sex work, poor formal education, and inadequate sexuality education curriculum.

(1) The Federal government

The federal government should embark on the following:

a. The federal government should provide free tuition for primary and secondary school education to encourage more enrolment especially in Northern Nigeria. The federal government should liaise with ministry of education in the various states for adequate and effective implementation and monitoring of the free-tuition programme. In addition to the free tuition programme, free meals should be provided for the primary pupils and junior secondary students. This are the critical stages where child marriage is commonly practiced.

b. Federal government should provide life skill intervention programme for the junior and secondary school students. They would be equipped with social and interpersonal skills including communication skills, assertiveness negotiation skills, decision making skills. They would be trained in stress management and emotional coping skills.

c. The federal government should liaise with the relevant agencies and ministries to review and restructure the sexuality education curriculum. The curriculum should move beyond abstinence-only curriculum to accommodate sexual and reproductive needs of the teen and youth populations in Nigeria. The sexuality education curriculum should contain sexuality diversity and gender roles, human development, relationships, personal skills, sexual behaviour, sexual health, society, and cultures. This curriculum would provide students with information of contraception, abortion, masturbation, et cetera.

(2) Federal ministry of youth and social welfare

This ministry is to collaborate with state ministries of youth/social development, chieftaincy, and religious affairs in Northern Nigeria, to create a committee that would focus on preventing child marriage through enlightenment campaign. The committee would consist of teachers, health educators, but dominant of Islamic clerics and traditional rulers who would champion enlightenment campaign on the dangers of child marriage. The campaign would also stress the importance of sexuality education and formal education on the socioeconomic and sexual reproductive wellbeing of a girl child; and focus on awareness raising on legal age of marriage.

(3) The Federal ministry of Health and social welfare

a. The ministry to review the child adoption process in Nigeria. This is to provide a seamless process for child adoption in Nigeria with a view to discouraging illegal child adoption through the “baby factory” outlets.

b. This ministry to liaise with state and local government to provide teen/youth friendly sexual reproductive health rights clinics and services for the teeming teen/youth population. This clinic and centres should be widely spread across the country especially in the rural and semi-urban communities. These clinic and centres would provide access to accurate information, safe, effective, affordable, and acceptable contraception methods, among other benefits.

(4) Federal ministry of labour and productivity

The federal ministry of labour and productivity to embark on mass job creation programme for the youths' graduates. This would encourage undergraduate education pursuit among the youths and reduce secondary school drop out.

References

1. NYSC HQ. NYSC - About Scheme [Internet]. NYSC Official Web site. 2017 [cited 2021 Jul 16]. Available from: https://www.nysc.gov.ng/aboutscheme.html

2. Guttmacher Institue. Abortion in Nigeria | Guttmacher Institute [Internet]. 2015 [cited 2021 Dec 31]. Available from: https://www.guttmacher.org/fact-sheet/abortion-nigeria

3. Sedgh G, Filippi V, Owolabi OO, Singh SD, Askew I, Bankole A, et al. Insights from an expert group meeting on the definition and measurement of unsafe abortion. Int J Gynecol Obstet [Internet]. 2016 Jul 1 [cited 2021 Dec 31];134(1):104–6. Available from: https://onlinelibrary.wiley.com/doi/full/10.1016/j.ijgo.2015.11.017

4. Seewald M, Martin LA, Echeverri L, Njunguru J, Hassinger JA, Harris LH. Stigma and abortion complications: stories from three continents. https://doi.org/101080/2641039720191688917 [Internet]. 2019 Nov 29 [cited 2021 Dec 31];27(3):75–85. Available from: https://www.tandfonline.com/doi/abs/10.1080/26410397.2019.1688917

5. Kirk-Greene, A. Hamilton Millard , Ajayi, . J.F. Ade , Udo, . Reuben Kenrick and Falola . Toyin O. . Nigeria | History, Population, Flag, Map, Languages, Capital, & Facts | Britannica [Internet]. Nigeria. Encyclopedia Britannica. https://www.britannica.com/place/Nigeria. 2020 [cited 2022 Jan 3]. Available from: https://www.britannica.com/place/Nigeria

6. Salau AT. Geography in Nigeria. Prof Geogr [Internet]. 1986 [cited 2022 Jan 3];38(4):417–9. Available from: https://www.commonwealthgovernance.org/countries/africa/nigeria/geography/

7. Jummai MR. Language Education In Primary Schools in Nigeria: Contemporary Issues And New Direction. Lit Inf Comput Educ J. 2012;3(3):757–61.

8. State Population, 2006 - Nigeria Data Portal [Internet]. Nigeria Data Portal. 2006 [cited 2022 Jan 6]. Available from: https://nigeria.opendataforafrica.org/ifpbxbd/state-population-2006

9. DESA UN. World Population Prospects 2019. United Nations. Department of Economic and Social Affairs. World Popul Prospect 2019 [Internet]. 2019 [cited 2022 Jan 6]; Available from: https://www.un.org/en/development/desa/publications/world-population-prospects-the-2012-revision.html

10. National Population Commission (NPC), ICF. Nigeria Demographic and Health Survey 2018 [Internet]. National Population Commission and Measure DHS. 2019 [cited 2022 Jan 8]. Available from: https://ngfrepository.org.ng:8443/jspui/bitstream/123456789/3145/1/NDHS 2018.pdf

11. World Bank Group. Poverty and equity brief: Africa Western & Central. Nigeria [Internet]. The World Bank. 2021 [cited 2022 Jan 9]. Available from: https://databank.worldbank.org/data/download/poverty/987B9C90-CB9F-4D93-AE8C-750588BF00QA/AM2021/Global_POVEQ_NGA.pdf

12. TENS. Nigerian Educational System [Internet]. Ministry of Education , Science and Technology Niger State. 2022 [cited 2022 Jan 10]. Available from: http://tens-niger.com/about-tens/nigerian-educational-system/

13. Nuffic. The education system of Nigeria described and compared with the Dutch system [Internet]. 2017 [cited 2022 Jan 10]. p. 15. Available from: www.nuffic.nl/en/home/copyright

14. Babafemi T. AN ASSESSMENT OF THE IMPLEMENTATION OF THE 6- 3-3-4 SYSTEM OF EDUCATION IN NIGERIA : A CASE STUDY OF ILORIN , KWARA STATE. Ilorin J Educ [Internet]. 1999 [cited 2022 Jan 10];19(1):84–96. Available from: https://www.academia.edu/15267512/AN_ASSESSMENT_OF_THE_IMPLEMENTATION_OF_THE_6_3_3_4_SYSTEM_OF_EDUCATION_IN_NIGERIA_A_CASE_STUDY_OF_ILORIN_KWARA_STATE

15. Evaluating the 6-3-3-4 and 9-3-4 System of Education in Nigeria [Internet]. Zerofy editorial. 2021 [cited 2022 Jan 10]. Available from: https://zerofy.ng/system-of-education-nigeria/

16. Educational System In Nigeria [Internet]. BFFA. [cited 2022 Jan 10]. Available from: http://bffa-online.org/education.html

