

Factors Affecting Use of Modern Contraceptives among Women in Ethiopia-Literature Review

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Ethiopia

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Development Policy & Practice/
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of Master of Public Health

By

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Declaration:

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Definition of terms

1. **Acceptability:** The services meet the expectations of users in terms of cultural and norms preference, skills of the staff, stigma and gender aspect (Jacobs et al, 2011).
2. **Affordability:** Ability of client to pay the cost of service such as resource of the client and agreeable to pay for both direct and indirect service price (Jacobs et al, 2011).
3. **Contraceptive Prevalence Ratio (CPR):** Percentage of women of reproductive age who are currently using, or whose sexual partner is currently using, at least one contraceptive method, regardless of the method used (WHO 2013).
4. **Geographical accessibility:** The physical space or journey time to reach the service delivery site from the clients' location. i.e urban/rural, transport cost and the way of transport (Jacobs et al, 2011).
5. **Evaluated needs:** Professional judgment about people's health status and their need for medical care (Andersen 1995).
6. **Family planning:** Ability of individuals and couples to anticipate and attain their desired number of children and the spacing and timing for their births. It is achieved through use of contraceptive methods and the treatment of involuntary infertility (MOH 2011).
7. **Health beliefs:** Attitudes, values and knowledge that people have about health and health services (Andersen 1995).
8. **Modern contraceptive methods:** includes male and female condoms, male and female sterilizations, injectables, pills, IUCD, implants, emergency contraceptives, and calendar methods (MOH 2010).
9. **Perceived needs:** how people view their own general health and functional state, as well as how they experience symptoms of illness, pain and worries about their health and whether or not they judge their problems to be of sufficient importance and magnitude to seek professional help (Andersen 1995).
10. **Unmet need for family planning:** women with unmet needs are those who are fecund and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the next child (WHO 2013).

Abbreviation

AOR	Adjusted Odds Ratio
BMC	Bio Medical Centers
CSA	Central Statistical Authority
CI	Confidence Interval
CBRH	Community Based Reproductive Health
CPR	Contraceptive Prevalence Rate
DHS	Demographic and Health Survey
EC	Emergency Contraceptive
EDHS	Ethiopia Demographic and Health Survey
FGAE	Family Guidance Association of Ethiopia
FHI	Family Health International
FDRE	Federal Democratic Republic of Ethiopia
FP	Family Planning
GP	General Practitioner
GoE	Government of Ethiopia
GDP	Growth Domestic Product
HC	Health Center
HDA	Health Development Army
HEP	Health Extension package
HEWs	Health Extension Workers
HO	Health Officer
HP	Health Post
HSDPs	Health Service Development Plans
HIV/AIDS	Human Immunodeficiency Virus /Acquired Immuno Deficiency Syndrome
IEC	Information Education and Communication
ICPD	International Conference on Population and Development
ICHD	International Course in Health Development
IUCD	Intrauterine Contraceptive devise
LAM	Lactational Amenorrhea Method
LAPMs	Long Acting and Permanent Methods
MNSO	Malawi National Statistical Office
MSIE	Marie Stopes International Ethiopia
MCH	Maternal and Child Health
MMR	Maternal Mortality Ratio
MDHS	MEASURE Demographic and Health Survey
MDG	Millennium Development Goal
MOH	Ministry of Health

NPC	National Population Council
NPP	National Population Policy
NISR	National Institute of Statistics of Rwanda
NS	National Survey
NGOs	Non Governmental Organizations
OR	Odds Ratio
PRB	Population Reference Bureau
RH	Reproductive Health
SWA	Sector Wide Approach
SNNPR	Southern Nations, Nationalities and Peoples' Regions
STI	Sexually Transmitted Infection
TFR	Total Fertility Rate
THE	Total Health Expenditure
UN	United Nation
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
USD	United States Dollar
WHO	World Health Organization

Abstract

Background: Modern contraceptive use plays a vital role in the reduction of maternal and child mortality. Though knowledge of at least one modern contraceptive method is almost universal in Ethiopia and contraceptives are available for free, it is not translated into use.

Objective: To identify influencing factors of modern contraceptive use among women in order to inform policy makers and stakeholders on how to strengthen family planning programs in Ethiopia.

Methodology: Literature review using the adapted Andersen's 1995 behavioural model of health services use as guide to analyse the influencing factors.

Findings: Health belief and health care system factors are most likely to affect access and use of modern contraceptives. Women who are young, unmarried, uneducated, Muslim, poor, suffer from gender inequality and living in the rural areas are less likely to access and use modern contraceptives. Furthermore, inadequacy of health facilities, shortage of staff, lack of supplies, limited information, limited competency of health care workers particularly HEWs and acceptability of FP services are identified gaps in the current health care system and likely associated with low use of modern contraceptives.

Conclusion and Recommendations: Health belief and health care system are important barriers to access and use of modern contraceptive methods in Ethiopia. It requires raising community awareness at the lowest community level to minimize the effect of perceptions, beliefs, values and norms and increase knowledge. Increase accessibility, availability, quality of FP services and improving competency of health care providers are required to increase the use of modern contraceptive methods.

Key words: access, use, modern contraceptive methods and health beliefs.

Word count: 11,487

Introduction

I am a Statistician, who was working in the reproductive health data management in a local and in an international Non Governmental Organization (NGO). Always when I went for a field work I saw a pregnant woman having a baby at her back, another very young two children in her left and right hand walking for agricultural work. When I analysed data the increasing trend of abortion services and low use of modern contraceptive methods made me to ask why women are not using modern contraception to prevent unintended pregnancies and space or limit childbearing.

The high numbers of mothers' death related to pregnancy and childbearing made my question even stronger. This thesis gives me an opportunity to answer my question why women are not using modern contraceptive methods.

Family planning (FP) is key to developing countries like Ethiopia to attain economic development, educational advances, women's empowerment and slowing unsustainable population growth (UNFPA 2012). It plays a vital role in the reduction of infant, child and maternal morbidity and mortality. Moreover, FP can prevent women from pregnancy related complications and unsafe abortion by avoiding too early, too late, too many and too close pregnancies. It is also a cost effective and smart intervention in achieving the Health System Development Program (HSDP) targets and MDGs (MOH 2013). Use of modern contraception is one of the main methods to obtain this benefit (WHO 2013).

Understanding the influencing factors to use modern contraceptives contributes to address the problem at all levels and increase the utilization.

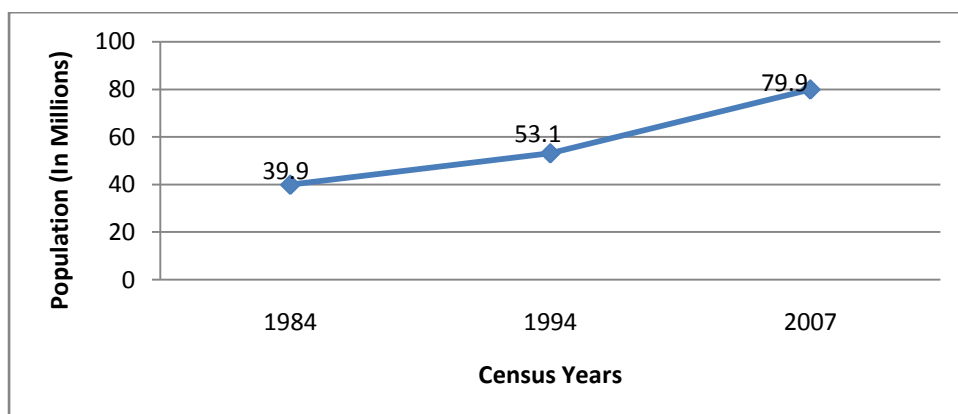
This thesis has six chapters. The first chapter presents background information of Ethiopia including health sector information related to FP. Chapter two describes problem analysis, objectives and methodology. Chapters three, four and five describe the study findings. Finally chapter six presents the discussion, conclusion and provide recommendations based on the identified factors.

Chapter one: Background Information

1.1 Demography

Projection from the 2007 population and housing census results in an estimated total population of 87 million in 2013, with an average growth rate of 2.6% (CSA 2007). According to CSA 2008 summary report the population becomes almost double from 1984 to 2007 as shown in figure below. The sex ratio is almost equal. Ethiopia is one of the least urbanised countries in the world (83.6% rural vs 16.4% urban). The average household size is 4.7 persons (CSA 2008).

Figure 1: Counted Population Size of Ethiopia (in millions) 1984-2007



Source: CSA, 2008

The population age pyramid is predominantly young: 44% are under 15 years, over half (52%) are between 15 to 64 years and 3% are 65 or more years old, and women in the reproductive ages constitute 24% of the population.

The dominant religious followers are orthodox Christian (43.5%) followed by Muslim (33.9%) and others (22.5%). Ethiopia has a decentralized federal structure with nine regions: Amhara, Oromia, Tigray, Afar, Benishangul-Gumuz, Gambella, Southern Nations Nationalities and Peoples' Regional State (SNNPR), Somali, Harrari and two city administrative entities: Addis Ababa and Dire Dawa (see annex 1, Map of Ethiopia by regions)(CSA 2008).

