Declaration

I hereby declare that the work presented in this study for a Masters' Degree of Public Health is the product of my own work and that it has not been presented for any other degree. It has been prepared in accordance with the guidelines for Master of Public Health Dissertation of the University of Zambia. I further declare that, other peoples' work has been duly acknowledged and referenced thereto, to which I owe them.

Signed…….
Date……

Candidate

Supervisors:

We the undersigned have read this dissertation and have approved it for examination.

Signed …….
Date……..

Supervisor

Signed …….
Date……..

Supervisor

Approval of Admission of Dissertation

This dissertation bySr.Rosemary Mwaba Kabonga is in partial fulfilment of the requirements for the award of the Master of Public Health degree (MPH) by the University of Zambia, Lusaka.

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Head of Department

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Date:……

Dedication

This dissertation is affectionately dedicated to my late elder sister Pascalina Kabonga (Bana Mwaba) who became sick at the time I was writing the exam. I asked God to keep her safe until I finish the exam and it happened that she died after I wrote the exam present at her bed side. I wish bana Mwaba you could see your children's days.

You were so wonderful to us and a pillar for the family. May Your Sour Rest in Peace dear.

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List of abbreviations

AIDS	Acquired Immune Deficiency Syndrome
BREC	Biomedical Research Ethics Committee
CHW	Community Health Worker
C.S.O	Central Statistical Office
DF	Degree of Freedom
FP	Family Planning
FLMZ	Family Life Movement of Zambia
FGD	Focus Group Discussion
HAHC	Hospital Affiliated Health Centre
HIV	Human Immunodeficiency Virus
IEC	Information, Education and Communication
IUD	Intra Uterine Device
KMS	Kilometers
LAM	Lactational Amenorrhea
MCH	Maternal and Child Health
MoH	Ministry of Health
NFP	Natural Family Planning
PPAZ	Planned Parenthood Association of Zambia
SPSS	Statistical Package for Social Science
STI	Sexually Transmitted Infection
TBA	Traditional Birth Attendant
UNZA	University of Zambia
WHO	World Health Organization

ZDHS Zambia Demographic and Health Survey

Abstract

The problem of low utilization of natural family planning is worldwide. There is low utilization of natural family planning in all parts of Zambia including Chilonga. Natural family planning rank least among the family planning methods used in Zambia.The study sought to determine factors influencing utilization of Natural Family Planning (NFP) among child bearing women in Chilonga Catchment area.

A cross sectional study was done in five health posts of Chilonga Catchment area between July to November 2010. Systematic random sampling was used with a sampling interval of 1: 5. Mothers coming for under five and antenatal clinics were interviewed. Out of 425 questionnaires issued, 411 were successfully utilized which gave a dropout rate of 3%.Teachers trained in NFP method were purposively selected into the study for Focus Group Discussions (FGD).A total of 2 FGDs, each with 8-10 participants were conducted.

Data was collected using a structured interview schedule comprising of open ended and closed ended questions .The study sought to answer the research question: What are the factors influencing utilization or non-utilization of NFP among child bearing women in Chilonga? The study was analysed using SPSS version 17.0. Chi-square was used to determine the association of independent variables with the dependent variable. The findings have been presented using frequency tables and cross tabulations.

The majority (74%) of the respondents had heard of NFP method. However, of the total, 58.4% did not know any method of NFP. Ever-used NFP was 50.4%, Current use of family planning (FP) was 38.4 % and most of the respondents (67.9 %) were in favour of NFP. Contraceptive pills were the commonest method in use 27.0% followed by NFP 23.6 %. When determinants of method of contraception were tested at 0.05 using Person chi square to see if any association occurred, it was observed that age and education were not factors in selecting a preferred method but that income and religious affiliation were factors. The majority of the respondents (72.8%) wanted to have more than 4-10 children. This means they did not know what impact large families will have on the poverty stricken households. There is some ignorance about NFP methods. Therefore, there is need to intensify Health Education in this area.

CHAPSTER ONE - INTRODUCTION

1.1 Background

Natural family planning (NFP) is a method of periodic abstinence from, and varieties of, sexual contact between the male and female in a couple who desire to plan the timing of the arrival of their children (Kippley and Kippley 2009).By being able to estimate whether or not a woman is likely to be fertile at a given time, the chances of conception can be increased or decreased depending on whether that timed period is used for abstinence from, or engagement in, unprotected intercourse (Palmerini 1998).

Natural methods of contraception are those which do not use any appliance of medicine. Some of these methods have been practiced throughout the world from prehistoric times (Kippley and Kippley 2009). Even today natural methods are widely practiced by couples. Their popularity is due to several factors;

1. They do not need any medical appliance or medicine
2. They involve no cost
3. They can be practiced most secretly by partners
4. Do not fall under any religious bar (Chaudhuri 2004).

Zambia like other developing countries has promoted family planning since1970s.Family planning (FP) is viewed as a critical component of the essential package of health interventions (CBoH 2002). The Ministry of Health (MoH) developed family planning policy strategies and guidelines. This document is used by health workers throughout the country (MoH 2006).

Zambia is one of the countries found in sub-Saharan Africa with a high population and according to the 2007 Zambia Demographic Health Survey (ZDHS) has a population of 11.7 million. Out of the total population it is estimated that 22% are women in their child bearing age. According to Zambia's National Population Policy of 1990, family planning services were to be made accessible and affordable to at least 30% of women of child bearing age. This was a target made up to the year 2000 and would represent an increase of 20% from the current rate of utilization of services.

Given this focus and commitment by the government of Zambia to increase utilization of family planning services to women, different methods were encouraged. For example a number of organizations became actively involved in family planning services such as; Planned Parenthood Association of Zambia(P.P.A.Z),Family Life Movement of Zambia, Catholic Church, including the government itself. Family planning services including NFP are being offered by the government health institutions, private clinics and non-governmental organizations. Until recently, NFP services were provided by volunteers on a part time basis in scattered localities of the country where a few interested individuals or small groups took the initiative to make NFP instructions available.

There are many methods of family planning available in the country.Modern methods include female sterilization, male sterilization, the pill, intrauterine device (IUD) commonly known as the loop, injectables, implants, male condom, female condom, diaphragm, foam/jelly, lactational amenorrhoea (LAM), and emergency contraception. Traditional methods include the rhythm method (periodic abstinence) and withdrawal (CSO 2007).

There may not so far be what can be referred to as an ideal family planning method. An ideal family planning method, however, is one that is safe, effective, inexpensive, simple to administer, long lasting, enough to obviate frequent administration and requiring little or no medical supervision such as NFP (Nakiboneka and Maniple 2008).

Natural family planning or fertility awareness refers to methods for family planning and preventing pregnancy by observing naturally occurring signs and symptoms of the fertile and infertile days of the menstrual cycle (Kippley 2009). If these methods are used to prevent pregnancy, the couple avoids intercourse on the days during the menstrual cycle when the woman is mostly likely to become pregnant often called the fertile days. Fertility awareness is based on a scientific knowledge of the female and male reproductive systems and on an understanding of the signs and symptoms that occur naturally in the woman's menstrual cycle to indicate when she is fertile and when she is infertile. This is also called safe period method.

There are four types of fertility awareness methods and they include the following:

Calendar rhythm: This method is based on the fact that most women ovulate 12 to 16days before each menstrual bleeding, no matter how long their menstrual cycle. The fertile phase is identified by using a mathematical calculation to determine the fertile and unfertile phases.

Basal body temperature: This type of fertility awareness is based on the pattern of the body's temperature at rest. A woman's temperature rises slightly after ovulation and remains elevated during the rest of her cycle until she menstruates. Monitoring the rise in temperature makes it possible to determine when the woman has ovulated and to calculate when her fertile days have passed. The woman using this method takes her temperature every day before she rises in the morning and carefully records it on the chart.

Cervical mucus method (Billings or ovulation method): This method is based on detecting the changes in cervical mucus secretions and in the sensations in the vagina.Before ovulation; the cervical mucus becomes slippery in the vagina.The mucous changes are greatest around the time of ovulation. After ovulation, the cervical mucus becomes thick or may disappear completely. A couple using this method to avoid pregnancy will abstain from intercourse when the mucous indicates the woman is fertile. They also abstain during menstrual bleeding.

Sympto-thermal method: The symptom-thermal method combines recording the basal body temperature and observing the cervical mucus and other physical signs of ovulation. These signs include tenderness of the breasts, midcycle pain and spotting or bleeding and abnormal heaviness. Couples using these methods to avoid pregnancy abstain from intercourse from the appearance or sensation of wet cervical mucus.

According to Kippley 2009, abstaining from intercourse on the days of the menstrual cycle when the woman's signs and symptoms indicate that she may become pregnant are called periodic abstinence. Avoidance of intercourse in the so-called fertile period for purposes of family planning has been practiced by the ancient Romans, Greeks, Africans and Hindus (Chaudhuri 2004).Natural family planning provides an alternative for those who for some reasons do not wish to use artificial methods. Some religious denominations like Catholics and Hindus promote NFP.

