

## Factors Influencing the Utilization of Long-Term Contraceptive Methods among Women of Reproductive Age in Ting'ang'a Location; Kiambu East District, Kenya

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### Abstract

Contraceptive use has increased throughout the world over the years. They are classified into two categories; Short-term term methods which are used within three months and long term used longer than three months. The study aimed to establish the various factors influencing the utilization of family planning methods by women in the Ting'ang'a Location of Kiambu East District. A descriptive cross-sectional study was conducted, and 300 women aged 15 to 49 participated. Structured questionnaires, in-depth interview guides, and FGD were used to collect quantitative and qualitative data. A chi-square test at 95% C.I. was used to test the association of variables regarding knowledge, attitude, and cultural practice of Family planning. Out of 300 respondents, 70.3% were married and 17.0% were single. Their mean age was 30.69 years  $\pm$  7.905, the youngest being 15 years, the oldest 49 years. There were 97.0% Christians and 3.0% others and 65.7% had attained primary school. 50.0% currently use modern contraceptives. The Utilization rate was classified as Depo-Provera (50.0%), Implant (21.7%), Pills (19.2%), IUCD (5.6%), Tuba-ligation (1.0%), and others (2.5%). Level of education had no significant ( $P= 0.490$ ) influence on the current use of FP methods. However, two variables were significant: the age of respondents ( $P= 0.000$ ) and knowledge of the benefits of FP ( $P= 0.000$ ) respectively had an influence on the current use of family planning methods. There was high awareness of FP methods; half of the respondents were currently using a contraceptive. Culture was a key hindrance, constituting 91.1%.

**Keywords:** Contraceptives, Kenya, Longterm, Utilization, Women.

### Introduction

Reproductive Health as defined by the World Health Organization, is generally a state of complete physical, mental, and social well-being in all matters related to the Reproductive Health system, and not merely the absence of disease or infirmity [1]. RH care system therefore is inclusive of all promotive, preventive and curative services that will be conducive to the well-being of the individual in human reproduction and sexuality [2]. Reproductive Health is made up of many components, amongst which is the aspect of family planning. Family planning is the use of

birth control methods to choose the number and timing of children born into a family. It is recognized not only as a key intervention for improving the health of women and children but also as a human right [3]. The basis for action in family planning as stated in the Programme of Action of the UN International Conference on Population and Development, must be, to enable couples and individuals to decide freely and responsibly the number and spacing of their children, to have the information and means to do so, to ensure choices and make available a full range of safe and effective methods [2].

Contraceptives are classified into two main categories namely; Short term contraceptives which are used within three months and below and Long term contraceptives used from three months and above [4]. Worldwide, 61% of women aged 15–49 years who were married or in a consensual union (635 million women) used some form of contraception in 2019. In developed countries, women relied mostly on oral contraceptives (16%), female or male sterilization (15%) and condoms (13%); only 9% of women used long-acting reversible contraceptive (LARC) methods. The respective percentages in developing countries were 3%, 6%, 18% and 25 % respectively [5].

Although oral contraceptives can be very effective in preventing unintended pregnancies, they have been associated with poor compliance which often results in contraceptive failure [6]. In contrast, female sterilization does not depend on users' adherence, it is highly effective, but it has a permanent contraceptive effect. Notably, Long long-acting reversible Contraceptive methods combine reversibility with particularly high effectiveness, which does not rely (or relies to a small degree only) on users' compliance or correct use. Despite these advantages, the uptake of LARC methods in Britain and most other developed countries is rather low [7].

Approximately 25 % of women and couples in sub-Saharan Africa who want to space or limit their births are not using any form of contraception. In a survey carried out by the CDC on the use of contraceptives in Sub-Saharan Africa in the year 2020, sterilization was 2.4%, contraceptive pills was 10.1%, Intra-uterine contraceptive device was 2.1% and Condom was 1.9%. In most countries, the source of supply will vary substantially, by type of method. As in many regions in Africa, east Africa is facing the threat of HIV and increasing poverty. The governments of these countries are consistently sensitizing and educating on the practice of family planning [8]. One of these countries is the Government

of Kenya. The total fertility rate for Kenya in 2021 was 4.6, the use of family planning services was 46%, and the use of IUCD in particular as a long-term method was 2.4%) In 2021 [9].