1.2 Economy

The Ethiopian economy depends heavily on the agricultural sector; agriculture accounts for 83.4% of the labour force, about 43.2% of the Gross Domestic Product (GDP) and 80% of exports (MOH 2010). High annual economic growth was recorded since 2004 and Ethiopia is still among the fastest growing non-oil producing economies in Africa. Ethiopia follows a five year Growth and Transformation plan to foster high and broad-based growth by giving emphasises to agricultural transformation and industrial growth. The country also focuses on expanding employment opportunities by giving greater emphasis to the development of small and medium-scale industries (Africa Economic Outlook 2012). But, still Ethiopia is one of the low income countries with per capita annual income of 498 USD and 39% of the population are living below the national poverty line (World Bank 2013).

1.3 Education

Generally, educational attainment is in Ethiopia. Females are less educated compared to men. In 2010 adult literacy rate for men was 1.6 times higher compared with female (62% for male and 39% for female) (MOH 2010). It is much higher in the urban population than the rural population. Since the government gave greater emphasis to increase the number of schools and put a special focus on women education, girls who never attended primary school have decreased from 66% in 2005 to 51% in 2011, while for males it decreased from 43% to 33% (CSA 2012 and CSA 2005).

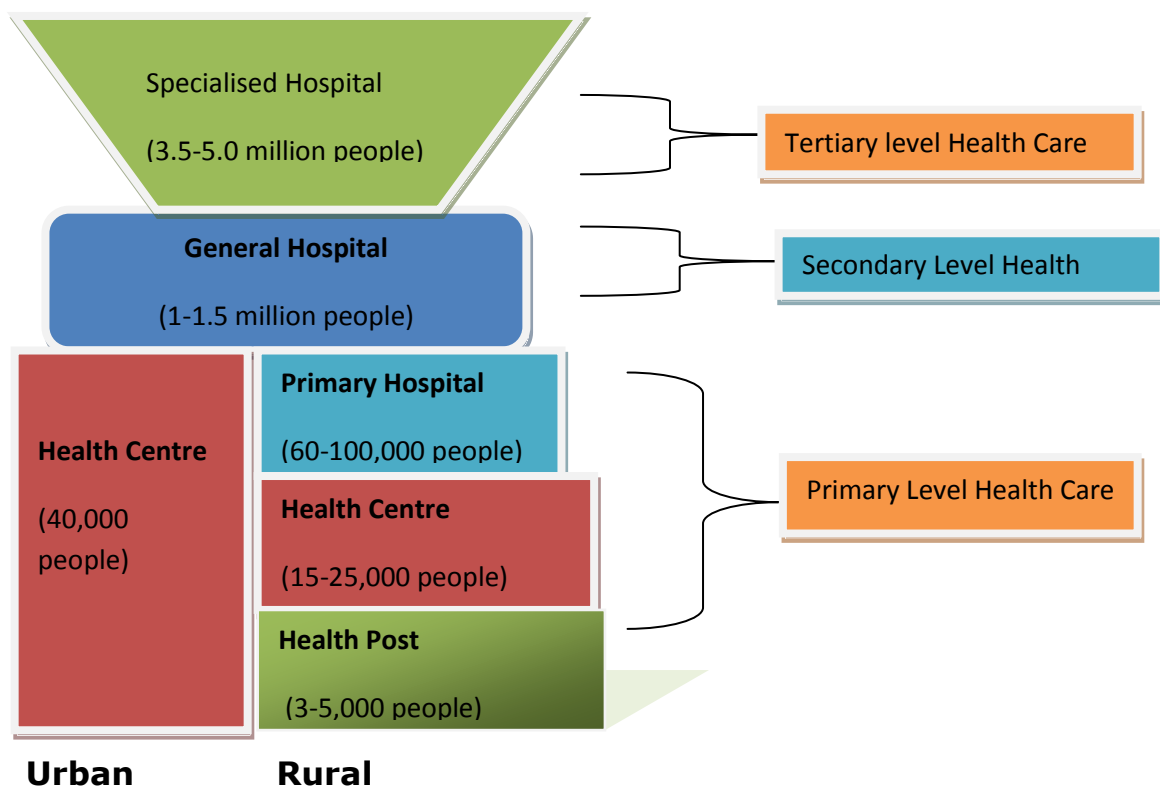
1.4 Health Status

The health status of Ethiopia population is poor. In 2010, the average life expectancy was 55 (male 54, female 57) (MOH 2011). Maternal Mortality ratio (MMR) was 676 deaths per 100,000 live births, under-five mortality rate was 88 deaths per 1,000 live births and infant mortality was 59 deaths per 1,000 live births (CSA 2012).

1.5 Health System

The Health sector reform in the HSDP III introduced the three tier health care delivery system in Ethiopia. Primary level health care comprised of a primary hospital, Health Centers (HCs) with each health center having five satellite Health Posts (HPs). Secondary level health care comprised of general hospitals and the third level includes specialised hospitals. The coverage of the population at each level of care is presented in (figure 2) (MOH 2010). For each level of FP services provision see (annex 2)(MOH 2011).

Figure 2: Ethiopia Health Tier System (MOH 2010)



Source: MOH, 2010

Ethiopia has 67,713 health workers all over the country (MOH 2010). Though the health workers number is one of the highest in sub-Saharan African countries, the large population leaves it with a very low health

worker to population ratio, 0.84 per 1,000 populations which is far behind WHO standards of 2.3 per 1,000 populations (World Bank 2012).

1.6 Health Care Financing

The state of health care financing in Ethiopia has over the years been characterized by low government spending and minimal participation of the private sectors. Total expenditure on health as percentage of GDP is 4.8% and the private expenditure on health as percentage of Total Health Expenditure (THE) is 42% (WHO 2013). Sources of financing for the health care are: federal and regional governments, grants and loans from donors, non-governmental organizations (NGOs) and private organizations (MOH 2010).

1.7 Family Planning

In 1966, family planning was introduced by Family Guidance Association of Ethiopia (FGAE) with the aim of providing family planning information, counselling and services to families who voluntarily expressed their needs to space or limit births. Thereafter in the early 1980's, the Ministry of Health (MOH) integrated family planning in a national maternal and child health (MCH) program in public facilities (MOH 1996).

Taking into account the adverse consequences of rapid population growth, the government of Ethiopia adopted a population policy in 1993 with an overall objective of harmonizing the country's population growth rate with that of the economy. The policy in particular aims, to reduce Total Fertility Rate (TFR) from 7.7 to 4.0 children per woman and increase the Contraceptive Prevalence Rate (CPR) from 4.0% to 44% by the year 2015. This effort was focused on expanding facility based and outreach FP services to reach uncovered areas (GoE 1993). In line with this, different local and international institutions involved in expanding FP program and services. To guide stakeholders, expand and ensure quality FP services, MOH released a FP Guideline in 1996. In this guideline, the ministry designed new outlets for FP services such as Community Based Reproductive Health (CBRH) and social marketing in addition to the pre-existing facility based and outreach FP services. It was revised in 2011 and now also incorporates integration of FP services with other reproductive health services. The guideline also emphasises on providing quality FP services as one strategy to achieve MDG5 and the objectives of HSDPIV (MOH 2011).

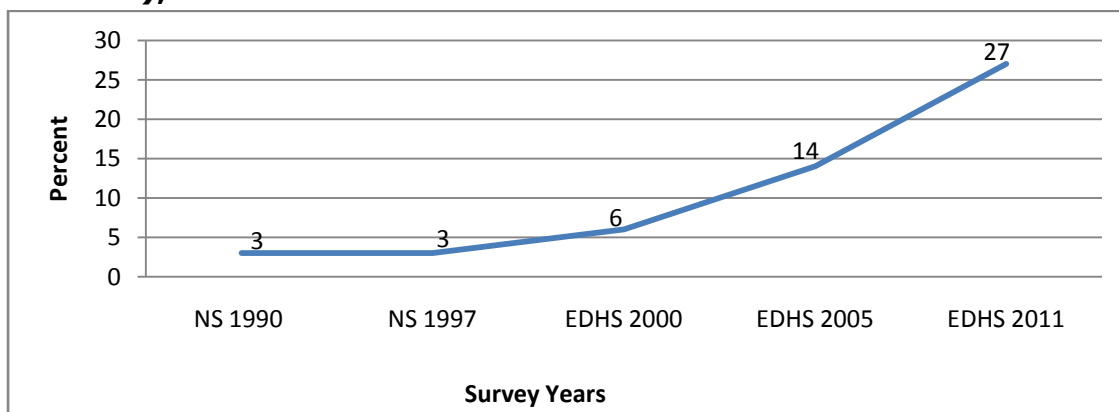
In 2006, MOH also developed a National Reproductive Health Strategy for the years 2006-2015. Under this RH umbrella one of the priority areas was to reduce unwanted pregnancies and enable individuals and couples to achieve their desired family size by creating acceptance and demand for FP, increase access and utilization of quality FP services and delegating the service delivery to the lowest level possible without compromising safety or quality of care (MOH 2006). In line with these, since 2003 the Health Extension Program (HEP) was a turning point in the country's effort to expand family planning services to the underserved rural population (MOH 2007).

Types of modern FP methods provided in Ethiopia are: Male and Female condom, Vaginal Contraceptive Foam Tablet and Jellies, Emergency Contraception, Progestin-Only Pills, Combined Oral Contraceptive, Injectable Contraceptives, Implants, Intra-Uterine Contraceptive Devices, Bilateral Tubal Ligation and Vasectomy. The provision of FP is dependent upon the integration of services throughout the health system from community to specialized referral hospitals (MOH 2011).

