Title: Responding to Adolescent Sexual and Reproductive Health needs in Liberia

By: Joyce Walley Garblah

Master in International Health

September 9 2013– September 4, 2014

KIT (ROYAL TROPICAL INSTITUTE)

A thesis submitted in partial fulfilment of the requirement for the degree of Master in International Health

By

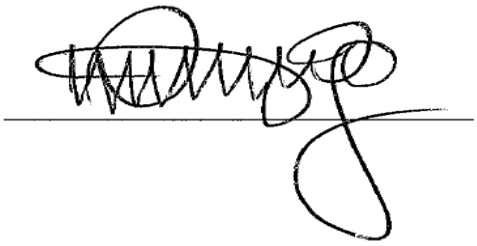
Joyce Walley Garblah

Liberia

Declaration:

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

The thesis responding to Adolescent Sexual and Reproductive Health needs in Liberia is my own work

Signature: 

Total word count: **13,182**

Date: August 13, 2014

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Dedication

This thesis is dedicated to the glory of God Almighty because it is He who gave me the strength, patience, wisdom and the breath of life to endure to the end.

This work is also dedicated to my darling son, Praise Wodoquoi Garblah, the sunshine in my life.

With all my love!

Acknowledgement

My heartfelt thanks and gratitude go to the almighty God for his blessings throughout my studies.

I am indebted to the Ministry of Health and Social Welfare for providing the full scholarship to pursue my studies.

My sincere appreciations and heartfelt gratitude to the Bassa County Health and Social welfare Team for all the moral support rendered me during my studies. Iam indeed grateful!

My sincere appreciations to my Dear Husband: Mr. Michael Garblah, my two girls: Amuchin and Teenzee, my Mom and Dad, and my siblings. Your prayers and love kept me strong.

My gratitude goes to all of my friends, Pastors and families who kept me in their prayers during the period of my studies.

Finally, special and very big thanks to all course facilitators, coordinators and Administrators of the Royal Tropical Institute for knowledge so willingly impacted. Your patience and support will be remembered.

ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
ASRH	Adolescent Sexual Reproductive Health
BPHS	Basic Package of Health Services
CHC	Community Health Committee
CHDC	Community Health Development Committee
CPR	Contraceptive Prevalence Rate
EPHS	Essential Package of Health Services
FGM/C	Female Genital Mutilation/Cutting
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development
ICRW	International Center for Research on Women
IDU	Injecting Drugs Users
LDHS	Liberia Demography and Health Survey
LMIS	Liberia Malaria Indicator Survey
MDGs	Millennium Development Goals
MoDG	Ministry of Gender and Development
MOHSW	Ministry of Health & Social Welfare
NACC	National Aids Coordination Commission
NACP	National Aids Control Program
NGO	Non-Governmental Organization
NHA	National Health Accounts
PSI	Population Services International
RWHR	Regional Watch for Human Right
TFR	Total Fertility Rate

UNAIDS	United Nations Aids Program
UNFPA	United Nation Population Fund Agency
UNICEF	United International Children Educational Funds
USAID	United States Aids for International Development
WHO	World Health Organization
YHRC	Youth Health and Rights Coalition
YMCA	Young Men Christian Association

DEFINITION OF TERMS

Adolescent: "identifies adolescence as the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to19. It represents one of the critical transitions in the life span and is characterized by a tremendous pace in growth and change that is second only to that of infancy" (Choice for youth and sexuality, 2011)

Sexual Health: "a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled." (Choice for youth and sexuality, 2011)

Reproductive Health: "A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the rights of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate healthcare services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant" (ICPD, 1994)

Youth Friendly Services: are services that are design to meet the sexual and reproductive health needs of young people while respecting their rights and gaining their trust (Youth Empowerment Alliance, 2014)

Sexuality: "a central aspect of being human throughout life encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thoughts, fantasies, desires, beliefs, attitudes, values, behaviors, practices, roles and relationships. While sexuality can include all of these dimensions, not all of them are always experienced or expressed. Sexuality is influenced

by the interaction of biological, psychological, social, economic, political, cultural, legal, historical, religious and spiritual factors." (WHO, 2006)

Sexual Rights: 'The human rights of women include their right to have control over and decide freely and responsibly on matters related to their sexuality, including sexual and reproductive health, free of coercion, discrimination and violence. Equal relationships between women and men in matters of sexual relations and reproduction, including full respect for the integrity of the person, require mutual respect, consent and shared responsibility for sexual behavior and its consequences' (ICPD/IPPF, 2013)

Sex: 'refers to the biological characteristics that define humans as female or male' (WHO, 2006)

ABSTRACT

Adolescents have specific sexual and reproductive health needs that make them vulnerable. Many adolescent faced sexual and reproductive health risks such as early sexual debut, STIs including HIV, unwanted pregnancy and unsafe abortions. These challenges threaten their survival and posed a lifelong risk of ill sexual and reproductive health for them.

OBJECTIVES

To explore adolescent sexual behavior, knowledge and attitude about sexuality and factors influencing access to sexual and reproductive health services in Liberia in order to make recommendations for interventions to improve the situation.

METHOD

Literature review was used to explore adolescent sexual reproductive health needs and effective interventions that have work in developing countries to improve adolescent sexual and reproductive health. There were literature from both Liberia and other countries in the context of Liberia used. Socio-ecological model was used to guide the analysis.

RESULTS

Factors that influence adolescent sexual and reproductive health needs were: sexual behavior influenced by lack of knowledge, attitudes and practices towards safe sex, early sex, family, peer and social relationships.

Other findings were deeply rooted cultural, gender norms and values that encourage early marriage, gender inequalities, discrimination and violence against girls. Poverty was also found as an underlying social determinant. And lack of access to adolescent sexual and reproductive health services.

CONCLUSSION

Responding to adolescent sexual and reproductive health needs require a multi-faceted approach ranging from comprehensive sexuality education through schools and communities, to reflecting on norms and cultural values that serve as barrier and provision of youth friendly services that are accessible, available and affordable.

Key Words: Adolescent, Sexuality, Reproductive, Health, Liberia

Total word count: 13,182

INTRODUCTION

About 20% of the world population is adolescent and the majority of them are found in developing countries (Hindin et al 2012). Liberia has a young population with 51% below the age of 21 (LDHS, 2007). Adolescents are people between the ages of 10-19 years (WHO, 2014a). Adolescents are important because they are the future generation of any nation and as such their wellbeing and development should be at its core. Sexual and reproductive health is an integral part of the total wellbeing of any individual especially adolescent (Youth Health & Rights Coalition, (YHRC), 2011). Adolescents all over the world have sexual and reproductive health needs because it is at this stage of life that adolescent face numerous challenges in accessing sexual and reproductive health services (YHRC, 2011).

Many adolescents face sexual health risks such as early sexual debut, early marriage, unwanted pregnancy, illegal abortions, violence, rape and sexually transmitted infections including HIV/AIDS. These challenges threaten their health and survival and make them vulnerable (UNFPA, 2014).

The International Conference on Population and Development stressed the importance of adolescent sexual and reproductive health needs as basic human rights, yet adolescent lack access to these rights and services (ICPD, 1994).

In Liberia by age 15, about 17% of girls and 9% of boys have had sex. Additionally, about 80% of females and 50% of males have had sex by age 18 (LDHS, 2007).

At the age of 19, approximately 62% of adolescent girls are pregnant (LMIS 2009). Twenty –six (26%) of adolescent pregnancy are unintended and 30% of these pregnancy ends in unsafe abortion (MOHSW, 2011). The contraceptive prevalence rate stands at 11% with unmet needs of family planning amongst adolescent girls at 39%. Adolescent boys are at gross disadvantage in accessing sexual and reproductive health services (LDHS, 2007).

In my experience as community health director and with long term of working with communities especially in the rural areas, I have seen that there is little done by the community and health system in meeting the adolescent sexual and reproductive health needs of the growing population of adolescents in Liberia.

This thesis is intended to explore factors influencing adolescent sexual and reproductive health needs and how those factors can be mitigated within the society and health system to empower adolescent with requisite knowledge and services that will promote their sexual and reproductive wellbeing.

Chapter 1: Background Information on Liberia

Africa's first Republic was founded in 1822 for the purpose of relocating free black slaves from America and gained her independence in 1847. The country is located along the west coast of Africa. Liberia is bordered on the west by Sierra Leone, north-west by Guinea-Conakry and north-east by La Cote d'Ivoire. The country has five regions and is divided politically into fifteen (15) Counties. See figure 1: map of Liberia in annex.

Liberia is a patriarchal society with multiple cultural practices and beliefs such as bride price and gender norms and values that encourage gender discrimination and violence against girls and women (MoGD, 2011). There is a major mining company and two major rubber plantations in three of the fifteen counties that employ expatriates and attract young girls who are involved in transactional sex (see table 1).

Table 1: Geo-demographic and socio-economic characteristics of Liberia

Country	Liberia
Capital City	Monrovia
Area of Country (K^2	111,369
Natural Resources	Rubber, iron ore, Timber, diamond, cocoa, coffee and hydropower
Population (million)	3.5
Fertility Rate	5.2
Population Growth Rate	2.1
Life Expectancy	58 years
GDP (Growth rate)	8.1
Literacy Rate (male/female)	64.8/56.8
Human Development Index	182/187
Unemployment (Formal sector)	84%
Official Language	English

Culture	Multicultural (16) ethnic groups
Religion	Christian (85%)

Data Source: LDHS, 2007; National Population Census, 2008

1.2 Health system profile

The 14 years of civil war in Liberia led to severe destruction of health infrastructure and critical reduction in human resource as most of the health workers fled the country to save their lives. This created a huge gap in service availability which led to limited access to health services for the population. Though some progress has being made in rebuilding the system, the challenge is still great (MOHSW, 2013).

1.3 Leadership and Governance

The Ministry of Health & Social Welfare has the mandate to provide quality health and social welfare services to the people of Liberia. The Ministry is headed by a cabinet Minister, who is assisted by four deputy ministers; Deputy Minister for Health services, Administration, Social Welfare and Planning and Development.

The County level is managed by the county health Team and is headed by a county health officer who is either a public health technician or a medical doctor. This level is responsible for implementation of all health intervention in accordance with national policy and guidelines.

District level is managed by the district health Team and is headed by a district health officer and is responsible to the county health Team.

1.4 service delivery

The ministry of health and social welfare in collaboration with partners developed a National health strategic plan in 2011. The plan has four components: the Essential package of health services (EPHS), Human Resources for Health, Infrastructure Development and Support system (MOHSW, 2011).This plan outlines a standardized package of services that would be available to every Liberian citizen free of charge.