Women's decisions about non-use, use, and discontinuation can be affected by their perceptions of contraceptive risks and benefits, concerns about how side effects may influence their daily lives, and assessments of how particular methods may affect relationships with partners or other family members. Incorporating women's perspectives into contraceptive introduction strategies can help local family planning programs increase user satisfaction, improve continuation rates, and expand method use, experts suggest. It has been found through several studies that the dependent factors are effectiveness and side effects [2]. Kenya is divided into many Districts which are in turn divided into locations and sub-locations respectively. In Kiambu District, the female population in the reproductive age group made up 26.4% of the total district's population. In this District, different aspects of the provision of reproductive health services were found to be wanting in some locations. This data includes the study area (Ting'ang'a) which has a total population of 8,475 [10]. Thus the objective of this study was to assess the utilization of long-term contraceptive methods by women in Ting'ang'a location in order to facilitate the planning of health care provision. The analysis in this report is based on the findings and responses from women of reproductive age 15-49 years, using SPSS version 18.0. Other popular contraceptive methods, such as the male condom and male sterilization are not examined in this paper, as their use does not depend exclusively on women's choice and compliance.

## **Problem Statement**

Rapid population growth has contributed to large family sizes that in turn contribute to exacerbating the effects of poverty on people. It

was therefore important to promote the use of long-term contraceptive methods of family planning to control and maintain a manageable family size. It had been observed that the use of short-term contraceptives was higher in the Ting'ang'a location but the use of long-term methods was very low. All GOK health facilities in all the locations of Kiambu provide the two types of contraceptive methods. Long-term methods were more advantageous as they can be used between 3 -12 years once administered without frequent visits to the FP provider [11]. This information and many more on family planning were offered to all women attending ANC services in this District. It was not clear why the Ting'ang'a location in this district had a characteristic of not using long-term contraceptive methods over the past years [10]. Studies have found that the reasons for such a situation could be poor accessibility to the service, high cost, cultural and religious influence and lack of knowledge about these services. The availability of a health facility providing FP services, continuous education on the essence of FP and reduction of the cost of these services could increase the utilization [12].

### **Justification of the Study**

According to Robert Malthus (1798), if the human population is allowed to increase in an uncontrolled way, then the number of people would increase at a faster rate than the food supply. A point would come when the human population would reach the limit to which food sources could not support. Any further increase would lead to a population crash caused by natural phenomena like famine or disease. In his own words, "passion between the sexes is an inevitable phenomenon hence, when unchecked, population would grow at such a high rate that it would outstrip food supply" [13]. According to Malthus, disease, food shortage and death due to starvation, was nature's way to control the population. He proposed that human beings adopt measures

like moral restraints, delaying marriage, avoiding extramarital sexual gratification, and the practice of abstinence before marriage as a way to check population growth [13].

In order to avoid getting into the situation of natural checks as a result of the rapid population growth rate as predicted by Rev. Robert Malthus (1798), which may lead to inadequate access to food, water supply, education and health services, it is important to enhance policies that promote contraceptive prevalence. These policies are only enacted and implemented after a thorough investigation or research has been conducted. The two types of contraceptives are short and long-term methods that: prevent pregnancy; and allow spacing and choice of family size [14]. Modern long-term contraceptive methods such as intra-uterine device (IUD), Implant and tuba-ligation are used to postpone or avoid pregnancy for a long period of time. They are all effective if used in the correct manner are reversible and can be removed anytime one wishes to have a baby except for tuba-ligation which is a permanent method [15].

Research indicates that the most effective birth control method is the method the client is most comfortable with. Client understanding of various methods and comfort with the one they choose is best accomplished with non-directive counselling and education from a family planning provider that they trust. Family planning providers aim to increase the percentage of clients who use their chosen method consistently and correctly [16].