According to EDHS 2011 analysis, the most preferred method by women was injectables (21.2%) and the least preferred was IUCDs 0.7% (see annex 2). The largest portion of modern contraceptive (82%) was provided by public sectors (HCs and HP/HEWs) and 13% by private sectors (CSA 2012). From the private sectors FP service provision, FGAE takes the largest share (USAID 2012).

An increasing trend is recorded in modern contraceptives use from 3% in 1990 to 27% in 2011 (see figure 3) (FP2020 2014).

Figure 3: Trend in Modern Contraceptive Prevalence Rate (Married Women), 1990-2011



Source: Family Planning 2020

In 2005, abortion was legalized for all young women in Ethiopia in case of rape and a number of other situations for example, if the woman has

mental and physical health problems. In 2006 abortion guideline was released and incorporated expanding the range of health facilities and states women seeking abortion services, do not need to provided proof of rape, how old is she and partner approval. (FDRE 2006). In 2008, an estimated 382,500 induced abortions were performed, for an annual rate of 23 abortions per 1,000 women age 15-44 (GUTTMACHER Institute and Ipas 2010).

Chapter Two: Problem Analysis, Objectives, Methodology and Conceptual Framework

2.1 Problem Analysis

Globally, use of modern contraceptives shows a slight increase from 54% in 1990 to 57% in 2012. A minimal increase was reported between 2008 and 2012. Sub-Saharan Africa accounts for the lowest increase, 23% to 24% (WHO 2013). Though contraceptive prevalence rate shows a slight increase, still an estimated 222 million women have an unmet need for contraception in developing countries in 2013(WHO 2013).

Fertility and unmet need for contraception are much higher in sub-Saharan African countries compared to developed countries (UN 2011). Ethiopia is the second most populous nation in sub-Saharan Africa (PRB 2012) and characterized by high scarcity of resources (Tegenu 2013). The TFR was 4.8 per woman in 2011, which is 60% higher than the wanted fertility rate of 3.0 per woman. Women in the rural areas have twice as many children as women in the urban areas. This high fertility is associated with increased risk of maternal morbidity and mortality. In 2011 maternal mortality ratio (MMR) was 676 per 100,000 women (CSA 2012), which is far behind the MDG target to reduce the MMR to 267 per 100,000 live births by 2015 (MOH 2001). Maternal deaths are particularly high for young and poor women, who have less access to contraceptive services (UNDP 2012).

Despite knowledge about contraception being almost universal (97% of currently married women and 99 % of men knowing at least one method of contraception), only 18% of all women are using modern contraceptives and the CPR for married women was 27% by 2011 (CSA 2012), which is far below the national goal of the HSDP IV to be attained by 2015 (66%) (MOH 2010).

The unmet need for family planning among married women is high (25%), 16% for spacing and 9% for limiting (CSA 2012). This increases the rate of unintended pregnancies among women. Studies done in different regions of Ethiopia revealed unintended pregnancies percentage ranges between 24% and 34% (Hogan et al. 2010 & Hamdela 2012). It is estimated that, one in ten pregnancies in Ethiopia ended in abortion; more than 60% of these were unsafe which increases the disability and death in women (MOH 2008).

Although evidence suggests that male involvement to use family planning methods, support their wives in using family planning and openly discuss family planning methods, have bigger role in spacing and limiting of births, in Ethiopia male involvement is extremely rare (Bayray 2012).

Justification

Ethiopia is off track to meet its Millennium Development Goal (MDG) target for reducing maternal mortality. Each year, more than 22,000 women die (more than two women every hour) while another 500,000 suffer illness and disability from complications of pregnancy and child-birth (MOH 2008). Addressing family planning unmet need in Ethiopia is expected to avert 12,782 maternal deaths, more than 1.1 million child deaths and reduce unplanned births and unsafe abortions by 89-92% by the target date of 2015 (USAID 2009).

The high number of children over-burden women and force them to spend a large proportion of their lifetimes giving birth and caring for young children. This increases school dropout to young women and hinders women's ability to involve in income-generation activities to themselves as individuals, to their families and communities. In addition to this, women and child health worsen when they are unable to afford to pay for health care services (Berhane et al. 2001).

Therefore, identifying the main barriers to use modern contraceptives among women and couples in countries with low prevalence of contraceptive use should be the first priority to address the problems (Ali et.al 2013).

Though there are some studies done in Ethiopia to identify the influencing factors to use contraception, some are focused on the socio-economic factors and some are on quality of FP services and related factors. Therefore I would like to make a comprehensive study that shows pre-disposing, enabling and needs factors to use contraceptives in Ethiopia in order to inform policy makers and stakeholders to strengthen family planning programs using the recommended interventions to address the identified barriers.

Study question:

What are the influencing factors to use modern contraceptive among women in the reproductive age group in Ethiopia? And how can we address them to enable women and men to use it?

2.2 General Objective

To identify influencing factors of modern contraceptives use among women in order to inform policy makers and stakeholders on how to strengthen family planning programs in Ethiopia.

Specific objectives:

- To identify predisposing factors to use modern contraceptives.
- To identify the main enabling factors to use modern contraceptives.
- To identify need related factors to use modern contraceptives.
- To inform policy makers and stakeholders on how to strengthen family planning programs in order to increase the uptake of FP methods.

2.3 Methodology-Literature Review

This thesis is accomplished by review of literatures, studies done on factors affecting use of contraceptives among women in the reproductive age group in Ethiopia and comparable sub-Saharan African countries. The literature review includes NPP, national RH/FP strategy, HSDPs, family planning use and related factors, reports on FP from MOH, Ethiopian Demographic Health Survey (EDHS), Central Statistics Agency (CSA) and other local and international non-governmental organizations implementing FP services. In addition to this, a review of reports from WHO, UNFPA, UNDP, PRB and World Bank was done. The information gathered includes health policy and strategies on family planning, demographic data of women, socio economic status, health beliefs, personal, communities and quality of FP service.

Data for review are collected from online databases published in English, identified via: PubMed, Google Scholar, Science direct, Biomed central, the Lancet, and Google.

Inclusion Criteria: Literature from Ethiopia is included after the adoption of the NPP (1993) up to 2014. This criterion also applied to comparable sub-Saharan African countries.

Exclusion criteria: Literatures before the implementation of the NPP (1993) and studies from other than comparable African countries and from other continents.

Key words: combination of words: Ethiopia, FP, contraceptive, need, preference, health beliefs, attitudes, factors affecting or barriers to use family planning, access, availability and quality of family planning are used.

2.4 Conceptual frame work

Intensive review was done on various studies to select an appropriate conceptual framework for reproductive health containing elements of family planning and factors affecting its use. Some of them were factors related to women, women and health services and others are policy and guidelines. Finally, Anderson's 1995 behavioural model of health services utilization was adapted to serve as the conceptual framework for this study.

The model discusses the interrelated effects of environment and population characteristics for individual health service utilization (Andersen 1995). Using the model this study assumes that women's use of family planning services can be explained in terms of environment and population characteristics.

The population characteristic has three components: predisposing factors, enabling factors and needs.

Predisposing factors refer to those personal characteristics that act as deterrents or catalysts for the use of health care services. Components of predisposing factors are demographic, social structure and health belief. The demographic factors are individual characteristics suggesting the likelihood that people will need health services. Social structure is a broad array of factors that determine the status of a person in the community. Health beliefs are knowledge, values and attitudes of people about health and health services which could influence their subsequent perceptions of need and use of health services (Andersen 1995). In this study, demographic factors include age and marital status of women. Social structure includes education of women, religion and son preference. Health belief considered attitudes, values and knowledge of individuals and couples on modern contraceptive use.