The current plan, the Essential Package of Health Services (EPHS) will cover a period of 10 years and is based on a primary health care approach (MOHSW 2011).

The health system operates at a three tier level; primary, secondary and tertiary. See table 2 below for breakdown of components

Table 2: Health system component breakdown

No.	Levels	Components
1.	Primary	Community Health structure: community health development committee (CHDC), Community health committee (CHC), Community health volunteers, Primary Healthcare Facility (this level covers a population of 3500-12000)
2.	Secondary	Health Centers, Hospitals and county health system (covers a population of 25000-over 200,000)
3.	Tertiary	Regional hospitals, National referral Hospitals and National health system (covers the total population of the country)

Source: MOHSW, 2011

There are a total of 661 Health facilities; including 35 hospitals, 48 health centers and 578 clinics. Most facilities are situated in urban cities leaving the rural population with limited access to health services (MOHSW 2009). See table 3 below in annex for distribution of health facilities per county.

1.5 Adolescent Sexual and Reproductive Health Services

Access to sexual and reproductive health services is essential for the realization of every individual's fundamental right to health (ICPD 1994).

The International conference on population development (ICPD) marked a paradigm shift by recognizing that adolescents have unique sexual needs and that they are vulnerable and as such special health services should be provided for them (ICPD 1994).

Adolescent sexual and reproductive health services are a component of the national health policy and plan of Liberia. There is also a National sexual and reproductive health policy that includes adolescent health services (MOHSW, 2010).

The package of services spelled out in the policy are: family planning services, prevention and control of sexually transmitted infections including HIV, information education and communication programs to promote adolescent sexual and reproductive health, ensure integration of health issues into schools and youth programs, management of sexual and gender based violence cases, and ensure the participation of adolescent in the decision making as relate to these programs (MOHSW, 2010).

The policy did not capture any intervention on abortion or post- abortion care for adolescent. There was also nothing mentioned about abortion law, legal age of marriage or sexual violence or rape for adolescent (MOHSW, 2010).

There are national laws that prohibits abortion expect for life saving purposes and law stipulating the legal age of marriage, and there are policies for sexual violence and rape (Liberia Panel Law, 1976).

However, these policies are mainly focused on maternal health services with emphasis on reducing maternal mortality rather than sexuality education and improving access to adolescent sexual and reproductive health needs (MOHSW 2010).

As a result of this, many adolescents are faced with difficulties in obtaining sexual and reproductive health services.

1.6 Health Financing

The Liberian health system is heavily dependent on external support from the international community. About 47% of the total health budget comes from extend AID, while 35% accounts for out of pocket payment, 15% from public funds and 3% from private sector. The Government health expenditure as of total government expenditure increased to 10% in 2013 (MOHSW 2013) compare to 7.7% in 2008 (MOHSW, 2009). Reproductive health expenditure as percent of the total health expenditure is 6.7% and accounts for 1% of total GDP (MOHSW, 2009). There is no health insurance for the general population but the government is offering free health services in all public health facilities (MOHSW, 2013).

1.7 Human Resource

Human resource for health is a major challenge for the health system in Liberia. There is critical shortage and inadequate skill mixed of health care professional (Varpilah et al. 2009).

Midwives are the first line healthcare provider for sexual and reproductive health services in Liberia but nurses and physician are also trained to provide these services.

Human resource for reproductive health services is very limited with 0.33 physicians per 1000 population and 0.52 nurses and midwives per 1000 population which is far below the WHO standard of 2.4 skilled birth attendants per 1000 as a minimum threshold (Human Resource Census, 2009). See table (4) in Annex for distribution of health workers by cadre.

1.8 Health Information Management System

Health information is used as a monitoring tool for tracking of health trends, measuring progress and improvement of effective interventions.

Liberia has a health management information system (HMIS) which is designed to collect, process and analyses data for policy making, resource allocation and planning (MOHSW 2011).

1.9 Access to Essential Medicine and Supplies

There is a supply chain unit that is solely responsible to ensure that essential medicines of high quality including reproductive health commodity are available and affordable to the people of Liberia (MOHSW 2013).

Adequate supply of essential medicines and supplies remains a serious challenge for Liberia's health system. There are numerous problems with supply of essential medicines and supplies including; stock outs of family planning commodities, HIV test kits and antibiotics for the management of STIs and sepsis. There is lack of storage facilities and limited funding for the procurement of pharmaceuticals (MOHSW 2013).

CHAPTER 2: PROBLEM STATEMENT, JUSTIFICATION, OBJECTIVES AND METHODOLOGY

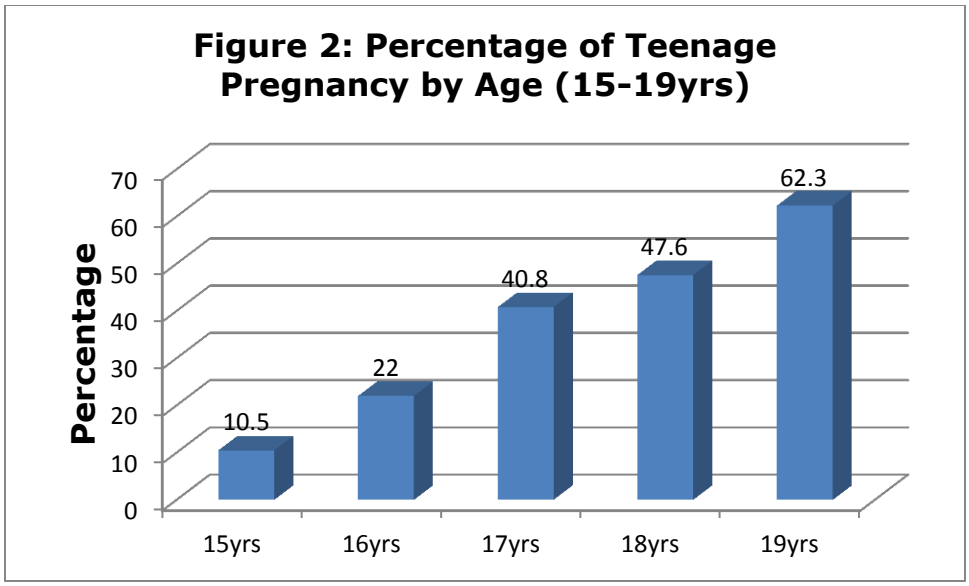
2.1 PROBLEM STATEMENT

Adolescent sexual and reproductive health issues are still a major challenge in most developing countries, despite efforts by various governments and donor to address the challenges (WHO, 1998).

About 10% of girls in low and middle income countries become pregnant by age 16 with the highest rates occurring in sub-Saharan Africa. The proportion of girls who get pregnant before age 15 is also high and ranges from 0.3%- 12% with variations in sub-Saharan Africa. An estimated three million girls aged 15-19 undergo unsafe abortions every year. In low- and middle-income countries, complications from pregnancy and childbirth are a leading cause of death among girls aged 15-19 years (WHO 2014b).

Many health problems are associated with negative outcomes of pregnancy during adolescence; postpartum hemorrhage, fistula, and mental disorders, such as depression. The risk of maternal mortality is four times higher amongst adolescent girls especially in the age range of 16 and below than young adults because the adolescent body is not well develop physically and they are more likely to receive little or no antenatal care which could lead to serious health outcomes (WHO 2014b).

Liberia's total fertility rate (TFR) is 5.2 with adolescent fertility contributing 14% of the TFR at 177 births/1000 women (LDHS 2007). Teenage birth rate has increase from 29% in 2000 to 38% in 2009 (LMIS, 2009). Maternal mortality is estimated at 770/100,000 live births, with adolescent girls contributing 21% of these deaths. See figure 2 for adolescent pregnancy per age.



Data Source: LMIS, 2009

Contraceptive prevalence rate stands at 11% with unmet needs of family planning amongst adolescent girls at 39% (LDHS, 2007). HIV prevalence rate is 1.5% in the general population but the disaggregation shows that women in the age group of 15-24 years have three times higher HIV prevalence as compared to male 1.3%: 0.4% amongst 15-19 years adolescent (MOHSW, 2008).

Knowledge of any contraceptive method including condom is high amongst adolescent at 82% but the current use is low; amongst married adolescent the current use of any method is 5.4% whilst any modern method is 4.4% (LDHS 2007). Married girls age 15-19 years account for 7.6% whilst never married account for 79.7, the rest are either living together or separated. For boys 96.9% have never married, 0.4 were married and 2.2% are living together (LDHS 2007)

Only 19% of all women and 7% of men know the physiology of reproduction in relation to the fertile period of a female (LDHS 2007). This clearly indicates that reproductive health education is very limited.

The Government has put into place some programs to address Adolescent sexual and reproductive issues, but challenges to adequate provision of these services are still numerous.

2.2 JUSTIFICATION

In Liberia, access to adolescent sexual and reproductive health and rights are more in theory than practice. This study focuses on adolescents who are transitioning to adulthood and are exposed to sexual and reproductive health risks that will affect their future health and development. Focus on adolescent sexual reproductive health service delivery is new but research has shown that provision of these services can have positive sexual and reproductive health outcomes (Hocklong et al. 2003).

Adolescence is a period of transition from childhood to adulthood and actions are require to address challenges they are face with during this period so that they grow and develop social economically into potential adults. Available opportunities and choices adolescent has during this period will enable them to begin adulthood as empowered and active contributors to the society. However, unplanned or unwanted pregnancy, HIV/AIDS, and other complications related to pregnancy jeopardize the rights, health, education and potential of many adolescent especially girls, robbing them of a better future (UNFPA 2012).

There is limited research and knowledge of the perceptions of adolescent as it relates to sexual and reproductive health and there is a need to explore factors contributing to sexual behavior and utilization of sexual reproductive health services.

This study attempts to provide understanding of the factors affecting adolescent sexual and reproductive health and the challenges they face in accessing and utilizing services and review effective interventions to address these challenges.

2.3 OBJECTIVES

2.3.1 General Objective

To explore factors influencing adolescent sexual and reproductive health in Liberia in order to make recommendations for interventions to improve adolescent sexual and reproductive health services.

2.3.2 Specific Objectives

1. To identify factors influencing adolescent sexual reproductive health and Rights behavior and access to services

2. To explore strategies or effective interventions from other countries that can be used to improve adolescent sexual and reproductive health in Liberia

3. To provide appropriate recommendations to policy makers that could help to improve Adolescent sexual reproductive health services in Liberia

2.4 Methodology

The study was conducted through literature review using the socio-ecological model for analysis.

