FACTORS INFLUENCING UNMET NEED FOR FAMILY PLANNING AMONG WOMEN, AGED 15 TO 49 YEARS, IN LIBERIA

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By

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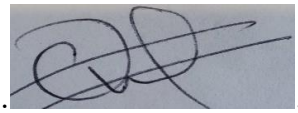
Signature……  …….

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Contents

List of Tables v

Acknowledgments vi

Abstract vii

List of Abbreviations viii

Glossary of Terms x

Chapter 1: Background Information on Liberia 1

1.1 Country Context 1

1.2 Socio-economic 2

1.3 Healthcare system and financing 2

Chapter 2: Problem statement, Justification, Objectives and Methodology 4

2.1 Problem Statement 4

2.2 Justification 5

2.3 Thesis objectives 5

Overall objective: 5

Specific objectives: 5

2.4 Methodology 6

2.5 The conceptual framework 7

2.6 Limitation of the study/Quality assurance 8

Chapter 3: Factors that influence the unmet need for Family Planning in Liberia 9

3.1 Demand Factors 9

3.1.1 Individual factors 9

3.1.2 Women and girls empowerment 11

3.2 Supply Environment Factors 12

3.2.1 Policy Environment 12

3.2.2 Human and Financial Resources 13

3.3 Development Program 15

3.3.1 Behaviour Change Communication 16

3.3.2 Private sector/International/local Non-Governmental Organization 16

3.4 Demand for healthcare 17

3.4.1 Personal wellness/care-seeking/ Gender equity 17

3.5 Service Delivery Environment 17
3.6 Health Behaviours 18
3.7 System Factors influencing demand and supply 18
3.7.1 Socio-Cultural Factors 18
3.7.2 Political 19
3.7.3 Legal Factors 19
Chapter 4: Best practices in addressing the unmet need for FP in similar context to Liberia 20
4.1 The rationale behind selecting countries for best practices in similar context 20
4.2 Findings in selected countries 20
4.2.1 Ghana 20
4.2.2 Kenya 21
4.2.3 Rwanda 22
Chapter 5: Discussion 24
5.1 Demand factors 24
5.2 Supply Environment Factors 24
5.3 Best practices in addressing the unmet need in selected countries 25
5.4 Reflection on the Framework 26
5.5 Thesis strength and weaknesses 26
Chapter 6: Conclusion and Recommendations 28
6.1 Conclusion 28
5.2 Recommendations 28
5.2.1 Recommendations on Policy and Implementation 29
5.2.2 Research Recommendations 29
5.2.3 Intervention Recommendations 30
References 31
Annex 38

List of Figures

Figure 1: Liberia population pyramid, 2021[9] .....
Figure 2: Conceptual framework of factors influencing an unmet need for FP among married and unmarried women aged 15-49 years ([24] .....
Figure 3: Family Planning Budget Allocation, FY 2014/15 to 2017/18 (15). .....

List of Tables

Table 1: Annual Costs by Thermatic Area for 2018, in USD(15) (21) .....
Table 2: Search Strategy Table (Specific Objectives) .....

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Abstract

Background: Unmet need for FP among married women in Liberia is 33%. Unmet need for FP is high (47.2%) among married adolescents aged 15 to 19 years, compared to 16.3% among married women aged 45 to 49 years. Some research has been conducted on FP services and their use in Liberia, yet findings are not sufficiently known of factors influencing an unmet need for FP.

Objectives: This study aims to explore factors influencing an unmet need for family planning among married and unmarried women aged 15 to 49 years in Liberia, and to make recommendations to FP stakeholders to improve FP services and programs for those women

Study Method: A literature review was done using the USAID evaluation conceptual framework to guide the findings of the study.

Findings: Women's socio-economic level, and educational status, cultural issues were other factors affecting FP demands. The supply environment factors such as poor policy enforcement in Liberia, coupled with limited human, financial and other resources.

Conclusion and Recommendations: There are variety of factors that influence both demand for and supply of FP services. It is recommended that existing FP policies be enforced, that community-level research be conducted to address socio-cultural factors influencing FP demand among women of reproductive age in Liberia, especially young women, and that FP program be prioritized by increasing allocated funds

Keywords: "Unmet need" "Liberia" "Family Planning" "Contraceptive" "Sub-Saharan Africa"
Word Count: 13,075

List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
BPHS	Basic Package of Health Services
CBD	Community-Based Distributor
CHA	Community Health Assistant
CHEW	Community Health Extension Worker
CHO	Community Health Officer
CHP	Community-Based Health Planning and Service
CHV	Community Health Volunteer
CIP	Costed Implementation Plan
COVID-19	Corona Virus Disease
EC	Emergency Contraceptive
EPHS	Essential Package of Health Services
EVD	Ebola Virus Disease
FP	Family Planning
GDP	Gross Domestic Product
GOL	Government of Liberia
HIV	Human Immunodeficiency Virus
IUCD	Intrauterine Contraceptive Device
Km2	Kilometre square
LDHS	Liberia Demographic Health Survey
LIC	Liberia Investment Case
LMIC	Low and Middle Income Country
MCHIP	Maternal and Child Health Integrated Program
mCPR	modern Contraceptive Prevalence Rate
MIS	Malaria Indicator Survey
MMR	Maternal Mortality Rate
MNCH	Maternal, Newborn and Child Health
MOH	Ministry Of Health
OOP	Out Of Pocket
PNC	Postnatal Care
RH	Reproductive Health
RMNCAH	Reproductive, Maternal, Newborn, Child and Adolescent Health
SBCC	Social Behaviour Change Communication
SIDA	Swedish International Development Corporation Agency
SRHR	Sexual and Reproductive Health and Rights
SSA	Sub-Saharan Africa
TFR	Total Fertility Rate
THE	Total Health Expenditure
UN	United Nations
UNFPA	United Nation Population Fund

WHO	World Health Organization
WRAs	Women of Reproductive Age

Glossary of Terms

Contraceptive Prevalence Rate – Contraceptive prevalence rate is the percentage of women who use, or whose sexual partner uses, at least one method of contraception, regardless of the method. It is usually reported for married or in-union women between the ages of 15 and 49 [(1)].

Family Planning -Family planning allows people to attain their desired number of children if any, and to determine the spacing of their pregnancies. It is achieved through the use of contraceptive methods. [(1)]

Gross Domestic Product - GDP is the final value of goods and services, produced within a country's geographic boundaries, over a specified period, typically a year [(7).]

Maternal Mortality Rate - The number of maternal deaths, due to birth complications or pregnancy-related complications, per 100 000 live births, over a set period, usually a year [(13)].

Out-of-Pocket spending – Out-of-pocket spending are costs that individuals pay from their own cash reserves [(10)].

Postpartum amenorrhea - It's the time between the end of pregnancy and the start of menstruation, following delivery, and it's considered the in fecund phase of a woman's reproductive life [(2).]

Teenage Pregnancy – Pregnancy in girls is occurring between 10-19 years [(5)]

Total Fertility Rate - The average number of children, that a hypothetical cohort of women would have at the end of their reproductive period if they were subjected to the fertility rates of a given period, for their entire lives and were not subjected to mortality. It is expressed in terms of children per woman. The total fertility rate is the sum of all women's age-specific fertility rates, multiplied by five. The fertility rates for the seven five-year age groups range from 15–19 to 45–49 [(80)].

Unmet need for FP – An unmet need for FP is defined as the percentage of women of reproductive age, married or unmarried, who want to delay, space, or stop childbearing but do not use any method of contraception [(2]

Introduction

Family Planning (FP) allows people to attain their desired number of children, if any, and to determine the spacing of their pregnancies. It is achieved through the use of contraceptive methods [(1)]. However, there are factors in Liberia that influence the unmet need for FP among Women of Reproductive Age (WRAs) 15-49 years. An unmet need for FP is defined as married or unmarried/sexually active women, who want to delay, space, or stop childbearing, but do not use any method of contraception [(2)(3)]. These include all women of WRA, whose pregnancies were either unintended or mistimed during conception, women who are postpartum amenorrhea and do not use FP and whose last birth was mistimed, and women who are neither pregnant nor postpartum but do not want any more children [(2) (3) (4)]. In 2019, of 1.9 billion WRAs worldwide, there were 270 million who have an unmet need for FP [(1) (4)].

With many years of experience, working in the health sector in Liberia, it can be said that the below listed are just a few of the many factors, contributing to the unmet need for FP services: Shortage of skilled health workers, difficulties in accessing health care, and services due to bad roads, limited material/financial resources, sexual and gender-based violence issues, affecting the population, especially women of reproductive age.

In the past three years, I worked on school health programs and with non-governmental organizations, where I had first-hand experiences, with challenges in schools and communities, such as Teenage Pregnancy (TP) and school dropouts that are deeply rooted in the high unmet needs for FP services. According to the United Nation Population Funds (UNFPA) Liberia, three out of every five girls are already mothers by the age of 19. If this problem persists for the next 25 years, it will pose a threat to the core Liberian society, because most of these girls will lack basic knowledge, skills, and opportunities for self-empowerment [(5)]. Subsequently, in 2019, my direct engagement with communities, as a County Community Representative in a local non-governmental organization, allowed me to not only focus on root causes of issues, such as teenage and unintended pregnancies, but also on promoting Sexual Reproductive Health and Rights (SRHR), specifically the increase in contraception uptake by working with women groups, youth groups, community leaders, and others in helping to shift societal and cultural norms associated with unmet need for FP among women and girls.

The research aim is to explore factors that influence an unmet need for FP among women of reproductive age, to recommend findings to policymakers, for improvement in programs that address barriers, associated with an unmet need for family planning, among those women.