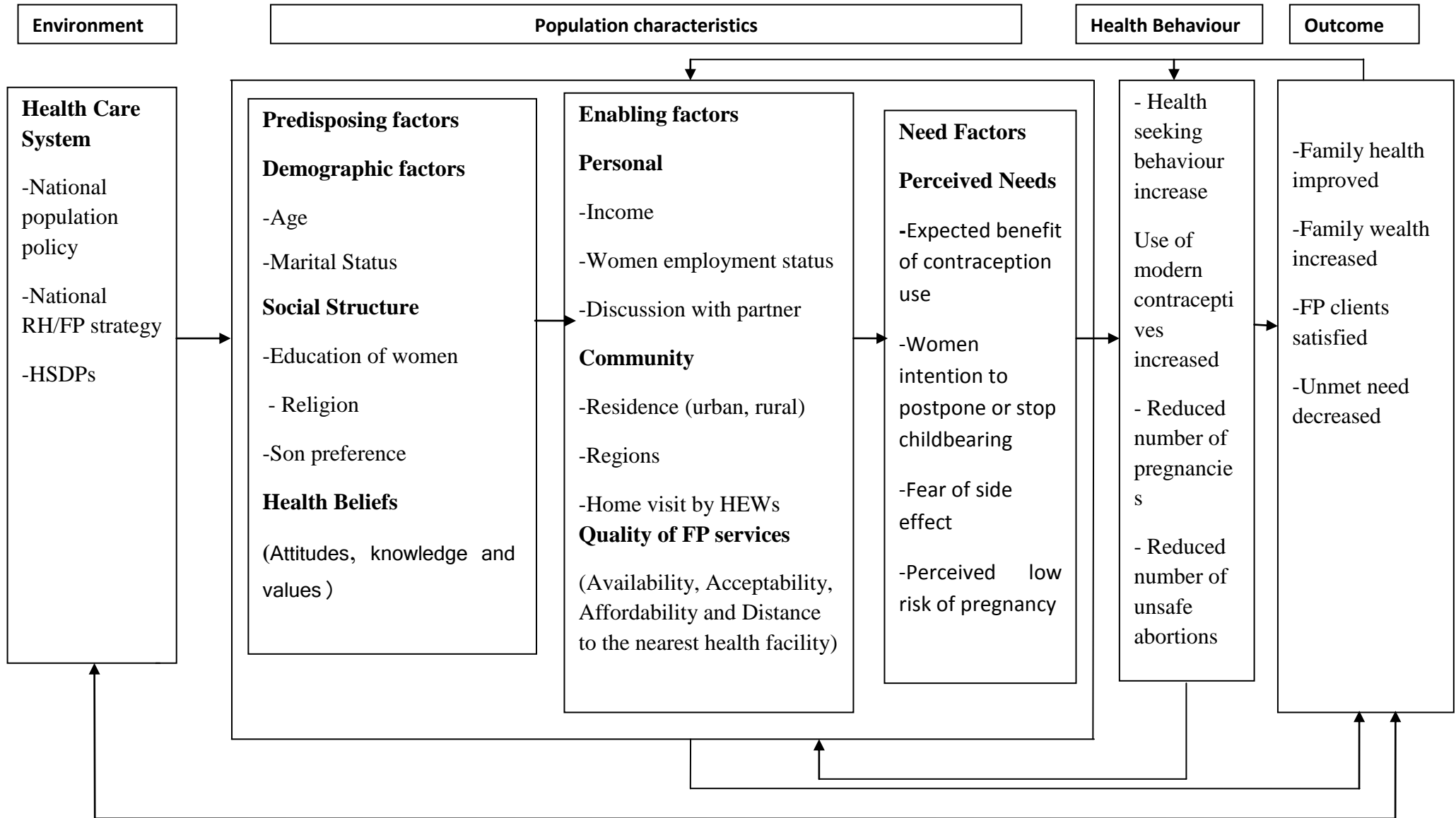
Enabling factors are the means and know-how to satisfy an individual health need once the health facilities and health personnel are available where people live and work (Andersen 1995). Considering this definition, the health care system factors under the environment component of the conceptual framework are explained under enabling variables. As I explained above, in Ethiopia knowledge about contraception is almost universal and contraceptive methods are freely available in the communities. Therefore, quality of FP services is considered in this framework separately. By taking into account good quality of FP services helps individuals and couples to meet their reproductive health needs safely and effectively (Tafese et al. 2013). According to Andersen 1995, enabling factors are personal and communities. In this study enabling factors includes health care system, personal, communities and quality of FP services. Health care system factor are national population policy, RH/FP strategy and HSDPs. Personal factors are income, employment status of women, and discussion with partner. Community variables include geographical location such as region, type of residence (urban or rural) and home visit by HEWs. Quality of FP services variables are availability, acceptability affordability and distance to the nearest health facility.

Need is the immediate reason to use health care services. Perceived need for care may be increased or decreased through health education, changing their financial incentive to seek services and so on. Similarly, evaluated need is professional judgment about an individual's health status and their need for medical care (Andersen 1995). In this study, perceived benefit of contraception, intention to postpone or stop childbearing, perceived fear of side effect to use contraception and perceived low risk of pregnancy variables considered as perceived need. Evaluated need is professional judgment and seen in the quality of FP services.

2.5 Limitations of the study

- Due to shortage of time, the researcher was limited to a literature review and used the available data for analysis. More in-depth information could have been come up if primary data were collected and analysed from the communities.
- Most of the studies are cross sectional studies which can only show associations not cause and effect relationships.

Figure 4: Adapted Andersen's 1995 Behavioural Model



Chapter three: Predisposing factors to use contraceptive

This chapter explores predisposing factors to use modern contraceptives. These are variables that are describing individual factors which are indirectly associated with modern contraceptive use (Andersen 1995).

3.1 Demographic Factors

Age

There are many studies showing women in different age groups have different contraception use experience. The EDHS analysis shows, the intermediate age group 30-34 for all women were the most modern contraceptives users (29.3%) compared with young women age 15-19 and old women age 45-49 that had 5% and 10% respectively (CSA 2012).

A KAP study done in five regions and two administrative areas of Marie Stopes International Ethiopia (MSIE) FP implementation sites shows, women in the age of 25-34 were the most frequent contraceptive user group (48%) compared with the other age groups (Espeut et al. 2010).

Similar results were documented in Tanzania, where use of FP was highest among women in the age of 30 years and older (Tengia-Kessy & Rwabudongo 2006).

All, the three studies agreed that the age of women can influence use of modern contraception.

Marital Status

Different studies have documented use of modern contraception varies according to marital status of women. A study conducted in Shire Indaselase Ethiopia shows, married women were 2.7 times more likely to use modern contraceptives compared with sexually active unmarried women (Tsehaye et al. 2011). In North West Ethiopia also among women living in the street, mosque and church, married women were 3.5 times more likely to use contraception compared with unmarried women (Megabiaw 2012).

Contrary to this, the 2011 EDHS analysis shows, unmarried sexually-active women were the most likely contraceptives user (52%) compared with married women (27%) (CSA 2012). It might be due to small number

of unmarried women were included in the study and the majority of them might be living in the urban areas where contraceptive use is higher in general.

A study in Nigeria also documented, married women were the most frequent contraception users (86.3%) compared with (14.6%) single, divorced and separated women (Agbo et al. 2013).

This suggests there might be cultural norm that influence women contraception use depending on their marital status. Therefore marital status can be an influencing factor.

3.2 Social Factors

Education of women

Several studies documented women contraception use differs according to women's literacy. A study done in Modjo Ethiopia found, literate women were 1.903 times more likely to use modern contraceptives compared with illiterate women (Gizaw & Regassa 2011).

Use of contraception also increases with increasing level of women education. Secondary analysis from DHS 2011 data shows, women who had secondary or higher and primary education had 1.89 and 1.46 times respectively higher odds of contraception use compared with women who had no education (Tilahun et al. 2013).

Similarly it has been observed in Tanzania that contraceptive use was best predicted by level of education and it has strong influence in the acceptance of contraception use (Tengia-Kessy & Rwabudongo 2006).

In Ethiopia the literacy rate is very low particularly among women. Therefore, education can be a potential factor to increase the use of modern contraception.

Religion

Different studies documented, women who have different religion have different contraception use experiences. A secondary analysis from EDHS 2011 data shows, Orthodox married women were 41.7% times more likely to use modern contraception than other religious follower married women (Ferede 2013).

Similarly, different studies in Ethiopia documented, women who follow Orthodox Christian were more likely to use modern contraceptives

compared with Muslim or other religious followers (Lakew et al. 2013 and Gordon et al. 2011).

Similar results were documented in Nigeria, Christian followers had higher uptake of modern contraceptives compared with Muslim religious followers (Olugbenga-Bello et al. 2011).

In communities where religion is highly respected it could be a potential determinant of contraceptive use.

Son preference

There are several studies that have documented use of contraception might be determined by number of male children in a family. In a study conducted in Modjo Ethiopia shows, 51.7% of respondents had sex preference for male instead of female, 42.1% says sex does not matter and 6% says God knows (Gizaw and Regassa 2011).

Some couples also prefer more boys than females in a family. This suggests they will continue giving birth until they get more proportion of male children than female. A woman participating in a qualitative study in rural Oromia said, "I want to have more male children than female ones. If the number of male children is less than female children, I will try to get male children. Even if the sex of children is a gift of God, I want to try until I get more male children." (Ieda 2012).

Contrary to this, a study conducted in Jimma town shows, sex preference varied depending on the number of boys and girls living in the family. Couples with no boys had a different desire to have a boy as the next children. This preference disappears among men once they had two boys and among women once they had at least one. 36% of women reported they ever had a child death of which almost 76% boy child (Tilahun et al. 2013).

This suggests there might be a cultural norm that can affect individual decision to use contraception. Therefore, son preference could be an influencing factor to use contraception methods.

3.3 Health Beliefs

Health beliefs explain the attitudes, knowledge and values of women and men about contraception. Overall in all studies I reviewed, participants had positive attitude towards short term contraceptives (oral pills, injectables and male condom) and injectable was the most preferred method (Mekonnen et al.2013,Tsehay 2013 Tilahun et al. 2013 and

Alemayehu et al. 2012). This might be because of easy availability of the method and less perceived side effects by women.

Contrary to this, there were different studies that documented both men and women had negative attitudes for Long Acting and Permanent Methods (LAPMs). A study conducted in Jinka town shows, 31% of the participants had poor attitude on LAPMs particularly men had very poor attitude to vasectomy. In a focus group discussion, one male participant (54, M) said, "...If I have vasectomy, I can't have birth. Why should I use this method? Shouldn't I replace myself?! Nobody should use vasectomy, unless by legal punishment. Previously, there was no issue about male sterilization" (Mekonnen et al.2013).

Similarly, a study conducted in Southern Ethiopia shows, some women and men in the rural area aggressively oppose permanent methods of contraception as they believe it is against God (Bogale et al. 2011). This might be due to limited awareness creation of the FP program in the communities on LAPMs.

Contrary to this in Malawi, female sterilization was the second most preferred method (10%) next to injectables (26%) (MNSO 2010).

This suggests knowledge on the benefits of contraception is limited and the belief and perception in the communities affect individual decision to use contraception. Therefore, health beliefs are a potential influencing factor to use modern contraceptives.