2.4.1 Search Strategy

Literature was searched using data bases and search engines such as PubMed and Google scholars. Organizations in the field of Adolescent and Sexual reproductive health service website were used to search for information relevant to the topic. Organizations included: WHO, UNFPA, UNICEF, PSI, Guttmacher, engerderhealth, IPPF, population reference bureau, Grey literature and National data including MOHSW policy document and demographic health survey data (LDHS). Publications, peer review, reports, articles, systematic reviews and other master dissertation were considered. Only full articles were included in the search. The review will use studies from Liberia, West Africa, sub-Saharan Africa and other developing countries from 1998 to 2014 July.

2.4.2 Key Words

The combination of these words were used: adolescent, sexual, reproductive health, Liberia, Sub-Saharan Africa, sexuality, socio-cultural, behavior, norms, perceptions accessibility, acceptability, Peer pressure, sex, age, gender, sex education, girls, boys, human rights, sexuality education, cross generational communication, parent, child, religion, Youth friendly services, contraceptive, knowledge, attitude, condom use, socio-ecological model, intervention, rights, .

2.4.3 Limitations

This research will review available literature on Liberia but due to the limitation of studies on Liberia, other literature especially from sub-Saharan will be used. Also only literature in English will be reviewed. Literature from developed countries will not be included in the findings or interventions. The use of primary data would give a clearer picture on the actual perception of adolescent as it relate to sexual and reproductive health practice and

services but this was not available due to limited study time and financial constraints.

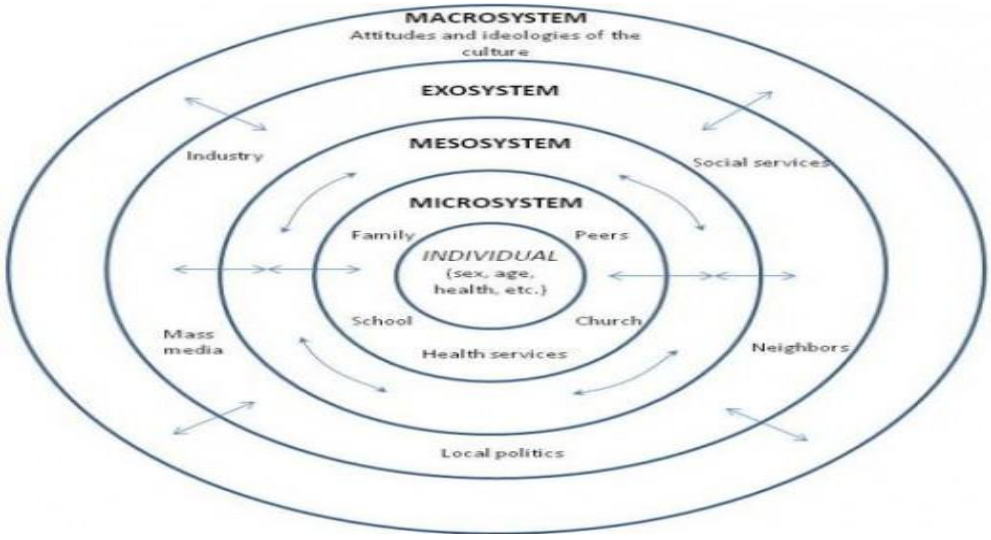
2.5 Conceptual Frame Work

The ecological frame work (Bronfenbrenner ecological model) for exploring adolescent sexuality was used to guide the analysis of this thesis. The frame work is used to explore gender, sexuality and health. It gives understanding to the different aspects that impact an individual throughout life. See figure 3 below.

The socio-ecological model was chosen over other model because adolescent grow up in an environment where they interact within family, and the broader environment which consist of social structure that are influenced by society norm, values, and cultural practice. These factors play a role in the growth and development of adolescent and also influence their sexual and reproductive health behaviors.

For the purpose of this thesis, the ecological model was adapted because it provides a clear picture of the social determinants of human development and how these interactions affect the life course from childhood to adulthood. It identifies how the interactions with the environment, close relations, social structures and culture can shape the behavior of an individual. See annex for original copy of model.

Figure: 3. Bronfenbrenner Ecological Theory of Development (1979)



The model proposes that individual behavior or experience is influenced by multiple interactions between the individual and their environment; this differs based on the individual's context, culture and changes throughout the lifespan (Bronfenbrenner & Morris, 2006).

The ecological model identifies five environmental systems with which an individual interacts and which influence development. The individual, micro, exo, meso and macro systems; each represents different parts of the system that affects an individual.

The individual or Chronosystem involves individual characteristics such as age, sex, and health. This system also includes life transitions over the course of an individual's life, particularly significant events, transitional periods, as well as socio-historical contexts that one has undergone. For example, transition from childhood to adolescent, or divorce and how it impacts the life of an adolescent.

The microsystem views the individual as an active agent interacting with family, friends, the community, religious organizations and health services and how these relationships shape the life of the individual.

The Mesosystem places emphasis on the connection between the individual, his family and social structures such as school, and church. For example interaction between the individual's parent and his teacher

Exosystem explores activities beyond the individual like how workplace and other element like local policies and social services in the surrounding that affect this person.

The Macro system level refers to cultural issues in the environment, such as behavior patterns, beliefs, and all other elements of a cultural group that is transferred from generation to generation and is reflected throughout all other systems (Bronfenbrenner & Morris, 2006).

The frame work will be discussed at three levels since four of the five systems are interrelated and could create lots of repetition if discussed separately. As such the macro and exosystem will be merged as macro-exo, micro and Mesosystem will merged as meso-micro whilst the individual level will remain as it is.

Chapter 3: Study Results

3.0 Exploring factors influencing adolescent sexual and reproductive health

This session will discuss findings of the review using the ecological framework to analyze each determinants and its influence on adolescent sexual and reproductive health in Liberia.

3.1 Individual Level

3.1.1 Age

Age is one factor influencing sexual reproductive health in many developing countries in the world (WHO, 2011). Early sexual debut marks exposure to sexually transmitted infections including HIV and unwanted pregnancy. Most often, sexual intercourse during adolescent is not consented making adolescent vulnerable to violence such as; rape, sexual exploitation, and harassment as their ability to prevent these occurrences is limited (WHO, 2011).

About 25% of adolescent boys and girls in developing countries aged 15 -19, had their first sexual experience before the age of 15 (Dixon-Mueller, 2007). As stated earlier, sexual debut starts early in Liberia with about 80% of girls and 50% of boys having had sex by age 18 (LDHS, 2007).

Adolescent in the urban areas and those with secondary education are less likely to engage in sex by age 15 than those in the rural areas and those with no or primary education (LDHS, 2007)

Consistent with the studies from Liberia, a study done in Sierra Leone also reveals that over 75% of girls have had sex by the age of 18 with high rate of teenage pregnancy causing girls to drop out of school (UNICEF Sierra Leone, 2010).

Given, these findings, it is clear that most adolescents initiate sex at an early age which exposes them to sexually transmitted diseases including HIV and unwanted pregnancy.

3.1.2 Sex

Biological difference in sex is one factor of concern as it relates to adolescent sexual and reproductive health. Girls face greater sexual and reproductive health challenges than boys following puberty (UNFPA, 2012). Foremost among these are early pregnancies, greater risks of contracting HIV/AIDS

and STDs compared to boys. Greater risk for contracting STIs is due to social and physiological factors such as transactional sex and easily bruised vaginal lining, immature genital tract and large sexual surface area (NACC 2002; Leslie et al.2002,; UNFPA, 2012). Adolescent girls are vulnerable of sexual violence, abuse and exploitation which pose them at greater risk of contracting HIV. Gender roles and norms such as early marriage and power relations also pose girls at risk (UNFPA, 2012).

Globally, about 16 million adolescent girls aged 15-19 give birth every year and about 3.2 million unsafe abortion took place amongst adolescent aged 15-19 in developing countries (WHO, 2012). Adolescent girls are at higher risk of complications of childbirth and abortion than adult women. Approximately 65% of women with fistula resulted from teenage pregnancy (WHO, 2011).

Studies have found HIV infection levels to be higher among adolescent girls at 64% of all new cases globally (UNICEF, 2011).

In Liberia, adolescent girls have three time higher HIV prevalence than boys. Adolescent girls also face other health risk associated with unwanted pregnancy such as unsafe abortion and pregnancy related complications such as fistula as stated earlier on in the problem statement (MOHSW, 2011).

Adolescent girls are also at risk of working earlier and being the supporter of their parents and other sibling. A study found that about 54% of girls aged 15-19 in the City of Monrovia were working in the informal sector and 10% of those girls were also the major source of income for their families UNIICEF/Liberia, 2012). This poses them particularly at risk of sexual exploitation and coercion.

Gender roles and norms that regard men as superior and associate maleness with violence also pose girls at risk as sexual and intimate partner violence is high among adolescent especially those in relationships with older partners (MoGD, 2012). Sexual violence is a one of the reason for unsafe sex in Liberia as most girls between the ages of 13-18 are coerced into sexual intercourse by older men either for material goods or money or because of pressure as the source of income for the family (UNHCR & Save the Children-UK, 2002).

These findings clearly point out that adolescent girls are more vulnerable than boys as it relates to sexual and reproductive health matters.

3.1.3 Individual lifestyle

Individual lifestyle is a factor influencing adolescent sexual reproductive health in developing countries. The behavior of adolescent during this period is important as it could impact their lives, health, and wellbeing forever (WHO, 2014c).

During this period, adolescents perceive themselves as healthy and indestructible people because they and their peers around them are not having any serious illnesses (Merluzzi and Nairn, 1999). This perception makes them to engage in risky behaviors like unplanned sexual activities, drinking alcohol or taking drugs; that are likely to expose them to health risk. Societal norms in sub-Saharan Africa promotes that boys are supposed to be adventurous, risk taking and have experience about sex whilst girls are to be submissive and with no experience about sex. This poses a high risk of acquiring STI/HIV for both boys and girls (Baker & Ricardo, 2005).

Condom and contraceptive use: Condom use is important as it provides dual protection; it prevents sexually transmitted infections and unplanned pregnancy if used correctly and will reduce risk of exposure to those adolescents who are initiating sexual intercourse (Lopez et al. 2013).

Use of contraceptives has proven to substantially reduce fertility, poverty, maternal deaths, and child deaths and also add to women empowerment as it enhances primary education globally (Cleland et al. 2006) yet, contraceptive use is still low. Probably due to lack of knowledge of contraceptive amongst adolescent and unmet needs of contraceptives.