Research findings have shown some of the advantages of both artificial and natural family planning methods (Chaudhuri 2004).The pill has about 95% effectiveness. For the pill, it was also observed that the method increased sexual relationship enjoyment because of decreased anxiety about becoming pregnant.Intra-Uterine Devices (IUDs) also have high figures of effectiveness. It was also shown that IUDs were convenient methods because once introduced the woman did not have to worry about swallowing tablets(Nakiboneka and Maniple 2008).

The advantages of NFP were also outlined. The method can be used by all women. Other advantages are that it has no health risks or side effects (it is safe), natural menstruation not affected, encourages couple to communicate, it increases a woman's self-awareness and couples knowledge of the woman's reproductive system, may improve marital relationship as it involves the man's cooperation, there is no cost at all or follow up once the couple know how to use it, acceptable to many religious groups, morally and culturally acceptable in any society where other methods of contraception are not allowed and it can also assist a couple in achieving a wanted pregnancy (Chaudhuri 2004).There is also marriage building. In the American contraceptive culture, there are 50 divorces for every 100 marriages. Among NFP users, the available evidence indicates that there are less than 5 divorces for every 100 marriages. There is nothing automatically marriage building about taking your temperatures and observing your mucus, but the practice of NFP with self-discipline and generosity helps to build the attitudes, communication and respect that are needed for healthy and happy marriages(Kippley 2009).

One of the disadvantages of artificial methods is that drugs are introduced into the body and so are likely to have side effects. The disadvantages with NFP include the following: it requires the full commitment, motivation and cooperation of both partners involved, requires substantial initial and some ongoing counseling, most couples require 3 cycles to use the cervical mucus method or the sympto thermal method correctly, some couples experience emotional stress as a result of not being able to have intercourse for several days of the woman's cycles and does not directly protect from Sexually Transmitted Infections (STIs) including Acquired Immune Deficiency Syndrome (AIDS).

With this information then the choice of the method is left to the woman to make a final decision. A number of study findings have indicated side effects of artificial methods as a reason for clients to use natural family planning (Klaus et al 1988; Mofziger 1988; W.H.O 1988).The other factor is the socio-economic situation of the family and the country as a whole. The expenses of natural family planning methods are calculated in relation to time spent to teach the methods, while the artificial methods have to be bought. The later methods prove expensive to the family and country.

Because of the potential benefits of family planning, it is important to any community when the births of children are spread. This indirectly leads to healthy members of the family. Improved child survival allows optimum mother's health during pregnancy and child rearing (Chaudhuri 2004).A healthy family contributes to a healthy nation and increased production, thereby improving the economy of a country (WHO 2003).

The World Health Organization (1971) stated that the rationale of family planning includes the following goals;

- To remove the discrepancy between desired and actual family size.
- To reduce the morbidity and mortality of mother and child
- To reduce the fertility rate in order to maintain population size.

For Zambian situation, reduction of morbidity and mortality of mother and child is the most serious because of high rates. In Zambia, the infant mortality is at 70 deaths per 1,000 live births (ZDHS 2007). Maternal mortality rate is at 591 maternal deaths per 100,000 births (ZDHS 2007).There's a direct connection between family spacing and reduction in maternal and infant mortality rates. Spacing of children improves the health of a mother and child. This gives time for the mother to recover from the stress of pregnancy and delivery.

In Zambia, NFP started in 1974, and the government recognized and accepted it as part of the health programmes in 1981 (Family Life Movement of Zambia 1991).Since then it has been used in most parts of the country. NFP centres have been established whose purpose is to teach couples about the method and how best they can use it. Interest in NFP has grown recently because of

the population explosion and general concern about the complications of contraceptive drugs, devices and surgery (Chaudhuri 2004).

1.2 Statement of the problem

The problem of low utilization of natural family planning is worldwide. There is low utilization of natural family planning in all parts of Zambia including Chilonga. Natural family planning rank least among the family planning methods used in Zambia.The contraceptive utilization for women in Zambia is at 30% (CSO 2007).Most women currently using contraceptives use a modern method (25%), while 5% are using traditional methods. The pill is the most commonly used method (7%), while the IUD, implant, and female condom are the least used modern methods (less than 1% each). Among the traditional methods, withdrawal is the most commonly used (4 %), while less than 1 % of women use the rhythm method or other traditional family planning methods (CSO 2007).The reason for low utilisation included lack of men's consent and approval.

There are several factors that are likely to influence women's utilisation of natural family planning. The first factor is lack of information on NFP.It is quite obvious that if one is ignorant about a service he will not use it. Although the level of awareness on modern methods of contraceptives is very high among child bearing women in Zambia, there's still knowledge deficit on NFP, hence the need to intensify education on family planning. Perhaps this could be the greatest barrier to the use of natural family planning. Many women and men know very little about physiology and reproduction.

The government is trying to encourage the use of family planning methods, but this is difficult to achieve as artificial methods need constant supply. Yet the supply is erratic as we depend on donor supply due to the country's low economic potential. This is because donors can pull out their support at the specified period or when they feel so.Non-prescribed family planning methods can be utilized. Unfortunately, this is not effective at the moment because those methods are least used by the clients.

The low economic situation of the country has led to what is known as ''brain drain.'' This is a situation whereby qualified personnel move to other countries for better employment opportunities.

This problem has led to the situation whereby even if the government is training doctors, nurses and other paramedical staff, these are not found in most rural health institutions and communities. In view of such a situation, the government is left with no choice but to continue using the available human resources in the communities. Such type of health providers are the Community Health Worker (CHW), Traditional Birth Attendants (TBA) and family members including others whose work is related to health. Among the methods of family planning, it is possible for these above mentioned personnel to administer non prescriptive methods .These methods are NFP methods.NFP is a contraceptive choice that is made on individual moral, religious, health, political, economic or personal grounds (Kippley 2009).

Research has also shown that there is low utilization of family planning services in developing countries like Zambia compared to developed countries. To solve this problem of low utilization of family planning methods, increased use of non-prescriptive methods would be the best. So far only few studies have been carried out in the country on reasons why clients least use non- prescriptive methods, specifically natural family planning and what factors could contribute to the low utilization. To try and answer this problem the study will be centred on the notion that an individual's behavior and action are influenced by self and the environment. For the purpose of this study the concern is the social environment of the woman on which she tries to use family planning methods. The factors of interest will be herself, the culture she lives in and the health personnel.

Review of records at Chilonga Hospital shows that the proportion of women using NFP method is low (Chilonga Annual Report 2008).Being a catholic mission hospital it offers only natural family planning services based on religious beliefs. The hospital has been offering natural family planning services and the diocese trained NFP teachers. However, the researcher is concerned with low levels of utilization. The other factor is the attitudes of service providers towards natural family planning. Most service providers do not recommend NFP because they think these methods are not as effective as artificial methods (Lawrence et al 2010).It's a known fact that FP is by choice. This can only be effective if women have the knowledge to make a choice.

The effectiveness of all NFP methods is dependent upon the couple's motivation to prevent pregnancy and ability to interpret the symptoms of ovulation. For a couple to use NPF successful should be also

good intra-spousal communication. Lack of intra spousal communication is a problem in Zambia which is a stumbling block in the acceptability and usage of NFP (Mtonga 1991).

From the researcher's observation, when women come to family planning clinics, they are mainly given information on artificial methods. Yet NFP methods are always available. There's great need to provide information on NFP methods as well. Lack of information on a service leads to non-use of that service. It is therefore, imperative for the researcher to determine factors influencing utilization of natural family planning among child bearing women in Chilonga.

1.3 Justification of the study

Reproduction and sexual health care including family planning services and information is recognized not only as a key intervention for improving the health of women and children but also as a human right (WHO 2003). All individuals have the right to selection,access, choice, and benefits of family planning methods. Family planning clients should be provided with the factual and adequate information to enable them make informed, voluntary choice of a family planning method.

Married couples who are properly instructed and motivated can practice the cross-checking Sympto-thermal Method at the 99% level of effectiveness for avoiding pregnancy. Various studies have shown that the "perfect use" of the method yields that result. A German study on the Sympto-thermal method published in February 2007 showed an effectiveness of 99.6%.

Despite several studies and reports indicating significant levels of knowledge on NFP among the Zambian women, the utilization of NFP in Chilonga is low (Chilonga Annual Report 2008).