17. UNESCO. UNESCO Member States unite to increase investment in education [Internet]. UNESCO Press Release. 2021 [cited 2022 Jan 10]. Available from: https://en.unesco.org/news/unesco-member-states-unite-increase-investment-education

18. UNICEF. Key demographic indicators: Nigeria [Internet]. Under-five mortality rate. 2021. Available from: https://data.unicef.org/country/nga/

19. TWG-NSHDP/Health Sector Development Team, Development HS. The National Strategic Health Development Plan Framework [Internet]. 2015. p. 72. Available from: http://www.internationalhealthpartnership.net/fileadmin/uploads/ihp/Documents/Country_Pages/Nigeria/Nigeria National Strategic Health Development Plan Framework 2009-2015.pdf

20. Okpani A, Abimbola S. Operationalizing universal health coverage in Nigeria through social health insurance. Niger Med J. 2015;

21. Types of Health Care System In Nigeria - Public Health [Internet]. Public Pealth Nigeria. 2020 [cited 2022 Jan 11]. Available from: https://www.publichealth.com.ng/types-of-health-care-system-in-nigeria/

22. NHIS. SERVICE CHARTER FOR NATIONAL HEALTH INSURANCE SCHEME [Internet]. 2021 [cited 2022 Jan 12]. Available from: https://www.nhis.gov.ng/2021/06/21/service-charter-for-national-health-insurance-scheme-nhis/

23. Varrella S. Nigeria: health expenditure as share of GDP | Statista [Internet]. 2021 [cited 2022 Jan 12]. Available from: https://www.statista.com/statistics/1126455/health-expenditure-as-share-of-gdp-in-nigeria/

24. WHO. WHO Commitment to Improving Adolescent in Nigeria [Internet]. 2021 [cited 2022 Jan 15]. Available from:

https://www.afro.who.int/news/who-reiterates-commitment-improve-adolescent-health-nigeria

25. UNFPA. Nigeria National Standards & Minimum Service Package for Adolescent & Youth-Friendly Health Services. Minist Heal [Internet]. 2018 [cited 2022 Jan 15];(July):1–93. Available from: https://tciurbanhealth.org/wp-content/uploads/2019/02/7-MPSS-Nigeria-National-Standards-vdec-17-FINALE.pdf

26. 28 Too Many. Nigeria: The Law and FGM. Thomson Reuters Found [Internet]. 2018 [cited 2022 Jan 15];(July):1–10. Available from: https://www.refworld.org/pdfid/5b3497357.pdf

27. Kimani S, Obianwu O. Female genital mutilation/cutting: A review of laws and policies in Kenya and Nigeria. Reprod Health [Internet]. 2020 [cited 2022 Jan 15];26. Available from: https://knowledgecommons.popcouncil.org/departments_sbsr-rh

28. (NACA) N agency for the control of A. History of NACA _ NACA Nigeria [Internet]. 2016 [cited 2022 Jan 18]. p. 1. Available from: https://www.naca.gov.ng/history-of-naca/

29. Shiffman J, Kunnuji M, Shawar YR, Robinson RS. International norms and the politics of sexuality education in Nigeria. Global Health [Internet]. 2018 Jul 3 [cited 2022 Jun 25];14(1):1–13. Available from: https://globalizationandhealth.biomedcentral.com/articles/10.1186/s12992-018-0377-2

30. Knoema. Nigeria - Crude death rate [Internet]. WORLD DATA ATLAS NIGERIA TOPICS DEMOGRAPHICS MORTALITY. 2020 [cited 2022 Jan 15]. Available from: https://knoema.com/atlas/Malaysia/Death-rate

31. World Health Organization. Maternal health in Nigeria: generating information for action [Internet]. Sexual and reproductive health. 2019 [cited 2021 Dec 22]. p. 1–3. Available from: http://www.who.int/reproductivehealth/maternal-health-nigeria/en/%0Ahttp://www.who.int/reproductivehealth/maternal-health-nigeria/en/%0Ahttp://www.who.int/reproductivehealth/maternal-health-nigeria/en/%0Ahttps://www.who.int/reproductivehealth/maternal-hea

32. Content SF. Nigeria Life Expectancy 1950-2021. Macrotrends [Internet]. 2021 [cited 2022 Aug 10];1–5. Available from: https://www.macrotrends.net/countries/NGA/nigeria/life-expectancy

33. Bank W. Nigeria Overview: Development news, research and data [Internet]. The World Bank. 2021 [cited 2022 Jun 17]. Available from: https://www.worldbank.org/en/country/nigeria/overview

34. Varrella S. Nigeria: age distribution of population, by gender 2021 | Statista [Internet]. Vol. 44, Statista. 2021 [cited 2022 Jun 17]. p. 1–1. Available from: https://www.statista.com/statistics/1121317/age-distribution-of-population-in-nigeria-by-gender/

35. National Population Commission of Nigeria. Nigeria Demographic and Health Survey 2013 [Internet]. National Population Commission. National Population Commission, ICF International; 2014 [cited 2022 Feb 17].

Available from:
http://ngfrepository.org.ng:8080/jspui/handle/123456789/3139

36. Ajala AO. Factors associated with teenage pregnancy and fertility in Nigeria. J Econ Sustain Dev [Internet]. 2014 [cited 2022 Feb 17];5(2):1–9. Available from: www.iiste.org

37. Envuladu EA, Agbo HA, Ohize VA, Zoakah AI. Determinants and outcome of teenage pregnancy in a rural community in Jos, Plateau State, Nigeria. Sub-Saharan African J Med Envuladu EA, Agbo HA, Ohize VA, Zoakah AI Determ outcome teenage pregnancy a Rural community Jos, Plateau State, Niger Sub-Saharan African J Med [Internet] 2014 [cited 2022 Feb 17];1(1)48– [Internet]. 2014 [cited 2022 Feb 17];1(1):48–52. Available from: https://www.ssajm.org/article.asp?issn=2384-5147;year=2014;volume=1;issue=1;spage=48;epage=52;aulast=Envuladu

38. Bolarinwa OA, Tessema ZT, Frimpong JB, Babalola TO, Ahinkorah BO, Seidu AA. Spatial distribution and factors associated with adolescent pregnancy in Nigeria: a multi-level analysis. Arch Public Heal [Internet]. 2022 Dec 1 [cited 2022 Mar 25];80(1):1–13. Available from: https://archpublichealth.biomedcentral.com/articles/10.1186/s13690-022-00789-3

39. Kirchengast S. Teenage Pregnancies: A Worldwide Social and Medical Problem. An Anal Contemp Soc Welf Issues [Internet]. 2016 Oct 26 [cited 2022 Feb 2]; Available from: https://www.intechopen.com/chapters/52475

40. WHO. Adolescent pregnancy [Internet]. 2020 [cited 2022 Feb 3]. Available from: https://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy

41. WebMD. Teenage Pregnancy: Medical Risks and Realities [Internet]. Pregnancy. 2021 [cited 2022 Feb 3]. Available from: https://www.webmd.com/baby/teen-pregnancy-medical-risks-and-realities