In sub-Saharan Africa contraceptive use ranges from as low as 3% to a higher 56% amongst adolescent (Khan & Mishra, 2008) and condom use ranges from 5% to 81% in developing countries (Doyle et al. 2012).

Unsafe sex exposes adolescents to STIs including HIV and unwanted pregnancy(Doyle et al, 2012).

In Liberia, only about 6% of adolescents use condom during initiation of sexual intercourse (LDHS, 2007). Modern contraceptive use is 9.5% for adolescent girls and unmet need of family planning is 39% (LDHS, 2007).Reasons for not using contraceptive in Liberia are lack of knowledge

about contraceptive, misconception, Socio-cultural, religious and lack of access to contraceptives (Kagone et al. 2007).

Condom and contraceptives use is higher among those living in urban areas, especially the capital city and also higher amongst those with higher level of education and in the higher wealth quintiles (LDHS, 2007).

This has social, economic and physical health consequences such as illegal abortions which could lead to serious complications or death, high school dropout and being a single parent at a young age (Doyle et al, 2012).

Transactional sex: transactional sex is the exchange of money, gifts and favor for sex and is widely practiced in sub-Saharan Africa (Castle and Konaté, 1999). It usually occurs between adolescent girls and older men who are the provider of the money and gifts but can also happen between adolescents of the same age ((Chatterji et al. 2004).

The risk of unsafe sex is great as the exchange of money or gifts for sex makes young women, who are mostly on the receiving end of goods and money vulnerable due to less decision making power on timing of sex and safer sex practices such as condom use (Atwood, et al 2011).

Studies and analysis from 12 sub Saharan African countries reveal that adolescent girls and boys are at higher risk of transactional sex and engage in such because of peer pressure and parental influence to get money for basic social needs or for luxuries. The proportion ranges from less than 2% - 11% with the highest proportion between the ages of 15-19 years (Chatterji et al. 2004).

A study done in Tanzania also found that transactional sex is common among young people. The study reveals that about 75% of teenage girls reported being given money or gift during their sexual debut whilst 43% of men reported giving some form of token in exchange for sex (Wamoyi et al. 2010).

In Liberia, transactional sex is common and occurs between young girls and older men who are the giver of money and other material goods (Atwood et al., 2011). A study conducted amongst adolescent students in a primary school found that 15% of adolescent in this study group were involved in transactional sex. In another study conducted amongst youth 14-24 years in

Liberia, it was revealed that about 71% of women and 56% of men were engaged in transactional sex (McCarraher et al. 2013).

Adolescent engagement in transactional sex poses the risk of unsafe sexual practices and contracting HIV including other STIs and unplanned pregnancy (Chatterji et al. 2004).

Drugs and Alcohol Use:

The use of drugs and excessive drinking of alcohol is a factor influencing adolescent sexual and reproductive health in many countries including developing countries (WHO, 2014c). Being under the influence of drugs or alcohol clouds the judgments and lessens self-control which increases the risk of making reckless decisions such as initiating unsafe sex that could pose serious health risks earlier or later in life.

Studies conducted in sub Saharan Africa show strong relationships between alcohol drinking and risky sexual behaviors such as unprotected sex, early sex initiation and multiple sexual partnerships amongst adolescents (Kalichman et al. 2007; Chersich et al, 2009).

In Liberia, a study done amongst youth between the ages of 14-24, reveals that about 25.9% of male and 21.5% of females had used drugs (opium, marijuana, valium or cocaine). Also over 75% of participants reported use of alcohol while about 30% of both males and females reported drinking alcohol every-day during the past month preceding the study ((McCarraher et al. 2013). The study found injecting drug use (IDU) to be lower at 2% in males and 1% in females.

These findings suggest that alcohol consumption and the use of other opioid drugs orally is high amongst adolescent compare to injecting drugs in Liberia and this could influence risky sexual behavior that might have adverse health risk for them.

3.1.4 Sexuality and sex education

Sexuality in relations to this study encompasses sexual identity, reproductive anatomy, body image, puberty and emotions associated with sexual maturation (WHO 2014d). Sex education gives information to young people about their sexuality, such as puberty, menarche, reproductive health and rights, and expectations of the overall sexual and reproductive functions as one advance in life (Chidiebere, 2008).

Evidence has shown that sex education improves knowledge of adolescent on sexual and reproductive health risks and has helped to shape their attitude and ideas about sex (Hindin et al. 2009).

Yet, there are lots of barriers to the provision of sex education for adolescents with major factors being issues around traditional values, taboos, culture and religion (WHO, 2014).

Discussion of sexuality with adolescent by parents, teachers or other family members has been a controversial issue and varies across cultures, ethnicity, religion, socioeconomic and geographic backgrounds (Bidwell, 2003).

In sub-Saharan Africa, less than 30% of adolescent age 15-19 knows about ovulation and when a woman can get pregnant. Additionally, the same proportion knows also just one method of modern contraception (Biddlecom et al, 2007).

A study done to identify health conditions that are neglected in Liberia revealed that 58% of adolescent lack knowledge on how to practice safe sex (YMCA/Ycare International, 2012).

In Liberia knowledge about HIV is high amongst adolescent but use of condom and HIV testing is low (LDHS, 2007; McCarraher et al. 2013)

An estimated 70% of female and 78%% of male feel that adolescent sexual education should be focused on abstinence rather than condom promotion and use while 60% female and 57% of men agreed that adolescents should be taught about condom use (LDHS, 2007).

These findings suggest that, adults are still against the fact that adolescents have the rights to knowledge about sexuality.

3.1.5 Education

Study has shown that formal education can impact Adolescent sexual reproductive health (Lloyd, 2007).

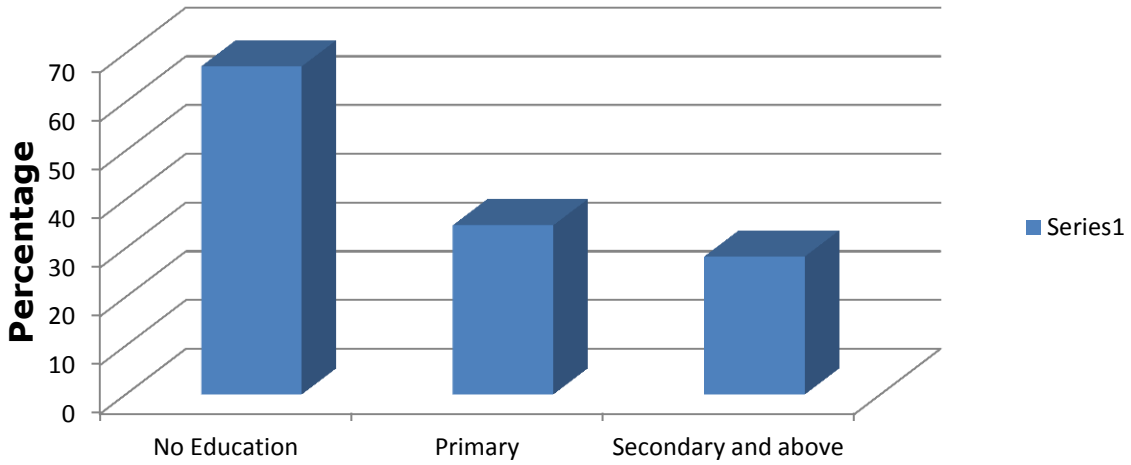
Adolescent with little or no education are more likely to have limited knowledge on sexuality and adverse effects of earlier sex initiation and early marriage than those with higher formal education (Lloyd, 2007). Girls with higher education are more likely to delay sex or practice safer sex than those with lower education (Lloyd, 2007).

Globally, about 50 million adolescent boys and girls who are married have limited access to formal education and sexual reproductive health services which limits their economic prospects (USAID, 2012).

In Liberia Knowledge about HIV/AIDS increases with educational status; about 99% of those with secondary education have knowledge about AIDS (LDHS, 2007). Also use of contraceptive is higher amongst women with secondary education at 21% compare with 12% for those with primary education and 8% for those with no education (LDHS, 2007).

Childbearing amongst adolescent females aged 15-19 decreases with higher education at 28.3% for those with some level of secondary education compare to 34.7% for those with primary and 67.3 for those with no education (LMIS, 2009).

Figure 4: Adolescent Pregnancy by Education Status



Source: LMIS, 2009

A report from UNFPA estimates that 60% of girls and 64% of boys are enrolled in secondary school (UNFPA and Population Reference Bureau: 2012).

3.2 Micro-Meso System

3.2.1 Family relations and Communication

Family relations is an important factor that affects adolescent sexual and reproductive health as adolescent regard parents as the highest influencing force during this period (IPPF, 2014). The way family live together also

influence adolescent sexuality. Study has shown that adolescent from broken home, single parenting and those who did not grow up with their own parents are more likely to involve in risky sexual behaviors than adolescent that live with both parents ((DeVore & Ginsburg, 2005; IPPF, 2014; Rupp & Rosenthal, 2007). However talking about sexuality with children by parents is like a taboo in many African settings and Liberia is no exception (Bastien et al, 2011)

Communication between parents and child is also an important factor influencing adolescent sexual and reproductive health (Akers et al, 2011). There is long standing positive effect on risk behavior of adolescent that have close relations with their parents; good and effective communication between parent and child decreases risky sexual behavior and also reduces peer pressure as support from family helps adolescent to mature and make good decisions (Rupp & Rosenthal, 2007).

A review of sub Saharan African countries, revealed that parent are embarrass to discuss about sexual and reproductive health information at home and discourage provision of such information in schools (Bastien et al, 2011); because they have the belief based on deeply rooted cultural and religious practice that talking about sexuality with adolescent will promote early sexual debut or promiscuous behavior amongst them (Carmma, 2013).

A study done in Ghana reveal that there are huge difficulties faced by adolescent and parents relating to generational communication about sexuality and reproductive health (Kumi-Kyereme et al., 2007). The study found that adolescents are shame to talk about sexuality with their parents and vice versa; the study found that fewer communications that are done are gender based like mother to daughter and father to son and takes the form of an instruction rather than conversation. This can be extrapolated to Liberia as the same attitudes exist throughout the country.

3.2.2 Social structures

Social structures such as schools, workplace, neighborhood, and adolescent meeting places are influencing factors as it relate to adolescent sexual and reproductive health (WHO, 2014f).

School and other social structures serves as a protective factor and also as risk factor, studies done in sub-Saharan Africa showed that adolescents who are attending school are less likely to engage in sexual activities and risky

behaviors compare to their peers who are not in school (Biddlecom et al.2008). High school enrollment and long duration in school also has influence on the age of marriage especially for girls and promotes women empowerment.