All women are entitled to a contraceptive method of their own choice. Long-term methods are more dependable and reliable as they give a woman a long break from childbearing and better opportunities for involvement in the socio-economic life of the community. A woman's ability to avoid unintended pregnancy is related to her level of risk for pregnancy, her choice of methods, the strength of her motivation to avoid pregnancy and her pattern of contraceptive use [17]. These

factors, in turn, are often associated with a woman's demographic and socioeconomic background, characteristics of her sexual partnerships, and her experiences with and attitudes toward pregnancy and contraception [18]. It was vital for this research to consider the background, demographic, socio-economic, socio-cultural and accessibility factors associated with the use of long-term contraceptives by women aged 15-49 in this location.

Since the information on the utilization of long-term methods of contraceptives in Kiambu East-Ting'ang'a location, is scanty with no scientific study done to access factors influencing the prevalence of use, the information generated by this study gave an insight into prevalence use, accessibility and sociocultural factors hindering long term contraceptive use. The data will help the district management team and other stakeholders in future planning and integration of other health services with family planning.

### Research Question

What are the underlying factors influencing the utilization of long-term contraceptive

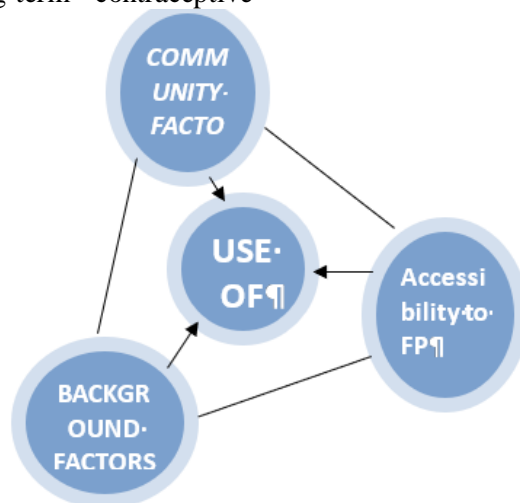


Figure 1. Conceptual Framework

### Study Area

Kiambu East is one of the eleven districts in the central province. It borders Nairobi to the south, Thika and Gatundu districts to the east and Kiambu west to the west. The district has a

total area of 365.7 km<sup>2</sup>. It is divided into three administrative divisions namely: Kiambaa, Githunguri and Kiambu Municipality, 16 locations and 48 sub-locations respectively. Population was 2,417,735, with a population

### Broad Objectives

To establish the various factors influencing the utilization of long-term contraceptive methods in the Ting'ang'a Location of Kiambu East District.

### Specific Objective

1. To establish the prevalence use of long-term contraceptive methods.
2. To assess the accessibility and availability of Long-term contraceptive services
3. To determine, socio-cultural and religious beliefs and myths hindering the utilization of long-term Contraceptive methods.

### Hypothesis

There are no socio-cultural factors influencing the utilization of long-term contraceptive methods in Ting'ang'a Location, Kiambu East District.

### Conceptual Framework

growth of 2.6 % which makes it the most densely populated district in the province with 952.4 persons per square (Km<sup>2</sup>) [19]. The study area was conducted in Ting'ang'a Location with a catchment population of 8,475, in two sub-locations namely; Kagongo and Ting'ang'a comprising 14 villages respectively.

### **Health Facilities**

The district had two (2) hospitals; Kiambu District Hospital, Kihara sub-district hospital and Beta Care (nursing home); six (6) health centres and thirteen (13) dispensaries. As per the Community Strategy Mapping, the expected number of Community units in the district is 52. Only seven (7) of these units are functional [19]. In Ting'ang'a, the Catholic Mission dispensary was the only one serving the location.

### **Socio-Economic Status**

Primary resources in the district include land, soil and water. About 90% of the district was arable land. All divisions had high agricultural potential. Coffee, tea, horticulture and flower farming were major cash crops in the district. Livestock and enterprises were also major economic activities. Other natural resources included, mining (quarries) in the Githunguri division. Long rains in the district occur between April and May while short rains occur from October to November. The majority of the people in the Ting'ang'a location were farmers and in fact (60%) of the women who responded to the interview were farmers, 25.6% were doing marketing, 10% were employed and salaried and 4.4% had no permanent occupation. Farming in this location largely included cattle rearing and milking [19].