42. Ganchimeg T, Ota E, Morisaki N, Laopaiboon M, Lumbiganon P, Zhang J, et al. Pregnancy and childbirth outcomes among adolescent mothers: a World Health Organization multicountry study. BJOG [Internet]. 2014 [cited 2022 Feb 3];121 Suppl:40–8. Available from: https://onlinelibrary.wiley.com/doi/full/10.1111/1471-0528.12630

43. CDC. Unintended Pregnancy/ Reproductive Health [Internet]. CDC. 2021 [cited 2022 Jun 27]. Available from: https://www.cdc.gov/reproductivehealth/contraception/unintendedpregnancy/index.htm

44. UNICEF. Adolescent Demographics - UNICEF DATA [Internet]. United Nations Children's Fund. 2019 [cited 2022 Feb 3]. Available from: https://data.unicef.org/topic/adolescents/demographics/

45. WHO. Adolescent pregnancy- WHO [Internet]. Human Reproductive Programme. 2014 [cited 2022 Feb 3]. p. 1–4. Available from: https://apps.who.int/iris/bitstream/handle/10665/112320/WHO_RHR_14.08_eng.pdf

46. UN. World Population Prospects - Population Division - United Nations [Internet]. 2019 [cited 2022 Feb 4]. Available from: https://population.un.org/wpp/Download/Standard/Interpolated/

47. WHO. Adolescent and young adult health [Internet]. World Health Organisation. 2021 [cited 2022 Feb 4]. Available from: https://www.who.int/en/news-room/fact-sheets/detail/adolescents-health-risks-and-solutions

48. United Nations. World Fertility and Family Planning 2020 [Internet]. Department of Economic and Social Affairs Population Division. 2020 [cited 2022 Mar 17]. 1–42 p. Available from: https://www.un.org/en/development/desa/population/publications/pdf/family/World_Fertility_and_Family_Planning_2020_Highlights.pdf

49. United Nations. Adolescent Fertility since the International Conference on Population and Development (ICPD) in Cairo. Econ Soc Aff [Internet]. 2013 [cited 2022 Feb 12];2–21. Available from: https://www.un.org/en/development/desa/population/publications/pdf/fertility/Report_Adolescent-Fertility-since-ICPD.pdf

50. Kassa GM, Arowojolu AO, Odukogbe AA, Yalew AW. Prevalence and determinants of adolescent pregnancy in Africa: A systematic review and Meta-analysis 11 Medical and Health Sciences 1117 Public Health and Health Services [Internet]. Vol. 15, Reproductive Health. BioMed Central Ltd.; 2018 [cited 2022 Feb 4]. p. 1–17. Available from: https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-018-0640-2

51. Analytics H. ADOLESCENT PREGNANCIES AND ITS IMPLICATIONS ON THE FEMALE CHILD – Health Think Analytics [Internet]. 2021 [cited 2022 Feb 12]. Available from: https://healththink.org/adolescent-pregnancies-and-its-implications-on-the-female-child/

52. UNFPA. Adolescent pregnancy: a review of the evidence. UNFPA. 2013.

53. United Nations Department of Economic and Social Affairs PD. Fertility among young adolescents aged 10 to 14 years [Internet]. United Nations. 2020 [cited 2022 Jun 18]. Available from: https://www.un.org/en/development/desa/population/publications/pdf/fertility/Fertility-young-adolescents-2020.pdf

54. FMoH. Nigeria Demographic and Health Survey 2018 - Summary Report. Natl Popul Comm [Internet]. 2018;1–20. Available from: https://dhsprogram.com/pubs/pdf/SR264/SR264.pdf

55. Kemi B, Christian O, Alabi JA, Isola O. Unplanned Parenthood: The Socio-Economic Consequences of Adolescent Child-bearing in Nigeria. J Educ Pract [Internet]. 2015 [cited 2022 Mar 30];6(31):15–8. Available from: www.iiste.org

56. The World Bank. Current health expenditure (% of GDP) [Internet]. The World Bank. 2022 [cited 2022 Mar 30]. Available from: https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS

57. CNBC. Nigeria’s $82 billion health-care gap: Investors stand by. CNBC

[Internet]. 2021 [cited 2022 Mar 30]; Available from: https://www.cnbc.com/2021/01/04/nigerias-82-billion-health-care-gap-investors-stand-by.html

58. Slap GB, Lot L, Huang B, Daniyam CA, Zink TM, Succop PA. Sexual behaviour of adolescents in Nigeria: cross sectional survey of secondary school students. BMJ [Internet]. 2003 Jan 4 [cited 2022 Mar 31];326(7379):15–8. Available from: https://pubmed.ncbi.nlm.nih.gov/12511453/

59. Yaya S, Bishwajit G. Age at first sexual intercourse and multiple sexual partnerships among women in Nigeria: A cross-sectional analysis. Front Med. 2018 Jun 1;5(JUN):171.

60. Onukwugha FI, Magadi MA, Sarki AM, Smith L. Trends in and predictors of pregnancy termination among 15-24 year-old women in Nigeria: A multi-level analysis of demographic and health surveys 2003-2018. BMC Pregnancy Childbirth [Internet]. 2020 Sep 22 [cited 2022 Apr 1];20(1):1–13. Available from: https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-020-03164-8

61. Ordinioha B, Owhonda G. Clandestine abortion in Port Harcourt: user\'s profile and motivation. Niger J Med [Internet]. 2008 Apr 22 [cited 2022 Apr 1];17(1):33–6. Available from: https://www.ajol.info/index.php/njm/article/view/37351

62. WHO. WHO Recommendations On Adolescent Sexual and Reproductive Health and Rights. Geneva World Heal Organ. 2018;1–88.

63. Adelekan B, Goldson E, Abubakar Z, Mueller U, Alayande A, Ojogun T, et al. Effect of COVID-19 pandemic on provision of sexual and reproductive health services in primary health facilities in Nigeria: a cross-sectional study. Reprod Health [Internet]. 2021 [cited 2022 Apr 23];18(1):1–12. Available from: https://reproductive-health-journal.biomedcentral.com/track/pdf/10.1186/s12978-021-01217-5.pdf

64. World Health Organization. Facts and figures from World health organization [Internet]. 2005 [cited 2022 Feb 17]. Available from: http://www.who.int/whr/2005/media_centre/facts_en.pdf

65. D'Alessandro DM. What Are Some of the Complications of Teenage Pregnancy? [Internet]. PediatricEducation.org. 2007 [cited 2022 Feb 19]. Available from: https://pediatriceducation.org/2007/04/09/what-are-some-of-the-complications-of-teenage-pregnancy/

66. Moni SA, Nair MKC, Devi RS. Pregnancy among unmarried adolescents and young adults. J Obstet Gynecol India [Internet]. 2013 [cited 2022 Feb 19];63(1):49–54. Available from: https://pediatriceducation.org/2007/04/09/what-are-some-of-the-complications-of-teenage-pregnancy/

67. Williamson N. Motherhood in Childhood: Facing the Challenge of Adolescent Pregnancy. State World Popul 2013 [Internet]. 2013 [cited 2022 Feb 19];132. Available from: https://www.refworld.org/docid/52fcc7e84.html