Chapter Four: Enabling factors

This chapter continues exploring and analyzing enabling factors to use modern contraceptives. Enabling resources provide the means for use and increase the likelihood of use of contraception (Andersen 1995).

4.1 Policy Related Factors

National Population Policy

Recognizing the pressure of rapid population growth rate on the social and economic life of the population, the government adopted the National population policy in 1993, followed by four consecutive Health Sector Development Programs (HSDPs) implemented in five years plan (MOH 1997). The main focus of the policy was to ensure access to basic primary health care services for all people. The policy outlines: decentralization of the health system, promoting intersectoral collaboration and involvement of NGOs and private sectors (GoE 1993). The MOH is responsible to ensure accessible, affordable, equitable and quality health care services to the communities including FP services. From the various objectives of the policy, some of them were increase the CPR to 44%, decrease the TFR to 4.0 per woman, reduce maternal, infant and child mortality, increase female participation at all levels of the education by the year 2015. Strategies in relation to FP were increase the health work force, giving information and education to the community on the benefit of having small family size, expansion of both clinical and community based contraceptive services provision, develop and disseminate Information Education and Communication (IEC) programs specially to promote male involvement in FP and diversify method of contraception (GoE 1993).

Looking back the NPP at this time, almost after 20 years considerable progresses are recorded in all the above mentioned plans but still far behind to achieve the goals by the year 2015. A review to assess the achievement and challenges of the NPP implementation identified failure to establish the National Population Council (NPC) was one of the major obstacles in the implementation of the policy. As stated in the policy, the NPC was responsible to develop policies, strategies, and programs to work with partners and develop guidelines to the implement of the NPP. This results in weak coordination, budget constraint, lack of a comprehensive population program and weak monitoring and evaluation system that can

hinder the enhanced implementation of the policy (Hailemariam et al. 2011).

Over the years government spending for health in Ethiopia is very low which hinders the successful implementation of the policy. Taking into account the importance of allocating funds for the FP program, the government of Ethiopia earmarked a budget line for the first time to the procurement of contraceptives in 2007, before this time almost all was from donors. In 2007-2008 the government allocated and spent total money of \$910,000. The total government budget increased to \$919,000 in 2010-2011 (USAID 2012). This is a good start compared to the previous years where Ethiopia was totally donor dependent, but still it requires more government commitment and increasing budget to further strengthen the progress and achieve the targets.

National Reproductive Health Strategy

The national RH/FP (2006-2015) strategy builds on the initiatives of NPP and HSDP I&II. Family planning is one of the six priority areas identified from the larger scope of RH services as intervention. Constraint issues have been prioritized in the strategy at community level, system level and policy level that affect use of FP in the country. Community level issues were; traditional values, desire for large family size, early marriage, social and economic status of women undermine their desire and regulate of fertility, value of children in the communities as a labour force and support at old age. At the system level large demand supply gap, poor logistic management, stock out of commodities and lack of broad method mix identified. At the policy level lack of fund to procure FP commodities, weak government coordination of partners was identified. Increase acceptance and demand to FP, increase the accessibility of FP services and use lowest cadres at community level to promote FP services and increase the availability were the strategies to reduce unwanted pregnancy and help couples and individuals to have the desired number of children (MOH 2006).

Health Sector Development Plans (HSDPs)

Following the NPP, four phase HSDPs were developed to implement in five consecutive years for each to implement the NPP. Maternal and child health are the core performance indicators of the health sector development plans (MOH 2010).

Improvement was recorded during HSDP I & II (1996/97-2003/2004), both in terms of health services coverage and utilization of health care

services at all levels. Construction of HPs, HCs and hospitals increased and number of health workers increased. To improve access to essential health services at the village and household level, the Health Extension Package (HEP) launched at national levels including FP counselling and short term modern contraceptive provision at communities levels in 2003. It ensures institutionalization of community health services at the health post level. HEWs were trained and deployed. This program brings community participation through creation of awareness, behavioural change and community organization and mobilization. Encouraging results recorded in the prevention and control of infectious communicable diseases such as malaria, HIV/AIDS, TB and so on. Contraceptive coverage also showed remarkable change from 4% in 1996/97 to 25% in 2003/04.

In HSDP III (2005/06-2010/11), one of the major targets in family health was increasing family planning service coverage from 25% to 60%. The MOH put great efforts to achieve this target on expansion of health facilities and deploying professional health workers including HEWs. At the end of the implementation phase (2010/2011), the average national health services coverage increased to 89%. But the increase of the health coverage was not equal in all regions of the country. For instance, Somali region had the lowest health coverage (50%) compared with other regions and the national average. The FP services coverage also increased to 56.2%. Though the achievement seems good in relation to the plan, still health facilities are inadequate because of the low facility to population ratio. The health post, health center and hospital to population ratio were 1:5,630, 1:37,299, 1:688,748 respectively. Trained and deployed health work force increased to 67,713 and HEWs constitutes the largest single group (47%). Still there was also wide gap with regard to medical doctors and midwives professionals (see table below)(MOH 2010).

Table 1: Summary of human resources for health 2010

Human Resource Category	Actual numbers of staffs	Required numbers of Staffs	Shortage/ surplus of nurses	Percentage of shortage/surplus
All Physicians	67,713	71,140	-3,427	95%
Specialists	1151	1050	101	110%
General Practitioners	1001	2200	-1199	46%
Public Health Officers	3,760	5000	-1240	75%

Nurses Bsc. & Diploma (Except midwives)	20109	16870	3239	119%
Midwives	1379	3570	-2191	39%
Pharmacy Professionals				
HEWs	31,831	30000	1831	106%
Other Medical Staff	4,808	5,850	-1,042	82%

Though the government planned to provide all types of contraception method at the lowest health care level (Health centers and District/Zonal hospitals), in some rural health facilities, LAPMs has not yet started due to facility set-up, equipment and trained human resource problems. Similarly some facilities had shortage of supply for short term contraception. For instance, about 44% of HFs had stock outs of oral pills both at the time of survey and six months prior to the survey according to the national assessment of availability of modern contraceptives by UNFPA (2010).

Now, HSDP IV (2010/11-2014/15) is almost at the end of its implementation phase. Increase access to health services, improve quality of health services, ensure community ownership, pharmaceutical supplies and improve evidence based decision making are some of the strategic objectives (MOH 2010).

In this phase the government undertake new Health Development Army (HDA) initiatives to promote community mobilization and adoption of healthy lifestyles. It refers to organized movement of the communities in their neighbourhood. The HEWs and kebele (the lowest administrative unit in the country) administrator facilitates a one-to-five network development (one HDA to five community members). In 2012 a number of HDAs are trained in different regions of the country and start working with the communities. The report mentioned HDA formation show promising progress in promoting health and preventing disease at the community level together with the HEWs (MOH 2013).

The NPP, RH/FP and HSDPs analysis of the health care system factors shows that, health facilities were inadequate, health workers are scarce and commodities supply were limited which can affects the accessibility and availability of FP services. This shows, health care factors had higher contribution to the low use of modern contraceptive methods.

4.2 Personal

Income

Income could be one of the enabling resources to use contraception when contraceptive methods are unavailable in the nearby facilities and facilities are distant from home. Secondary analysis from EDHS 2011 data shows, married women who are in high and middle wealthy status had 1.9 (AOR 1.9, 95% C.I 1.5–2.4) and 1.4 (AOR 1.4, 95% C.I 1.1-1.8) times respectively higher odds of using modern contraception compared with poor married women (Lakew et al.2013).

In a study conducted at Kersa town, poor wealth status and long distance to the nearest health facilities were significant predictors to unintended pregnancy (Kassa et al. 2012).

This suggests income could be an enabling factor to access FP methods.

Employment status of women

Different studies documented contraceptive method use varies by women occupational status. Secondary analysis from EDHS 2011 data shows, employed married women had 1.3 times higher odds of using modern contraception compared with married women who were not employed (crude OR 1.3, 95% C.I 1.2-1.5) (Ferede 2013).

A study conducted in Butajira Ethiopia shows, civil servant, handicraft and merchant women were 6.2 (95% C.I 4.81-7.99), 3.46 (95% C.I 2.78-4.30) and 3.21 (95% C.I 2.73-3.76) times respectively more likely to use modern contraception compared to those whose livelihood was farming (Mekonnen and Worku 2011).

According to EDHS in Ethiopia more than 56% of women are engaged in agricultural unpaid work and mostly employed by family members (CSA 2012). Therefore employment status of women could be a factor to use contraception.

Discussion with partner

Discussion between husband and wife on fertility issues such as the number of children to have, when to have the first and next birth could be enabling resource for contraception use. A study conducted in Modjo Ethiopia shows, women who can discuss frequently with their partner or husband about family planning were 9.644 times more likely to use modern contraceptives compared with women who never discussed at all (Gizaw and Regassa 2011).

Women who can decide alone or jointly with partners about their health issue had better contraceptive use. For instance 32% of women used

contraception from those who can make decision about their own health care compared to 20% of those who cannot involve in decision making in their own health care (Tadesse et al. 2013).

Contrary to this, a study done in Tigray Ethiopia shows, 56% of men reported no discussion needed about FP issues with their wives and they believe it is a natural process (Bayray 2012). Similarly, a study done in Jimma Zone shows, majority of men and women considered contraceptive use as women's task. In the focus group discussion a man of 45 years age said, "What will I do in a family planning clinic, contraception is women's business, I will just give my wife the necessary financial support she needs" (Tilahun et al. 2013). This might be due to the perception in the communities that child bearing and related issues are considered as only women's responsibilities.