The purpose of the study is to explore and analyze factors that influence the low utilization of natural family planning methods in Chilonga. Low utilization of natural family planning services in Zambia poses a great challenge to the achievement of reproductive health. Many studies on natural family planning have been conducted globally, regionally and nationally and these studies have come up with different findings and can be attributed to cultural diversity. In Chilonga, no study has been done to determine factors influencing utilization of natural family planning. This makes this study necessary to explore the factors influencing low utilization of NFP in Chilonga. Therefore, the study will help to

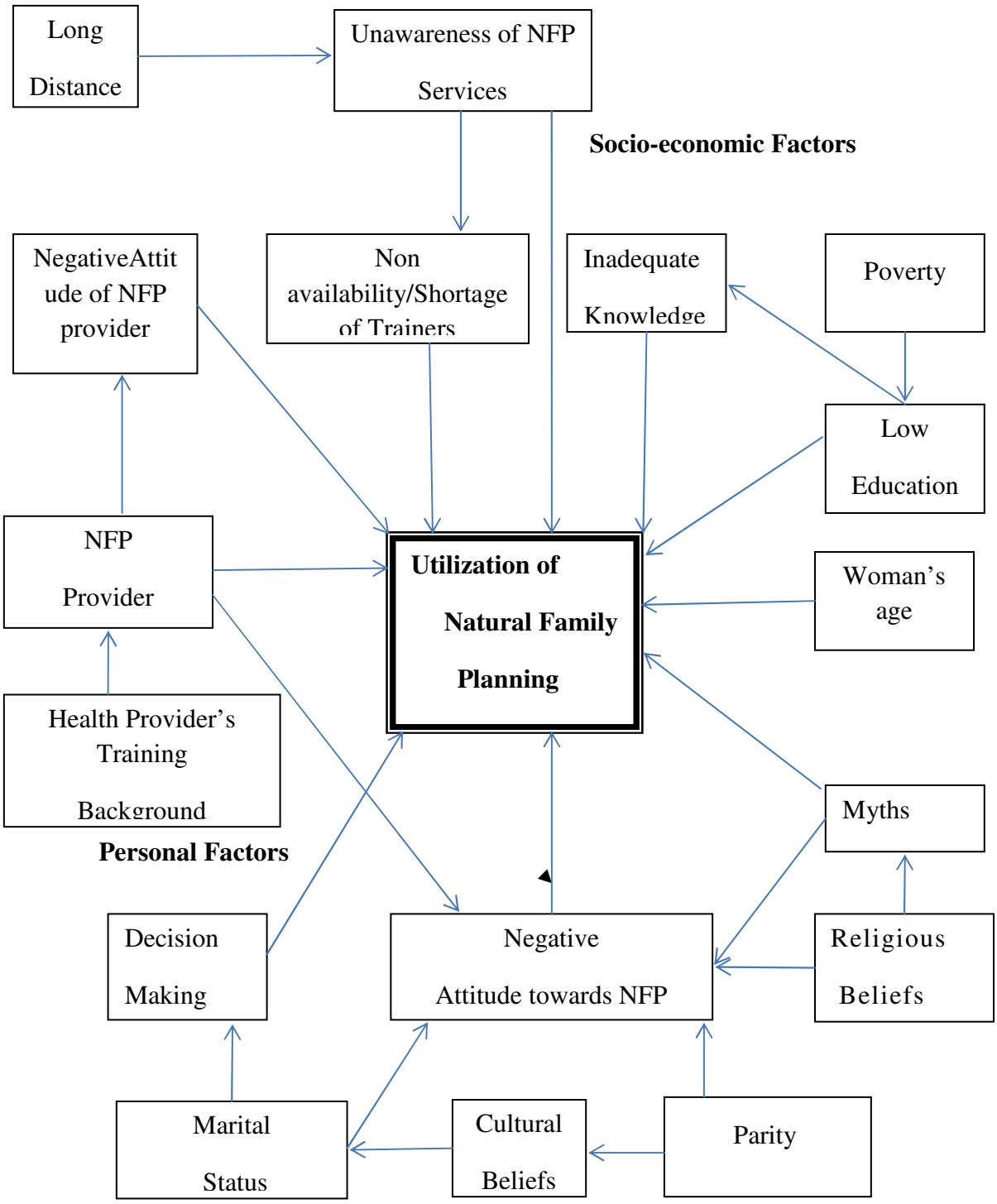
generate first hand data based on child bearing women experiences of natural family planning. Thus it is important to ascertain the factors influencing utilization of NFP. In addition the study will build on utilisation of NFP among Chilonga child bearing women, which indicates that a substantial percentage of these women are using NFP but may not be reporting it as a contraceptive method.

A better understanding of factors influencing NFP use in the context of contraceptive method choice, and provider support for providing information about NFP to clients will help policy makers, family planning managers and providers when designing strategies aimed at improving family planning services. The study also aims at providing a stepping stone for the future studies to be conducted in Chilonga and other parts of the country in the area of the reproductive health particularly natural family planning. It is hoped that from this study, we shall be able to put our experiences into hospital action plans and strategies for effective action at the community level later on.

The outcome of this study will contribute to highlight the misconception surrounding the usage of NPF and its findings would be used for sensitization of both the public and the health practitioners in the area and beyond.

1.4 Problem analysis

Figure1: ProblemAnalysisDiagramServiceRelatedFactors



1.5 Research Objectives

General Objective

The aim of this study was to determine factors influencing utilization of natural family planning among child bearing women in Chilonga.

Specific Objectives

1. To assess the knowledge of NFP methods among child bearing women in Chilonga.
2. To establish the utilization of NFP methods among child bearing women in Chilonga.
3. To determine whether there are variations in the type of method and the key demographic variables (Age, religion, tribe, education and income).
4. To determine the factors influencing utilization or non-utilization of NFP among child bearing women in Chilonga.

CHAPTER TWO - LITERATURE REVIEW

2.1Introduction

The literature reviewed focused on natural family planning in terms of utilization. As well in the literature, several factors that influence the use of natural family planning methods have been identified. These can be divided into the following areas; physiological risks to the woman using artificial methods, culture, occupation and health professionals advice. The socio-economic context in which the woman finds herself has an effect on all of these factors globally, regionally and nationally.

2.2Utilization

There is little data worldwide on use of natural family planning (Sinai 2001). It is estimated that 2–3% of the world's reproductive age population relies on periodic abstinence to avoid pregnancy (Che et al 2004). Recent surveys have reported that about 4% of married women and 10% of sexually active unmarried women in Sub Saharan Africa use periodic abstinence method, in India used by 3% of married women (Population Reports 2003).

Use of NFP in developed countries is also low. In Brazil, NFP is the third most popular family planning method (Kippley 2003).The contraceptive use in the USA in 2004 was at 70%, NFP use being 4%.Chandra et al 2005 found that while Catholics made up 24% of the United States population in 2002 of reproductive age American women using birth control, only 1.5% was using periodic abstinence. According to Dosajh et al 2005 the "safe period" method of fertility awareness is the most common family planning method used in India. A study conducted by Shirvani and Omidian in Ghaemshahr, Iran, 2005 found that the utilization rate of natural and medical methods were 39.5% and 60.5%, respectively.

The table below shows some of the most recent reports of NFP utilization in 7 countries. The report is for married women, or women in union. Shown for comparison are the number of women using no method and the number using the pill? These data are representative of NFP use around the world. It is clear that very few couples in any country use NFP; Sri Lanka has one of the highest rates of use with 15 percent of women using it.

Table 1: Natural Family Planning use around the world

	Brazil	Colombia	Indonesia	Sri Lanka	Ghana	Liberia	Senegal
None	34	35	52	38	87	94	89
Pill	25	16	16	4	2	3	1
NFP	4	6	1	15	6	1	1

Source:Contraceptive Prevalence Surveys (CPS) and Demographic and Health Surveys (DHS) 1999.

Gray et al 1999 conducted studies in Zambia and Liberia. The aim of the studies was to evaluate the use, effectiveness and cost effectiveness of natural family planning (NFP). The Liberian programme provided unipurpose NFP service to 1,055 clients mainly in rural areas while the Zambian programme provided NFP services integrated with MCH to 2,709 clients predominantly in urban areas. The one-year life table continuation was 78.9 and unplanned pregnancy was 4.3 per 100 women in Liberia compared to 71.2 and 8.9 per 100 women in Zambia. More women progressed to autonomous NFP use in Liberia (58%) than in Zambia (35.5%).However; programme costs per couple-year protection were lower in Zambia (US$ 35.7) than in Liberia (US $ 47.1), costs per couple-year protection were higher during the learning than autonomy periods and declined over time.

NFP is cost-effective, once learnt, it is for life and can be learnt by women regardless of the socioeconomic status, and furthermore, it is universally accepted. However, NFP is not available to most women especially those in rural Africa, and most family planning providers are not confident to counsel women about this method. These studies suggest that NFP programme can achieve acceptable use and cost-effectiveness in Africa. For family planning to be accessible to all women in Africa there is need to enhance the effective integration of NFP in other family planning services that are currently

being offered so that women who cannot access to modern family method because of financial, religious beliefs etc. can successfully use NFP.

The more recent studies conducted by Nsemukila et al 2000 in conjunction with WHO showed that approximately 96% of women knew one method of contraception and only 19% were using some kind of contraception. This study also revealed that more women in the urban (28%) were using contraception compared to rural women (13%). Women from the Copper belt and Lusaka provinces used contraception most (33% and 29% respectively), women from North-western and Western Provinces use contraception less at 5% and 9% respectively. The results also showed that 30% of the women who used contraceptives had reached grade 10-12 and were aged between 25-29 years. This study suggests that despite the high level of family planning awareness, there is a very big gap with the practice of family planning. This gap could be due to non-availability, inaccessible and unaffordable family planning methods. If modern family planning methods were made accessible and available to all women in Zambia, modern family planning practices is likely to increase from the current rate.