68. Akella D, Jordan M. Impact of Social and Cultural Factors on Teen Pregnancy. J Health Dispar Res Pract [Internet]. 2015 [cited 2022 Feb 19];8(1):41–62. Available from: https://digitalscholarship.unlv.edu/jhdrpAvailableat:https://digitalscholarship.unlv.edu/jhdrp/vol8/iss1/3

69. Hodgkinson S, Beers L, Southammakosane C, Lewin A. Addressing the mental health needs of pregnant and parenting adolescents. Pediatrics [Internet]. 2014 Jan [cited 2022 Feb 22];133(1):114–22. Available from: https://pubmed.ncbi.nlm.nih.gov/24298010/

70. Atuyambe L, Mirembe F, Johansson A, Kirumira EK, Faxelid E. Experiences of pregnant adolescents--voices from Wakiso district, Uganda. Afr Health Sci [Internet]. 2005 Dec [cited 2022 Feb 22];5(4):304–9. Available from: https://pubmed.ncbi.nlm.nih.gov/16615840/

71. Aransiola JO, Asa S, Obinjuwa P, Olarewaju O, Ojo OO, Fatusi AO. Teachers' perspectives on sexual and reproductive health interventions for in-school adolescents in Nigeria. Afr J Reprod Health [Internet]. 2013 [cited 2022 Feb 22];17(4):84–92. Available from: https://pubmed.ncbi.nlm.nih.gov/24558785/

72. Mohd Azri MS, Haliza G, Adibah Hanim I. A review of teenage pregnancy research in Malaysia. Med J Malaysia [Internet]. 2015 [cited 2022 Feb 19];70(4):214–9. Available from: https://www.researchgate.net/publication/281681567_A_review_of_teenage_pregnancy_research_in_Malaysia

73. Mersal FA, Esmat OM, Khalil GM. Effect of prenatal counselling on compliance and outcomes of teenage pregnancy. East Mediterr Heal J. 2013;19(1):10–7.

74. Ganchimeg T, Ota E, Morisaki N, Laopaiboon M, Lumbiganon P, Zhang J, et al. Pregnancy and childbirth outcomes among adolescent mothers: a World Health Organization multicountry study. BJOG [Internet]. 2014 [cited 2022 Feb 12];121 Suppl:40–8. Available from: https://onlinelibrary.wiley.com/doi/full/10.1111/1471-0528.12630

75. The World Health Organisation. Ending Preventable Maternal Mortality (EPMM) : A renewed focus for improving maternal and newborn health and wellbeing [Internet]. 2021 [cited 2022 Feb 19]. p. 1–8. Available from: https://www.who.int/reproductivehealth/publications/maternal-mortality-2000-2017

76. Ezekiel Kalipeni JI& DG-T. Maternal and child health in Africa for sustainable development goals beyond 2015. Glob Public Health [Internet]. 2017 Apr [cited 2022 Feb 19];12(6):643–7. Available from: https://doi.org/10.1080/17441692.2017.1304622

77. Golman M, Ricks N, Gallegos ID, Weaver J. Utilizing the Socio-Ecologic Model as a Framework for the Prevention of Teen Pregnancy. In: Timely Knowledge [Internet]. IGI Global; 2018 [cited 2022 Feb 23]. p. 208–33. Available from: http://services.igi-global.com/resolvedoi/resolve.aspx?doi=10.4018/978-1-5225-6108-8.ch012

78. Kilanowski JF. Breadth of the Socio-Ecological Model. https://doi.org/101080/1059924X20171358971 [Internet]. 2017 Oct 2 [cited 2022 Mar 21];22(4):295–7. Available from: https://www.tandfonline.com/doi/abs/10.1080/1059924X.2017.1358971

79. Mcleroy KR, Bibeau D, Steckler A, Glanz K. An Ecological Perspective on Health Promotion Programs. Heal Educ Behav. 1988;15(4):351–77.

80. Teen Network H. Adolescent Pregnancy Prevention Program Increasing Our Impact by Using a Social-Ecological Approach. Fam Youth Serv Bur. 2015;1–5.

81. Network HT. How and Where Youth Live, Learn and Play Matters [Internet]. Youth 360. 2014 [cited 2022 Feb 25]. p. 1–2. Available from: https://www.healthyteennetwork.org/wp-content/uploads/TipSheet_Youth360.pdf

82. Poux S. Social Ecological Model offers New Approach to Public Health [Internet]. The Borgen Project. 2017 [cited 2022 Mar 3]. Available from: https://borgenproject.org/social-ecological-model/

83. CDC. The Social-Ecological Model: A Framework for Prevention. Inj Prev [Internet]. 2020 [cited 2022 Mar 3]; Available from: https://www.cdc.gov/violenceprevention/about/social-ecologicalmodel.html

84. Yakubu I, Salisu WJ. Determinants of adolescent pregnancy in sub-Saharan Africa: A systematic review. Vol. 15, Reproductive Health. BioMed Central Ltd.; 2018.

85. Zoakah AI. Exploring the Factors Influencing Adolescent Sexual Behavior in Plateau State Nigeria. Am J Med Med Sci [Internet]. 2017 [cited 2022 Mar 31];7(1):1–6. Available from: http://article.sapub.org/10.5923.j.ajmms.20170701.01.html

86. Tetteh J, Nuertey BD, Dwomoh D, Udofia EA, Mohammed S, Adjei-Mensah E, et al. Teenage pregnancy and experience of physical violence among women aged 15-19 years in five African countries: Analysis of complex survey data. PLoS One [Internet]. 2020 Oct 1 [cited 2022 Jun 2];15(10). Available from: https://pubmed.ncbi.nlm.nih.gov/33108400/

87. Odo AN, Samuel ES, Nwagu EN, Nnamani PO, Atama CS. Sexual and reproductive health services (SRHS) for adolescents in Enugu state, Nigeria: A mixed methods approach. BMC Health Serv Res [Internet]. 2018 Feb 8 [cited 2022 Apr 2];18(1):1–12. Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-017-2779-x

88. Amoran OE. A comparative analysis of predictors of teenage pregnancy and its prevention in a rural town in Western Nigeria. Int J Equity Health [Internet]. 2012 Jul 30 [cited 2022 Mar 29];11(1):1–7. Available from: https://equityhealthj.biomedcentral.com/articles/10.1186/1475-9276-11-37

89. Stella A. TEENAGE PREGNANCY AND ITS INFLUENCE ON SECONDARY SCHOOL EDUCATION IN NIGERIA. Br J Educ. 2019;7(11):87–96.

90. UNFPA. Sexual & reproductive health [Internet]. United Nations Population Fund. 2022 [cited 2022 Jul 17]. Available from: https://www.unfpa.org/sexual-reproductive-health#readmore-expand

91. Salami KK, Ayegboyin M, Adedeji IA. Unmet social needs and teenage pregnancy in Ogbomosho, South-Western Nigeria. Afr Health Sci. 2014;14(4):959–66.