## **Methodology**

### **Study Design**

A descriptive, cross-sectional study was undertaken to establish the various factors influencing the utilization of long-term contraceptive methods by women of

reproductive age (15-49 years) in Ting'ang'a Location of Kiambu East District from June 29 to July 15, 2024.

### **Study Population**

The study population constituted women of reproductive age group aged between 15-49 in the Ting'ang'a location.

### **Sampling**

Ting'ang'a location was purposively sampled by the District Health Management Team of Kiambu owing to the low utilization of long-term contraceptives in the area. The sampling frame was households with women aged 15-49 years.

### **Sampling Technique**

Women aged 15-49 years in the Ting'ang'a location who were present at the time of the study were randomly sampled and interviewed.

### **Sample Size Determination**

The required sample size was calculated using the approximate percentage of women in the reproductive age bracket (26.4%) of 8475 which totals to 2,238 women (Kiambu East District Profile, 2021). the target population of Caregivers of children with malaria is assumed to be large. Hence, the sample size will be calculated using Cochran's formula for a large population [20].

### **Cochran Formula (1963)**

The sample size was calculated as follows:

$$n = \frac{z^2 pq}{d^2}$$

Where n = maximum desired sample size,

z = standard normal deviation set at 1.96, which corresponds with 95% CI

P= proportion of the target population estimated to have a particular characteristic of Interest (50%)

d= Minimum error (degree of accuracy desired) set at 0.05.

q= the proportion of the remaining population (1-P)

i.e.  $q=1-0.5=0.5$

$$n = \frac{1.96^2 * 0.5 * 0.5}{0.05^2} = 384.2 = 385$$

Women of reproductive age bracket in Ting'ang'a location are 2,238

$$Nf = n / \left(1 - \frac{n}{N}\right) = 385 / \left(1 - \frac{385}{2238}\right) = 328$$

The desired sample size (n) was 328 women

The actual sample size was 300 women (91.5%)

## Study Variables

### Data Collection Methods and Tools

Structured Questionnaires were administered to eligible women in their households. In-depth interview guides moderated by the Principal Investigator were conducted with two key informants (the Chief and woman leader), and two focus group discussions (FGD), where proceedings were recorded using a tape recorder and notebooks. Following this method, both quantitative and qualitative data were collected. Table 1: Key Study Variables of the study group and scale of measure.

### Inclusion and Exclusion Criteria

All women of reproductive age 15-49 years residing within the six villages of the two locations were included in the study. Women of age 15-49 years who were not residing within the six villages together with those who were residing but were not present at the time of the study were excluded.

### Data Analysis

Data cleaning was done by running frequencies to trace the missing data and cross-checking the interview schedule after data entry using SPSS Version 28.0. Categorical data was analyzed and presented in frequencies, proportions and percentages while numerical data was analyzed and presented in measures of central tendency and dispersion.

## Quality Control

The researcher ensured that the data collection tools (30 interview schedules (9.1%) of the desired sample size were filled for pre-testing by women of the Ting'ang'a sub-location and the necessary correction and adjustments done on the final interview schedule. Research assistants were carefully identified on condition that they were fluent in both Swahili and English languages and had no bias against any contraceptive methods of family planning.

## Ethical Consideration

Confidentiality and privacy of respondents was maintained as names of respondent identification were not required and information gathered was limited only to persons authorized to use such type of information. Consents were sought from each administrative leader, facility head, family and respondent before interviews were conducted. Potential benefits to the community were articulated clearly and unambiguously so as to make information useful when needed. Research participants were considered partners, not research subjects and their daily work schedule was respected. Responsible members of the community such as the Chief, Women leader and Community Health Volunteers were given responsibility for ensuring continuous education on family planning. After consultation with the leaders about the proper methods for publishing and disseminating information to benefit the community, community members were the first to receive information about the results of this study.

## Limitations and Delimitations

Time was the major limitation experienced during the study. Heavy rainfall (slippery roads and mud), traffic jams (caused delays) and the farming period (women went to the farms) were also key limitations to achieving the desired sample size. All these contributed to chopping and reducing the research time. However, a

representative sample was achieved through hard work and commitment by the entire team.