2.3Factors that influence Utilization of Natural Family Planning

Research findings have identified a number of physiological risks to women who use artificial methods of family planning.Wesserleit et al 1999 showed that women who had I.U.Ds were more prone to reproductive tract infections than non-users. Kene and Porter 1984 in their study wrote that women using I.U.Ds had the following complaints; intermittent bleeding or cramps, increased chances of pelvic inflammatory diseases, painful or very heavy periods. The woman is exposed to infection which may later lead to blockage of fallopian tubes and then infertility.

Some of the reported side effects of the Pill and other forms of hormonal birth control are headaches and feelings of nausea. Other effects are major including strokes and death. Many of these problems are related to blood clots caused by the artificial estrogen in the Pill and other hormonal birth control drugs. Some individuals reported allergic reactions to the latex in condoms(Kippley 2009).Kene and Porter 1984 found deep vein thrombosis, high blood pressure, weight gain and infertility.

According to the World Health Organization (2005), decision making for contraceptive method requires the need to make trade-offs among the different methods, with advantages and disadvantages

of specific contraceptive methods. Women's choices, however, are often imposed or limited by direct or indirect social, cultural and economic factors. WHO recommends that other medical eligibility, the client's preference should be considered in order to provide contraceptive choices in a way that respects and fulfills their human rights enabling them to make informed choices.

A study conducted in Andhra Pradesh Padmadas et al (2004), showed that reproductive decisions are socially and culturally influenced. For instance in many developing countries, sexual relationships are initiated only after marriage and child bearing after wedlock is socially forbidden.According to WHO (1996), FP utilization may be influenced by the likely rate of effectiveness, least side effects, ability to take a pill everyday or insert a diaphragm before every sexual act, availability and cost of the method

Moronkola and others (2006) conducted a similar study in Ibadan, which revealed high level of knowledge on family planning. The study showed that women considered their health and husbands approval as strong determinant of their contraceptive use. The study also showed that women's decision about the use, non-use or discontinuation of family planning methods can be affected by their perceptions of contraceptive risks and benefits, concerns about how side effects may influence their daily lives and assessment of how particular methods may affect relationship with partners and other family members. The study recommended that men support their wives to access appropriate family planning services.

The disadvantages of natural family planning have also been identified. The periodic abstinence in natural family planning could cause frustration and resentment to the couple, especially the husband. This especially could be true with young couples who tend to have a high coital frequency, 76% reported once or more a week (Laing 1984).It requires highly motivated couples in order for the method to be effective (Kleiman 1983;Kosenfield 1990;WHO 2000).

The advantages for both artificial and natural family planning methods have been addressed.Monsen and Kinnarid 1993 in the study on the impact of contraceptive use among urban women traders in Nigeria, demonstrated that women marketers used I.U.Ds for convenience. The women felt that I.U.Ds were more convenient for them because once the device was inserted they did not have to bother taking drugs. For NFP methods communication was improved because of shared responsibility (WHO 2002).Women's personal convictions had an influence on the use of NFP methods.Nofziger 1998

outlined the following personal convictions: women with a health conscious were those who do not want to interfere chemically with their body processes by the use of synthetic hormones, the anti-technologists who would like to remain at peace with nature; feminists would want to retain complete control over their bodies and the consumer advocates, who demand a say in all aspects of their health care.

Cultural factors are important in the choice and utilization of family planning methods. One of the strongest influences is that of the relationship between husband and wife. The others are religious beliefs; education background and the desire to have children, especially a son (Chaudhuri, 2004).All these affect a woman in her decision. There is low utilization of NFP because customarily it is not common to discuss issues about sex (Klaus et al 1998).If this is the situation then there is little chance for the couple to use the method which requires the couple to continuously communicate with each other. Unwillingness of couples to change their pattern of sexual behavior could also discourage from using NFP (Kleiman 1993).The desire to have children, especially a son was another issue which came in the literature. Couples used NFP in order to achieve pregnancy especially when they wanted a son (Chaudhuri 2004, Klaus et al 1998).The results point to a custom that a son is viewed as being very important in the maintenance of the family heritage.

Women used N.F.P methods for religious beliefs, (Chaudhuri 2004; Kleiman 1993; Laing 1984).In all these studies the Roman Catholic Church was the strong advocate of these methods. In other studies done in Kenya, South Korea, India and Bangladesh, results showed that it was not only Catholics who used N.F.P methods (Klaus et al 1998).The natural methods are also morally accepted by the RCC on the grounds that they enhance and intensify the matrimonial relationship between spouses (Sin 2001)

The other major cultural factor is educational background. In two studies the educational background of husband and wife was used when finding out the effect of the husband's approval to use N.F.P method (Chaudhuri 2004 and Ezeh 1993).The findings showed that men with higher educational backgrounds were more willing to approve of the use of family planning methods than those who were less educated.

The perceived cultural right of the men to make family decisions was evident especially when focus group discussions were used. The men and women were put in different groups but the findings were the same. From the study done by Ezeh (1993) on influence of spouses over each other's contraceptive attitudes in Ghana, two examples follow;

Mr. B:''When you bring the woman to your house, you should make her know all the things you like and what you don't like. She has to obey what you tell her.''

Young Woman: ''When I wanted to do family planning, my husband did not allow me so I did not do it.''

The study brought out detailed information on the importance of decision making by husband. From observation, to a larger extent this is common among most African communities.

In Zambia, a study conducted by Shankanga 1996 on factors influencing low utilization of natural family planning in Mongu reviewed that illiteracy among women, plus other socioeconomic factors were associated with the likelihood of non-use of NFP methods. Another study done in 1991 by Mtonga showed that lack of intra spousal communication is a problem in Zambia. This is a stumbling block in acceptability and usage of NFP.

Health professionals also influence the type of family planning methods the clients used. 'In the past ignorance and distrust by members of the health profession made them discourage clients to use N.F.P methods (Flynn and Brooks 1984).''From observation when health workers give advice on health issues, in most cases it is taken with little questioning. The other factor which influenced the usage of N.F.P methods was policies and practices at the health institutions which dictated that the methods should be taught to couples only (Brown et al 1990).This study was done in Lusaka, Zambia on characteristics of contraceptive acceptors.

Whichever method the client chooses to use, there are some economic implications. Natural family planning programmes could prove expensive because of the time spent to give instructions on the methods (Kleiman 1993).When women use artificial methods they have to constantly get the supply or

buy and in case of I.U.Ds, more money may also be spent on the side effects caused. These side effects would be as a result of correcting anemia from bleeding and from pelvic inflammatory diseases. A woman must live within walking distance to a health clinic and be able to afford a visit to a health professional in case of side effects.

2.4 Summary

Most of this literature is based on un published data. From this Literature review it is obvious how complex the issue of family planning is in Zambia. The woman often has little to say over her own health issues because of the outside pressures from cultural influences and the health professionals. The woman is exposed to a number of potential health hazards from the use of artificial methods and certain inconveniences from the use of N.F.P.From an extensive review of the literature it appears that many factors have been studied which affect the choice and use or non – use of family planning methods by women. In spite of a stated commitment by the Zambian government to increase availability of family planning services there is still a low utilization of these services.

Little research has been conducted in Zambia to discover what are the actual factors which affect a woman's choice of family planning methods without knowing the woman's personal perspectives on the choice and the use or non – use of family planning methods . The Neuman's systems model has been chosen as a framework for this research because it encompasses the broad inter – relationship between the woman, her family, community and health professionals.

CHAPTER THREE - METHODOLOGY

3.1Introduction

Research methodology refers to the development of research instruments and methods used in research investigation (Polit and Hungler 2007). It is a broad term involving all strategies that describe how, when and where data is to be collected and analyzed. This chapter describes the research methodology that was used in the study.The purpose of the study was to identify factors that influence women of child bearing age in Chilonga to use natural family methods as this area has not been researched before in Chilonga.

3.2Variables of interest

Dependent Variable

Dependent variable is the variable used to describe or measure the problem under study. It is therefore affected by the independent variables. In this study the dependent variable is utilization of natural family planning methods.

Table 2: Dependent Variable and Indicator

Variable	Operational Definition	Indicator
Utilization of Natural Family Planning	The ability of women to use the available natural family planning methods.	Proportion of women utilizing NFP

Independent Variable

Independent variables are used to measure factors that are assumed to cause or influence the problem under study. In this study independent variables include; education level,age,occupation, source of information ,marital status,religion,number of children, economic status,socio - cultural, decision making, attitudes and influence.

Table 3: Independent Variables and Indicators

VARIABLE	INDICATORS	SCALE OF MEASUREMENT
Age	➢ 18-20years(Teenager) ➢ 21-35years(Youth) ➢ 36-49years(Adult)	➢ Teenager ➢ Youth ➢ Adult
Education	➢ None ➢ Primary ➢ Secondary ➢ College/University	➢ Uneducated ➢ Low education ➢ Average education ➢ High education
Marital status	➢ Single ➢ Married	
Occupation	➢ Employed ➢ Un employed ➢ School going	
Monthly Income	➢ K300,000.00 ➢ K500-K700,000 ➢ More than K700,000	➢ Low income ➢ Average income ➢ High income
Number of children	➢ None ➢ 1-3 ➢ 4-6 ➢ More than 7	➢ No parity ➢ Low parity ➢ Medium parity ➢ High
Influence	➢ Health personnel ➢ Spouse/Family ➢ Religion ➢ Self	
Knowledge on Natural Family Planning.	➢ Low ➢ Average ➢ High	➢ 0-2 correct statements ➢ 2- 4 correct statements ➢ 5 or more correct statements on NFP
Knowledge on general family planning methods	➢ Inadequate knowledge ➢ Adequate knowledge	➢ 1-2 scores ➢ 3 or more scores on general methods.