92. Kwarai M. Insights into early marriage and girls' education in Northern Nigeria [Internet]. Action Health Incorporated. 2011 [cited 2022 May 30]. 60 p. Available from: http://www.actionhealthinc.org/publications/docs/innovators.pdf

93. Romero L, Pazol K, Warner L, Cox S, Kroelinger C, Besera G, et al. Reduced Disparities in Birth Rates Among Teens Aged 15–19 Years — United States, 2006–2007 and 2013–2014. MMWR Morb Mortal Wkly Rep. 2019 Apr 29;65(16):409–14.

94. Kenton W. Revenue Definition [Internet]. 2019 [cited 2022 Apr 4]. Available from: https://www.accountingtools.com/articles/revenue

95. OSAJE P. Why Teenage Pregnancy Rampant — Karu Residents [Internet]. NNN News. 2019 [cited 2022 Jun 19]. Available from: https://nnn.ng/why-teenage-pregnancy-rampant-karu-residents/

96. Musyoki BM, Kisimbii J. Factors Influencing Teenage Pregnancies in Kenyan Public Primary Schools : A Case of Kitui County, Kenya. J Entrep Proj Manag [Internet]. 2019 [cited 2022 Mar 31];4(3):11–26. Available from: https://stratfordjournals.org/journals/index.php/journal-of-entrepreneurship-proj/article/view/343/461

97. Loto, O. and Isuku E. Parental Factors and Teenage Pregnancy among Adolescent Girls in Secondary Schools in Ibadan Metropolis. Int J Educ Adm Plan Res. 2016;8(2):28–245.

98. Salami KK, Ayegboyin M, Adedeji IA. Unmet social needs and teenage pregnancy in Ogbomosho, South-western Nigeria. Afr Health Sci [Internet]. 2014 [cited 2022 Jun 4];14(4):959–66. Available from: https://pubmed.ncbi.nlm.nih.gov/25834508/

99. Huebler F. International Education Statistics: Age and level of education in Nigeria [Internet]. 2005 [cited 2022 Apr 1]. Available from: https://huebler.blogspot.com/2005/12/age-and-level-of-education-in-nigeria.html

100. KHP. What is substance use? - Kids Help Phone [Internet]. Kids Help Phone. 2022 [cited 2022 Apr 5]. Available from: https://kidshelpphone.ca/get-info/what-substance-use/

101. Connery HS, Albright BB, Rodolico JM. Adolescent substance use and unplanned pregnancy: strategies for risk reduction. Obstet Gynecol Clin North Am [Internet]. 2014 [cited 2022 Apr 5];41(2):191. Available from: /pmc/articles/PMC4031466/

102. Anyanwu OU, Ibekwe RC, Ojinnaka NC. Pattern of substance abuse among adolescent secondary school students in Abakaliki. Cogent Med [Internet]. 2016 Dec 31 [cited 2022 Apr 5];3(1):1272160. Available from:

https://www.tandfonline.com/doi/abs/10.1080/2331205X.2016.1272160

103. Amoo EO, Adekeye OA, Omumu F, Akinpelu OO, Ajayi MP, Olawande T, et al. Drug use and high-risk sexual behavior among school-going adolescents in Nigeria. Open Access Maced J Med Sci. 2020 Mar;8:256–61.

104. Black MM, Oberlander SE, Lewis T, Knight ED, Zolotor AJ, Litrownik AJ, et al. Sexual intercourse among adolescents maltreated before age 12: A prospective investigation. Pediatrics. 2009 Sep;124(3):941–9.

105. David N, Ezechi O, Wapmuk A, Gbajabiamila T, Ohihoin A, Herbertson E, et al. Child sexual abuse and disclosure in south western nigeria: A community based study. Afr Health Sci. 2018 Jun 1;18(2):199–208.

106. Manyike PC, Chinawa JM, Aniwada E, Udechukwu NP, Odutola OI, Chinawa TA. Child sexual abuse among adolescents in southeast Nigeria: A concealed public health behavioral issue. Pakistan J Med Sci [Internet]. 2015 [cited 2022 May 31];31(4):827. Available from: /pmc/articles/PMC4590391/

107. Rashidi Akanji O, Matthias Olufemi Dada O. Finding the Causal Relationship between Child Abuse and Teenage Pregnancy: Perspectives of the Crawford University Students in Nigeria. Int J Prev Treat. 2013 Jan 7;1(4):67–77.

108. Steinberg L. Peer Pressure : Its Influence on Teens and Decision Making. NIH [Internet]. 2008 [cited 2022 Apr 7]; Available from: https://headsup.scholastic.com/students/peer-pressure-its-influence-on-teens-and-decision-making

109. Isuku EJ. Peer Pressure and Teenage Pregnancy among Adolescent Secondary Schools Girls in Ibadan Metropolis. 2020;15(June):88–99.

110. Lawrence A, M AA. CONTRIBUTING VARIABLES TO TEENAGE PREGNANCY AMONG FEMALE ADOLESCENTS IN NIGERIA [Internet]. Vol. 6, International Journal of Interdisciplinary Research Methods. 2019 [cited 2022 Apr 8]. Available from: https://www.eajournals.org/wp-content/uploads/Contributing-Variables-to-Teenage-Pregnancy.pdf

111. Aji J, Aji M, Ifeadike C, Emelumadu O, Ubajaka C, Nwabueze S, et al. Adolescent Sexual Behaviour and Practices in Nigeria: A Twelve Year Review. Afrimedic J [Internet]. 2013 Sep 25 [cited 2022 Jun 4];4(1):10–6. Available from: https://www.ajol.info/index.php/afrij/article/view/94553

112. Philipose A, Toure R, Verhulst C. Child Marriage in West and Central Africa. UNICEF and UNFPA [Internet]. 2018 [cited 2022 Apr 25];1–12. Available from: https://www.unicef.org/wca/media/2596/file

113. Clark S, Bruce J, Dude A. Protecting young women from HIV/AIDS: The case against child and adolescent marriage. Int Fam Plan Perspect [Internet]. 2006 [cited 2022 Apr 25];32(2):79–88. Available from: https://click.endnote.com/viewer?doi=10.2307%2F4147596&token=WzMzODEzNDQsIjEwLjIzMDcvNDE0NzU5NiJd.NLPJ3fRxCsH5mbV_013V5kIlSPg

114. Bolarinwa OA, Ahinkorah BO, Okyere J, Seidu AA, Olagunju OS. A multilevel analysis of prevalence and factors associated with female child marriage in Nigeria using the 2018 Nigeria Demographic and Health

Survey data. BMC Womens Health [Internet]. 2022 Dec 1 [cited 2022 Jun 19];22(1):1–11. Available from: https://bmcwomenshealth.biomedcentral.com/articles/10.1186/s12905-022-01733-x

115. Nwosu UM. Contemporary factors of teenage pregnancy in rural communities of Abia state, Nigeria. Int J Community Med Public Heal. 2017 Jan 25;4(2):588.