## Results and Findings

### Location of the Study

64.1% of the respondents were from the Ting'ang'a sub-location while (35.9%) were from Kagongo. In all the two sub-locations, 3 villages from each were sampled. In the Ting'ang'a sub-location, the villages were, Upper Gituamba (14.4%), Lower Gituamba (15.9%) and Gitundu (15.0%) while the villages in Kagongo sub-location were, Thaara (20.3%), Kagongo (14.4%) and Makenga (20.0%) respectively.

### Socio-Demographic Characteristics

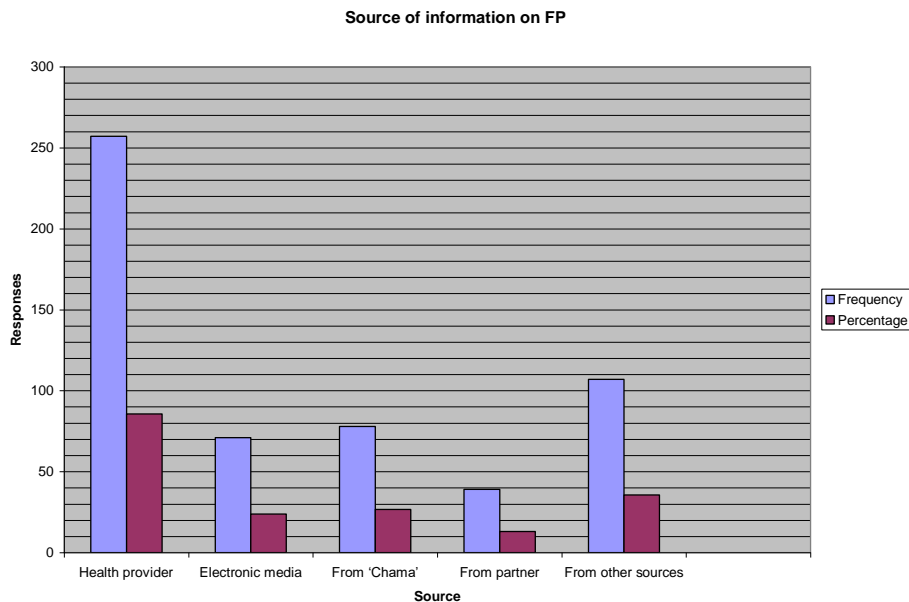
Out of the 320 respondents, 66.9% were married, 26.92 were single and the rest were either separated, divorced or widowed. Their mean age was 29.9 years  $\pm$  7.61, the median 28.3; the youngest respondent was 16 years while the oldest was 49 years. 71.3% of the respondents were Catholics while 28.1% were Christian Protestants and over half of the respondents (52.5%) had attained secondary

education. The majority (48.4%) of the respondents had their last child between 0-4 years. (31.6%) of the respondents were housewives, (10.0%) were salaried.

### Utilization of Contraceptive Methods

#### Source of Information on Contraceptives

The majority (94.7%) of the respondents were aware of family planning methods. Sources of information were classified as Health provider (85.7%), Chama (women group) (26.7%), Electronic media (23.7%), Partner (13%) and others (friends, seminars, books) (35.6%). A higher percentage of the respondents got information from Health providers during visits to Child Well Fare Clinics (CWC) while a small percentage got it from the Chama (women group) during group meetings. The in-depth interviews with the opinion leaders and the focus group discussions also confirmed that women who practised FP mostly got it during routine visits to the ANC. A full graphical picture is displayed in Figure 2 below.



**Figure 2.** Source of Information on FP (*Multiple Respond*)

## Current Use of Modern Contraceptives

Current usage of modern short-term contraceptives was found to be; Depo-Provera (30.3%), Contraceptive Pills (25.9%) and other (natural, herbs) (30.3%) and for long-term contraceptive methods; IUCD (6.6%), Implant (4.7%) and Tuba-ligation (1.3%). The prevalence use of long-term was noted to be low (12.5%) as compared to short-term methods (56.2%). From the focus group discussions, most of the women pointed out that they prefer short-term methods (Depo-Provera and pills) because they are easily available and

cheaper in the shops and Chemists. They complained that long-term methods were expensive and only available in hospitals and health centres which were not operating in the location during the time of the study. Most of them mentioned that they were usually frustrated anytime they went to the facility requesting tuba-ligation as they were denied the service for reasons of being young in age owing to its irreversible nature. This was pointed out as one of the reasons for the low prevalence use of tuba-ligation in this location. The table 1 below shows the frequencies and percentages of currently used contraceptives in the location.