Table 3 shows independent variables, indicators and cut off points.

3.3Theoretical Framework

People are viewed in the context of a larger macro-structure of system. The individual is seen as being in continuous interaction with the environment or community (Mc Murry 1993).In this study the woman is viewed as in continuous interaction with the family, the community, who include the health personnel. An adapted Neuman systems model will be used to guide this research study.

The Neuman systems model assumes a holistic concept of optimizing a dynamic yet stable interrelationship between the mind, body and spirit of the client in constantly changing environment and society. The three main concepts of the model are person, environment and health, while nursing connects all these concepts .The concepts have been defined by Neuman (1989, 2002) as follows:

Client or Person

The Person or Client in the Neuman systems model is a composite of the relationship between physiologic, psychological, social cultural, developmental and spiritual variables which function to achieve stability in relation to the environmental stressors experienced by the client. The client in the Neuman's system model is viewed as an open system in which repeated cycles of input, process, output and feedback constitute a dynamic organizational pattern. Exchange with the environment are reciprocal, both the client and the environment may be affected either positively or negatively by the other.The system may adjust to the environment to itself. The ideal is to achieve optimal stability. As an open system the client, the client system has propensity to seek or maintain a balance among the various factors, both within and outside the system, that seek to disrupt it.

Environment: The environment is broadly defined as all internal and external factors or influences surrounding the identified client or client system. The client may influence or be influenced by environmental factors either positively or negatively at any point in time.

Health: Neuman considers health as dynamic in nature in which the person's health is as the level of health continuum—wellness or illness. Wellness or health exists when all the parts or systems of a person works harmoniously. When the parts of the client system interact in disharmony among the parts of the client system is considered illness in varying degrees reflecting unmet needs.

Nursing: Neuman believes that nursing requires a holistic approach that considers all factors affecting a client's health—physical, physiological, psychological, mental, social, cultural, developmental and spiritual well-being. The goal of nursing according to Neuman is to facilitate for the client optimal wellness through retention, attainment or maintenance of client system stability.

Just as the Neuman systems model focuses on the total person and her environment, this study will look at the relationship between environment, person and health. For the purpose of this study the client is the woman in her reproductive age (18-49 years) expected to use family planning services. The environment is the family, community including the health personnel. The study will look at influences both from the woman and her environment which either have facilitative or disruptive influence on the woman to use natural family planning methods. For example, how the information is received from the health personnel can influence the utilization of NFP methods by the woman. On the other hand her reaction to the information received would depend on the mechanisms she developed the situations in the past. The framework adopted will be used throughout the period of conducting the research study.

Figure 2: Schematic illustration of influences on women in choice of family planning methods.

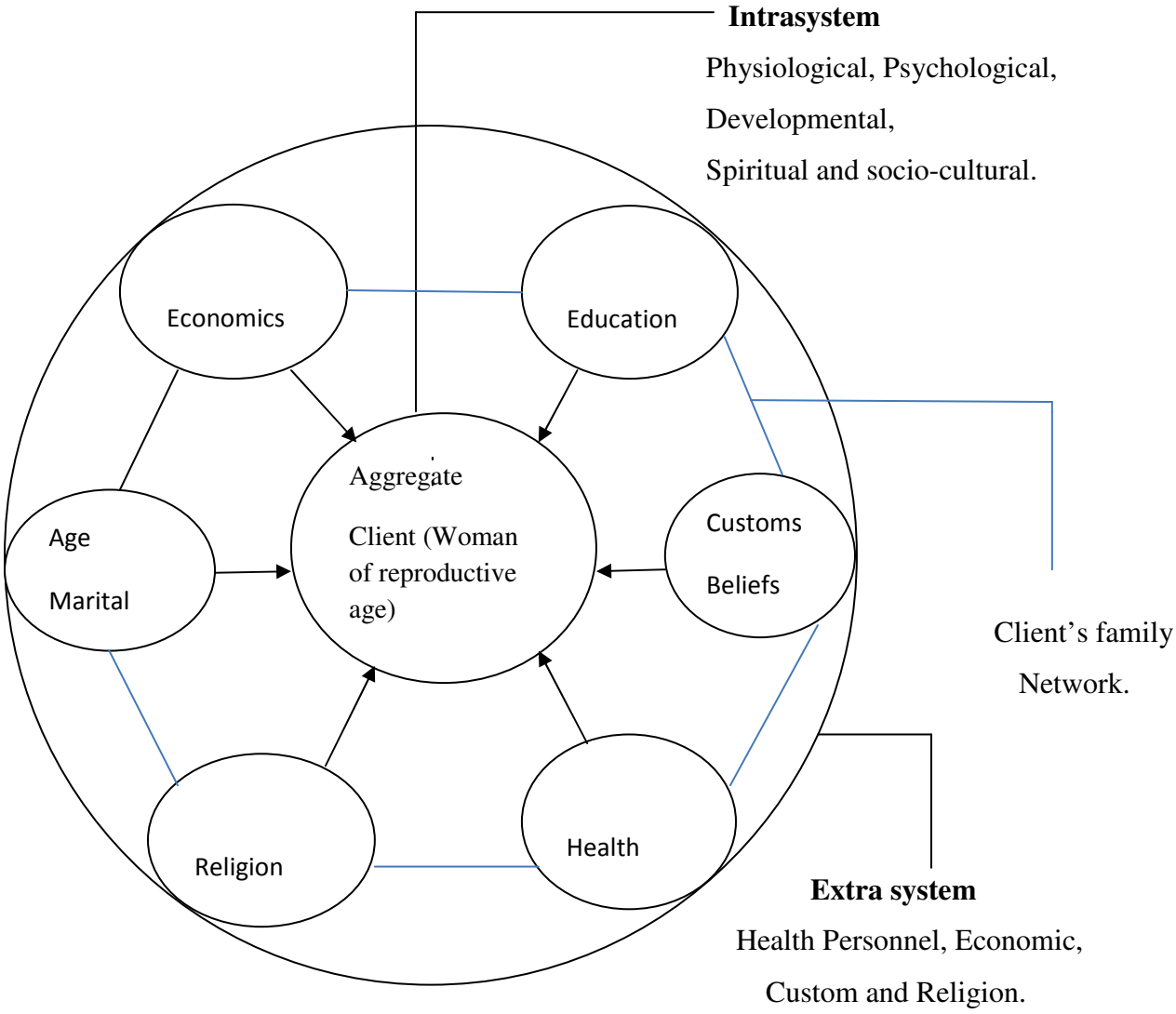


Figure 2 shows schematic illustration of influences on women in choice of family planning method, adapted from the Neuman Systems Model as aggregate client (Neuman 1989).

3.4Research Design

A research design is a plan, structure and strategy of investigations of answering the research question (Basavanthappa 2007). The two basic purposes of the research design are; to provide answers to research questions and to control variance. In this study, the researcher used a descriptive cross sectional study design. Both qualitative and quantitative data was collected. A structured interview schedule (questionnaire) and focus group discussions were used to collect data. In this study, the researcher explored the factors that influence women of child bearing age in Chilonga to use natural family planning methods. A descriptive design is a non-experimental research designed to discover new meaning and to provide new knowledge when very little is known about a phenomenon of interest and involves a systematic collection and presentation of data to give a clear picture of a particular situation (Dempsey and Dempsey 2001). Quantitative research is a formal, objective systematic process to describe, test relationships, and examine cause and effect interaction among variables (Basavanthappa 2007). It is based on the measurement of quantity or amount and it is applicable to phenomenon that can be exposed in terms of quantity. On the other hand, cross sectional survey is a design which is aimed at quantifying the distribution of certain variables in a study population at one point in time (Sweeney and Olivieri 1999).

The descriptive design was chosen because the study described the factors which influence use of natural family planning methods. The quantitative design was also used because the subject's responses were quantified and objectively measured. In addition to that a cross sectional design was used because data from subjects was collected at one point in time and there might be no need to go back to the same subjects or study setting to get the same data. This type of design was appropriate because it is less expensive as respondents remained in their natural environment and it was also less time consuming considering the limited time in which the study was carried out.

3.5Study Site/Research Setting

Research setting is a place or area where the research study will be conducted (Basavanthappa 2007). The study was conducted in 5 Health Posts within Chilonga catchment area of Mpika District which is situated in the Northern Province of Zambia. Chilonga is served by Our Lady's hospital and is supporting the 6 health centres in the southern part of Mpika namely; Nabwalya, Lukulu, Mpumba,

Lubunga, Muwele and Chiundaponde. All these institutions offer family planning services but for Chilonga Hospital Affiliated Health Centre (HAHC) only natural family planning is offered.