This suggests partner communication and support, and women's decision making power on their health issue, have contribution in contraception use. Therefore discussion with partners could be potential enabling factors to use contraception.

4.3 Communities

Urban/rural

There are different studies that documented use of FP methods varies by women's residence. According to EHDS 2011 data, married women living in the urban areas were more than two times more likely to use modern contraceptives compared to their counterparts (53% and 23%) respectively (CSA 2012). A study conducted Southern Ethiopia shows, rural women had almost three times lower use of modern contraceptives compared with urban women (OR 2.7, 95% C.I 1.78-4.06)(Bogale et al. 2011).

The MSIE study shows, women living in the urban areas had better contraception use compared with their counterparts (61% and 49%) respectively (Espeut et al. 2010). This might be because women living in urban area have better information and access to FP services.

Contrary to this, Rwanda married women living in urban and rural areas had little difference in modern contraceptive use (47% and 45%) respectively (NISR 2012). This was due to Rwanda can close the gap between urban and rural in terms of access and availability of FP services.

In Ethiopia there was urban-rural disparity in terms of health facilities, availability of health care providers and availability of the preferred

method in some rural facilities (World Bank 2012 and UNFPA 2010). Therefore, residence of women could be a potential factor in Ethiopia.

Regions

Studies documented use of modern contraception varies by regions in the country. The 2011 EDHS analysis shows, use of modern contraceptives was highest in Addis Ababa (56%) compared with Somali and Afar (4% and 9% respectively) (CSA 2012).

Secondary analysis from the same EDHS 2011 data after excluding Addis Ababa found, Amhara region had the highest percentage of modern contraceptive use (30.8%) followed by Gambella 29.4%. Somali and Afar had still the lowest percentage for modern contraceptive use (4.3% and 9.5%) respectively (Tilahun 2013).

Accessibility and availability of FP services might be limited in those regions. The other region might be majority of Somali and Afar region communities are Muslim religion followers, this might affect their contraception. Therefore, it could be a factor.

Visit by HEWs at home

Different studies documented visit at home by HEWs for primary health care services had positive effect on contraception use. Secondary analysis from EDHS 2011 shows, women who reported being visited by HEWs in their home and discussed about family planning were 1.4 times more likely to adopt modern contraceptives compared with women who do not have access to home visits by HEWs (OR 1.4 95% C.I 1.3-1.6). A study done in the rural parts of Ethiopia shows, 72% of mothers got advice on family planning from HEWs (Medhanyie et al. 2012) (n=725).

A study done in West Gojam Zone shows, women who finished 75% of HEP package education were almost four times more likely to use contraception compared with their counterparts (AOR, 3.966, 95% C.I 3.007–5.230) (Yitayal et al. 2014).

This suggests visit by HEWs helps women to discuss about family planning and increase the access of FP service to women.

4.4 Quality of family planning services

Availability

Availability of modern contraception both by type and quantity increases women's ability to access the preferred types of contraception and ensures quality of FP services. The MSIE study shows, easy availability was a key driver of modern contraception methods use in the study areas (Espeut et al. 2010).

Contrary to this, a study conducted in Butajira Ethiopia shows, for the majority of non-users (53.5%) the reason was stock out and absence of preferred methods in the facility (Mekonnen and Worku 2011).

Acceptability

Acceptability of family planning services by clients could ensure continuity of contraception use. A study conducted in North West Ethiopia shows, about one fourth of the participants at the health centers and hospitals could not understand the health care provider's discussion. In addition to this, 66.6% of the respondents complained about the privacy of the services particularly in the government health facilities (Fantahun 2005). A study conducted in Modjo documented, clients reported the counselling session was insufficient to discuss with service providers. Only mass gathering and short time discussion were reported by clients in the health facilities. This reduces comforts of the client to discuss openly about the different methods (Gizaw and Regassa 2011).

In a study done in Jimma zone, the most frequent told method to clients was Norplant (60%) and the least frequent told method was male and female sterilization. It might be due to the training given by NGO prior to the study which can limit women informed choice (Tafese et al. 2013)

Health care providers also put different restriction criteria which is not included in the FP guideline. For instance in the FHI assessment, to prescribe oral pills nurses put age limit to 15.2 years whereas for HEWs the minimum age limit was 18.6 years. They also advised a woman to come back after menstrual period and ask partner consent to provide contraception method (FHI 2012).

Health workers also had different perception regarding side effects. Majority of health care providers recognize the side effects and take time in counselling. However the HEWs in the village and health workers in one private facility simply told clients contraception has no side effect at all.

One HEW explained as “I believe there is no side effect. That (contraceptives have side effects) is a wrong perception among the people. People tend to associate their problems with contraceptive use. For example if a woman takes Depo(injection)and catches other diseases not related to contraceptives, then people think that the disease comes from the medicine. So, it’s a wrong understanding. And they spread this idea among others in the community. They say; I got sick after I took the medicine!” (Ieda 2012).

In a study done in Addis Ababa and Awassa shows, some pharmacists working in private drug dispensary perceived more than one times use of Emergency Contraceptive (EC) has serious side effect and they advise their client not to use more than once and refuse to sell to repeating customers (DKT 2012).

This suggest health care providers are not following the FP guide and limited competency is observed particularly in HEWs which can have higher negative impact on FP program success.

Affordability

The direct and indirect cost of FP services may affect contraception use. A study conducted in Modjo town shows, since the contraceptives were free in the health facilities, respondents did not raise financial issue as barrier (Gizaw and Regassa 2011). A study conducted in Mekele town shows, 83.3% of contraceptive users got it for free and 16.7 % paid to get it. All women told the price was affordable (Alemayehu et al. 2012).

In a study done in Ethiopia and Pakistan to see franchising effects on FP services accessibility to the poor shows, the greatest access for poor client was government facilities and franchise facilities were unaffordable to poor women (Shah et al. 2011).

In South Western Nigeria, 41.2% of modern contraceptive users the main reason of preferring male condoms, pills and injectables were affordability of the long acting methods (Olugbenga-Bello et al. 2011).

This suggests cost of contraception method affects access to get the services and compromises the quality.

Distance to the nearest health facility

Different studies have documented that distance to the nearest health facility affect access to FP services. A study conducted in Butajira Ethiopia

shows that, the majority of the respondents reported to get the preferred type of contraception they have to walk a long distance, in some instance even up to 18 kilometres (Mekonnen and Worku 2011).

In a study conducted at Kersa town shows, distance of the nearest facility and unintended pregnancy had strong statistical association. Women who have to walk 80 minutes and more to the nearest health facility had 2.25 (1.49-3.39) times more often unintended pregnancy compared with women who walk for 40 minutes or less to the nearest facility (Kassa et al. 2012).

A study done in West Gojam Zone shows, the majority (67.7%) of current contraceptive users got the services from the nearest health post (Yitayal et al. 2014).

Similarly a study in Tanzania documented, women who lived closer to health facilities are more likely to use modern contraceptives compared with their counterparts who had to walk for an hour or more (Tengia-Kessy and Rwabudongo 2006).

This suggests distance to the nearest facility affects the accessibility of FP services.

Chapter Five: Need Related Factors

This chapter continues exploring factors related to need to use modern contraception.

5.1 Expected benefit of contraception use

Women's perception of the expected benefits of using contraception affects adopting contraception. A study conducted in Debremarkos town shows, 56% and 43% of women mentioned contraception has advantage to spacing births and limiting family size respectively (Bulto et al. 2014). A study conducted Tigray shows, 77.5% married women had awareness of the advantage of LAPM for prevention of unwanted pregnancy and helps to plan the family (Alemayehu et al.2012)

A study conducted in Jimma Zone shows 30% of men did not know the different types of contraception (Tilahun et al. 2013).

This suggests knowledge gap in the expected benefit could be potential factor to use contraception.

5.2 Fear of the side effects

Different studies documented perceived fear of side effect is one of the major reasons not to use contraception. A study done in Kelela town shows, 38.9% married women who do not use modern contraception was due to fear of side effect and health concern like being infertile and developing medical illness such as hypertension (Kassie et al. 2014). A recent analysis from DHS data of developing countries to identifying reasons for contraceptives non-use among married women to Ethiopia shows, 30% of their reason was fear of side effects of contraception (Sedgh and Hussain 2014).

A study conducted in Jimma Zone Ethiopia documented, 23% of non-use of contraception among women was due to past experience of perceived side effects of contraception use such as heart burn and excessive menstrual bleeding (Tilahun et al. 2013).

A study conducted in Mekele town shows, 42.5% women had negative attitude towards practicing IUCD. They had misconception that it, can cause interference with sexual intercourse, delay pregnancy, restrict normal working activities, cause cancer and invasion of privacy during its

insertion and removal. Similarly, 11% of implanon contraception users switched to injectables. Their main reason to switch was implant insertion and removal has pain (Alemayehu et al. 2012).

Furthermore, the proportion of women who blamed fear of side effect or health concerns for not using contraception increased from 15% in 2005 EDHS to 20.7% in 2012 EDHS (CSA 2012 and CSA 2005). This suggests discussion about the possible side effects of contraception is limited. For instance in 2011 EDHS only 28% women were informed on the possible side effect of their method (CSA 2012).

This suggests there is high misconception in the communities and limited discussion by health care providers on the possible side effect of preferred contraception with current contraceptive users. Therefore, fear of side effect on contraception use could be a potential factor not to use or discontinue contraception.