**Table 1.** Methods Currently Used by Most Respondents

Method currently using	Frequency	Percentage
<b>Short-Term</b>		
Depo-Provera	97	30.3
Contraceptive Pills	83	25.9
Not Using	98	30.3
<b>Long-Term</b>		
IUCD	21	6.6
Implant	15	4.7
Tuba-ligation	4	1.3

## Reasons for Low Use of IUCD

Most of the women were not using IUCD for the following reasons; no idea (59.7%), side effects (18.4%), expensive (5.6%) and others (not available, family decision) (16.3%). According to the women leader, women in the community complain that they experience backache, headache, bleeding and failure and that there are also some misconceptions and myths such as its disappearance in the Uterus, and attachment to the head of the fetus. The women also said that they fear the route of

insertion and the method is not available in all the clinics they visit within the location. This is confirmed by WHO [21] in a study aimed at Creating a Common Ground for the use of FP methods. This displayed women's Perspectives on the Selection and Introduction of Fertility Regulation Technologies.

## Future Use of IUCD

A greater percentage of women (56.9%) said they will never use IUCD in future, (34.4%) said they may possibly use it in the future and (8.8%) were not sure as seen in Table 2.

**Table 2.** Future Use of IUCD

Options	Frequencies	Percentages
No	182	56.9
Yes	110	34.4
I don't know	28	8.8
<b>Total</b>	<b>320</b>	<b>100.0</b>



### Socio-cultural and Religious Factors

The majority of the respondents mentioned religion (46.7%) as the most influential socio-cultural factor in the use of long-term modern

contraceptive methods. A few of them based their arguments on myths and misconceptions (31.1%) and others (on culture) 22.2%. Figure 3 gives a vivid picture of these results.

Socio-cultural Factors

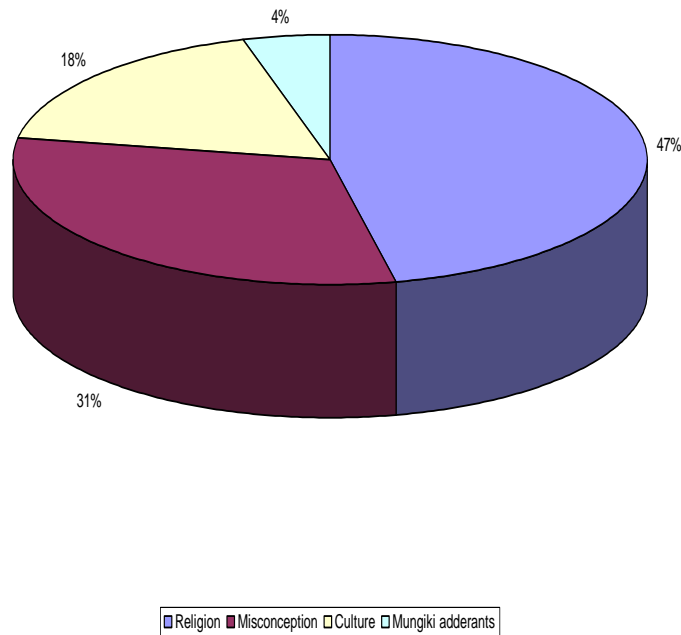


Figure 3. Socio-cultural Factors

### Association of Age Group of Respondents to Usage of Contraceptives

Although the Chi-square test could not be used to associate the age groups and utilization of contraceptives because the statistical value exceeded the upper limit of 20, the highest utilization rate was found among women of age group 25-29 as it was 27.2% for short-term and 25.00% for long term. This signifies almost equal acceptance of the two categories of contraceptive methods of family planning. On the other hand, women above 30 years use them

at a lower rate but the usage of long-term was more than the short term.