Chilonga is situated along the Great North road. This is 30 kilometers south of Mpika Township. The road network consists of one tarmac road, the Great North Road that links Lusaka, Kitwe and Kasama branching off in Mpika to Mpulungu port on Lake Tanganyika as well as to Nakonde up to Dar es Salaam in Tanzania. Other roads are gravel roads and depending on the area easily or not easily accessible. Nabwalya can only be reached by car during the dry season. Muwele and Chiundaponde can be reached with difficulties. Public transport is provided by Tanzania Zambia Railway Authority (TAZARA) from Kapiri mposhi to Nakonde then it proceeds to Dar-es-salaam and long distance buses. Most people rely on lifts, hired vehicles or bicycles and some walk when coming to the health facility. It occurs that people walk three days to reach the hospital. Chilonga has a population of 12,498 (CSO 2000).Chilonga provides a transit point for people travelling between Zambia, Tanzania and the Democratic Republic of Congo (DRC).Chilonga shares boundaries with Mpika to the north, Lundazi to the north-east, Chama to the east, Serenje to the south, Luapula to the west and to the north-west.

Chilonga HAHC catchment area is 15kms north of Chilonga and 25kms south of Chilonga. This HAHC has a Mother Child Health (MCH) Department which offers reproductive health services including natural family planning services. There are ten (10) Health Posts under Chilonga catchment area. My research setting comprised of five Health Posts which are; Chilonga MCH Department, Kaole, Kapoko, Mufubushi and Kasenga. These centres were selected by simple random sampling. Though not adequately staffed, all the health posts apart from Chilonga HAHCoffer natural family planning services in addition to artificial family planning.

3.6Study Population

The study population is the total group of individual people or things meeting the designated interest to the researcher (Basavanthappa 2007). The target population is the entire population in which the researcher is interested in and to which he /she would like to generalize the results of the study (Polit and Hungler, 2007). The accessible population is the population of people available for a particular

study, often a random subset of the target population (Polit & Hungler, 2007). The target population for this study consisted of child bearing women aged between 18-49 years old while the accessible population was, child bearing women aged between 18- 49 years in 5 health posts in Chilonga catchment area. Child bearing women comprise 22% of the total population which was calculated at 2,749.The group was selected because they were antenatal/nursing mothers within the child bearing age who are supposed to use family planning. Women who were less than 18 years were excluded because they needed somebody to sign consent for them and so were women who were mentally disturbed as they were less likely to cooperate and give genuine answers.

Inclusion Criteria

- Child bearing women residing in Chilonga catchment area. Only those who were above 18 years of age were selected for this study.
- Child bearing women who gave consent to participate in the study.

Exclusion Criteria

- Child bearing women who do not reside in Chilonga.
- Women below 18years old because they cannot make decisions or consent.
- Women who did not give consent to the study.

3.7Sample Size

Sample size is a small part of the population selected in such a way that the individuals in the sample represent as near as possible the characteristics of the population (Dempsey and Dempsey 2001). In this study, a sample size of 425 participants from the five selected health posts was considered. The sample size was arrived at using this formula below:

$$n=\frac{Z^2 \text{ X } P\ (F)}{(E)^2}$$

Where; n = Sample size required

Z = being 1.96^2 at alpha 0.05 (degree of certainty)

P = being Prevalence (target population under study) = 50

F = being Confidence level at 95% (100-P)

E =being the error level or Confidence interval at 5% (0.05)

Assuming a large population or considering women with acceptability rate of 50% and an error rate of 5%.Therefore, the required sample size is:

$$= \frac{1.96^2 \text{ X } 50\ (100\text{-}50)}{0.05^2}$$

$$= 384$$

The sample was increased by 10% (38) to cover for non-response rate. The final sample size was 422 which was rounded to 425.

3.8Sample Selection

Sample selection is the process of obtaining information about an entire population by examining only a part of it (Basavanthappa 2007).

In this study, a simple random sampling method was selected to collect the sample. On each antenatal or children's clinic day, pregnant women or women attending children's clinic from within the selected Health Posts were selected. Interval sampling was used that is every 5th person was included in the sample resulting in recruiting 10 women per day in one clinic and a total of 20 women were recruited in two separate days per week. Fourty three (43) days was required to come up to the sample of 425.If the individual did not meet the inclusion criteria, the next person was given chance to parcipate.On an average, clinic attendance would be 50 women.at least out of the 50,nearly 5% were below the age 18 years, who were not included in the study. Purposeful sampling was used to select participants for Focus Group Discussion (FGD).

3.9Data Collection

Data was collected using the two data collection tools; closed and open ended questions in a structured interview schedule and focus group discussions. Translated questionnaires into Bemba language were used when needed. Data collection was done within 5 months from July 2010 to November 2010 after

approval to proceed with the study from the University of Zambia Biomedical Research Ethics Committee and permissions from chief Chikwandaand Chilonga Hospital Management Committee.

3.10Data Collection Tool and Methods

A data collection tool is an instrument that is used to measure variables and gather information. It is the formal written document used to collect and record information, such as a questionnaire (Polit and Hungler 2007).

3.11Structured Interview Schedule

A structured interview schedule was used to collect data on four hundred and twenty five (425) women. This tool was modified from previous study questionnaire. The structured interview schedule contained the study variables on which data was collected and it was divided into 5 sections. It included open ended and closed ended questions. The use of an interview schedule permits clarification of questions and it ensures high response rate. The use of an interview helps to produce additional information through observation. It also allows probing to elicit information than what was volunteered in the initial reply. This information can be useful in interpreting responses. The interviews were conducted on women who came for antenatal care, children's clinic or at a time it was convenient to them at the health Centre, health post or in their home. At least 8-10 participants were interviewed every day with each interview lasting 30 minutes. The interview was conducted in a private room. The limitation of this method is that the presence of an interviewer can influence responses.This limitation was taken care of through documentary review.

3.12 Focus Group Discussion

Focus Group Discussion (FGD) was conducted in two groups of 8-10 each at the HAHC targeting natural family planning teachers as they know some of the problems child bearing women face. It comprised of four women who were identified from each of the five health posts. A total of 20 respondents participated. A focus group discussion guide was used to collect in depth information

about factors influencing utilization of natural family planning with open ended questions. Areas for discussion included what information they know about natural family planning and how different is natural family planning to artificial methods of family planning. Focus group discussion took about 45 minutes to 1 hour. The limitation is that some people are uncomfortable expressing their views in front of a group. To avoid this problem, the facilitator encouraged participation by trying to avoid a question and answer session; clarification was encouraged instead. When dealing with a dominant participant the principle investigator avoided eye to eye contact which could discourage a person from speaking. The researcher led the discussion according to the set of questions whereas the research assistants were helping with note taking during FGD. The discussion was also recorded on the audio tape.

The combination of data collection technique is known as triangulation. It maximizes the quality of data collection and reduces the chance of bias. In this study structured questionnaire and FGD guide were used. By using the two different methods of data collection, it is hoped that true information was obtained as triangulation helps to converge on the truth.

3.13 Pre-Testing

Pre testing of tools was done at Chilonga Railways Health Post in Mpika, before use in the field to test the validity and reliability of the tools to be used. This health post was chosen because it has similar characteristics to other health posts in the study. Participants of the pretest were selected using convenient sampling. Twenty five (25) participants were selected for the pretest, which is 5% of the sample. The purpose of the pre-test was to test the data collection tool, detect flaws such as ambiguous and illogically sequenced questions as well as for spaces provided if they were enough for eligible women. A few adjustments were made to the questionnaire in the spaces provided for answering questions. The pre-test also helped to assess whether the variables were observable and measurable. Participants of the pretest were excluded from the main study.

3.14Validity and Reliability

Validity is the ability of data gathering instrument to measure what it intended to measure (Dempsey and Dempsey 2001). In this study, the researcher ensured validity by employing strategies that dealt with threats to validity like appropriate selection of study design, random selection of study participants, and use of a pre-test to test the research instruments. In addition to that, same questions

which were clearly constructed to avoid ambiguity were asked to each respondent in the same sequence.

Reliability in quantitative research is the stability of a measuring instrument over time. It is how well the measuring instrument will produce the same information each time it is used (Dempsey and Dempsey 2001). This means that the instrument used should be able to bring out the accurate information even when it is used after some time. Reliability of the study was measured by testing the research tools before the main study which was done in a similar environment with similar characteristics.During the pretest, ambiguous questions and problems with comprehension were identified. Open ended questions in the interview schedule provided an opportunity to clients to add their own ideas thereby bringing out issues not thought of when designing the interview schedule.

3.15Credibility, Dependability and Transferability

The credibility of the study was ensured by asking open –ended questions and in a neutral manner. The participants' responses were also verified to ensure that there was consistence and continuity in the way questions were answered. Triangulation of data collection techniques also helped the investigator to improve the credibility and therefore even the dependability of results. The transferability of the results was ensured by providing sufficient description of the research setting data so that reviewers can evaluate the applicability of the data to other contexts.

3.16 Data Collection Techniques

Data collection Technique is the process of gathering needed information to address a research problem (Polit and Hungler, 2007).
Face to face interviews were conducted to collect quantitative data. In-depth interviews were used to collect qualitative data.