On the other hand, school creates a risk as it is a social environment where parents have less control as children interactions with peers and other adults in school could affect their sexual behavior (Stambach, 2000).

A study done in other West African Countries found that most adolescent migrate to urban area to continue secondary education leaving their parents behind which caused breakdown in close family relationship. These children are often face with many challenges as they are expected to perform all domestic duties and are often exploited physically and sexually (UNICEF, 2012).

This can be apply to Liberia from my own experience and an assessment conducted by the World Bank in Liberia which found that, adolescent lack basic social support due to lack of community social structures, limited and weak social institutions such as schools and health services, and breakdown in family relations because of poverty and as such are prone to sexual, physical and psychological exploitation (Ruiz-Abril, 2008).

Supportive family relations and safe social environments are a significant determinant of adolescent sexual and reproductive health as this will protect and help them grow and develop well.

3.2.3 Peer Pressure

Peer Pressure is a determinant of adolescent's sexual and reproductive health (Kirby, 2002). Many adolescents get information on issues relating to sexuality from their peers which could negatively or positively impact their behavior.

In Liberia, peer pressure is one factor that leads to risky sexual behavior between young people and also between younger girls and older men (Atwood KA et al 2011). Adolescent girls are pressure by their friends because of desire for materials things and financial security while the boys are pressure because of gender norms that promote sexuality as a male proud to indulge in high risk sexual behavior (Lau and Muula 2004).

A study done in Sierra Leone also confirm that peer pressure is an influencing force that lead to sex among adolescents (Koning et al. 2013). However, adolescent also have the desire to have sex as long as puberty has occurred (Guttmacher Institute, 2008)

3.2.4 Religious factors

Religious beliefs serve as a barrier to adolescent sexual and reproductive health services provision in many developing countries (WHO, 2014e).

In many African Countries, religious practices and beliefs frown at talking about sexuality openly with adolescents; especially on the use of preventive sexual and reproductive health commodities such as condom and other modern contraceptives instead they only focus on abstinence only teachings (CARMMA, 2013). Study has found that abstinence only education is not effective in preventing safe sex practices or delaying sexual debut amongst adolescent. The study also found that comprehensive sexuality education does not promote early sexual debut but rather promote safer sex practices thereby preventing unwanted pregnancy and STIs including HIV when adolescent engage in sex (Kirby, 2007).

Liberia, being a highly religious country also has similar religious practices and beliefs. There is no significant data on Liberia but in my experience, religious beliefs is a barrier to the promotion of sexuality education and use of preventive sexual and reproductive health commodities in Liberia.

These religious beliefs focus on upholding moralities and the perception that sex should only take place within marriages so adolescent are expected to abstain from sex until marriage which poses a problem for those who will not adhere to these teachings but rather engage in sexual activities before marriage exposing them risk of STIs including HIV and unwanted pregnancy.

However, there are other faith based organizations that promote contraceptive use and also provide services through its network of health facility. The Christian Health Association of Liberia (CHAL) is one of such institutions (Kagone, 2007).

3.2.5 Violence/Coercion

Violence against adolescent is a determinant of sexual and reproductive health and also a violation of human rights (UNFPA, 2012).

Study from 15 sub Saharan countries revealed that sexual violence ranges from 7-21% while physical violence ranges from 27- 56% amongst adolescent girls (Ringheim & Gribble, 2010) For boys, a study from 6 countries revealed that between 1-21% of men suffered sexual violence during adolescents when they were growing up with the highest rates of sexual violence among young men found in Rwanda and India (Barker et al. 2011).

Physical and sexual violence especially against adolescent girls is prevalent in Liberia (WHO, 2012). Rape and intimate partner violence accounts for the highest cases of violence; about 55% of rape survivals were below 15 years (MoGD, 2012).

In Liberia about 48% of girls and 37% of boys agreed that a man is right to beat his wife for just one reason; this implies that gender based violence is an accepted societal norm. It also shows that women accept that they are of low status and do not recognize that this act is a violation of women's rights (USAID, 2010). About 13% of women who had sex before age 15 admitted forced sex during sexual debut (LDHS, 2007).

Though there is limited data from Liberia on sexual violence against adolescent boys, research done after the war reported that boys also suffered sexual violence during the war but were reluctant to report it due to shame and fear of stigma (WHO, 2012; MoGD, 2012).

Physical and sexual violence has other health and social consequences that could have lifelong effect on the individual. These include depression, low self-esteem, and sexual dysfunctions which posed a long term health risk (Knerr 2011, Contreras et al 2012).

3.3 Macro-Exosystem

3.3.1 Traditional Practices

Traditional practices such as female genital mutilation or cutting (FGM/C) is a globally recognized harmful cultural practice that influences ASRH (USAID, 2012).It is also a violation of human rights which impacts the health of adolescent girls during childbirth and also increase their vulnerability to STIs and HIV (USAID, 2012; UNFPA, 2012).

Some sub-Saharan African Countries practice FGM. A study reveal FGM rate for Mali at 85% and Ethiopia at 62% amongst girls aged 15-19 (Ringheim & Gribble, 2010).

In Liberia about 44% of adolescent girls are victim of FGM/C (Ringheim & Gribble, 2010). Though it is not in all communities, 10 of the 16 ethnic groups practice FGM.

Liberia has two forms of traditional school or secret society, the Sande for girls and the Poro for boys. These are deeply rooted traditional practices that have existed for very long time but some of the practices conducted in these societies are harmful.

In both societies people are enrolled between ages 4 to 12 years. These institutions are viewed as bush schools because; boys and girls learn gender roles and societal norms during their stay there (MOHSW, 2010). The school is controlled and headed by zoes who are high traditional leaders in the community.

Boys received traditional marks as an identity during their closing (MOHSW, 2010). Girls undergo female genital cutting type two, which involve partial removal of the clitoris (Lori, 2009).

This practice serve as a rite of maturity especially for girls in Liberia as most girls who are not literate are given in marriage to an older man or her peer upon completing this bush school in the rural parts of Liberia.

Consequences of FGM type two includes; infection and inflammation immediately after the act of FGM, obstructed labor due to scarring of vaginal which could lead to maternal or fetal death(Berg and Underland, 2013).

3.3.2 Early Marriage

Early marriage or child marriage is an informal or formal union before 18 years and is most often not consented; it is a violation of human rights, as well as other international rights on discrimination against women (UNICEF, 2005).

It is estimated that 42% of girls in Africa are married before 18 years and 10% even married before age 15 (UNFPA, 2005). Additionally, estimates from Niger and Sierra Leone are even higher; with 36% of child marriage in

Niger by age 15 and 75% by age 18(UNFPA 2012); followed by 18% of child marriage by age 15 and 44% by age 18 in Sierra Leone (UNFPA, 2012).

In Liberia, about 11% of girls are married by age 15 whilst 38% are married by age 18 (UNFPA, 2012). The major reasons for child marriage in Liberia are poverty and socio-cultural factors. A study done in west Africa, Liberia included found that some parents regards girls as a source of income as in collection of a girl's bride price and other goods from the in-laws, while others regard girls as an economic burden due to lack of funding for school fees and other basic needs and so forced them to married so that their economic burden will be on the husband rather than the parents (Walker, 2013).

Children who married early are more likely to suffer sexual and domestic violence from husband and his family. They are also deprive of their rights to education, making decision concerning their sex and reproductive life and are face with suffering the consequences of early childbearing (breakthrough, 2013).

3.3.3 Gender norms and values/Power Relations

Disparities in gender role and unequal power relations between male and females restricts female (especially adolescent girls) control over their sexual and reproductive health activities and greatly limits their capability to protect themselves against sexually transmitted infections including HIV/AIDS and unintended pregnancies (UNFPA, 2000).

Gender norms often pose girls at a disadvantage making them vulnerable to acquiring STIs including HIV and having unintended pregnancy (Ramjee & Daniels, 2013). Boys are exposed to sexual risk behavior because of gender norms that allow and accept that boys have multiple sexual partners and the risk taking is seen as being manly (Ramjee & Daniels, 2013).

In Liberia, women and men have socially defined roles/ gender identities that they are taught during the period of childhood and adolescence through bush schools, family and the church and are expected to adhere to throughout the lifespan (MoGD, 2012).

Young girls are taught to be submissive to their male partners/husband, and always obey them. They are also taught that their roles are to have children, take care of them and to do all domestic household chores like cleaning, washing, cooking, fetching water, and firewood amongst others. Young boys

are taught to be the head of the household and as such should provide basic needs for his family by working hard: these include clearing the land for farming, hunting, and other skills that will enable you to get income (MoGD, 2012).

Though, these are seen more in rural than urban areas, it is deeply rooted in the Liberian society (MoGD, 2012; MOHSW, 2010).

Gender disparities are also reflected in the sex of a child in Liberia as male children are viewed as being more productive than females as such they are prioritized in areas of education and overall socio-economic development (MOHSW, 2010).

These socio-cultural norms pose adolescents girls at disadvantage socio-economically which increase the risk of dependency on men for basic social services thereby limiting their power to negotiate safe sex and have an equal decision making space as relates to issues of sexual and reproductive health such as having sex free of coercion and having a child when she want to.

3.3.4. Local policies

Creating enabling environment for adolescent sexual and reproductive health through policies, laws and regulation will enhance effective interventions in this area, yet there are policies and laws that serve as barriers to provision of quality sexual and reproductive health services for adolescent (WHO, 2010).

Many policies and laws have being legislated to solve problems related to ASRH and rights in Liberia, such as inheritance law, rape law, National policy on sexual and Reproductive health, education policy, Gender policy, and marriage law. Yet these are not been effected due to numerous problems ranging from political commitment to enforce these laws to awareness about these laws (Bruce, 2012).

In Liberia, abortion is illegal except for life saving purposes, to preserve the physical and mental health of the woman, severe malformation of fetus and pregnancy as a result of rape or incest, and is only to be performed by certified physicians (Liberia, 1976). Due to this and other reasons such as lack of money and fear of informing parents, adolescent girls with unwanted pregnancy has no other choice then to resort to unsafe abortion which are performed mostly by unqualified health practitioner under unhygienic

conditions leading to life threatening complications and sometimes death (MOHSW, 2011; New Narrative , 2011).

The legal age for marriage in Liberia for male is 21 years and female is 18 years (RWHR, 2009), yet early marriage is a problem in Liberia especially in the rural parts of the country.

There is no legal prohibition of Female genital mutilation in Liberia as a result; this is practiced in rural Liberia (RWHR, 2009).