Chapter 1: Background Information on Liberia

1.1 Country Context

Liberia is located in western Africa, bordering on Sierra Leone to the west, Guinea to the north, the Ivory Coast to the east, and the Atlantic Ocean to the south. It has a total area of 111,370 square kilometres (km^2), with 96,300 km^2 of land and 15 km^2 of water [6] [25]. The country is organized into five regions, with 15 counties. These counties are divided into 93 health districts. Grand Kru County has the smallest population of 57,913 people, while Montserrado County has the largest population of 1.1 million inhabitants [6] [7] [8]. Liberia has 16 indigenous ethnic groups and several foreign minorities, with the indigenous group, accounting for 95% of the population. These groups include the Gio, Krahn, Mano, Grebo, Bassa, Kpelleh, Madingo, Kru, Gola, Vai, Americo-Liberians, or Congo, Dei, Mende, Loma, and Fanti. The ethnic minority population accounts for 25% of the total population. Christianity is practiced by 85.5% of the population, Catholicism by 7.2%, and Islam by 12.5% [7] [8]. Liberia's population is approximately 5.2 million people, with one-third of the population being adolescents and youths (10-24). It has a population density of 46.51 square kilometres and an annual growth rate of 2.46%, the country ranks 122nd in the world, in terms of population density. Greater Monrovia, the country's capital, is home to 25% of the population, while 52% of the population lives in urban regions [25][9]. Women of the reproductive age of 15 to 49 years, constitute 1.2 million of the population, with a life expectancy of 65.0, male 63.5 years and female 66.5 years [6][9][7].

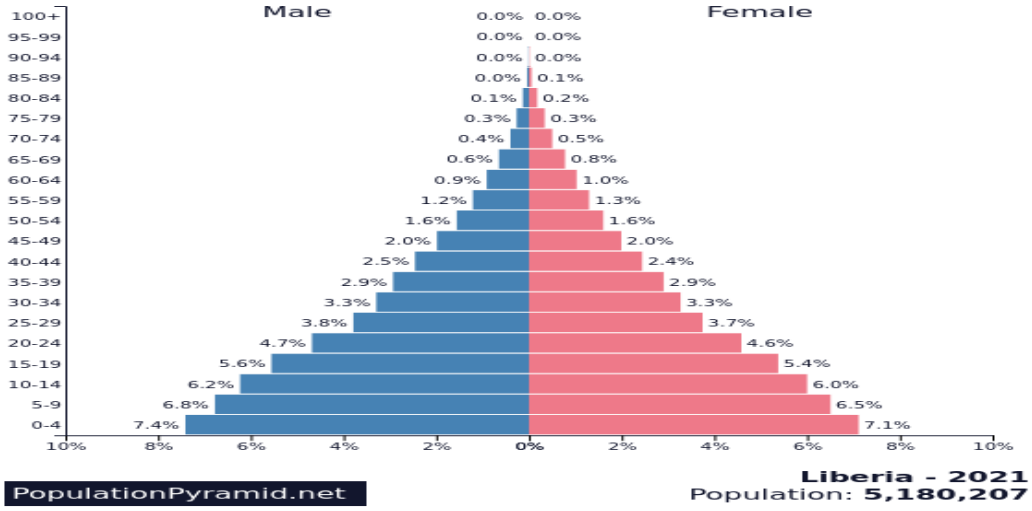

Figure 1: Liberia population pyramid, 2021[8]

1.2 Socio-economic

In Liberia, 40.9% of the population is poor, living below the international poverty line of $1.9 per day [(6)]. The country's Gross Domestic Product (GDP), reduced from 5.8 percent in 2013 to 2.5% in 2016, due to the Ebola Virus Disease (EVD) and is now projected to be 2.2 as a result of the Corona Virus Disease (COVID 19) pandemic. Early pregnancy, school dropout, child and maternal mortality, are all common among Liberian women, with the majority of these deaths occurring in low-income households [(10)]. Poverty, food insecurity, and widening gender gaps in education, are all factors that contribute to the issues mentioned, as most poor households prioritize educating boys over girls, with their limited resources [(10)(11)]. The country's economy is weak because it is one of the world's poorest and least developed countries. Despite being one of the poorest countries in the world, Liberia is rich in natural resources; forestry is the most important industry, with timber and rubber being the main exports; mining and foreign aid provide the rest of the country's income [(7)(11)].

1.3 Healthcare system and financing

Liberia experienced a 14-year civil war from 1989 to 2003, which left the health system dysfunctional, resulting in shortages of infrastructure and health workforce [(10)]. Continuing the recovery, from the 14 years of civil war, the country has made significant efforts to rebuild the health system, by instituting the Basic Package of Health Services (BPHS) and the Essential Package of Health Services (EPHS) and by promoting healthcare delivery at all levels. Still, most people in rural areas, do not have access to healthcare services [(6)]. The use of healthcare services has continued to fall, as a result of the outbreak of infectious diseases. Between 2014 and 2016, Liberia's health system was hit by EVD, which disrupted the health, losing 10% of its doctors, 8% of nurses and midwives to EVD. In 2019 the country was hit again by the COVID 19 pandemic, which is still having a negative impact on both the health system and the country's economy. Currently, the country's key health system difficulties, include a shortage of resources and their unequal distribution, an insufficient quantity of health infrastructure, and ineffective supply chain management resulting in drug stock-outs, and a weak management information system. Communicable diseases, non-communicable diseases, and tropical diseases have all continued to a negative impact on the health of the population. [(11) (6) (12) (10) (25)]

The health sector's funding remains insufficient to provide basic health services to the population, the majority of which is due to poor accountability and transparency as a result of corruption [(10)]. The health sectors' Fiscal Year 2019/2020 budget, is 14.16% of the total national budget, including external support. Donor sources account for 45% of the Total Health Expenditure (THE), and Out-Of-Pocket (OOP) expenses account for 51% of total spending [(25)(10)]. Household spending affects 15% of poor households, compared to 8% of wealthy households. The most significant barrier to accessing healthcare is cost (47%), followed by distance to care (40%), with 29% of all Liberians and 60% of the population living in rural areas have to walk 5 kilometres to the nearest health facility

[10]. The country has a shortage of health workers, broken health structures, and insufficient service provision; 77% of essential medicines, including FP commodities, are out of stock. [6][11] [14] [13]

Chapter 2: Problem statement, Justification, Objectives and Methodology

2.1 Problem Statement

Women of reproductive age (WRAs) are influenced by several factors that influence their thoughts and decisions about contraception, when considering the various aspects of unmet need, such as delaying childbearing, spacing childbirth, stopping childbearing, and others. [1][2][3][19] Few studies have indicated a variety of known factors that influence an unmet need for family planning, among women of reproductive age, ranging from limited access to contraception and method variation to a lack of comprehensive information on reproductive health, unequal gender norms, and power dynamics. [13][15] [17]. According to the United Nations (UN), more than one in ten married and unmarried women has an unmet need for family planning, with at least 214 million women of a reproductive age in developing countries, including Liberia, have an unmet need for family planning. [4][3]

In Liberia, the unmet need for FP, has been cited as one of the primary reasons, why the positive impact of FP, in averting about 30 percent of maternal deaths, is yet to be realized. [20]Liberia has one of the highest Maternal Mortality Rates (MMR) globally, with 1,072 women dying in every 100,000 live births [11] [13]. These statistics come in the context of a country with a high total fertility rate of 4.2 children per woman (urban and rural fertility rates are 3.4 and 5.5 children per woman, respectively) and a high teenage pregnancy rate (33.5%). [21] [11] [12] [13] Many factors, including low family planning use and unsafe abortion, have been identified as contributing factors to the poor health indicators in Liberia. An estimated 30 percent of unintended pregnancies result in unsafe abortion. In general, unsafe abortion accounts for 10 percent of all maternal-related deaths. [11] [12]

The country has a low modern Contraceptive Prevalence Rate (mCPR) of 30.7 percent, with variations in urban and rural settings (31.6 percent in urban and 29.1 percent in rural) [20]. Implants, Intrauterine Contraceptive Devices (IUCD), male and female condoms, injectables, pills, male and female sterilization, and Emergency Contraceptive (EC), are some of the modern contraceptive methods available in Liberia [13] [20]. In comparison to unmarried and married women, 45% of unmarried women and 24% of married women, use a modern contraceptive method, with only 1% of married and 1% of unmarried women using traditional methods. The unmet need for modern contraception has increased from 31.1% in 2013 to 33% in 2019. [13] [14] Unmet needs for FP are as high as 34.3% in urban areas (despite the presence of more than two-thirds of healthcare facilities and multiple FP outlets), while they are 32.5% in rural areas. Married women aged 15 to 19 years have the highest total unmet need for FP (47.2%) more than married women aged 45 to 49 years (16.3%). [20] [12]

Aside from the challenges of maternal mortality, low family planning use is associated with poor child health outcomes, child abuse, and neglect, as most parents are unable to adequately care for their children, and their children grow up to perpetuate the general awkward cycle of poverty, increased gender disparity, school dropout, reduced productivity in family and society, and an increase in Sexually Transmitted Infections (STIs) including HIV/AIDS. [20] [16] [21] [22]

2.2 Justification

In Liberia, the current average unmet need for modern contraception is not only high but also a recipe for many of the health and socioeconomic challenges, confronting women of reproductive age, their children, families, and the country as a whole [(15)(16)]. Efforts to reverse the current negative impact, on the non-use of modern contraception, necessarily require a thorough understanding of the difficulties, associated with these unmet needs in women of reproductive age. Meanwhile, challenges mentioned in the problem statement can be mitigated by an effective FP use. [(16)(17) (18)]

For FP programs in Liberia to be more effective, a better understanding of the key barriers, to unmet need for FP, is required, which can only be provided by research. Some evidence-based studies, from other African countries, have identified factors that contribute to an unmet need for FP, such as cultural norms and values, religious beliefs, gender inequalities, and so on. However, few studies have been done in Liberia, on the factors associated with an unmet need for FP, among women of reproductive age. This research aims to fill these gaps and explore the Socio-demographic factors, socio-cultural and economic factors, as well as political, legal, and health-system-related factors, that influence the unmet need for FP, among married and unmarried women aged 15 to 49 years in Liberia. The reproductive age range, of 15 to 49 years, was chosen because this age group is the most vulnerable, in terms of reproductive issues, and data about them is readily available. As data mentioned in the problem statement, modern methods of contraception are considered over others, because the vast majority of women use them. The findings of this study will provide policymakers, with recommendations for improvement in programs that directly benefit women, by addressing barriers, associated with unmet needs and developing strategies, to increase the use of modern contraception among those women.

2.3 Thesis objectives

Overall objective: This study aims to explore factors influencing an unmet need for family planning among married and unmarried women aged 15 to 49 years in Liberia, and to make recommendations to FP stakeholders to improve FP services and programs for those women.