Before starting field work, research assistants received training on how to conduct interviews and how to record the answers. To gather the needed information from the respondents, the interviewer started

by introducing her/himself and getting permission from the health/community health worker on duty and asked for a private room where respondents were interviewed from. The researcher then introduced himself to the respondents and the purpose of the study was explained carefully to the respondents. The respondents were assured of confidentiality by explaining to them that no other person at the health post will be given the information collected from them and that their names were not going to appear anywhere on the questionnaire. Apart from that, they were told that all the filled interview schedules were going to be properly secured by the interviewer. Verbal consents were obtained from them. In the private room, the interviewer repeated to the respondent the introduction, purpose of the study and verbal consent. Instructions were read and so were the questions of which the respondent was asked to answer truthfully. The interviewers directly asked the questions to the respondents and the responses were recorded with the exact meaning without any alteration. After the questions were answered, the interviewer thanked the respondent for the participation and another participant was called in.During the interview, with permission field notes were written. At the end of each day of data collection, the researcher waschecking all the forms for completeness of data and internal consistency. Although the questionnaire is in English, it was translated into local language by the experts. After this, FGD interviews were conducted, Field notes were written and tape recording of discussions was carried out.

3.17Data Processing and Analysis

Quantitative Data

All questions were coded using numbers. After data collection, the entire structured interview schedule was sorted out, numbered and edited for internal consistency, completeness, legibility and accuracy. This was done to ensure quality control. Any interview schedule that was not complete was discarded as it may affect the validity of the result. Fourteen (14) questionnaires were incomplete and so were discarded. Closed ended questions were categorized and assigned numeric codes.Open ended questions were categorized and suitable items were formulated to bring all related data together which were coded like closed ended questions and were analysed like the former. Responses were entered into a computer using Statistical Package for Social Science (SPSS) version 17.0 software computer package. Data wasanalyzed by SPSS using descriptive statistics.

Qualitative Data

Textual data that derived from focus group discussion was analyzed using qualitative content analysis. Interview notes were read and reread in order to gain an understanding of their content. Transcription of verbatim extracts was done. Then there was classification of questions, numerical coding of themes and categorizing of themes according to the most frequent used themes. These codes were also entered and analyzed on the computer using SPSS software packages.

Frequency tables were used to describe the sample and Cross tabulations were done to show relationship between dependent and independent variables. Pearson Chi-Square was used to test for association of variables for contingency tables higher than two by two tables. For two by two tables with expected frequency greater than five, the Yates corrected Chi square test was used. Confidence interval has been set at 95%.This means being 95% confident that the sample mean represents the population mean. The level of significance has been set at 5%, statistical significance achieved if P value is <0.05.And so, a p value of less than 0.05 indicated significant association.

3.18Ethical Consideration

Ethics are a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal and social obligations to the study participants (Dempsey and Dempsey 2002). As such, before conducting the study, ethical clearance was obtained from the University of Zambia Biomedical Research Ethics Committee (UNZA BREC). Written permission to conduct the study was sought from chief Chikwanda and Chilonga Mission Hospital Management. This was followed by community sensitization about the research through the village heads. An informed consent form prepared according to the UNZA BREC guidelines were issued to the participants in order to guarantee voluntary participation, confidentiality, benefits and maintenance of privacy during the data collection exercise and it was explained to each participant. The purpose and nature of the study were explained to the study participants. Study participants were assured of anonymity and confidentiality by interviewing them individually and in privacy. Participants' names were not written on interview schedules and no other person apart from the researcher and supervisors was allowed to

have access to the research data. Only those who volunteered to participant were included in the study. The researcher gave the address of the UNZA BREC and her contact phone numbers to participants of the questionnaire in case they wanted further clarity on the study.

Issues pertaining to NFP could be of sensitive nature dealing with sexual and reproductive life of the study participant.It was thereforeexpected that some of them may not like to discuss in the open. Care was taken to maintain confidentiality of the participant during the interview.

Participantswere not subjected to any physical harm or risks as the research did not involve any invasive procedures.

The freedom to opt out at any point without consequences or effects on medical care provided was clearly stated to those who declined to participate. Those who agree to take part in the study after verbal consent were requested to sign a written consent form. The respondents were informed of their right to know the results after conducting the study.

3.19Staffing

Three research assistants were recruited to assist with data collection. These were trained to equip them with knowledge and skills needed for the exercise. The researcher provided technical guidance to ensure the smooth running of the study.

3.20Budget

The total budget was K31, 700,000.00. The funds catered for food, transport, stationary, computer use, secretarial services and research assistants. Details of the budget are in appendix 1.

3.21Time Frame

The study commenced on 2nd July and completed on 25th November 2010.

CHAPTER FOUR - PRESENTATION OF FINDINGS

4.1 Introduction

A total of 425 questionnaires were issued of which 411 were correctly filled which gave 97% response rate and 3% non-response rate .20 of the teachers who were trained in natural family planning method were included in the focus group discussion that is 10 for each group. The data from the 411 child bearing women who were attending antenatal and children's clinic has been presented in frequencies, cross tabulations and percentages.

4.2 Demographic DataSource:Demographic Characteristics

Table 4.2.1.Age in years

	Frequency	Percent
18-24	146	35.5
25-34	172	41.8
35-44	83	20.2
45 and above	10	2.4
Total	411	100.0

This was a youthful sample with the majority of the respondents 9358 (77.35), being less than 34 years. It was least expected that women above 45 would be part of those using various forms of contraception (table 4.2.1)

Table 4.2.2 Marital status

Marital status	*Frequency*	*Percent*
Single	28	6.8
Married	365	88.8
Divorced	14	3.4
Widowed	4	1.0
Total	411	100.0

Within this youthful sample, more women were married (365; 88.8%) than not and it was rather expected in this rural place that values marriages.

Table 4.2.3 Tribe

Marital status	*Frequency*	*Percent*
Tonga	24	5.8
Lozi	20	4.9
Bemba	275	66.9
Bisa	58	14.1
Nyanja	20	
Other	14	3.4
Total	411	100.0

The Bembas were rather predominant and all other tribes were very few (table 4.2.3).

Table 4.2.4 Religious Affiliation

Religious Affiliation	*Frequency*	*Percent*
Catholic	143	34.8
UCZ	104	25.3
SDA	50	12.2
Pentecostal	79	19.2
Yehova's witness	15	3.6
Other	20	4.9
Total	**411**	**100.0**

None of the women were un affiliated to a religious organization in the sample. In the community under study, Catholics and UCZ had more affiliations than SDA, Pentecostal or Jehovah's witnesses (Table 4.2.4).

Table 4.2.5Women's highest education level

Education status	***Frequency***	***Percent***
Never been to school	34	8.3
Basic education	290	70.6
High secondary education	67	16.3
College	20	4.9
Total	411	100.0

A minority of the respondents were illiterate 34 (8.3%) as compared to those who were 377 (91.7%). However, within the sample most of the women had basic education and just a handful had college education. This is rather characteristic of a rural place (table 4.2.5) of those that were literate, revealed that they had attained up to primary level of education, 16.3% (67) secondary level of education while 8.3% (34) had never been to school and 4.9% (20) reached college level.

Table 4.2.6 Spouse's highest education level

Spouse's education level	***Frequency***	***Percent***
Never been to school	13	3.2
Basic education	235	57.2
High secondary education	100	24.3
College	33	8.0
University	4	1.0
Missing in System	26	6.3
Total	411	100.0

While a minority of the female sample was illiterate, the men too had a similar characteristic as the women. Within the sample most of the men were reported by their spouses as having had basic education and just a handful had college and university education.

Table 4.2.7Occupation of the women

Occupation of the women	***Frequency***	***Percent***
Unemployed	35	8.5
Employed	20	4.9
Attending school	25	6.1
Housewife	322	78.3
Any other-business	9	2.2
Total	411	100.0

It was not expected that in this rural place the women could be in formal employment. The majority of them (322; 78%) were just housewives. A minority of the respondents were unemployed (35; 8.5%), employed (20; 4.9%) attending school (25; 6.1%0 and 9 were involved in doing some other jobs and farming some other business.

Table 4.2.8Spouse's occupation

Spouse's occupation	***Frequency***	***Percent***
Unemployed	34	8.3
Formal employment	45	10.9
Informal employment	17	4.1
Farmer	275	66.9
Any other-business	14	3.4
Other jobs	385	93.7
System	26	6.3
Total	411	100.0

The men had diverse activities to earn an income and only 34 (8.3 were rather unemployed (tables 4.2.6 and 4.2.7).

Table 4.2.9Monthly household income

Marital status	*Frequency*	*Percent*
below K300,000.00	285	69.3
K300,000.00-K500,000.00	60	14.6
K500,000.00-K700,000.00	17	4.1
above K700,000.00	49	11.9
Total	411	100.0

Given the geographic location of this place being a rural area, it was expected that the household incomes would be rather very low. Nearly everyone was earning below or just above the national band of low minimum wage income (K400, 000).

Table 4.2.7 Number of children

Number of children	*Frequency*	*Percent*
None	12	2.9
1-3	212	51.6
4-6	134	32.6
7 and above	53	12.9
Total	411	100.0

In this rural place, most of the households had children between 1 and 2 though a few had 4 to 6. It can be said that nearly every women had at least a child (table 4.2.10) and majority of them had a child that was less than 3 years (table 4.2.11).