116. Chimah UC, Lawoyin TO, Ilika AL, Nnebue CC. Contraceptive knowledge and practice among senior secondary schools students in military barracks in Nigeria. Niger J Clin Pract [Internet]. 2016 Mar 1 [cited 2022 Jun 24];19(2):182. Available from: https://www.njcponline.com/article.asp?issn=1119-3077;year=2016;volume=19;issue=2;spage=182;epage=188;aulast=chimah

117. Coe E, Cordina J, Feffer D, Parmar S. Understanding the impact of unmet social needs on consumer health and healthcare [Internet]. Mckinsey & Co. 2020 [cited 2022 Jun 20]. p. 1–10. Available from: https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/understanding-the-impact-of-unmet-social-needs-on-consumer-health-and-healthcare

118. Ajayi AI, Okeke SR. Protective sexual behaviours among young adults in Nigeria: Influence of family support and living with both parents. BMC Public Health [Internet]. 2019 Jul 23 [cited 2022 Jun 4];19(1):1–8. Available from: https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-7310-3

119. Anene JO, Ojinaka EP, Ndie EC. Variables Influencing Premarital Sex among Secondary School Adolescents in Anambra State, Nigeria. J Community Public Heal Nurs [Internet]. 2017 Sep 11 [cited 2022 Jun 20];3(4):1–6. Available from: https://www.omicsonline.org/open-access/variables-influencing-premarital-sex-among-secondary-school-adolescents-in-anambra-state-nigeria-2471-9846-1000194-95820.html

120. Crawford EE, Atchison CJ, Ajayi YP, Doyle AM. Modern contraceptive use among unmarried girls aged 15–19 years in South Western Nigeria: results from a cross-sectional baseline survey for the Adolescent 360 (A360) impact evaluation. Reprod Health [Internet]. 2021 Dec 1 [cited 2022 Jun 21];18(1):1–13. Available from: https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-020-01056-w

121. Alayande A, Bello-Garko B, Umeh G, Nuhu I, Olaolorun FM, Taylor M. Access to contraceptives for adolescents in northern Nigeria – a cross-sectional study from three secondary health facilities in Kaduna metropolis, Kaduna. Gates Open Res 2019 31476 [Internet]. 2019 May 29 [cited 2022 May 14];3:1476. Available from: https://gatesopenresearch.org/articles/3-1476

122. Mbachu CO, Agu IC, Obayi C, Eze I, Ezumah N, Onwujekwe O. Beliefs and misconceptions about contraception and condom use among adolescents in south-east Nigeria. Reprod Health [Internet]. 2021 Dec 1 [cited 2022 Jun

6];18(1):1–8. Available from: https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-020-01062-y

123. Esere MO. Effect of sex education programme on at-risk sexual behaviour of school-going adolescents in Ilorin, Nigeria. Afr Health Sci [Internet]. 2008 Jun [cited 2022 Jun 5];8(2):120. Available from: /pmc/articles/PMC2584331/

124. Aderibigbe SA, Araoye MO, Akande TM, Musa OI, Monehin JO, Babatunde OA. Teenage pregnancy and prevalence of abortion among in-school adolescents in north central, Nigeria. Asian Soc Sci. 2011;7(1):122–5.

125. Sule H, Akor J, Toluhi O, Suleiman R, Akpihi L, Ali O. Impact of Sex Education in Kogi State, Nigeria. J Educ Pract [Internet]. 2015 [cited 2022 Jun 5];6(3):34–41. Available from: www.iiste.org

126. VOA. 18.5 Million Nigerian Children Are Out of School [Internet]. VOA News. 2022 [cited 2022 Jun 13]. Available from: https://www.voanews.com/a/millions-nigerian-children-are-out-of-school-unicef-says/6569716.html

127. UNICEF. Education [Internet]. UNICEF Nigeria. 2022 [cited 2022 Jun 13]. Available from: https://www.unicef.org/nigeria/education

128. Mohammed M-NN, Quadri KA, Yoshifumi H. Examining the fragments and causes of increasing out-of-school children in Nigeria. J African Stud Dev [Internet]. 2021 [cited 2022 Jul 10];13(4):66–73. Available from: http://www.academicjournlas.org/JASD

129. Dahiru A. COVID-19 Widening The Education Gap In Northern Nigeria [Internet]. HumAngle Media. 2020 [cited 2022 Jun 13]. Available from: https://humanglemedia.com/covid-19-widening-the-education-gap-in-northern-nigeria/

130. Ikechebelu J, Udigwe G, Ezechukwu CC, Ndinechi A, Joe–Ikechebelu N. Sexual abuse among juvenile female street hawkers in Anambra State, Nigeria. Afr J Reprod Health [Internet]. 2009 Feb 26 [cited 2022 Jul 10];12(2):111–9. Available from: https://www.ajol.info/index.php/ajrh/article/view/7864

131. ProCon.org. What Is Prostitution? [Internet]. Merriam-Webster Online Dictionary. 2007 [cited 2022 Jul 12]. Available from: https://prostitution.procon.org/questions/what-is-prostitution/

132. Okunola TO et al. Contraception and Pregnancy Experience among adolescent commercial sex workers in southwest Nigeria. Clin Res Obstet Gynecol [Internet]. 2020 [cited 2022 Jun 26];3(1):1–6. Available from: https://www.academia.edu/43760962/Contraception_and_Pregnancy_Experience_among_Adolescent_Commercial_Sex_Workers_in_Southwest_Nigeria

133. Owoseni JS. Sexual Knowledge and Teenage Pregnancy among Female Hawkers in Ekiti State , Nigeria [Internet]. Sexual Knowledge and Teenage Pregnancy among Female Hawkers in Ekiti State, Nigeria. 2020 [cited 2022 Jun 29]. Available from: https://assets.researchsquare.com/files/rs-15613/v1/145a3732-ac13-4334-8011-7a37e7d8da8d.pdf?c=1631831305

134. 1Akani-Ejike, Queen Woroma; 2Dr. Maxwell Eremie & 3Ebere JN. Sex Education and Early Pregnancy among Female Adolescent Students in South West Senatorial District in Rivers State Nigeria. Int J Innov Psychol Soc Dev [Internet]. 2021 [cited 2022 Jun 27];9(4). Available from: https://seahipaj.org/journals-ci/dec-2021/IJIPSD/full/IJIPSD-D-4-2021.pdf

135. Sserwanja Q, Sepenu AS, Mwamba D, Mukunya D. Access to mass media and teenage pregnancy among adolescents in Zambia: a national cross-sectional survey. BMJ Open [Internet]. 2022 Jun 1 [cited 2022 Jul 12];12(6):e052684. Available from: https://bmjopen.bmj.com/content/12/6/e052684

136. Oluwaseyi Israel, Adeleye Adeomi, Oluwatosin Adeoye, Michael Israel AO-B. Contraceptive Knowledge, Access and Uptake among Rural and Urban Unmarried in-school Adolescents in Osun State, Nigeria: A Comparative Study. J Community Med Public Heal. 2019 Nov 5;3(3).

137. AGUNBIADE Ojo Melvin B, Ayotunde T, Mustapha O. Pregnancy Stigmatisation and Coping Strategies of Adolescent Mothers in two Yoruba Communities, Southwestern Nigeria.