Specific objectives:

1. To analyze the demand factors influencing an unmet need for FP among married and unmarried women aged 15-49 years.
2. To explore the supply environment factors influencing an unmet need for FP among married and unmarried women aged 15 to 49 years.
3. To analyze best practices in addressing the unmet need for FP among married and unmarried women aged 15 to 49 years in countries similar to Liberia.
4. To make recommendations to key FP stakeholders on how to improve FP services and programs among married and unmarried women aged 15-49 years with an unmet need for FP.

2.4 Methodology

Study method – Literature Review

This study aims to thoroughly search, analyze, and synthesize, existing literature and other grey documents on the factors influencing an unmet need for FP among married and unmarried women of reproductive age, in Liberia.

Strategy for Search

Relevant databases and search engines, such as VU library, PubMed, Hinari, and Google scholar, are used as the primary search sites, for peer-reviewed and grey studies. Articles selected from each of these databases will address factors influencing an unmet need for FP among married and unmarried women aged 15 to 49 years. Information will be gathered using the Liberia Demographic Health Survey (LDHS), World Health Organization (WHO), UNFPA, the UN, the Government of Liberia (GOL), and other non-governmental organization reports. The information obtained from these grey sources will provide evidence of the country's current health issues in relation to FP, as well as its efforts to address them. The snowballing technique will also be used to identify additional studies by searching reference lists of potential studies.

The research materials will be gathered, only from studies published between 2005 and the present. This timeline is reasonable, given the scarcity of significant scientific research on the topic under discussion in Liberia. The study will prioritize peer-reviewed articles. The official search language will be English.

Inclusion Criteria: Studies/reports conducted/written in English language, FP literature from low and middle-income countries similar to Liberia on factors influencing an unmet need for FP, among women of reproductive age. Primary and secondary research findings that are published as best practices, no earlier than 2005, for research studies and reports.

Exclusion criteria: studies conducted before 2005. Works that only presented opinions and abstracts

Keywords

The following search terms were identified in order to answer the research questions. “Birth spacing,” Limiting” “Women,” “Age,” “Family Planning,” “Contraception,” “Unmet Need for Family Planning,” and “Contraception Non-Use” “Married”, “Cultural” “unmarried,” SDGs, “Education,” unintended pregnancy, “male involvement,” Socio-economic” “Gender”, “low-middle income country,” “Gender-sensitive,” “Health behaviour” and “Financial/Human resources.” The search terms “Liberia”, “Sub-Saharan Africa”, and “West Africa” were combined with the above to limit the study to LMICs most especially in Africa.

2.5 The conceptual framework

This conceptual framework describes the pathway by which Reproductive Programs (RH) can be achieved, it can also be applied to other areas of RH such as Family Planning [23]. This framework was adapted to show the various factors that influence an unmet need for FP among women of reproductive age. The model considers both the Demand and Supply aspects and the social, cultural, economic, political, and legal factors that influence the non-use of modern contraception [23].

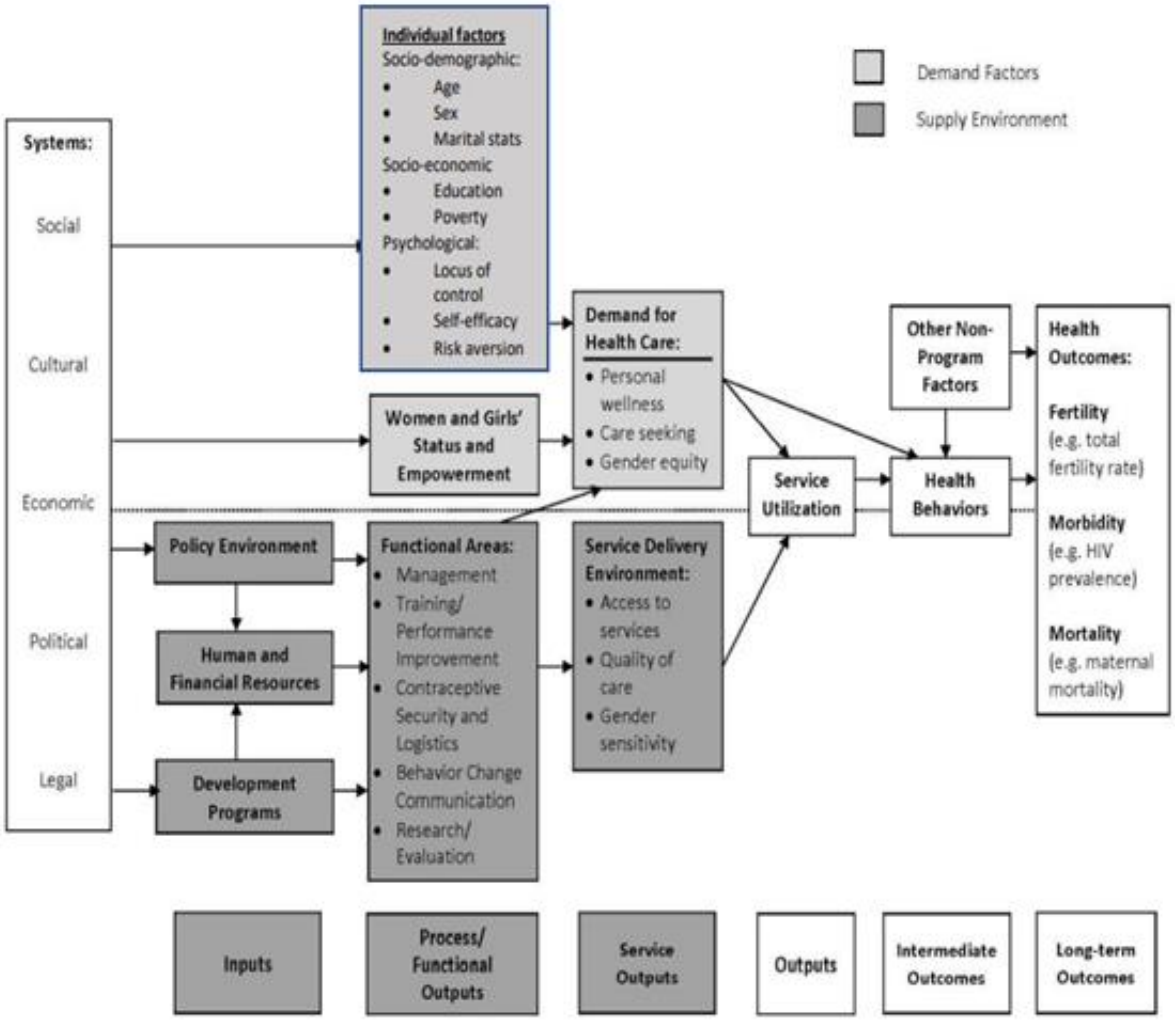

Figure 2: Conceptual framework of factors influencing an unmet need for FP among married and unmarried women aged 15-49 years [23]

The social, cultural, economic, political, and legal systems influence demand and supply in relation to FP. These are the factors that define the context in which programs operate, as they supply FP in response to demand. Factors in the supply environment are shaded dark, whereas those in the demand environment are shaded light.

The original framework has been modified, by the author of this paper, to fit the context and research question of this study. The change was made to the framework's demand component, which now includes socio-demographic factors as part of the individual factors. These socio-demographic factors - age, sex, and marital status are important in the Liberian FP demand context that influences decision making.

Individual factors, as well as the status and empowerment of women and girls, are included in the demand environment (upper left section of the framework), as influenced by broad system factors. Individual factors include socio-demographic, socio-economic (education and poverty), and psychological factors (knowledge and awareness). These factors make up the demand component, directly impact healthcare demand, as evidenced by personal wellness, care-seeking, and gender equity.

The framework's lower left section provides key supply-related factors as part of the environment. The policy environment, human and financial resources, and development programs are examples of these. Management, training/performance improvement, contraceptive security and logistics, behaviour change communication, and research/evaluation are all directly influenced by these supply environment factors. These functional areas directly impact the service delivery environment and demand for healthcare. These have a direct impact on service utilization.

The level of service utilization is influenced by both supply and demand factors. As a result of education and counselling, the availability of supplies, or clinical procedures, service utilization, is critical in a client's ability to lead a healthy lifestyle. The framework component labeled "health behaviour" defines the behaviour targeted by FP and, more broadly, RH programs. Importantly, non-program elements can also have an impact on health behaviour and outcomes. Gender inequalities and norms are examples of non-program factors. The long-term outcomes (health outcomes) reductions in fertility, morbidity, and mortality are the result of a series of causal events and activities that serve as the ultimate goal of RH programs, including FP. [23]

The framework is preferable because it addresses key demand and supply factors that contribute to an unmet need for FP among women who do not want to become pregnant.

2.6 Limitation of the study/Quality assurance

There are limited number of studies on the research subject in Liberia, so literature from countries, with similarities to Liberia's context, were included. Despite the interdependence of multiple societal factors, on contraceptive use, my research will focus on factors that directly influence an unmet need for FP among women of reproductive age, with an unmet need for FP. Another limitation is that my findings are based on literature review rather than primary data collection.

Chapter 3: Factors that influence the unmet need for Family Planning in Liberia

This section of the chapter focuses on the findings/results of the conceptual framework. The findings will be structured on the demand, supply, and best practices on factors influencing an unmet need for FP among women aged 15 to 49 years with an unmet need for FP to the Liberian context.