5.3 Perceived low risk of pregnancy

Low perception of women of the risk of pregnancy during breastfeeding and postpartum, infrequent sex, too young/old to become pregnant perception all affect contraceptive use. A recent analysis of DHS data of developing countries to identify reasons for contraceptive non-use among married women to Ethiopia shows, 30% of their reason was breastfeeding and postpartum amenorrhea perception (Sedgh and Hussain 2014).

The MSIE study shows, 42% of non-contraception user reason was breast feeding and they felt that free from pregnancies risk (Espeut et al. 2010). A study done in North Ethiopia among street women the second most frequent reason for not using contraception was not being sexually active (27.4%)(Megabiaw 2012). Women who have this perception will have sex without using any contraception, which increases the risk of unintended pregnancy. A recent study among Wolayita Sodo University students shows, the rate of abortion was 65 per 1,000 women, making it almost three times national rate of abortion (23 per 1,000 women). Almost all (96.6%) were induced abortions and only half reported to be safe (Gelaye et al. 2014).

This suggests contraception use affected by women's different perception.

5.4 Women's intention to postpone or stop childbearing

Women's intention to postpone or stop childbearing has a positive effect on contraception use. According to EDHS 2011, 37% of married women do not want any more children and like to limit pregnancies. Another 38% want to wait for two or more years before having their next child.

The desire to space or limit childbearing is also determined by the number of living children women have. For instance 55% of currently married women want a child soon and 34% want to delay for at least for two years. The desire to stop childbearing increases with the number of living children women have. For instance women who have one child and who have six or more children had 9% and 69% desire to stop childbearing respectively (CSA 2012).

In a study conducted in Debreworkos shows 45.9% of women had intention to use one of the LAPMs of contraception in the future. Their reason accounts 55.9% for wanting long interval between pregnancies and 28.2% don't want any more children (Bulto et al. 2014). These women could be considered as potential contraception users.

This finding suggests women are aware of the risk of bearing many children and would like to space or limit pregnancies which could have positive effect on contraception use.

Chapter Six: Discussion, Conclusion and Recommendations

This chapter discusses and concludes the potential influencing factors to use modern contraception based on the findings and the adapted conceptual framework. Recommendations are provided on the identified relevant factors.

6.1 Discussion

Young and unmarried women are less likely to use modern contraception (Tsehaye et al. 2011, Agbol et al. 2013 Megabiaw 2012 and Espeut et al. 2010). This might be due to the perception in the general population about young and unmarried women should not be sexually active. This perception may affect their exposure to FP information and visits by HEWs to discuss FP issues. The finding also shows young women had a low perceived risk of pregnancy which affects their contraceptive method seeking and exposed them to unintended pregnancy. Due to limited knowledge on the availability of safe abortion services half of the abortion was unsafe. Some health care providers also put their own restriction criteria such as, different age limit and partner consent to provide contraceptive methods (FHI 2012 and DKI 2012). These cultural beliefs, perceptions and health workers attitude might hinder them to access modern contraceptive methods. But in the 2011 EDHS unmarried sexually active women are surprisingly more likely to use modern contraceptives (CSA 2012). These women might be educated and living in the urban areas which will have exposure to FP information and access to modern contraceptive methods. The other might be that only a small number of unmarried sexually active women were included in the study.

Uneducated women are less likely to use modern contraception (Tilahun et al. 2013Gizaw & Regassa 2011 and Tengia-Kessy & Rwabudongo 2006). In Ethiopia women are less privileged for education due to the cultural norm, women should know only house works like cooking food and child caring. This can affect them from acquiring knowledge and exposure to FP information. Uneducated women are more likely to be a house wife and will be busy both by household activities and assisting their husbands in agriculture. This might limit their social interaction with friends and families that might discuss contraception. Educated women are more likely to use contraception methods. This could be due to

exposure to different types of FP information materials and discussion on the possible side effects.

Muslim women are less likely to use modern contraception (Ferede 2013, Lakew et al. 2013 and Gordon et al. 2011 and Olugbenga-Bello et al. 2011). This might be due to the preference of extended family in the Muslim community. Another reason could be that Muslim women are less privileged to get education compared to other women, which can affect their exposure to FP information and knowledge. The review also shows contraceptive use is considered as a sin in the communities. This might be because of the religious leader thought and beliefs in the communities. Christian women are more likely to use modern contraceptive methods. This could be that Christian women are more likely to attend school and will have knowledge and exposure to FP information.

Women who want more male children are less likely to use contraceptive methods (Tilahun et al. 2013 and Ieda 2012). This might be due to the cultural and value of male children in the community. In Ethiopia a family will get respect in the communities if they have more male children than females because males considered as a guard for the family. The other reason might be that in Ethiopia agriculture is the main means of income for the majority of the population which requires more labour force to cultivate. The parents might value to this support of male children and, therefore want more male children. The parents also believe that, after marriage male children will bring their wives to the household then who can support them during old age. Females on the other hand follow their husbands and cannot be considered as family members once they get married. The findings also identified that women who had the experience of losing a male child have a strong preference of more male children. This could also apply to female children but this study did not identify it.

Women who have low knowledge and negative attitudes on contraceptive methods are less likely to use contraception. They believe contraception use can cause infertility, cancer, hypertension, delay pregnancy, heart diseases, excessive menstrual bleeding and negative influence on their capacity for normal work (Kassie et al. 2014, Tilahun et al. 2013). This might be due to the misconception in the general population. The limited discussion on the possible side effect of their preferred methods with contraceptive user women might have contribution to this misconception in the general population. For instance from EDHS 2011, only two out of ten women were aware the possible side effect of their preferred method and what to do if they encounter any side effects.

The review also shows that there is a very negative attitude in the community on LAPMs. This might be due to limited knowledge about LAMPs and unavailability of the services at the lowest community levels. The communities have positive attitudes on short term contraceptive methods and injectable is the most preferred method by women. This might be due to easy availability by HEWs at the lowest community level and less perceived side effect by women. The new initiative, HDA under the existing HEP played greater role in the promotion of community involvement in health care in one-to five network and identification of community needs which might have contribution to the promotion of LAPMs together with the HEWs.

Women who have a perception of being free from the risk of pregnancy due to breastfeeding or postpartum or infrequent sex are less likely to use modern contraceptive methods (Sedgh and Hussain 2014, Megabiaw 2012, CSA 2012 and Espeut et al. 2010). This might be Anti Natal Care (ANC) counselling to pregnant women is not strong enough on explaining how to apply Lactational Amenorrhea Method (LAM) to women. The other, women might not be able to practice exclusive breastfeeding due to different reasons such as jobs and agricultural activities, where breastfeeding is impossible. Women who have infrequent sex usually will use traditional methods like calendar method which may not always be effective. This perception hinders them from seeking modern contraception and will have unplanned sex which might expose them to unintended pregnancy.

In the communities there is a general perception that childbearing and related responsibility is only women's task. Taking into account this perception the NPP (1993) considered male focused promotion as one of the strategies but still men believe FP is a women's issue and there is no need for them to have discussion about FP (Tilahun et al. 2013 and Bayray 2012). This suggests promotion of male involvement in FP is still too limited and FP programs are women centred. Some women also believe that they have to accept their husbands' decision in their health issues including contraceptive use. This suggests women are less empowered to decide on their health issues.

Women who have support from their partner are the most contraceptive user (Tadesse et al. 2013, Gizaw and Regassa 2011 and Espeut et al. 2010). They might be educated and can understand the risk of too many pregnancies. This may encourage them discuss openly on the number of

children they will have and the intervals between births to minimize the risk of pregnancy.

Women who are poor, living in the rural areas and pastoralist regions are less likely to use modern contraceptives (Lakew et al.2013, Tilahun 2013, Kassa et al. 2012, Bogale et al. 2011 and Espeut et al. 2010). From the analysis there is a very low health facility to population ratio in Ethiopia, particularly health centers and hospitals are inadequate. The inadequacy of health facilities is more serious in the rural areas and pastoralist regions. This creates greater inequity between urban-rural and urbanized-pastoralist regions in modern contraceptive utilization. For instance, women living in the urban areas are more than two times contraceptives user compared with their counterparts. Similarly, Amhara region has more than six times higher modern contraception utilization compared to Somali region.

Though HEWs are providing short term FP methods at the community level, they sometimes experience a stock out and absence of the preferred methods limit women's use of contraception. According to a UNFPA (2010) national assessment on availability of modern contraceptive methods, in some facilities stock out of short term methods like pills was high. Women need to travel long distances to get the preferred methods even up to 18 km (Mekonnen and Worku 2011). This leads women to have to pay direct and indirect cost of contraception which may not be possible to poor women and often expose them to unintended pregnancies. In Rwanda, there was only a slight difference in women using modern contraception between urban and rural areas in 2010. In the previous DHS (2005) Rwanda had a similar gap in urban-rural modern contraception use like Ethiopia. To close this gap Rwanda implemented different strategies from 2006 to 2010 and achieved this successful result. Commitment is created from top leaders to lower local village administrators. The Rwanda Ministry of health leveraged other higher level Ministries including Finance and Education. Every leader at each level becomes an FP champion and advocates for FP in quarterly review meetings and community events including male involvement in FP. A strong FP technical working group is established. This technical working group coordinates the different partners working on FP, based on the priority of the gaps identified and minimize duplication of efforts. The Ministry also expanded the number of health centers at the village level and hospitals at district level. FP service is integrated in all health care services to offer contraceptive methods to all women coming to health facilities for other health care services. Rwanda also improved the availability of data for decision making at each level (USAID 2012).