### Level of Education of Respondents/Utilization

Although the Chi-square test could still not be used to associate the level of education and utilization of long-term contraceptives because the statistical value exceeded the upper limit of 20, it is evident that utilization is higher for short-term at primary but higher for long-term at secondary. The figure below displays the information.

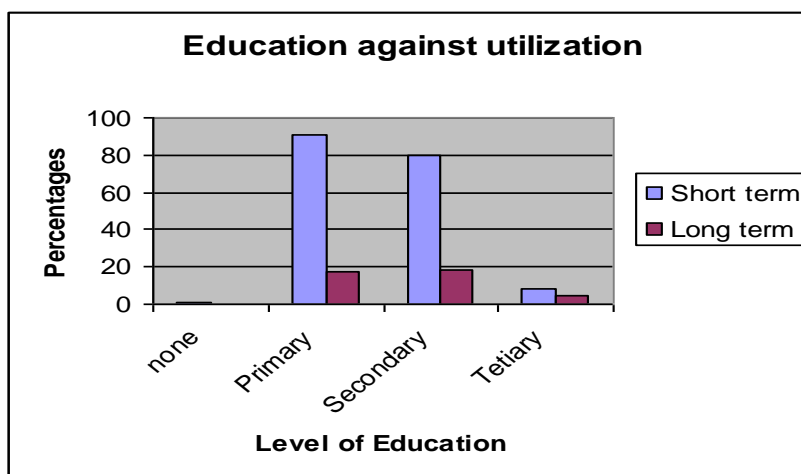


Figure 4. Level of Education of Respondents/utilization

### Results of Testing Association of Variables

Table 3. Results of Testing Association of Variables

Independent Variable	Long Term	Short Term	Statistical Test
<b>Sub-location</b>			
Ting'ang'a	18.6%	81.4%	$\chi^2 = 0.039$ ; 1df; $P > 0.05$ [0.843]
Kagongo	17.5%	82.5%	
<b>Religion</b>			
Catholic	19.8%	80.2%	$\chi^2 = 0.923$ ; 1df; $P > 0.05$ [0.337]
Protestants	14.0%	86.0%	

### Interpretation

The first association testing at a 95% confidence interval at 1 degree of freedom between the sub-location and use of long-term contraceptives showed that there is no significant difference in the prevalence of use patterning to each location. It clearly demonstrated that the place of residence of women had no influence on the utilization rate. The second association test at a 95% confidence interval at 1 degree of freedom was between the religion of the respondent (women) and the use of long-term contraceptives which also showed that the religion of the respondents (women) had no influence and did not determine whether she would use long-term contraceptive or not.

### Conclusion

Awareness and utilization of short-term were found to be higher than long-term contraceptives among women aged 15-49 in the Ting'ang'a location. Accessibility to long-term contraceptive methods within the location was poor and there were no socio-cultural beliefs/myths discovered that hindered women from utilizing long-term contraceptives effectively. However, during the FGD and In-depth interviews, some of the reasons given as to why women do not prefer IUCD could not be scientifically proven and should therefore be considered as misconceptions. Modern contraceptive methods were supplied through clinics in addition to commercial and community-based development (CBD) outlets. Pills, Condoms and other short-term methods were dispensed from any type of facility. Any

method of family planning be it natural or artificial, did not affect the sex life of the couple. However, no method was foolproof and there have been rare cases where women have become pregnant even after using contraception. Therefore, the best way would be to consult one's gynaecologist to understand the appropriate family planning method to practice.

## Recommendations

1. The Ministry of Health should integrate other health services within the location with Family Planning services.
2. The Ministry of Health should reduce prizes of long-term contraceptives to encourage use.
3. The District Management Team in Kiambu should decentralize FP services in order to reduce the unmet needs of families in Ting'ang'a location and curb the dependence on roadside vendors.
4. There is a great need to intensify health education on long-term contraceptives to

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the whole community of Ting'ang'a location to strengthen the capacity of both men and women on this issue.

5. The Chief, his assistants, the women leaders, the Community Health Workers and other influential leaders should integrate messages on long-term contraceptives during their routine meetings and interaction with the community.

## Acknowledgement

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