3.1 Demand Factors

3.1.1 Individual factors

Socio-demographic factors

Age/sex/marital status

This section of the findings discusses the relationships between age, sex, and marital status, to an unmet need for FP. According to research, there is a link between age and an unmet need for modern contraception; as people get older, their need for FP decreases. An unmet need varies across the reproductive age range, with an unmet need for spacing, increasing below the age of 34 years and decreasing above the age of 34 years [(17)]. However, other studies found that women, aged 35 years and up, have already had several children, indicating the need for a spacing method of contraception, because having more children, has a negative impact on older women's health [(17)(25)(43)]. Age also has an impact on other aspects of unmet need, such as contraceptive discussion with partners; older women are more likely than younger women to discuss contraceptive use with their partners and health care providers. Sexually active unmarried may require consent from the parent before seeking FP services [(26) (27) (33)]. The unmet need for FP, among married adolescents aged 15 to 19 years, is high 47.2%, compared to 16.3% among married women aged 45 to 49 years [(11) (15)]. Though there are a variety of modern contraceptive methods available for males, including condoms and vasectomy; more studies have been conducted on only females as contraceptive users, implying that males should support their partners, while ignoring males as contraceptive users [(27)(28)]. According to the LDHS, the average age for first sex among women is 16.2 years, while 24% of females aged 25 to 49 years have sex by the age of 15 years. 30% of sexually active females, aged 15 to 29 years, have an unmet need for modern contraception [(12)]. Sexually active unmarried women, are twice as likely as married women, to use a modern contraceptive method, 45% among unmarried compared to 24% among married women in Liberia [(13)]. The unmet need among married women is 34.3% in urban areas and 32.5% in rural areas, while the unmet need, among unmarried women in urban and rural areas, is 37.7% and 39.3% respectively. Relative to contraceptive use, unmarried women face different challenges as compared to married women. Outside marriage, there is a strong taboo against sex; unmarried women seeking contraception face social stigma, which contributes to the unmet FP need [(12) (29`) (30) (31) (35).] Age, sex, and marital status are all factors in influencing woman's unmet need for FP services in Liberia, as age showing to be the most influential factor contributing to the high unmet need for FP.

Socio-economic factors

Education/Poverty

The socioeconomic status consists of two factors, the level of education and the wealth status. Fertility rate and contraceptive non-use, differ by educational background; most Liberian women of reproductive age are aware of FP, with 98% of women, compared to 95% of men, aged 15 to 49 years knowing at least one method of contraception [13]. Despite the high FP knowledge level, mCPR is still low at 30.7 % [20]. The educational status of both partners, influences an unmet need for FP, as contraceptive discussion improves with education and male involvement, in Sexual Reproductive Health (SRH) [33][17]. For instance, women with at least a secondary education, are twice as likely to use contraceptive methods, as women without a minimum secondary education. (21% vs. 8%) [13][32]. Women with a secondary education account for 19.3% of unmet FP needs, while women with no education account for 30.2%. In addition, many male partners are unaware of the benefits of contraception, due to a limited understanding [27] [34]. Poverty has also an impact on the use of modern contraception; as wealth declines, fertility rises. About 26% of women in the wealth quintile use contraception, compared to only 14% of women in impoverished households; the highest wealth quintile has a 27% unmet need for FP, while the lowest wealth quintile has a 35% unmet need [33] [14][13]. Modern contraceptives are not easily accessible in most developing countries, like Liberia, where the majority of the population lives below one dollar [35]. Interestingly, Moreira et al. found that married women in the top wealth quintile and with higher education had a greater rate of non-use of modern contraception due to infrequent sex as a result of distance from partners [16][36].

Education status and poverty, contribute to an unmet need for FP, among women accessing contraceptive services; most women and men, lack detailed information about the benefits of FP, despite having a high level of knowledge about some methods. Most women with low socioeconomic position do not have access to modern contraception, since it is not easily accessible or affordable in Liberia.

Psychological factors

Locus of Control/self-efficacy/ risk aversion

Women of reproductive age in Liberia are aware of modern contraceptive methods; there is a lack of comprehensive and accurate knowledge among those women; this knowledge gap continues to perpetuate myths and misconceptions that are deeply rooted in societal norms [20]. Most women in Liberia avoid using contraception due to their partners', friends'/other people's, families', religions', and communities' beliefs or misconceptions, some of which include the development of fibroid, infertility, fainting, and that it is harmful to the baby [20][37][44]. According to studies, contraception does have side effects, and the fear of those side effects, whether experienced or anticipated, contributes to an unmet need For FP. Examples include menstrual changes (heavy bleeding or

absence), weight changes, nausea, headaches, and others. Most women hold the belief/perception that menstruation is regarded as a means of cleansing the body, therefore a lack of menstruation would result in sickness [37] [40] [45] [20]. Women's choices vary, depending on how strongly they believe they should adhere to one method over another, based on personal experience with the chosen method [16] [35] [38]. The unmet need for modern contraception, among women, has been linked to a psychological factor, as it is influenced by socio-stigma and dissatisfaction with current contraception options. Stigma is a significant barrier to contraceptive use, because it can be both internal and external (enacted) [41] [35] [36]. The choice and decision of women, to use modern contraceptive methods, are associated with risk and perception of method effectiveness [37]. According to studies, women who do not use contraception, cited contraceptive failure and other health risks, as some of the reasons for not using contraception [38] [39]. The widespread misconception about modern contraception and fear of side effects, prevents women with a high unmet need, from accessing FP services [37] [42]. Opinions and personal beliefs, about contraceptive use, influence the unmet need among Liberian women, as women may choose not to use contraception, due to perceived side effects and disadvantages, or because of the opinions of family, friends, or partners.

3.1.2 Women and girls empowerment

The ability of a woman to have children and choose a contraceptive method depends on her sense of empowerment. The overarching target, as stated in the London summit on FP 2020 in 2012, is to achieve 120 million extra users of modern contraception in the poorest countries by 2020. The achievement of this goal is consistent with the Sustainable Development Goals (SDG) 3 and 5, which emphasize health for all, gender equality, and women's empowerment [3] [39]. In Liberia, because of power dynamics between men and women, most women and girls are denied a choice over their reproductive lives as women's decisions (Gender) regarding the use of modern contraception are influenced by their male partners [46][16]. Women and girls may require permission from their husbands to visit a health facility and may be unable to pay for services [16] [46]. Despite having the right to make reproductive decisions for themselves, some women, particularly married women, have difficulty discussing contraception use with their partners. Liberia is a patriarchal country, in which men hold the most power and are less involved in FP promotion [20] [16] [41]. According to the LDHS, women between the ages of 15 and 49, who participate in household decisions, are more likely to use contraception, than women who do not (22% and 11% respectively) [12] [13]. In Liberia, women gain control over their ability to use modern contraception and plan their families, as they become more empowered. Women who participate in decision-making, have a lower unmet need for FP (30%) than women who do not participate (35%) [20] [13]. Women's empowerment plays a role in the unmet need for FP in Liberia. Liberia, as a patriarchal country, where men have the most of the decision-making power, women have less autonomy over issues concerning their reproductive health, including access to FP services, which contributes to the unmet need among those women.

3.2 Supply Environment Factors

3.2.1 Policy Environment

To improve access, the Liberian government is committed to keeping all FP services free of charge in public facilities. The National Policy on Health Promotion 2016-2021 was created to ensure that health is regarded as a fundamental human right that should be accessible, available, and affordable to all [(6)]. The Ministry of Health (MOH) released national health promotion guidelines (the National Policy and Strategic Plan on Health Promotion, 2016-2021, and the National Health Communication Strategy, 2016-2021). By expanding information, supporting couple decision-making, and fostering self-efficacy, the programs aim to raise the proportion of men and women of reproductive age, who space their children, at least two years apart [(6)(20)]. Despite the existence of this guidance, FP program would benefit from converting it into a complete and focused social and behavioural change action plan with key messages and resources [(6)]. As a barrier to access, there is a lack of enforcement of free FP services. According to a UNFPA survey, 1.9 percent of public services impose user fees, whereas hospitals charge consultation fees [(20)(47)]. These factors prevent women from accessing FP services and increase the unmet need among those women.

Liberia developed a Costed Implementation Plan (CIP) as a road map to ensure that every Liberian has access to the highest quality sexual reproductive health services, including FP, and that they can fully exercise their reproductive rights, manage fertility options, and have equitable access [(20)(47)]. The main intervention is to raise the mCPR from 30.7 percent to 39.7 percent by 2022, by ensuring that couples, individuals, and adolescents have access to a full range of quality and affordable contraceptive services, as well as a location of choice. It is estimated that implementing this plan will prevent 600,000 unintended pregnancies, 216,000 unsafe abortions, and 3,300 maternal deaths between 2018 and 2022 [(20) (47)]. The plan is aligned with the various goals committed to, at the FP2020 summit in 2012, as Liberia was one of the 24 countries in attendance, and the launching of the Reproductive Maternal Neonatal Child and Adolescent Health 2016-2020 (RMNCAH) and the endorsed Liberia Investment Case (LIC), which aims to reduce maternal death to 600/100000 lives birth, teenage pregnancy rate by 25%, and fertility rate by 25%by 2020 [(15) (11).] The CIP is a multi-year plan that outlines actions, to achieve national FP objectives. The plan includes strategies for government and FP stakeholders to prioritize areas of investment and identify the human and financial resources required for implementation. Service delivery, commodity security, youth, and an enabling environment, are among the priority areas [(14) (20) (47).] The national gender policy was drafted in 2009 with the goal of promoting unity, liberty, stability, equality, justice, and human rights, as well as providing opportunities for social, economic, and political growth regardless of gender [(48)].

3.2.2 Human and Financial Resources

Human resources

At the national level, the health system is responsible for policy, planning, and resource mobilization and allocation. Decentralization of service delivery occurs at the county, district, and community levels [20]. The total number of health workers increased from 1396 in 1998 to 11430 in 2016. The number of healthcare facilities has grown from 618 in 2010 to 770 in 2017. In 2016, there were 35 hospitals, 51 health centres, 618 clinics, and 137 pharmacies in the country, one health centre serving 5500 people [49]. Privately owned health facilities made up 22% of the total. There were 117 doctors, 436 physician assistants, 2137 nurses, and 659 midwives in the health workforce. Mal distribution of the health workforce across the country is still a challenge [24] [49].

Inadequate distribution of skilled health providers has a significant impact on the delivery of quality FP services, 70% of Liberia's 10000-strong health workforce is non-clinician or unskilled, with 50% based in the country's capital, Monrovia. Inadequate numbers of new graduates from pre-service institutions, high attrition rates, particularly in rural areas, and insufficient opportunities for FP in-service training, all contribute to facilities lacking the necessary number of skilled providers to meet FP coverage and quality [20][47][54]. Some partner-funded projects support the funding of FP in-service training; however, the small amount of in-service training is poorly coordinated, and lacks a mechanism to track trained and untrained staff, and has no impact due to a poor selection of participants. The incentive attached to the training has allowed the same participant to attend multiple times, affecting the uptake of modern contraception and contributing to the unmet need for FP [20] [47].