There is no law or policy on inclusion of sexuality education in the curriculum of schools in Liberia (Walker et al. 2009). Though, there exists school health clubs in some schools, the focus is on hygiene, sanitation and HIV/AIDS rather than sexual and reproductive health that could help to prevent early sexual debut, and teenage pregnancy (Walker et al. 2009).

3.3.5 Mass Media

Access to information is a factor that influences adolescent sexual and reproductive health (UNFPA, 2000).

In Liberia, there are three types of formal and widely spread mass media; Radio, Television and Newspaper. According to the LDHS, only 10% of women and 20% of men have access to all three forms, while 45% of women and 23% of men lack access to all three types and the rest of the population has access to either one (LDHS, 2007). Additionally, access to mass media increases with education, wealth and also favor for those residing in urban areas than the rural.

3.3.6 Poverty

It is evident that poor sexual and reproductive health of adolescent is associated with poverty in many developing countries (Walker et al. 2009; Lloyd CB, 2005). Transactional sex, early marriage, teenage pregnancy and school dropout amongst adolescent strongly correlates with poverty.

A review of demographic and health data from 12 developing countries revealed that early marriage, teenage pregnancy, low use of contraceptive, low school enrolment, and low access to sexual reproductive health services including mass media were found higher amongst poorer adolescent than the rich (Rani & Lule, 2004).

The poverty level is high in Liberia with about 63.8% of population living below poverty line defined as less than $1.25 U.S. Dollars per day and an estimated 48% of the of the population living in extreme poverty define as living on less than 0.50 U.S. cents per day (Walker et al. 2009).

There is high unemployment amongst adolescent in Liberia. According to LDHS report, about 64% of female and 52% of male adolescent were unemployed (LDHS, 2007). Also there is high primary school dropout rate for girls at 73% (Liberia education .info, 2013).

3.3.7. Youth Friendly Health Services

Research has shown that adolescent friendly health services availability has an influence on adolescent sexual and reproductive behavior (UNFPA, 2012).

Youth friendly sexual and reproductive health services are comprehensive services that meet the specific needs of adolescent and will attract them to utilize these services. These services include: sexuality education, counselling and provision of appropriate contraceptive, HIV counselling, testing and treatment, management of STIs, management of rape cases and provision of counselling for sexual and gender based violence survival amongst others (Youth Empowerment Alliance, 2014).

Service provision for adolescent sexual and reproductive health has been a major challenge in developing Countries (UNFPA, 2012). Though adolescent have the right to sexual and reproductive health services, many of them are either unaware or shy to seek these services while on the other hand, those who seek care are either denied or discriminated against because of their age (UNFPA, 2013)

Regrettably, these facilities are very scarce or not available at all in most developing countries (IPPF, 2012).

In Liberia, study to assess adolescent health seeking behavior and availability of health service revealed that only 5% of adolescent from the Capital city were aware of youth friendly health services. The study also found that 29% of adolescent would seek care at a clinic, 17% would treat themselves and 10% would seek care from a native doctor because of many reasons ranging from acceptability to high cost, availability, health worker's attitude and geographical access (YMCA/Ycare International, 2013).

Cost of health services in Liberia are free according to the national health plan and policy, but still there are under the table payment that prevent adolescent to seek health care services. The study found that adolescent had the belief that they would not receive quality care at these facilities because of the notion of under the counter payment which they could not afford (YMCA/Y-care International, 2013).

CHAPTER 4: EVIDENCE AND BEST PRACTICES

In this chapter, review of evidence based intervention will be done through systematic reviews, other reviews and best practices that have worked in developing countries.

Problems identified in chapter three were teenage pregnancy and STI including HIV especially among adolescent girls influenced by knowledge and attitude towards safe sex, early sexual debut, gender norms, values, early marriage and availability of contraceptive and STI/HIV services.

The discussion of evidences based intervention is organized using the same framework as the findings and interventions that are covering more than one factor will be grouped and pull together in fewer subheading to avoid overlapping and repetition.

4.1 Interventions on individual factors

4.1.1 Comprehensive sexuality education

This section will discuss interventions that are effective for improvement in knowledge about sexuality and perception of reproductive health risk. This will be followed by behavior change in relation to safe sexual practices and prevention of unwanted pregnancy.

Multiple systematic reviews about comprehensive sexuality education have being conducted (Paul-Ebhohimhen, Poobalan and Van Teijlingen, 2008: (Lloyd, C.B., 2005; Kirby, D. 2007; Oringanje C, 2009).). The reviews show similar results Comprehensive sexuality education means knowledge towards personal decision making and development of attitudes to change behavior that will prevent unsafe sex, STI/HIV and unwanted pregnancy.

The review show that the introduction of comprehensive sexuality education in secondary schools was instrumental in increasing adolescent knowledge, behavior and perceptions about sex and enhanced behavior change towards postponing sexual debut, reducing unsafe sex, and having multiple sexual partners.

The effectiveness of comprehensive sexuality education is that it impact on knowledge of STI/HIV, safe sex practices but there was less impact on behavior change.

More importantly, there is no evidence that sex education promotes increasing sexual activities as is being belief by parents and other adults (Lloyd, C.B., 2005; Kirby, D. 2007; Oringanje C, 2009).

Comprehensive sexuality education is needed but requires other interventions such as availability of condoms and other contraceptives to work.

In Liberia comprehensive sexuality education is not currently included in the educational policy. Existing programs that are going on now is health clubs that are organized by schools in collaboration with health institutions, but the focus is mainly on hygiene promotion practices and HIV awareness (USAID, 2009).

4.1.2 Mass media

Information dissemination through mass media has shown to contribute to behavior relating to knowledge, practice and attitude especially with regards to HIV (Bertrand et al.2006). The form of mass media widely used are radio, television, mass distribution of leaflet during campaigns through a community based awareness using drama teams and peer education.

A systematic review of studies in developing countries show the effectiveness of mass media on increase knowledge of HIV, perceived risk and reduction in high risk sexual behavior (Bertrand et al. 2006).

In Liberia mass media information dissemination programs are also highly focused on HIV/AIDS knowledge, practice and attitude (PSI/Liberia, 2011). There are radio, television and campaigns programs targeting adolescent and youth but are mainly implemented by non -governmental institutions and centered around urban cities.

4.1.3 Parent child Communication

Parent and child communication about sexuality and reproductive health have shown to be successful at some level (Akers et al, 2011; Bastein et al. 2011). Two systematic reviews found that cordial, close relationships and continuous communication between parent and child created positive behavior on the part for adolescent. The study found that children who had regular discussion with their parents on matters of sexuality and reproductive health were more likely to delay sexual debut and use condom

and contraceptives. Those who receive instructions instead of discussion were more likely to follow their peers than parents' instruction (Akers et al, 2011; Bastein et al. 2011).

In Liberia, this does not exist, because it is parents feel uncomfortable to discuss sexual and reproductive health matters because it is against social norms.

4.2 Interventions for Micro-Meso System

4.2.1 Social and gender norms and values and Social Structures

Gender norms, values and practices are contributing factors to sexual and gender violence, coercion and harassment, STI/HIV, teenage pregnancy and harmful traditional practices such as FGM and early marriage (Blanc et al. 2013).

Gender norms and values are socially constructed roles that can be change over time with appropriate evidence based interventions. These interventions includes: involving boys in sexual and reproductive health issues, engaging stakeholders through participatory and supportive networks that does not encourage violence against girls and empowering girls with skills and information to help build their capacities to be able to reject sexual and gender based violence (WHO, 2011; Chandra-Mouli et al. 2013).

Changing attitudes toward gender norms at an early age is effective in preparing the next generation.

Interventions that have shown to successful are school based programs (Achyut et al. 2011) and creating a safe environment during early adolescence (Krug et al. 2002).

For example a school based program conducted amongst adolescent in India proved to be successful in changing both boys and girls attitude towards gender discrimination and violence against girls (Achyut et al. 2011). This program was aimed at enhancing equal rights between boys and girls starting at an early age to instill in them social role that determines femininity and masculinity and the application of violence.

It is evident that creating a safe environment for children especially in the homes and building a good relationship that is free from violence between siblings and parents or caretaker has a positive influence on gender equality.

Building the capacity of an individual from early adolescent also will go a long way in developing life skills that will translate in making better choices and empowering girls not to accept violence as a way of life (Krug et al. 2002).

Involving men in violence reduction with their own programs that involved reflections on norms, values and masculinity alongside women empowerment is another promising intervention (Promundo, 2014).

For example, an intervention conducted in three developing countries found that upon evaluation, there was reduction of violence against partners of men who participated in the program ((Promundo, 2014).

Interventions involving community leaders, peer educator, families and social structures such as the church and other recreational centers have also shown to have impact on adolescent sexual and social behavior, and gender norms and roles (UNFPA/Pathfinder/Advocate for Youth, 2007).

These interventions focus on changing the community ideologies about gender norms and value that impact on adolescent sexual and reproductive health.

The study found that, the interventions that are addressing reflection on norms and values and the development of action for change affected adolescent behavior as well as the community leaders and members. It brought about change in some community norms and values that were negatively influencing ASRH ((UNFPA/Pathfinder/Advocate for Youth, 2007).

In Liberia, there are programs aimed at preventing or minimizing sexual and gender based violence through the Gender and Development Ministry and other NGOs especially women groups and organizations. The aim is to mainstream gender issues and correct gender imbalances in the country (MoGD, 2012). These programs focus mainly on preventive measures and management of SGBV survival. They are at both community and facility levels. The programs are multi-faceted and include massive awareness campaign through media and community volunteers, skills training to empower girls, involvement of stakeholders to build consensus for changing traditional norms that encourage violence against women and to stop FGM, and intersectoral collaboration between line ministries for the management of survivals (MoGD, 2012).

4.2.2 Early Marriage

Evidence has shown that there are programs that were initiated in other countries to prevent early marriages such as increasing and prolonging formal school enrolment for girls, providing sex education and empowering girls through vocational and life skills training, creating enabling environment through local policies and involving parent and families in girls' education (Lee-Rife et al. 2012).

A systematic review found 23 studies that reported on evidences that work to reduce child marriage in developing countries (Lee-Rife et al.2012).

Interventions which showed to be successful were the provision of quality and accessible formal education for girl children. Nine out of the 23 programs found that keeping girls in school delay marriage and serves as a protective factor as a girl in school is regarded as a child rather than an adult (Lee-Rife et al. 2012).