In Ethiopia, all methods of contraception are not available as planned in the RH/FP strategy. For instance LAMPs are unavailable in some rural facilities according to the UNFPA (2010) assessment. The main reasons were scarcity of health care workers, inadequacy of health facilities and limited supplies. But LAMPs are the most efficient and cost effective methods. In Ethiopia provision of both male and female sterilization and IUCD services can only be provided by trained GPs/HOs (see annex 1) but both professions are very scarce in the country. The scarcities of these professionals are more serious in the rural areas and pastoralist regions due to limited career development, education and salary in the rural areas and pastoralist regions. In Malawi for the increase of female sterilization different strategies were implemented. Task shifting, public-private partnership and the emergency human resource program were the most effective strategies that contribute for the successful increment of female sterilization. To use the available work force in the public sector task shifting allows providing training and deploy nurses and clinical officers to provide specific LAMPs. The development of public-private partnerships to provide LAMPs in outreach services and private facilities reduce the gaps between urban-rural and contributes for good achievement. The other strategy is Malawi developed an emergency human resource program to address the human resource crisis in the health sector and ensure retention of staff by increasing salary, providing training, promotion and performance based incentives. The total health provider density increased from 0.87 per 1,000 in 2004 to 1.44 in 2009 (USAID 2012).

Mass discussion on contraception is one of the issues identified in this study particularly in the government health facilities which can affect their privacy and hinder from discussing openly their concern (Gizaw and Regassa 2011 and Fantahun 2005). This might be due to over burden of staff by different activities to allocate individual and sufficient counselling time. This can also compromise the quality of FP services.

This study also identifies private drug dispenser pharmacists also misinform clients by telling more often use of EC has serious side effects, therefore they refuse to sell it for repeating customers (DKT 2012). This can limit women from taking action after unsafe sex like condom breakage and unplanned sex.

The finding also identifies that some health workers become biased and offer most often there recommended method were recently trained on, which limits women choice to identify their own preference.

This study also identified some health care providers are not taking into account client's capacity during discussion and didn't follow the FP guideline and use their own restriction criteria to provide contraception methods.

Some health care providers in the private clinic and HEWs also have limited knowledge on the possible side effects of each contraceptive method (Ieda 2012). This lead them to misinform clients by saying contraception has no side effect at all. This incorrect thought expands to the communities and develops negative attitude among the general population which can have serious negative impact in FP program success. Therefore, Improving the capacity of health workers particularly health extension workers is mandatory.

6.2 Conclusion

This study identified that the health belief is an important predisposing factor. The beliefs, norms, values, perceptions and limited knowledge in the communities affect women's modern contraception use. Furthermore, health care system factors such as limited accessibility, availability and low quality of FP services affects women's modern contraceptive methods use.

Use of modern contraception can increase by addressing these influencing factors. Intensified awareness raising in the communities is mandatory to improve knowledge and minimize the effect of norms, values, perceptions and beliefs. Expansion of health facilities, increase the number of health workers and adequate commodities supply is mandatory to the rural parts of the county to improve the accessibility and availability of FP services. Regular assessment of the FP services is also compulsory to ensure the quality of FP services.

6.3 Recommendations

The following recommendations are provided based on the influencing factors identified in this study to use of modern contraception in Ethiopia and other successful sub-Saharan African countries experience to address similar challenges.

Community level

- Strengthen the awareness rising program and Behavioural Change communication (BCC) with community leaders, religious leaders and school teachers.
- Engage HDA leaders to promote male involvement in FP, LAPMs and ensure community ownership of FP program.

Facility level

- Improve quality of contraceptive counselling such as encourage two way communications, inform women on the different method mix, make women aware of the possible side effects of their preferred method and what to do if they encounter any side effects.
- Follow the FP guideline to provide FP services and avoid personal bias towards young women.
- Improve the ANC counselling to pregnant women to raise awareness of the risk of pregnancy if exclusive breastfeeding is not practiced properly and that may fail sometimes.
- Integrate the FP services in all health care services to offer modern contraceptive methods to all clients that come to health facilities for other health care services.
- Strengthen the referral system from health posts and health centers to district hospitals for LAPMs services.
- Check the quality of FP services with a particular focus to HEWs and private health workers FP services provision and provide regular supportive supervision.
- Awareness raising on the availability and legality of safe abortion services to decrease the complications related to induced abortion.
- Improve the availability of data for informed decision making.

Policy level

- Expand the district hospitals and health centers in the rural areas and pastoralists regions to ensure accessibility of FP services to majority of the population.
- Increase the number of health workers in the rural areas and pastoralist regions to ensure the availability of all types of modern contraceptive methods particularly LAPMs.
- Improve contraceptive logistics system.
- Train health workers to improve their knowledge, skills and attitudes towards young women with a particular focus on HEWs.
- Integrate women's empowerment program into FP programs to educate women that they have a right to decide on their health issues including contraception use.
- Establish NPC to coordinate the programs, development partners, ensure government ownership, assign partners based on the identified gaps and minimize duplication of efforts.
- Task shifting for LAPMs to nurses where possible, it helps to use the existing work force to make available the services where it is not provided due to unavailability of GP/HOs.
- Strengthen monitoring and evaluation system, and provide integrated regular supportive supervision at all level.

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Annexes:

Annex 1: Map of the regions and zones of Ethiopia



Source: CSA, 2008

Annex 2: organization of services by level of care

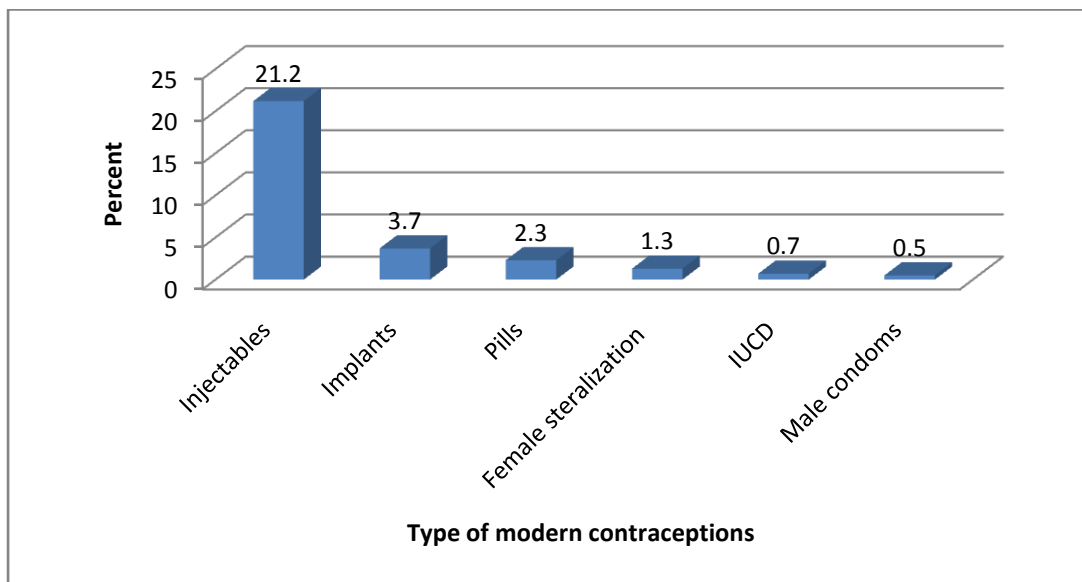
Level of Facility	Type of health personnel available	Family planning services
Health posts	Health Extension Workers	The above activities plus <ul style="list-style-type: none"> • Counselling on FP and other SRH issues • Counsel on natural family planning methods • Provide injectables • Implanon insertion and removal

		<ul style="list-style-type: none"> • Refer to health centre for other long acting and permanent methods of contraception • Planning based on local data
Health Centers	General Medical Practitioners (GMPs) and/or , Health Officers (HOs) Midwives, Clinical Nurses, Public Health Nurses, Laboratory Technicians	<p>The above activities plus,</p> <ul style="list-style-type: none"> • General physical and pelvic examination including VIA/VILI • Provide implant insertion and removal • Provide IUCD insertion and removal • Where a trained GP/HO is available provide Tubal ligation and Vasectomy • Manage complications and side effects • Provide syndromic management of STIs • Provide HIV testing and counselling including care • Training of Community level workers and junior health professionals in Family planning • Monitoring and facilitative supervision
District/Zonal Hospitals	Obstetrician and Gynaecologists and/or General Medical Practitioners (GMPs), Health Officers (HOs) Midwives, Clinical Nurses, Public Health Nurses, Laboratory Technicians	<p>The above activities plus:</p> <ul style="list-style-type: none"> • Provide permanent method of contraception • Receive referral • Manage complications and side effects • Work-up for infertility
Referral hospitals	Obstetrician and Gynaecologists , General Medical	<p>The above activities plus:</p> <ul style="list-style-type: none"> • Management of infertility • Management of complicated STIs

	Practitioners (GMPs), Health Officers (HOs) Midwives, Clinical Nurses, Public Health Nurses, Laboratory Technicians	<ul style="list-style-type: none"> • Manage complications and side effects of contraceptive methods • Management
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Source: MOH, 2011

Annex 3: Percentage of all women using modern contraceptive methods.



Source: CSA, 2012