138. Elekeh RI, Enwereji EE, Odina C. Factors and Conditions that Influence Teenage Pregnancy among In-school Adolescents in Umuahia North Local Government Area (L.G.A) of Abia State, Nigeria. Int J Heal Stat [Internet]. 2021 [cited 2022 Jun 27];1(1):15–20. Available from: https://openaccesspub.org/ijhs/article/1631

139. Eseadi C, Achagh W, Ikechukwu-Ilomuanya AB, Ogbuabor SE. PREVALENCE OF BABY FACTORY IN NIGERIA: AN EMERGENT FORM OF CHILD ABUSE, TRAFFICKING AND MOLESTATION OF WOMEN. Int J Interdiscip Res Methods [Internet]. 2015 [cited 2022 Jun 24];2(1):1–12. Available from: www.eajournals.org

140. F Onuoh. New Wares of Trade : Understanding Evolving Baby Factory and Trafficking in Nigeria. 2014 [cited 2022 Jun 25];(August):14–5. Available from: https://issafrica.s3.amazonaws.com/site/uploads/5th-Crime-Conf-2014/X005-Freedom-Onuoha.pdf

141. Huntley S. The phenomenon of baby factory in Nigeria as a new trend of human trafficking. Int Crime Database [Internet]. 2013 [cited 2022 Aug 7];3(October):1–24. Available from: http://www.bbc.co.uk/news/world-africa-22484318;

142. Makinde OA, Olaleye O, Makinde OO, Huntley SS, Brown B. Baby Factories in Nigeria: Starting the Discussion Toward a National Prevention Policy. Trauma, Violence, Abus. 2017;18(1):98–105.

143. Sanchez EK, Speizer IS, Tolley E, Calhoun LM, Barrington C, Olumide AO. Influences on seeking a contraceptive method among adolescent women in three cities in Nigeria. Reprod Health. 2020 Dec 1;17(1).

144. Somefun OD. Religiosity and sexual abstinence among Nigerian youths: Does parent religion matter? BMC Public Health [Internet]. 2019 Apr 18 [cited 2022 Jun 6];19(1):1–11. Available from: https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-6732-2

145. Odebode Oluyinka A Kolapo SO, Odebode SO, Kolapo OA. Vulnerability of Teenage Girls to Pregnancy in Ibarapa Central Local Government Area, Oyo State, Nigeria. J Int Womens Stud [Internet]. 2016 [cited 2022 Apr 21];17(4):122–31. Available from: https://vc.bridgew.edu/jiws

146. Maduforo AN. Prevalence of Adolescent Pregnancy in Ganye Local Government Area. Adamawa State, Nigeria. Jorind [Internet]. 2011 [cited 2022 Jun 28];9(2):1596–8308. Available from: https://www.researchgate.net/publication/288831661_PREVALENCE_OF_ADOLESCENT_PREGNANCY_IN_GANYE_LOCAL_GOVERNMENT_AREA_ADAMAWA_STATE_NIGERIA

147. Federal Ministry of Education Nigeria. National policy on gender in basic education. Fed Minist Educ Niger [Internet]. 2006 [cited 2022 Apr 26];(January):1–24. Available from: https://planipolis.iiep.unesco.org/sites/default/files/ressources/nigeria_policy_gender_basic_education.pdf

148. Nmadu AG, Mohamed S, Usman NO. Barriers to adolescents' access and utilisation of reproductive health services in a community in north-western Nigeria: A qualitative exploratory study in primary care. African J Prim Heal Care Fam Med [Internet]. 2020 [cited 2022 Jun 28];12(1). Available from: /pmc/articles/PMC7433241/

149. Envuladu EA, Massar K, de Wit J. Adolescent sexual and reproductive health care service availability and delivery in public health facilities of plateau state nigeria. Int J Environ Res Public Health. 2021;18(4):1–11.

150. Federal Ministry of Youth and Sports Development. Federal Republic of Nigeria National Youth Policy. Federal Ministry of Youth and Sport Dvelopment. 2019.

151. Olufunke M, Ekiti Oluwagbohunmi Margaret Foluke A. An Overview of the Challenges Facing Youths in Nigerian Society. Int J Humanit Soc Sci [Internet]. 2014 [cited 2022 Apr 24];4(6). Available from: www.ijhssnet.com

152. Onuora-Oguno A. Constitutionalising the Violation of the Right of the Girl Child in Nigeria: Exploring Constitutional Safeguards and Pitfalls [Internet]. Oxford Human Rights Hub. 2013 [cited 2022 Apr 24]. Available from: https://ohrh.law.ox.ac.uk/constitutionalising-the-violation-of-the-right-of-the-girl-child-in-nigeria-exploring-constitutional-safeguards-and-pitfalls/

153. Ehiemua S, Suleiman Y, Hanafi ZB, Tanslikhan M, Adeyemi GA, Edeki SO, et al. An Examination of Girls ' Education Policies in Nigeria with focus on the Northeast. Data Br [Internet]. 2017 [cited 2022 Apr 26];18(2):1848–79. Available from: www.connecteddevelopment.org

154. Odenigbo V&, Eze A. Factors inhibiting girl child education in Nigeria. PCF [Internet]. 2019 [cited 2022 Jun 28];9(26). Available from: http://oasis.col.org/handle/11599/3358

155. Abdulkadir J, Zainuddin R Bin, Syakiran N, Ismail AB. POLICY ISSUES AND CHALLENGES ON GIRL-CHILD ENROLMENT AND RETENTION IN NORTHERN NIGERIA. Int J Manag Res Rev [Internet]. 2018 [cited 2022 Jun 28];8(4):2249–7196. Available from: www.ijmrr.com

156. Thelwell Kim. Food Insecurity in Myanmar - The Borgen Project [Internet]. The Borgen Project. 2018 [cited 2022 Apr 27]. Available from: https://borgenproject.org/food-insecurity-in-nigeria/

157. Oyefara JL. Food insecurity, HIV/AIDS pandemic and sexual behaviour of female commercial sex workers in Lagos metropolis, Nigeria. Sahara J [Internet]. 2007 Aug 1 [cited 2022 Jun 29];4(2):626–35. Available from: https://doi.org/10.1080/17290376.2007.9724884

158. UNFPA. UNFPA Nigeria | FP 2030- UNFPA Nigeria and partners Launch Policy documents [Internet]. UNFPA. 2022 [cited 2022 Jul 2]. Available from: https://nigeria.unfpa.org/en/events/fp-2030-unfpa-nigeria-and-partners-launch-policy-documents

159. FMOH. Nigeria Family Planning Blueprint 2020-2024. Fed Minist Heal Abuja, Niger [Internet]. 2020 [cited 2022 Jul 1];2019–23. Available from: https://health.gov.ng/doc/Final-2020-Blueprint.pdf

160. CliffsNotes. The Role and Influence of Mass Media [Internet]. CliffsNotes.com. 2015 [cited 2022 May 15]. p. 1. Available from: https://www.cliffsnotes.com/study-guides/sociology/contemporary-mass-media/the-role-and-influence-of-mass-media