Eight programs provided incentives to girls and their family as a means to alleviate economic burden while 3 programs initiated activities to strengthen enforcement of policies on legal age of marriage and create new laws and policies in accordance with the convention on the rights of the child (Lee-Rife et al. 2012). However, lack of change in norms and values about child marriage makes it difficult to sustain these changes after the cash transfer stopped.

A study from Ethiopia documented best practices of preventing early marriage through progressive stakeholder engagement (Population Reference Bureau, 2011).

For Liberia, making formal school accessible for girls is currently being implemented in Liberia as the Government of Liberia has made primary school compulsory and free and has also established a policy on girls education that give equal rights to girls to participate in education at the highest attainable level (Ministry of Education, 2009).

Vocational training and life skills programs are being implemented in Liberia but at a low scale and supported by the World Bank (World Bank, 2014).

There are existing policies on legal age of marriage that requires enforcement through stakeholder engagement to strengthen political commitment**.**

4.3 Intervention for Macro-Exosystem

4.3.1 Access to contraceptives

Making contraceptive accessible to adolescent both married and unmarried has shown to be effective in preventing unwanted pregnancy and associated complications (WHO, 2011). Contraceptives should be available through many different ways for adolescent to have access at all times and also accept the services in order to utilize it. This means that services should be located at a place where adolescent will feel good to go without fear of being seen or reported to their parents. It also means that the providers of these services should be knowledgeable about the needs of adolescent, keep secret matters coming to their knowledge, be non-judgmental and friendly in order to gain the trust of these adolescent (Chandra-Mouli et al. 2013; Oringanje C, 2009). The interventions are community based involving community leaders, over the counter provision of contraceptives, clinic based and school provision by health care providers. The impact of these interventions reflected increased use of contraceptive by adolescent (Chandra-Mouli et al. 2013).

In Liberia, contraceptive is available in health facilities which are not adolescent friendly. As a result, there is very low utilization of contraceptive amongst adolescent (LDHS, 2007; Clarke et al. 2008). The widely recognize community based available contraceptive is the male condom which is being distributed through social markets and periodic mass distribution during campaigns and awareness programs which are not sustainable (Urey and Gaffney, 2013). A pilot project to increase contraceptive uptake by adolescent started in two counties but is still at a low scale (Gebeh et al., 2013). This program is a community based approach using market women as point of contacts at their various selling locations.

Many programs targeting adolescent sexual and reproductive health are at a low scale, center around urban cities and supported by NGOs which is not sustainable.

4.3.2 Access to treatment of STI including HIV counselling and testing

Making preventive services for STI and HIV testing and counselling available and accessible to adolescent has shown to be successful in reducing HIV incidence, morbidity and mortality (WHO, 2013).

A systematic review shows that provision of STI/HIV counselling and testing services at the convenience of clients improves utilization. For example at locations like working places, and where adolescent meet. Also at hours that are suitable for them like after school (Obeermeyer and Osborn, 2007).

However, in Liberia, access to these services is lacking or very limited (MOHSW, 2011).Comprehensive services for HIV are concentrated at the secondary level while only STI prevention and treatment is at the primary level. Secondary level facilities are centered in urban cities while primary level facilities are more in the rural areas.

4.3.3 Availability of youth friendly services

There is evidence that making services for adolescent tailored to their needs through provision of youth friendly integrated services that will be accessible, acceptable and available will increase utilization of these services, especially sexual and reproductive health services (WHO, 2011). Interventions that have been successful in developing countries are; integrated services that provide contraceptive counselling, commodities, prevention and treatment of STI including HIV counselling and testing and abortion care and services (Chandra-Mouli, et al. 2013).

Some evidence is shown for increase knowledge and utilization through the provision of free youth friendly services by Government in Mozambique (Melo et al. 2008) and through private sector. However, the later was done in collaboration with social marketing of condoms and mass media sexuality education using peer educators (Neukom and Ashford, 2003).

Best practice yielding better results is combination of youth friendly services at different levels with train and nonjudgmental care provider. For example, a range of mixed and single programs, like comprehensive youth friendly services and services where only contraceptives including condoms are provided (Chandra-Mouli, et al. 2013).

In Liberia, provision of youth friendly sexual and reproductive health services has started but at a very low scale and concentrated around urban cities (PSI-Liberia, 2013). The national health policy also states that all primary health facilities should provide youth friendly services; but this is not feasible considering the critical human resource shortage and stock out of sexual and reproductive health commodities in the facilities (MOHSW, 2011).

Also there is no HIV counselling and Testing at the primary level for adolescent accept for pregnant girls for the purpose of preventing mother to child transmission of HIV.

There are also school health clubs and peer education programs but these are focus on HIV prevention and Hygiene promotion.

4.3.4 Local policies and Poverty

These are underlying factors and social determinants that cut across all other factors affecting adolescent sexual and reproductive health and required multi-faceted efforts of government and international community. The interventions are imbedded within all other interventions such as education, improving local policies, services and gender equity.

Policy on making abortion safe is essential in addressing adolescent sexual and reproductive health and rights (WHO, 2012).

A study from Ghana found that creating an enabling environment through policy and non -judgmental services to make abortion safe is a promising intervention (Guttmacher Institute, 2010). This was done by making abortions that are recognized by the law safe and formulating clinical guidelines for the implementation of safe abortion services.

In Liberia, there is no clear policy or guidelines for provision of safe abortion services (MOHSW, 2010).

CHAPTER 5: DISCUSSION AND CONCLUSION

This chapter will discuss the major factors influencing adolescent sexual and reproductive health; limitations, missing data, review effective evidence based intervention, and review the implications of these interventions in Liberia context.

The study found that the major factors influencing adolescent sexual and reproductive health were: sexual behavior influenced by lack of knowledge, attitudes and practices towards safe sex, early sex, family, peer and social relationships. Other findings are deeply rooted cultural, gender norms and values that encourage early marriage, gender inequalities and difficulties in negotiating safe sexual practices, discrimination and violence against girls. Other findings are local policies and law that negatively influence ASRHR such as abortion law. Poverty was also found as an underlying social determinant that cut across other factors such as early sexual debut, transactional sex, and low school enrolment. Lastly, lack of access to adolescent sexual and reproductive health services was also identified as a factor.

The study recognizes that there were some missing data, like trends in FGM due to the secrecy of the tradition. Data on adolescent sexual behavior and pregnancy below 15 years were also very difficult to find so the sexual and reproductive health needs for very early adolescents was not captured in this study. There were also very limited studies that focus on adolescent boy's sexual and reproductive health needs.

The study identified numerous interventions that are effective and have worked in other developing countries to improve adolescent sexual and reproductive health needs. Yet, it also found that, the factors and interventions are complex issues and most are interrelated. These interventions will be discussed based on the three levels.

5.1 Individual Level

The individual factors identified by the study were, sexual behavior influenced by knowledge, attitudes and practices, and biological factors. The study found that adolescent engage in unsafe sexual practices without knowledge of the sexual and reproductive health risk associated with such. These risks include STIs, including HIV, unwanted pregnancy, unsafe abortion and the complications associated with them. These sexual and

reproductive health risks could pose lifelong health problem or death for adolescent if not addressed properly.

Most adolescent in Liberia, up to 80% have had sex by age 18; about 38% of adolescent girls are married at the same age and it is estimated that 62% of girls are pregnant by age 18. All of these are evidence that adolescent are sexually active beings and needs sexual and reproductive health services.

There are evidences for effective intervention such as comprehensive sexuality education through schools and health clubs as well as improving parents to child relationships and discussion about sexuality and using mass media. In Liberia adolescents have limited knowledge on how to protect themselves from unwanted pregnancy, STI including HIV and awareness of their right to reproductive health services because comprehensive sexuality education is lacking in the informal and formal education sector. Liberia could adopt community and school based sexuality and reproductive health education. This will require a policy and curriculum for comprehensive sexuality education and training of teachers, and health care providers. This will take some time as after development of curriculum, it has to be included in the teacher training curriculum as pre-service training while for health worker it will be an in services training as they already have knowledge on health issue around sexuality and reproduction. Stakeholder engagement is also require to make them understand that with the advancement of technology, adolescent are more expose to information that could expose them to unsafe practices and if they are not provided with answers to confusing question or information they will just follow what they learn from internet and their peers. This may help to shift resistance especially if combined with programs that address norms and values in groups of stakeholders. This might be met with resistant, but Liberia could do this through mass media programs, and consistent engagement of stake holders through dialogue informing them about the consequences involved into this.

Another, implication as it relates to feasibility is government willingness to commit funding to call for stakeholder consultative meetings and build consensus on incorporating this into curriculum of schools. There will also be some conflicting role of Ministry of health and education which can be settle with mutual agreement on clearly define roles of each ministry. Government will be presented with the evidences of investing in adolescent sexual and reproductive health as a tool for social economic development and poverty

reduction. If this should work adolescent as the next generation will make informed choices concerning their sexual and reproductive health.

5.2 Micro-Mesosystem

The study and evidences have shown how gender norms and role, as well as interactions with social structures in the environment affect adolescent sexual and reproductive health and what intervention has proven to be successful in other developing countries.

Interventions that will promote gender equality and equity, by empowering girls, creating enabling environment through policies that discourage discrimination against girls, involving girls and boys in decision making process and engaging community and traditional leaders to change norms, values. The implications are when girls and boys are involved together in programs and household chores, this enable them to view gender identities and roles differently. Changing norms, values and traditional practices that promote gender violence and harmful practices will also minimize male dominance over female, increase decision making power and stop harmful traditional practices. Engaging stakeholder to change policies that are discriminatory against girls and that violate the rights of the child could be long term intervention through the engagement of communities to realize that these norms and rules were made by them and can still be change by them through actions and reflection programs involving generational communication but will require lots of community engagements and strong political will and commitment

These interventions could be adapted by Liberia through integration of activities involving the Internal affairs Ministry as the government arm to coordinate the interventions. While the Youth Ministry, Women organizations, civil society, community based organizations and the Gender and development ministry will be at the implementing arm. This will be challenging as traditional norms, values and cultures are deeply rooted in the society and could take another generation to actually effect a massive change but with strong political commitment and persistent community engagement through dialogue could work.

Another factor identified in the research was early marriage. Early Marriage robs girls of their adolescents and other opportunities such as continuing education for a better future and poses them at risks of STIs, including HIV and early pregnancy. There are promising evidence based interventions that

has been pointed out to work in other developing countries such as empowering girls through life skills education, retaining girls in school, enforcing law on the legal age of marriage and motivating girls and their family through cash transfer.