The GOL is the primary provider of contraception services for the majority of women (72.4 %). Clinics provide 29.3% of services, hospitals provide 19%, and health centres provide 18.1% ([20]. According to the 2016 Malaria Indicator Survey (MIS) report, most women get implants and injectables from clinics, hospitals, or health centres, while pills and condoms are obtained from private pharmacies. Pills and condoms have also been made available through the government's Community Health Assistants (CHAs) program, with 5 percent of women reporting access, but the policy does not allow CHAs to provide injectables, which is the preferred method of contraceptive in Liberia [21] [6][50]. Vasectomy for men is not practiced in Liberia; data from 2016 show a 0.00% use of vasectomy in Liberia [12]. In Liberia, emergency contraception is still relatively new, and only a few facilities provide emergency contraception services [12] [20]. The majority of available contraception is concentrated in urban and peri-urban areas [21]. Inadequate human resources, as well as limited skilled personnel for FP services, pose a variety of challenges in terms of unmet need among women, as they are unable to access those services.

Financial resources

In 2018, the total cost of FP in Liberia was estimated to be $8,925,829 (USD) [14] [20]. The breakdown is shown in the table below:

Table 1: Annuel costs by Thematic Area for 2018 in USD[14] [20]

Area	**2018**
Service Delivery	$3,074,355
Commodity Security (Programs)	$212,942
Commodity Security (Commodities and Consumables)	$1,895,445
Demand Generation	$1,179,150
Youth	$2,195,452
Enabling Environment	$368,486
Total Costs per Year	$8,925,829

However, budget allocation to FP in Liberia lags far behind estimation and annual costs; budget allocation falls far short of FP service estimation. See below figure 2: Liberia's budget allocation to FP (commodities) [20].

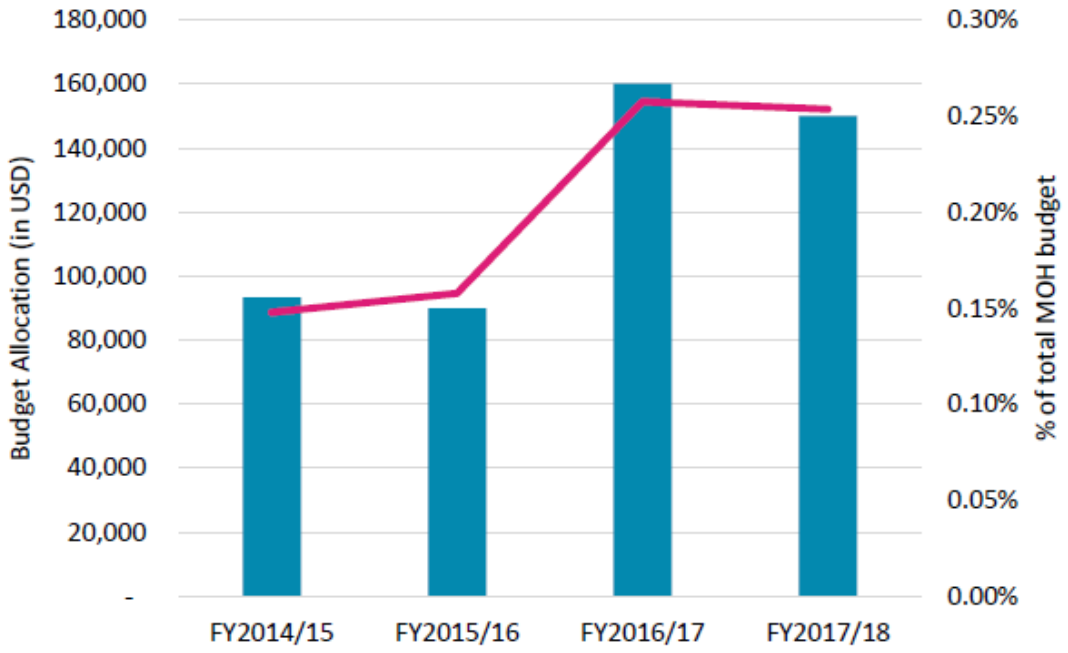

Figure 3: Family Planning Budget Allocation, FY 2014/15 to 2017/18 [14]

The budget allocation for 2017/2018 was approximately 150,000 (USD), representing 0.25% of Liberia's total health budget. Budget disbursements in Liberia, particularly in the health sector, are not completed and fully disbursed [20]. This is because, in part, of insufficient funds, a delay in approval, and the bureaucracy associated with processing payments and releasing quarterly allotments. Despite budget allocations, for FP commodities in Liberia, between 2014 and 2018, no funding was disbursed to family planning commodities in all four years, and there is a lack of robust

advocacy for resource mobilization for FP services [14]. As a result, the majority of FP services are funded through OOP and donor contributions, which account for 51% and 33% respectively [15] [21]. The UNFPA and the Swedish International Development Corporation Agency, are two developing partners, that support FP commodities and services in Liberia (SIDA) The lack of stability and long-term funding, for family planning in Liberia, continues to be a key impediment to attaining FP goals and expanding contraceptive prevalence rate [20][51].

Commodity security

Poor working conditions, such as a lack of or limited equipment and supplies, commodity stock-outs, and infrequent monitoring and supervision systems, all lead to poor service quality [52]. GOL and partners have engaged in several initiatives to address commodities stock out at all levels of healthcare delivery, but a frequent stock out of contraceptive commodities has remained a key problem. In Liberia, injectables have emerged as the most popular method of choice, with 66.2 % of health institutions, reporting a stock out of FP goods, according to a UNFPA survey in 2016 [20][52].

3.3 Development Program

According to estimates, 29% of all Liberians and 60% of rural Liberians walk an hour (5 kilometres) to the nearest health facility [20] [6]. To improve service delivery in rural areas, the GOL launched an active National Community Health policy and National Community Health strategic plan 2016-2021, which outlines the provision of health services at the community level beyond 5 kilometres from the nearest health facility. The GOL established a new health workforce known as Community Health Assistants (CHAs), who will work four hours per day. The goal was to deploy 4,000 CHAs by 2021[6][20] A comprehensive training module was also developed to strengthen their capacity; one of their primary responsibilities is to provide FP services to community members, including counselling, oral contraception, and referral to a health facility for injectables and long-acting and permanent methods of contraception. Before 2008, the community-based health worker's role was limited to health promotion alone. Although 2,249 CHAs have been trained across Liberia's counties, there is still a service coverage gap [6]. Another type of initiative, to promote contraceptive access in hard-to-reach areas, is outreach service, in which workers from designated facilities visit hard-to-reach areas, to give FP services. Poor planning, inadequate funds, competing priorities, poor coordination, and other factors, hamper the majority of program efforts [20] [14] [6]. More pronounced among these factors include impacts of Ebola and COVID-19. FP distribution in Liberia fell by 65% during the Ebola outbreak [54] [53]. This is due to a shift in focus away from the devastation caused by these diseases. The limited number of available health workers was diverted to combating diseases and protecting the country. Also, during the COVID-19 pandemic, supply and distribution of contraceptives were hampered due to lockdowns and closures of primary, non-essential health care centres, as well as limited supply from donors and other organizations to other countries, of which Liberia was one [54][55].

Integrating FP services into other health areas to reach those who have an unmet need. According to the LDHS 2007, 82% of postpartum women had an unmet need for FP, and the majority of those

women took their children for immunization [56]. Integrating these services, provided an opportunity to increase modern contraceptive uptake and reduce the unmet need, but there were few training opportunities for postpartum FP and the topic is not included in the training module, additionally, few providers who had been trained lacked the necessary equipment to perform the procedure[21][56].

In 2011, the Maternal and Child Health Integrated Program (MCHIP) in Liberia collaborated with the MOH and launched a proof-of-concept initiative, that integrated FP and immunization services at health facilities, to address the high level of unmet need for FP and behaviour change communication material, which was also designed, including postures, brochure, and job aid to help to reinforce key messages to mothers [47] [56]. The Expanded Immunization Program, which provides routine immunization for children in their first year of life, was integrated with postpartum FP services as a way to provide women with more comprehensive services, aimed at improving access to FP, 90% of postpartum mothers have expressed desire in delaying or stopping childbearing, but still have an unmet need for FP during this period [47].

3.3.1 Behaviour Change Communication

Healthcare providers in facilities are the primary source of FP information. Although some health facilities organize daily health talks, that include FP messages to attend to clients, there is still room for more people to be reached. The effort to integrate FP messages with other areas of health, such as immunization, has been implemented in a few facilities, but most providers face a lack of IEC/BCC materials [20][56]. Community mobilization is another effective strategy to promote FP services and challenge societal norms; during contraceptive day and FP week, community volunteers and providers visit public areas, hold radio talk shows and group discussions [21]. The lack of a dedicated family planning program, and social marketing strategy, as well as the Social Behaviour Change Communication (SBCC) strategy, lead to a weak and disjointed demand-generation effort. Short-term behavioural change outcomes, such as service uptake, are also prioritized by programs, whereas changing societal norms receives less attention [20].

3.3.2 Private sector/International/local Non-Governmental Organization

To improve the quality of FP services, the government has collaborated with partners. A large amount of healthcare services is provided by the private sector, both for-profit and non-profit. In Liberia, 30% of health facilities are owned privately and offer 62% of FP services. Some faith-based non-profit organizations do not provide contraception due to their beliefs. Between 2007 and 2013, 30% of women received FP services from private facilities such as drugstores, pharmacies, and clinics [54] [20]. The Liberian Planned Parenthood Association is the country's oldest FP organization, providing FP information, education, and communication surrounding SRHR, as well as HIV/AIDS prevention services such as voluntary counselling and testing, by working with the government and other relevant ministries [57]. They have 92 service points, including eight static clinics and two youth centres. It employs 26 full-time employees, and fieldwork is performed by 42 Community-Based distributors (CBDs) and 134 peer educators [57].

3.4 Demand for healthcare

3.4.1 Personal wellness/care-seeking/ Gender equity

Individual factors, women's and girls' status and empowerment, functional areas of policy environment, human/financial resources, and development programs levels, all have an impact on the demand for healthcare, which is another level of the framework. As mentioned above, fear of side effects, such as prolonged bleeding associated with contraception or persistent infertility, also discourages women from using modern contraception and to unmet need for FP (37). Women's ability to seek FP services is hampered by limited financial and human resources, lack of male involvement in FP services, as well as poor program implementation [(10) (20)]. In most societies, such as Liberia, most women of reproductive age who are married or in union do not have autonomy over their reproductive lives because they are afraid of being domestically abused or chased from their marital homes when seeking FP services. Gender inequities, as well as norms and values, contribute to poor reproductive health outcomes for women and girls, with certain groups such as sexually active unmarried adolescents, disabled women, and those living with HIV or sex workers are stigmatized by community members and service providers when seeking FP service [(41)(45)]. These factors influence care-seeking and contribute to the unmet need for FP.