161. Nigeria G. The Consequences Of Teenage Pregnancy | Gist Nigeria - YouTube [Internet]. Channels TV/BBS. 2019 [cited 2022 Jul 17]. Available from: https://www.youtube.com/watch?v=9gCCWIvjDP8

162. MTV Shuga. Watch MTV Shuga's New Documentary, "Young Moms" [Internet]. BellaNaija.com. 2020 [cited 2022 Jul 17]. Available from: https://www.bellanaija.com/2020/01/mtv-shuga-real-life-young-moms/

163. Sonenstein, Freya L, Stewart, Kellie, Lindberg, laura Duberstein, Pernas, marta, Williams S. Involving Males in Preventing Teen Pregnancy [Internet]. 1997 [cited 2022 May 15]. 1–176 p. Available from: http://webarchive.urban.org/publications/307327.html

164. One man's fight to end gender-based violence in Lagos [Internet]. UNICEF Nigeria. 2021 [cited 2022 Jul 3]. Available from: https://www.unicef.org/nigeria/stories/one-mans-fight-end-gender-based-violence-lagos

165. The World Bank. Nigeria poverty assessment Report [Internet]. Worl Bank Press Release. 2022 [cited 2022 May 15]. Available from: https://www.worldbank.org/en/news/press-release/2022/03/21/afw-deep-structural-reforms-guided-by-evidence-are-urgently-needed-to-lift-millions-of-nigerians-out-of-poverty

166. Idowu R. Nigeria Drops Again In Latest Transparency International Corruption Ranking [Internet]. Channels Television. 2022 [cited 2022 May 15]. Available from: https://www.channelstv.com/2022/01/25/nigeria-drops-again-in-latest-transparency-international-corruption-ranking/

167. Jacob ON, Musa A. National Home Grown School Feeding Programme (NHGSFP) in Nigeria: Achievement, Problems of Implementation and way Forward. Pindus J Cult Lit ELT [Internet]. 2021 [cited 2022 Jul 4];8:1–8. Available from: https://ideas.repec.org/a/mth/jpag88/v11y2021i3p100-

117.html

168. World Bank. Educating Girls, Ending Child Marriage. World Bank [Internet]. 2017 [cited 2022 Jul 17];1–10. Available from: https://www.worldbank.org/en/news/immersive-story/2017/08/22/educating-girls-ending-child-marriage

169. WHO. Life skills education for children and adolescents in schools [Internet]. 1994 [cited 2022 May 13]. p. 48. Available from: http://apps.who.int/iris/bitstream/handle/10665/63552/WHO_MNH_PSF_93.7A_Rev.2.pdf;jsessionid=6D8008BB763243A43509C0A7BA8221A9?sequence=1

170. UNICEF. Delivering connectivity, skills, and job opportunities to 20 million young Nigerians by 2030 [Internet]. UNCEF Nigeria. 2022 [cited 2022 Jul 2]. Available from: https://www.unicef.org/nigeria/press-releases/delivering-connectivity-skills-and-job-opportunities-20-million-young-nigerians-2030

171. Eilers JY and C. Nigerian Youth Win Big in Generation Unlimited Nigeria BetterTogether Program [Internet]. Generation Unlimited. 2020 [cited 2022 Jul 16]. Available from: https://www.generationunlimited.org/news-and-stories/Nigerian-Youth-Win-Big-in-Generation-Unlimited-Nigeria-BetterTogether

172. NLNG. Education; NLNG Post Primary School Scholarship [Internet]. Nigeria Liquified Natural Gas. 2022 [cited 2022 Jul 19]. Available from: https://www.nigerialng.com/csr/Pages/Education.aspx

173. Ayodele Arowolo G. Preventing and Eliminating Child Marriage in Africa: The Perspectives from Nigeria. J Law, Policy Glob [Internet]. 2022 [cited 2022 Jul 16];119:2022. Available from: https://www.

174. Walker J-A. Building Resilience and Resistance to Child, Early, and Forced Marriage through Acquiring Skills Findings from Implementation Research in Nigeria Building Resilience and Resistance to Child, Early, and Forced Marriage through Acquiring Skills: Findings fr. Glob Econ Dev Brookings [Internet]. 2019 [cited 2022 Jul 17];1–50. Available from: https://www.brookings.edu/wp-content/uploads/2019/08/Findings-from-Implementation-Research-in-Nigeria-FINAL.pdf

175. Ogun State Government Adolescent Reproductive Health Strategic Framework (2018-2022) [Internet]. Pathfinderr International. 2018 [cited 2022 Jul 4]. Available from: https://www.advancefamilyplanning.org/ogun-state-launches-adolescent-reproductive-health-strategy

176. Chandra-Mouli V, Camacho AV, Michaud PA. WHO Guidelines on Preventing Early Pregnancy and Poor Reproductive Outcomes Among Adolescents in Developing Countries. J Adolesc Heal. 2013 May 1;52(5):517–22.

177. Foluso AF, Odu BK. Effect of sexuality education on the improvement of health status of young people in the University of Ado-Ekiti, Nigeria. In: Procedia - Social and Behavioral Sciences [Internet]. 2010 [cited 2022 Jun 5]. p. 1009–16. Available from: https://pdf.sciencedirectassets.com/277811/1-s2.0-

S1877042810X00106/1-s2.0-S1877042810016010/main.pdf?X-Amz-Security-Token=IQoJb3JpZ2luX2VjEKf%252F%252F%252F%252F%252F%252F%252F%252F%252F%252FwEaCXVzLWVhc3QtMSJHMEUCICnINcgDAgVdAEJzxMTyqV1uuRthdQGFgHDniRwDv02SAiEAl%252B7xhXQQA%25

178. Yaya S, Odusina EK, Bishwajit G. Prevalence of child marriage and its impact on fertility outcomes in 34 sub-Saharan African countries. BMC Int Health Hum Rights [Internet]. 2019 Dec 19 [cited 2022 Jul 9];19(1):1–11. Available from: https://bmcinthealthhumrights.biomedcentral.com/articles/10.1186/s12914-019-0219-1

179. Nasir SG, Aliyu G, Ya'U I, Gadanya M, Mohammad M, Zubair M, et al. From Intense Rejection to Advocacy: How Muslim Clerics Were Engaged in a Polio Eradication Initiative in Northern Nigeria. PLOS Med [Internet]. 2014 [cited 2022 Jul 18];11(8):e1001687. Available from: https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001687

180. UNESCO. Global Review finds Comprehensive Sexuality Education key to gender equality and reproductive health [Internet]. United Nations. 2015 [cited 2022 Aug 10]. Available from: https://www.un.org/youthenvoy/2016/03/comprehensive-sexuality-education/

181. Nwaka JC, Odoemene A. "Baby Factories": Exploitation of Women in Southern Nigeria. Dign A J Sex Exploit Violence [Internet]. 2019 [cited 2022 Aug 8];4(2). Available from: https://doi.org/10.23860/dignity.2019.04.02.02