Liberia could adapt three of these programs; empowering girls through life skills training, enforcing marriage law, and retaining girls in school up till secondary level. This will require strong political commitment and investment as most girls drop out of school or cannot continue to secondary level because of poverty. The government could subsidize secondary education by paying tuition for girls to retain them in school. While for older adolescent who are far behind in education or illiterate, life skills education could be prioritize for them through subsidizing training and provision of tool to continue practicing and gain earning. Enforcing the legal age of marriage is promising but the feasibility of this will be met with challenges in the context of Liberia because early marriage is deeply rooted in Liberian culture and associated with the secret society as such, acceptability will be a problem but with high level of stakeholder involvement and political commitment, this could gradually be minimized. In the urban areas, the idea of early marriage has already shifted due to formal education, however, early pregnancy is still high yet it is prevalent in the rural parts of Liberia where these secret societies are being practiced. This is a long term intervention but could work if community and traditional leaders are involve in actions and reflective dialogues with high level commitment from central government through the internal affairs ministry.

5.3 Macro-Exosystem

The evidence has shown that with adolescent having access to youth friendly sexual and reproductive health services that are affordable, acceptable and accessible, they will utilize those services provided adolescent know where and how to obtain contraceptives including condom, and receive information to dispel misconception and make inform choices.

The implication for Liberia to provide youth friendly services are multiple ranging from shortage of health workers, and infrastructure stockout of sexual and reproductive health commodities.

A short term intervention for Liberia could be working with youth ministry through existing infrastructure and expanding access of contraceptives

through the community based distribution program and partnering with public and private dispensaries to provide over the counter contraceptives. This will still require counselling to dispel misconception and to make informed choices about which contraceptive is appropriate for the individual. The implementation also required training of community leaders and dispensers as well as advocacy with government to increase funding for reproductive health commodity through the Government revenue to improve supply of commodities, minimize stock out and provide performance based incentive for private dispenser and community based distributor to avoid selling of commodities or requesting clients to pay for services. While the long term goal will be to increase the number of nurses and midwives through pre-service training and developed infrastructure for youth friendly services as part of the health system in Liberia. This will require development of youth friendly adolescent sexual reproductive health policy as part of the National health plan. Another long term plan for improving adolescent sexual reproductive health is to engage stakeholders to see the need to change some policies that are currently serving as barrier to adolescent sexual and reproductive health such as the abortion law which has made unsafe abortion an option for adolescent with unwanted pregnancy.

Other factors like secret society and poverty could be indirectly influenced through improved formal education for all adolescents. The higher education attained will also improve economic empowerment for all and decision making power for girls. These are cross cutting issues that required high level political decisions that can be influence through persistent engagement of communities and civil society.

CHAPTER 6: RECOMMENDATIONS

This chapter will make recommendations based on the major factors discussed, effective interventions, implications and the feasibility for Liberia.

Individual Level:

Recommendations for improving Knowledge attitudes and practice about sexual and reproductive health

Long Term Interventions

1. The Government of Liberia should pass a legislation to include comprehensive sexuality education in both primary and secondary schools as

2. Liberian government should set up a task force that include stakeholders such as, MOHSW, Ministry of Education, Ministry of Gender and Development, Internal Affairs, Ministry of Youth and Sport, local government and youth leaders to work together and develop a comprehensive sexuality education curriculum and policy. This policy will clearly state what type of sexuality education will be taught at primary level and secondary level. The curriculum when developed should be incorporated into teacher training curriculum as the teachers will be the primary provider of sexuality education while health workers will support teaching at secondary level.

3. The curriculum when developed should be simplified by the MOHSW to be use by community health workers, community leaders, and peer educators to teach out of school adolescents.

Short Term Intervention

4. The MOHSW to collaborate with PSI and tap on their experience to expand mass media education programs to reach a significant population of adolescents including those in underserved communities.

Micro-Mesosystem level

Recommendation on gender norms and values

5. The government through the ministry of gender in collaboration with partners like the World Bank to evaluate the existing vocational and life skills education program for girls to see the effectiveness, pitfalls and make changes that will improve these programs.

6. Promotion of gender equality and equity should be done through the Gender and Development Ministry, NGO partners, women advocate groups, religious groups and youth advocate groups by involving communities, traditional leaders in generational dialogue to reflect on norms and values of old and the changing environment of technology. Generational dialogue can be conducted by CBOs who will be train by NGOs through the gender ministry

7. Liberian government through the Ministry of education should scale up enrolment and retention of girls children in secondary school through provision of subsidy for tuition fees.

Macro-Exosystem

Recommendation for provision of Youth Friendly Sexual and Reproductive Health Services

1. The Ministry of health should collaborate with Ministry of Youth and Sports and other partners to expand the community based contraceptive distribution through community based program and existing structure as a short term intervention.
2. There should be a working group establish that will include youth groups, ministries of youth and Gender to ensure adolescents involvement in sexual and reproductive health policies and plan and ensure that these services are available for adolescents

3. The Ministry of health should advocate with UNICEF, UNFPA, PSI, to formulate a youth Friendly health services policy based on the international plan parenthood guidelines, and increase number of health workers through pre-services training as a long term intervention.

4. The ministry of health should ensure that reproductive health commodity is available at all levels through advocacy with National and local government to increase budgetary allocation to purchase commodities and institute a monitoring system to avoid stockout

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Tables

Table: 3. Distribution of health facilities per county

No.	Counties	Clinics (PHC level 2)	Health center	Hospital
1.	Bomi	23	0	1
2.	Bong	35	1	3
3.	Gbarpolu	13	0	1
4.	Grand Bassa	27	1	3
5.	Grand Cape mount	29	2	1
6.	Grand Gedeh	15	2	1
7.	Grand Kru	12	4	1
8.	Lofa	50	3	4
9.	Margibi	27	5	2
10.	Maryland	21	2	1
11.	Montserrado	211	20	10
12.	Nimba	52	5	5
13.	River Cess	17	0	1
14.	River Gee	14	3	0
15.	Sinoe	32	0	1
	TOTAL	577	48	35

Source: MOHSW, 2013

Table: 4. Distribution of human resource by cadre

No.	Category	Number	Percent
	Clinical Workers		
1.	Physician	90	1.1
2.	Nurses	1393	16.3
3.	Certified Midwives	412	4.8
4.	Physician Assistant	286	3.3
5.	Nurse Aides	1589	18.6
6	Traditional Birth Attendants	243	2.8
7.	Dentist	23	0.3
8.	Pharmacist	46	0.5
9.	Laboratory Technician/Assistant	376	4.4
10.	Environmental	173	2.0

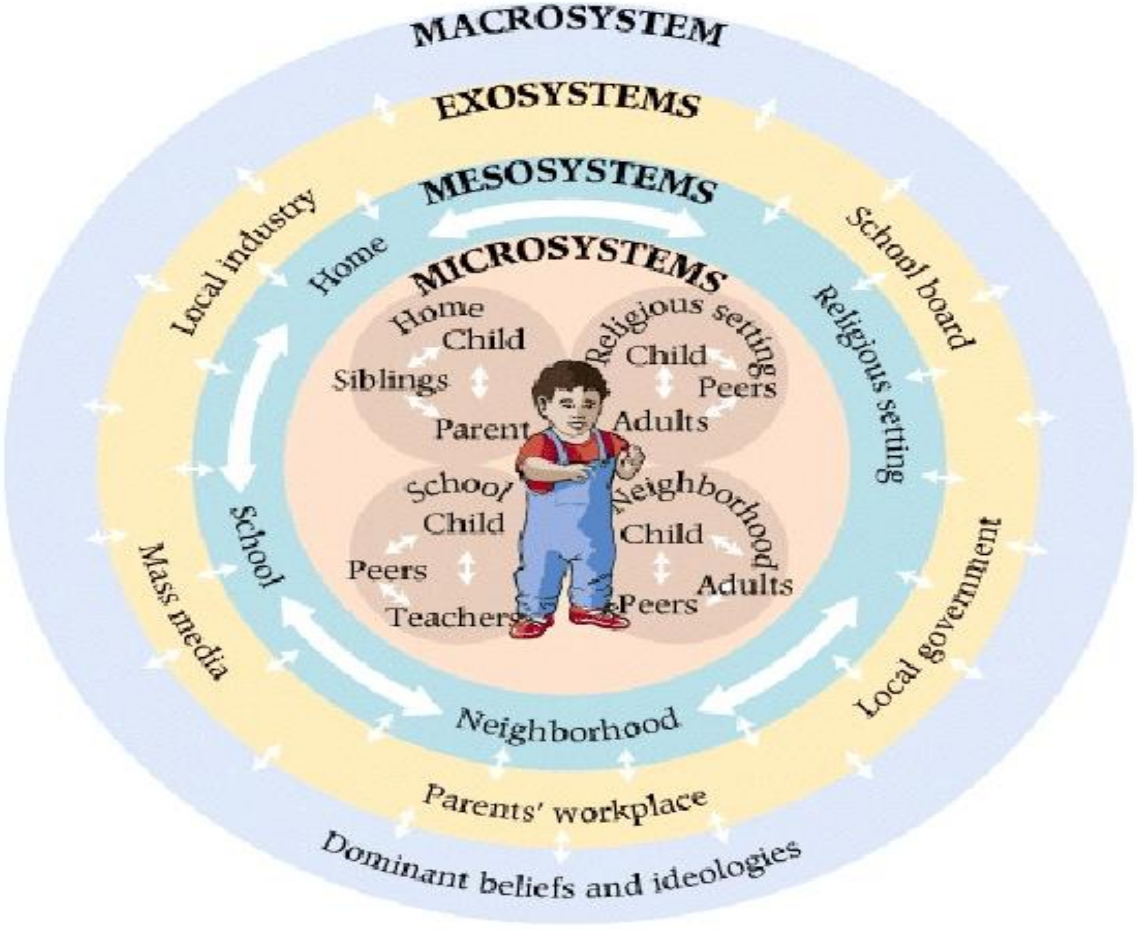
	Health Technicians		
11.	X-Ray Technician	22	0.3
12.	Physiotherapist	6	0.1
13.	Dispenser	505	5.9
14.	Social worker	182	2.1
			62.5
	Non-Clinical workers		
15.	Accountant	88	1.0
16.	Cleaner	707	8.3
17.	Field Worker	127	1.5
18.	Non-Clinical Professional	1285	15.0
19.	Registrar	457	5.3
20.	Security	515	6.0
21.	Surveillance	28	0.3
			37.5

Source: MOHSW, 2010

Annex 1: Map of Liberia

Source: LMIS, 2009

Annex 2: Bronfenbrenner Ecological Model



Source: Bronfenbrenner Ecological Theory, 1979