3.5 Service Delivery Environment

This is on the same level as the demand for healthcare on the framework and it is influenced by functional areas to policy, human/financial resources, and development programs. This level focuses on access to healthcare, quality of care, and gender sensitivity.

In Liberia, many women complained about factors, that impede their ability to access services, such as a financial barrier, which was mentioned by 47% of women, and distance to a health facility, this was cited as a barrier to access by (40 %) of women, particularly those living in rural areas. Only 8% of women say they get permission from their spouses to use services. Access to services improves with education and wealth quintile [(20) (10)]. Service delivery activities ensuring adequate, right-based, facility-based, and community-based FP commodities and services, by training skilled service providers, involving the private sector, and integrating family planning service delivery, with antenatal and HIV/AIDS service delivery, to improve access and quality[(20)]. More than half of healthcare facilities offer short-acting FP services, such as male condoms, pills, injectables, and implants; other short-acting methods, such as female condoms and emergency contraception, are available in fewer facilities. IUCD is available in 30.3% of primary care facilities· [(20)]. Currently, there is a low quality of care being provided in health facilities, both in rural and urban areas, because of poorly equipped and unskilled health providers, lack of functional systems and infrastructures. Other factors, such as a high attrition rate of skilled providers and a lack of opportunities for in-service FP training, contribute to the country's low FP service quality [(20) (52)] Most FP services are perceived as not welcoming male clients or partners; there is a lack of policies, services, and hours of service geared toward men; and health providers are not trained to counsel men on contraception [(34) (36(58)]

3.6 Health Behaviours

This is influence by service utilization and other non-program factors

In Liberia, the unmet need for FP has been linked to poor reproductive health outcomes, and the majority of women with unmet FP needs, face barriers to accessing services, as mentioned in other sections. Due to health concerns/side effects, the unmet need for modern contraception has also increased, among most reproductive-aged women in Liberia, who previously used contraceptive methods. Side effects were cited as causes for not using contraception by 34% of pill users, while contraceptive failure was cited by 16 % [13]. Health concerns/side effects, were the most common cause for injectable users' discontinuation (56%), compared to 5% failure. 37.2% of failures and 11.3% of side effects are attributed to other methods. Pills (5.6%), injectables (3.1 %), and other modern contraceptive methods (8%) account for women whose husbands or partners disapprove of the use of contraception. Women who reported a lack of access/distance, account for pills users (3.5%), injectables (4.2% and other methods (2.2%) [13] [32] [20]. In both groups, 14% (married) compared to 28 % (unmarried) use injectables, implant 5% (married) compared to 10% unmarried, pills 4%, IUCD 0.9 percent married and 1.3 percent unmarried. EC 3.1% married and 4.3% unmarried [13]. The majority of women use contraception after having a child. In Liberia, two out of ten poorer women rely on the private sector, compared to four out of ten wealthy women, as perceived cost discourages women from seeking services because many women are poor and cannot afford the cost [26][3]. Young women who want to delay childbearing may anticipate negative attitudes from health providers or community members, in the form of judgment, shame, fear of lack of confidentiality, denial of services, and excessive questioning [23] [24] Personal beliefs about fulfilling rights and not providing FP to specific populations, such as unmarried adolescents, a lack of individual competencies and time due to an intense workload, and bias against certain methods, such as IUCD, all contribute to the unmet need for FP in Liberia.

3.7 System Factors influencing demand and supply

The following system factors contribute significantly to the unmet need for FP, because most women who want to space, delay, or stop pregnancy, do not use modern contraceptives due to cultural and religious concerns, limited human and material resources, as a result of less priority placed on FP service, and a lack of laws enforcement.

3.7.1 Socio-Cultural Factors

In Liberia, cultural barriers, such as strong traditional beliefs, and social stigma and discrimination, have been cited as influencing the unmet need for FP, as people prefer having more children and extending family lineages, or preferring a male child or more male children, so most women without a son, continue to give birth until a male child is born. Most men believe that women should have more children, as value is placed on them. [15] [17]. Having more children in a polygamous union may provide security for the women; women do not use contraception because their co-wife may have more children. In most societies, including Liberia, home security is associated with birth; married

women are expected to have many children, and women who do not bear children, are sometimes chased from their marital homes. In Liberia, according to religious belief that children are a gift from God and bring with them blessings [42]. Modern Islam, Catholicism, and other traditional beliefs, contraception is associated with the killing of innocent children, because it affects breast milk and harms the baby, and God is the only one responsible for limiting children [15] [42] [20] [35].

3.7.2 Political

Because the MOH is overburdened with competing priorities and inadequate resources, FP in Liberia receives little attention and priority in health, development, and political affairs. On issues like Ebola and COVID 19, politicians pay attention to the health sector, but concerns including unintended pregnancies and FP get less attention [20].

3.7.3 Legal Factors

Several national policies and strategic plans have represented the national vision for FP. The GOL continues to refine the regulatory environment, to promote effective policy environments for FP, to combat teenage pregnancy, and minimize maternal mortality. Liberia adopted the Children's Act in 2011, to prohibit child marriage under the age of 18 years, to prevent adolescent pregnancy, delay sexual debut, and improve the women's RMNCAH outcomes [59]. Despite all of the policies, there are still gaps in the implementation of some of them, such as the lack of enforcement of laws against child marriage, sex with minors, and rape, and access to free FP services. According to UNICEF, 36% of Liberian girls marry before the age of 18 years, and a lack of clarity on the age eligibility of consent, to use contraception, creates barriers for sexually active unmarried adolescents seeking FP services [59][20]. This is especially important for providers who are afraid of parental consequences if they give contraceptives to adolescents. Those legal issues contribute to the high unmet need for FP.

Chapter 4: Best practices in addressing the unmet need for FP in similar context to Liberia

This study analyzes best practices, as an evidence-based intervention for addressing unmet FP needs, among reproductive-age women, in countries similar to the research context.

4.1 The rationale behind selecting countries for best practices in similar context

The rationale behind selecting countries for best practices in similar context

Sub-Saharan Africa (SSA) has the highest proportion of unmet contraceptive needs among women of reproductive age, with 47 million (25%) contributing to poor reproductive outcomes. Unmet FP needs are cited as a leading cause of unsafe abortion, particularly among young people (1). In 2017, modern contraceptives prevented an estimated 308 million unintended pregnancies; if all women's contraceptive needs are met, an additional 67 million unintended pregnancies will be avoided. [3] And [4] [20]. Though adequate data on unmet needs in most African countries are scarce, certain countries have been able to reduce unmet contraceptive needs through pragmatic and evidence-based approaches. Prominent among few of these countries are Kenya, Ghana, and Rwanda.

Unmet need for FP in Ghana has decreased over time, from 51% in 1988 to 43% in 2008 and 30% in 2014 [64]. In Kenya, a similar improvement had been made. In 1993, 35.5% of reproductive-age women had unmet contraceptive needs, which dropped to 23.9% in 1998, then increased to 26% in 2008, and are now at 18% [73]. Unmet needs for FP in Rwanda have been reduced to 17% in 2015, compared to 36% in 2000, 37.9% in 2005, 31.7% in 2008, and 24% in 2010[92]. An in-depth analysis, of the methods for addressing unmet needs in these countries, is expected to provide a basis for a pragmatic approach to addressing unmet needs in Liberia.

4.2 Findings in selected countries

4.2.1 Ghana

Ghana is one of the countries in West Africa, where modern family planning methods are highly adopted, by both married and unmarried women of reproductive age. This is due to a proactive and evidence-based approach employed in Ghana, in meeting the unmet need for contraception. In the 1990s, access to the nearest health facilities was 8 kilometres or more, for approximately 70% of Ghana's population, and access to and use of family planning was significantly low, particularly in rural communities, resulting in a high unmet need. To address the high unmet needs and other health challenges, Ghana's government launched a national community-based health initiative known as Ghana's Community-Based Health Planning and Service (CHPS) in 1999 [60]. This initiative implements strategies that have been trailed in specific regions of Ghana and are now being implemented throughout the country. Among these strategies are: nurses recruitment from their home districts; the recruitment and deployment of trained nurses, known as Community Health Officers (CHOs), to locations such as villages, remote and very rural areas, where they provide basic health services including FP services in homes, communities, and clinics. Community organizational

activities support the recruitment, training, and deployment of CHOs, and are overseen by regional health leaders. The effective provision of family planning information and services is critical to CHPS. This was accomplished through the delivery of contraceptives such as injectables, pills, IUCDs, and other long-acting methods in homes and communities [61] [60]. Promotional services geared toward the men's needs, such as the distribution of male condoms, were also made available. Male CHOs and volunteers were primarily in charge of organizing these activities. As a result, male participation as CHOs was also encouraged [62][63]

Regional nursing training schools were established, to train CHOs and other volunteers. These training schools also served to educate CHOs in the local languages of the communities, as well as their culture and traditions [62]. This is to provide contraceptive services that are tailored to the people's traditions and culture, while also addressing language barriers in service delivery. This is to ensure that women, with unmet needs, have access to contraception without being hampered by language, culture, or social barriers. The community provided resources in the form of scholarships for CHOs as well as housing for CHOs and other volunteers known as "health posts." This is to allow CHOs and volunteers to live within their community of service to maintain a good relationship with community dwellers while also maintaining confidentiality [63] [60].

Community leaders were made to share the initiative's vision to ensure the successful implementation of CHPS services in providing contraception and other health services [60]. This involvement included budget planning and allocation, negotiations with local governments and authorities, as well as NGOs, to provide funding and resource initiatives for CHPS services. The successful implementation of this initiative, in some regions of Ghana, resulted in an increase in contraceptive use and a reduction in unmet need among women of reproductive age in Ghana from 51% in 1988 to 43% in 2008 and 30% in 2014[63][60][64].

4.2.2 Kenya

In most SSA countries, including Liberia, health workers such as doctors, nurses, and midwives are in short supply, particularly in rural regions. To address the substantial unmet need for FP, Community Health Workers (CHW) should be considered, as a viable service delivery alternative and a feasible way to expand access and reduce financial barriers [65]. Providing timely contraceptive information and services can help reduce the unmet need for individuals and couples.

According to a study conducted in Kenya, the most commonly used methods of contraception are injectables, implants, and male condoms, which are mostly obtained through public services. Girls aged 15 to 19 years have already begun childbearing, and 47% of births are unintended. The unmet need for FP among this group is 23%, compared to 19% among 20-24-years and 18% among all married women [66]. The high unmet need can be explained by access challenges, which include cultural norms, decision making, distances, cost, among others [66]. Kenya launched a community health strategy in 2006, which was updated for 2014-2029. The government employed facility-based Community Health Extension Workers (CHEWs) to supervise the Community Health Volunteer (CHVs). The CHV works in teams in a variety of community health units and households, with each team or group expected to provide FP services to 5000 people, with an average of 1000 households,

delivering FP services to people at their doorsteps [67][68], The CHVs' responsibilities entail promoting, discussing, and providing basic counselling on all family planning methods; addressing misinformation; and providing selected contraceptive methods (mostly condoms) at the community level. Two pilot studies in Meru and Narok Counties concluded that CHV injections were safe, acceptable, and feasible in Kenya. Some CHVs now offer injectables to clients who would otherwise be unable to access facility-based services [67]. Ormel et al. found that CHV services were effective in reducing unmet needs among young sexually active men and women in Kenya, as well as other age groups, in a study done in Narok and Homabay counties in Kenya. The formal function of CHVs regarding contraceptives, the influence of community norms and values, the role of CHVs as contraceptive providers for youth, CHV knowledge and skills, and CHV motivation and incentives all shaped CHVs' role in lowering unmet need [67][68][65]. This intervention contributes to the increment in the provision of contraceptives to men and women of reproductive age by addressing cultural and religious norms influencing unmet need.

On the other hand, the Maternal, newborn, and child health (MNCH) integration approach focused on women of reproductive age who attend antenatal care (ANC), postnatal care (PNC), or child health services [82] [87] at four main levels of Kenya's health care system, which include Community level, Primary care level, County level, and National level [82] [88]. Contraception services, orientation, and access to family planning methods, have been made mandatory for women who attend these services. This approach has had a high level of success in providing women with access to contraception and reducing the unmet needs among reproductive-age women. According to one study, 40 % to 85% of women, who received ANC, PNC, and child health services in the Bondo area of Kenya, health centres also received FP services [69] [70]. Unmet needs for spacing and limiting have decreased in Kenya as a result of the FP services provided by MNCH. Through these efforts, the unmet need for contraception in Kenya has dropped to 18% [71]) for all women, compared to 35.5 percent in 1993, 23.9 percent in 1998, and 24.9% in 2003, and 26% in 2008 [71][73].

4.2.3 Rwanda

Rwanda has been cited as one of the countries that have done exceptionally well in addressing unmet FP needs, as well as increasing mCPR over the years [74]

Two key reasons have been identified as the foundation for Rwanda's success in reducing unmet need for FP. These include a strong government vision, with leadership commitment to reducing unmet need for FP, as well as effective strategies and approaches to strengthen Rwanda's health and health financing systems, addressing supply issues as well as the population demand [74][75].

Rwanda's government and leadership began addressing population growth in the 1980s, following the genocide, with its ideas known as the RAPID model, setting a vision 2020, with the goal of every Rwandan having a per capita income of 900$ per year. As a result, this could only be accomplished if each family has fewer than four children [76]. From there, FP was considered both a health and an economic issue. The Parliamentary Network on Population and Sustainable Development (RPRPD) was established in 2002, to ensure that parliamentarians hold several meetings and discussions with members of their constituencies, about the government's plan and the essence of FP [74][75].

Furthermore, the MOH consistently provided information about FP on national television by demonstrating condom use, while publicly chastising religious leaders for failing to support FP services [77]. These political leaders' efforts, to reach a consensus on FP, resulted in national support for FP as well as the inclusion of FP policies at many levels of society [74]. Local government officials were tasked with championing FP campaigns at the district and community levels. This was accomplished through public events. National community workdays known as "*umaganda*," as well as Maternal and Child Health (MCH) week, were established to have discussions on FP, among other health issues, while health care providers provided FP services at these events [74][75].

Rwanda has had a decentralized healthcare system in place since 2005. The number of health centres at the sector and district levels was increased, medical personnel training was strengthened, and data for decision-making was made available. Various ministries (for example, the Ministry of Health (MINESANTE), the Ministry of Finance (MINECOFIN), the Ministry of Local Administration (MINALOC), the Ministry of Education (MINEDUC), the Ministry of Gender and Women in Development (MIGEPROF), and the Rwandan Parliamentarians' Network for Population and Development) have all integrated family planning into their health services[77][78][78].

In 2010, FP service delivery was decentralized to lower levels of the healthcare system. Services were expanded beyond major hospitals to include health centres, health posts, and rural communities. In 2010, 92% of Rwandan women of reproductive age, received contraception from these various government services [78] [77]. In Rwanda, various health insurance and sponsorship methods have been established, to provide access to FP. One example is the establishment of community-based health insurance, known in Rwanda as "*Mutuelles*.". The essence of *mutuelles* is to provide quality service and a platform for dialogue, between the communities and health care providers. Despite FP services in Rwanda being free, the goal of *mutuelles* is to bring more people into contact with the healthcare system. According to available data, 78% of Rwandan households have health insurance, with *mutuelles* covering the vast majority [77].

Religious organizations and leaders were one of the strong oppositions to FP in Rwanda. In Rwanda, 4% of health facilities are religiously affiliated. To combat the religious leaders' opposition, the Rwandan MOH established health posts near health centres owned by religious organizations to provide FP services to the people [78]. These proactive approaches resulted in an increase mCPR to 53% in 2015, up from 17 in 2005[92]. Thus, the unmet need for FP was reduced to 17% in 2015, a 50% reduction in 10 years, as it was 36% in 2000, 37.9% in 2005, 31.7% in 2008, and 24% in 2010.[74][75][78][79].

Chapter 5: Discussion

This chapter discusses and analyses the findings of the literature review according to the thesis objectives.

5.1 Demand factors

Age is found to be the most influential factor in determining the unmet FP needs among women of reproductive age in Liberia. Younger age is associated with a high level of unmet need for FP. According to some findings, young women have a higher unmet need for FP than older women. FP needs of younger, sexually active unmarried women, are not often met as a result of factors, some of which are deeply rooted in social and cultural norms that encourage unmarried sexually active young women to abstain from sexual intercourse until marriage, social stigma, and discriminations from community members and service providers and, consent from parents all contribute to the difficulty of young people access to FP services and increase an unmet need for FP. Furthermore, younger women who are married, face a barrier to meeting their FP needs, as a result of their partners' approval and limited knowledge, as most men are unaware of the importance of FP. Young women have difficulty discussing FP with their partners, because the desire to have more children, is greater at this age than in older married women, and they will require permission from their partners, before visiting the health facility. Moreover, contraception is not easily accessible, and the majority of the population is poor and unable to afford the cost. Women of a younger age are unable to access these FP services because of their low socioeconomic status. Findings also show that a lack of comprehensive and accurate knowledge about FP, contributes to the high unmet need among young women in Liberia, as they use contraceptives because of personal beliefs, friends and family opinions, and other side effects.

5.2 Supply Environment Factors

The unmet need for FP in Liberia, is influenced by the policy environment, human and financial resources, and development programs. Policies were put in place to ensure that everyone has access to, availability of, and affordability of health care, including FP services. Some programs aim to support couple decisions and increase the proportion of men and women of reproductive age, who space their children by at least two years, with free FP services. Despite these policies, there is still a barrier to access, due to a lack of enforcement of the free FP policy, as some public facilities in Liberia, including hospitals, charge users and have consultation fees. According to the findings, there is an inadequate distribution of skilled health providers in the delivery of FP services across the country, as more than half of Liberia's 10,000-strong health workforce is either non-clinician or unskilled, with half of them based in the capital Monrovia. The high rate of attrition, particularly in rural areas, contributes to poor access and coverage, which is linked to the increased unmet need for FP among rural women. There are limited funds allocated to FP programs, as a result, most of the FP programs are funded through OOPs and donors contributions in Liberia, resulting in frequent commodity stock-outs, lack of equipment and supplies and poor monitoring and supervision, finding

show majority health facilities report stock out of FP commodities. Although findings revealed that there is provision for in-service training, this training is inadequate and poorly coordinated, contributing to an unmet need. Furthermore, findings revealed that 60% of rural dwellers walk an hour to the nearest health facility, this implies that a greater proportion of women, living in rural areas, lack access to FP services, because of distances and that the private sector owns 30% of health care facilities, many women, are unable to access and afford private services because of costs. Some faith-based organizations, which could be a source of assistance in meeting people's FP needs, do not provide contraception as part of their services. The CHA program, which was developed in reaching FP services to the community, is poorly monitored and supervised.

Furthermore, the findings of the study show that family planning policies, services, and delivery in Liberia were not intended to educate and orient men. Health care providers are also untrained in counselling and recognizing men's family planning needs, which has a direct impact on men's level of contraception knowledge, as most women of reproductive age require their husband's permission to use family planning services. Health care provider stigmas, such as judgment, shame, a lack of trust and confidentiality, personal bias to preferred methods, and a lack of competence, all impede access to FP services, among reproductive-age women, resulting in a high unmet need. This has a significant impact on both the supply and demand for FP services.

5.3 Best practices in addressing the unmet need in selected countries

Evidence- based intervention from other countries

According to findings in Liberia, approximately 29% of all Liberians and 60% of rural Liberians walk an hour to the nearest health facility. This was the situation in Ghana in the 1990s, when access to FP services and other health services was 8 kilometres or more away from approximately 70% of the population, resulting in a high unmet contraception need. The community-based approach used in Ghana, is a viable method for reducing the unmet need for FP in Liberia. This is because contraception is made available at the household and community levels for free, removing the barrier of long-distance, before accessing FP services, which were cited as 40% barriers. Community leaders in Liberia could make a significant contribution to the initiative by utilizing the efforts of the Community Health Assistants (CHAs), who are already in place. It is hoped that involving community leaders in the initiative will encourage rural residents to use FP services provided by CHAs, as is done in Ghana with CHO services. In addition, the support of community leaders could encourage Liberian men to serve as CHAs, thereby providing basic FP education and services to Liberian men. This could lead to meeting the unmet need for FP among women in Liberia as a result of male involvement, as more men will have adequate knowledge and support their wives and/or partners in the use of FP. Furthermore, recruiting health providers as CHO for local districts, with opportunities for career development, will address the high attrition rate and reduce the unmet need due to inadequately skilled staff.

The community-based approach was also helpful in addressing the unmet FP needs in Kenya. Though this has been discussed in Ghana, the methods of providing FP services to young people, particularly injectables, which is the preferred method in Liberia by CHVs, could be adopted. This could lead to high coverage of FP services, among the young population, as barriers, such as cost, distance, and stigma, would be reduced to a minimum. In addition, the MNCH approach used in Kenya may be another feasible alternative for addressing the unmet contraceptive needs in Liberia. This would be accomplished by incorporating FP services into ANC, PNC, and child health services. In Kenya, this strategy has proven to be highly effective. The provision of FP services to women during ANC, PNC, and child health services reduces unmet needs for spacing and limiting and increases the access to information and contraception use.

Rwanda has had outstanding success in addressing the unmet need for FP among its citizens. A potential strategy to achieving this is to bridge the gap between leaders and citizens. According to the findings of this study, Liberia has a local government in districts and counties, yet FP programs are not prioritized by those local leaders, and policy implementation is poor. Research has shown that effective connection and communication between the government and citizens, was a viable way for the provision of FP services in Rwanda. Adopting this approach in Liberia would be a feasible way of reducing the unmet FP needs, particularly through enforcement of policy implementation and creating of awareness. Political leaders at all levels must be actively involved in health concerns in Liberia, particularly FP services, as is the case in Rwanda; FP services must be included as part of health packages for public and civil servants. Furthermore, because most faith-based organizations in Liberia do not provide FP services, religious leaders are opposed to the provision of FP services; consequently, an alternative such as a community health post should be established to expand access to FP services, without overruling religious leaders. These are practical approaches to minimizing the unmet FP needs.

5.4 Reflection on the Framework

In regard to the conceptual framework, both demand and supply side factors were critical to the research, as it addressed the actual scenario of the unmet need for FP in Liberia. Yet, some determinants that were discovered to be important, influencing factors in the Liberia setting, were missing, such as Age, Sex, and Marital status, as Age is one of the factors that contribute to the high unmet FP in Liberia. The original model was modified by the author of this study to fit the research context. Other non-program factors, however, influence health behaviours and outcomes. The unmet needs were found to be strongly related to high rates of teenage pregnancy, unsafe abortion, and maternal mortality. Taking into account all of the factors in the conceptual model, best practices that are replicable and feasible are identified and explored to achieve better health outcomes.

5.5 Thesis strength and weaknesses

The study's findings identified some of the social, cultural, economic, political, and legal barriers that women of reproductive age face when seeking FP services, all of which contribute to the country's high unmet need. However, there was a scarcity of literature on the subject in the research

setting, although the findings were drawn from countries similar to Liberia, there were differences in cultural, economic, political, and legal factors influencing unmet need when compared to Liberia. There were challenges in identifying best practices (evidence-based) from other countries that could be adopted in Liberia because some of the interventions were not applicable to the Liberian context. Unmet need for FP data was more available for married women than unmarried women, but data on the breakdown of unmet need for spacing and limiting was limited, and data on the unmet need for stopping was unavailable.

Chapter 6: Conclusion and Recommendations

6.1 Conclusion

In Liberia, FP demand and supply are influence by several factors. However, age is one of the influential factors that influence demand and contribute to unmet need for FP, as most young people face barriers, such as a lack of comprehensive and accurate knowledge about FP, low socioeconomic status, partner/parent influence, deeply rooted cultural and societal norms, gender inequalities, and social stigma from community members as well as healthcare providers in accessing FP services. Other factors, influencing FP services in Liberia, are the supply environment, which includes lack of enforcement of government health policies, poor implantation of programs, as well as inadequacy of skilled human and other resources. Social, cultural, economic, political and legal are all system factors that influence both demand and supply, for FP services. Effective policy implementation, practices, and approaches such as decentralization and community-based healthcare approaches, as practiced in some successful countries, are suggested approaches for addressing the unmet needs for FP in Liberia.

Women of reproductive age still encounter challenges that restrict their access to FP services. Unmet need and other negative reproductive health outcomes, such as maternal mortality and teenage pregnancy can be reduced by increasing access to and utilization of FP services. Current demand barriers include age, economic, and cultural factors, as the majority of sexually active adolescents are denied services. And, due to gender inequality, most women require permission from their partners, before seeking FP services. While the supply environment includes poor enforcement of government health policies, as well as a scarcity of skilled human and other resources, all of which contribute to Liberia's high unmet need for FP. Effective policy implementation, practices, and approaches, such as decentralization and community-based healthcare approaches, as practiced in some successful countries, are suggested approaches for addressing unmet FP needs in Liberia.

5.2 Recommendations

The recommendations are based on evidence of the findings, to improve the quality of family planning services in Liberia. The recommendations are specified in three areas: policy, research, and intervention levels.

There is an urgent need for the Liberian government, health sectors, and other stakeholders, to review current family planning health policies and implementation, to improve availability, accessibility, acceptability, and quality of family planning, thereby reducing the unmet need for FP. The following recommendations are made in particular:

5.2.1 Recommendations on Policy and Implementation

There is an urgent need for the Liberian government, health sectors, and other stakeholders, to review current family planning health policies and implementation, to improve availability, accessibility, acceptability, and quality of family planning, thereby reducing the FP unmet needs. The following recommendations are made in particular:

- The Liberian government should focus more on implementing family planning policies. Despite certain policies (such as the National Policy and Strategic Plan on Health Promotion, 2016-2021, and the National Health Communication Strategy, 2016-2021, RMNCAH, LIC) have been drafted to meet FP supply/demand, policy implementation has been weak. Here the implementation of these policies at various levels of health care in Liberia, central, regional, and local health supervisors, could be established to ensure free access to FP services, most especially among young people.

- The Liberian government should review its financial policy and its budget allocation and implementation for FP services. Constant commodity stock-outs are one of the causes of a high unmet need in Liberia. This could be related to the fact that funding for FP services is limited, and FP programs are not prioritized. For an effective supply and demand of FP services, timely release and increment in the allocation of funds for FP services should be considered and priority be given to FP programs.

- Adequate health centres and clinics, particularly in rural areas, should be built. Given that 29 percent of all Liberians and 60 percent of rural dwellers walk approximately 5 kilometres to access health care services, efforts should be made to bring health care closer to the people. Elimination of distance barriers to health care centres would lead to an increase in patronization and demand for health services, including demand for FP services, resulting in a reduction in the unmet need for FP services.

5.2.2 Research Recommendations

- In Liberia, community-based research on socio-cultural and traditional values (i.e. desire to have many children as means of social security among others) influencing demands for and use of FP should be conducted at the regional level by the MOH. This could provide insight on the best ways, to address misconceptions, posed by cultural barriers concerning FP. This will also aid in the development and implementation of traditional and culturally specific strategies for the delivery of FP services in rural areas.

- Research should be conducted by MOH on the knowledge, attitude, and behaviour of FP service providers in both the public and private markets. Service providers play an important role in determining the people's FP needs. As a result, the service providers' knowledge, in the provision of FP services, should be measured, this will help in providing where needed, continuous education on efforts to maintain/improve service delivery and contribute to more youth-friendly services.

5.2.3 Intervention Recommendations

- An effective community integration approach should be used, to collaborate the government's efforts. This could be accomplished by involving community leaders in financial planning services. Actions, such as the construction of health centres, the recruitment of CHAs, and the creation of awareness, could be carried out more effectively with the assistance of the community. In addition, male involvement in service delivery should be prioritized. Men should be involved as CHAs at the rural and community levels, and should also be given the responsibilities of educating other men about FP services. This would lead to a high level of awareness among men, as well as the support of men/partners in women's use of FP, thereby reducing the unmet needs.

- According to the study's findings, there is a shortage of skilled health care providers, as well as an inadequate distribution of skilled health care workers. Efforts should be made to increase the recruitment and training of young people as CHAs, by allowing them to provide FP services, which include addressing the widespread myths and misconception about contraceptive use, and the provision of injectables across the country, as this is the preferred method in Liberia and will reduce distance, cost and social stigma associate with the unmet need, most especially among young people.

- FP services should be integrated with other health services such as HIV/AIDS, ANC, and PNC, as it will address the cost, and stigma, associated with unmet need for FP and increase knowledge, access, and FP coverage

- Finally, there is a need for the introduction of quality assurance programs and conduct of regular evaluation and monitoring, to assess the quality as well as the performance of FP services in Liberia. This will enable the public and private sectors to measure the services' effectiveness and know the setbacks and provide ways of addressing them.

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Annex

Table 2: Search strategy Table (specific Objectives). Search terms were combined using "AND" or "OR"

No.	Literature	Search databases	SO1 Keywords	SO2 Keywords	SO3 Keywords
1	Peer-review published articles	VU library, PubMed Hinari Google Scholar	Age, Sex, Marital status, Women of reproductive age, FP, Liberia, Sun-Saharan, unmet need, LMIC, contraception, unfriendly services	Education, Liberia, LMIC, West Africa, Knowledge, poverty, FP, cultural, SDGs, Side effects, community belief, religious belief, Stigma, Gender	Best practices, West Africa, Ghana, , Unmet need, Contraception, FP, Male Involvement
2	Grey Literature	LDHS WHO, UNFPA United Nations, GOL Non-governmental organizations report	Women, Contraceptive, unmet need, Family planning, married, unmarried	FP, Cost, Liberia, Contraception, wealth, Gender, London Summit FP2020, women empowerment, SRHR	"Sub-Saharan Africa" FP2020 "Kenya" "Intervention" "Unmet Need" "Reduction" "Rwanda" "Ghana" Unmet "Need" Demograhic "Health Survey"