Table 4.2.11Age- last child

Age- last child	*Frequency*	*Percent*
1 year	194	47.2
2 years	123	29.9
3 years	42	10.2
More than 3 years	40	9.7
Missing in the System	12	2.9
Total	**411**	**100.0**

Table 4.2.12Interval between children

Interval between children	***Frequency***	***Percent***
1 year	28	6.8
1-2 years	136	33.1
2-3 years	169	41.1
more than 3 years	44	10.7
Not applicable	34	8.3
Total	411	100.0

The Interval between the children varied from 1 to 2 years to 2 to 3 years. However, one would note that the women had demonstrated low parity (table 4.2.12).

Table 4.2.13planning for more children in the next one year

Planning for more children	***Frequency***	***Percent***
yes	232	56.4
No	179	43.6
Total	411	100.0

The women are somewhat divided in terms of planning to have children in the near future with just about more than half 232 (56.4%) desiring to and less than half (179) 43.6% not desiring to (table 4.2.13).

Table 4.2.14 planning for more children in the distant future

Number of Children in the distant future	***Frequency***	***Percent***
1-3	112	27.3
4-6	209	50.9
7-9	74	18.0
10 and above	16	3.9
Total	411	100.0

Though some of the women (232) plan to have children in the next one year, most of them intend to have 4 to 6 children in the distance future. Very few intend to have over 10 children. It was surprising to observe that no woman desired not to have a child in the distant future (table 4.2.14).

Table 2.4.15 Reason for the desire to have a child

Reason for number of children	***Frequency***	***Percent***
Source of income/investment	85	20.7
Wanting another sex	17	4.1
Husband wants more	56	13.6
The child is still young	21	5.1
Married	6	1.5
I cannot manage to keep them	78	19.0
Not to leave children scattered when I die	1	.2
Ill health	8	1.9
Adequate	53	12.9
God gives	5	1.2
No complete loss if some die	10	2.4
Not married	13	3.2
Old	18	4.4
Can manage to keep them	13	3.2
Still at school	3	.7
Labour difficulty	1	.2
Not being lonely	1	.2
I don't have any	1	.2
Not enough	5	1.2
Male child	16	3.9
Total	**411**	**100.0**

When the women were interviewed, they gave various reasons for the number of children they wished to have and no one reason seemed to be significant (table 2.4.15).

Table 4.2.16 Hearing about NFP

Heard of NFP	***Frequency***	***Percent***
YES	304	74.0
NO	107	26.0
Total	**411**	**100.0**

Most of the women (304; 74.0%) had heard of NFP and 107 (26.0%) had heard of it (Table 2.4.16).

Table 4.2.17Type of informant

Informant	*Frequency*	*Percent*
Family	71	17.3
Friends	52	12.7
Health care provider	151	36.7
Media	8	1.9
Other---old women	22	5.6
Not applicable	107	25.8
Total	**411**	**100.0**

When asked from whom they may have gotten information about NFP, most of them (151; 36%) got it from the health workers.

Table 4.2.18Knowledge of NFP

Knowledge of NFP	*Frequency*	*Percent*
No idea	137	33.3
Prevent to have many children	60	14.6
Natural way of spacing children	172	41.8
Space children	42	10.2
Total	**411**	**100.0**

Most of the women (270; 66.6%) however had correct knowledge about NFP as compared to only 137 (33.3%) who had no idea.

Table 4.2.19 Known NFP Methods

Methods of NFP known	*Frequency*	*Percent*
Basal body temperature	33	8.0
Ovulation///mucus	55	13.3
Lactational amennrrhoea/breast feeding	146	35.5
Sympto-thermal/calender	22	5.3
All 4	18	4.3
Not applicable	137	33.3
Total	**411**	**100.0**

The women seemed to know all the NFP methods and the commonest (146; 35.5%) was the Lactational amenorrhea/breast feeding. Most of the women were however, not aware of the other natural family planning methods (Table 4.2.19).

Table 4.2.20Benefits of NFP

Benefits of NFP	***Frequency***	***Percent***
No idea/knowledge	137	33.3
Space children	105	25.5
No side effects	101	24.5
Cheap/easy	31	7.5
Avoid unwanted pregnancy	29	7.1
No benefit	7	1.7
Having few children	1	.2
Total	**411**	**100.0**

The women agreed that NFP has a number of benefits and the notable benefits included spacing children (105; 25.5%) and having no side effects (101; 24.5%). The most extreme responses were that there were no benefits (7; 1.7%) and that it worked if someone wanted to have few children (1;0.2%) (Table 4.2.20).

Table 4.2.21Disadvantages of NFP

Disadvantages of NFP	*Frequency*	*Percent*
No idea/knowledge	175	42.6
Difficult to abstain	30	7.3
Can become pregnant if you miss	88	21.4
Difficult to use	36	8.8
No disadvantage	58	14.1
Can have many children	3	.7
No protection from HIV/AIDS	7	1.7
Not 100% effective	10	2.4
Requires discipline /commitment	4	1.0
Total	**411**	**100.0**

While NFP had benefits, the women were able to highlight the disadvantages. This time apart from 137 who were initially non-committal to comment on NFP. More women were able to cite the disadvantages (175; 42.6%). Though there were some women who saw that NFP had no disadvantages (58; 14.1%), NFP was considered to be unsafe as a woman could become pregnant (88; 21.4), difficult to use (36; 8.8), difficult to abstain (30; 7.3) and that it was not 100% effective (10; 2.4%) (Table 4.2.21).

Table 4.2.22ever used any method of family planning

Used any Family planning method	*Frequency*	*Percent*
Yes	274	66.7
No	137	33.3
Total	**411**	**100.0**

The women in the sample used nearly all family planning methods. In fact, majority of them 274 (66.7%) had at one time used a family planning method as compared to only 137 (33.3) who had not (Table 4.2.22).

Table 4.2.23 Type of Method used before

Type of Method used	*Frequency*	*Percent*
Oral contraceptive(pill)	111	27.0
Injection	30	7.3
Condoms	25	6.1
Traditional	11	2.7
Natural	96	23.4
Not applicable	137	33.6
Total	411	100.0

The detailed profile of use of family planning in the women sample is that the most used method was the oral pill (111; 27%). All other methods were not frequently used and 137 women indicated using none (Table 4.2.23).

Table 4.2.24 Type of NFP Method used before

Ever used NFP	*Frequency*	*Percent*
Cervical mucus	12	12
Sympto-thermal	6	6
Lactation amenorrhea	64	67
Basal body temperature	14	15
Total	96	100

Within the 96 in sample that had used NFP, lactation amenorrhea was the most preferred method (64; 67%) and the least was Sympto-thermal (Table 4.2.24)

Table 4.2.25family planning method being used currently

On Family planning method now	***Frequency***	***Percent***
Yes	158	38.4
No	253	61.6
Total	**411**	**100.0**

At the time of the study, 253 (61.6%) of the women were on no family planning method as compared to 158 (38.4%) who were not (Table 4.2.25).

Table 4.2.26In favour of NFP

In favor of NFP	*Frequency*	*Percent*
In favour	279	67.9
Not in favour	132	32.1
Total	411	100.0

Though the women had these particular profiles of family planning use, it was surprising that most of the women (279; 67.9%) and even those that were on NFP seemed to be in favour of the NFP than those who were not (132; 32.1%) (Table 4.2.26).

Table 4.2.27 Source of advice on NFP

Source of NFP advice	***Frequency***	***Percent***
Health Centre	141	34.3
Private Clinic	5	1.2
Hospital	54	13.1
Family/Elderly	77	18.7
No Where	127	30.9
Church	4	1.0
TBA	2	.5
Reading Books	1	.2
Total	411	100.0

The women got advice on NFP from a variety of sources and health institutions were the most prevalent sources of information. Health institutions accounted for most of the advice (200; 48.6%) and it was surprising that 127 (30.9%) got advice from nowhere. There were few pockets of

advice.gotten from Family/Elderly, the church, TBAs and reading books (Table 4.2.27).

Table 4.2.28family planning method being used currently

family planning method being used currently	*Frequency*	*Percent*
Yes	274	66.7
No	137	33.3
Total	411	100.0

At the time of the study, more women in the sample (274; 66.7%) were on family planning than not (137; 33.3%).

4.3 Utilizing Family Planning Methods

Table 4.3.1Reason for not using a type of family planning method

Reason for not using FP	*Frequency*	*Percent*
Didn't know about it	82	20.0
Want to have more children	12	2.9
Religious and traditional beliefs	5	1.2
Husband disapproval	12	2.9
Any other-scarred to use	14	3.4
Any other-complications raised by others	9	2.2
Husband not at home most times	1	.2
Prime para	1	.2
Not married	1	.2
Not applicable	274	66.7
Total	**411**	**100.0**

When the women asked about the reasons for not using any family planning method, it was surprising that the reasons were rather numerous. The most frequent reason was that the women were not aware of family planning (table 4.3.1).

Table 4.3.2Reason for not using a type of family planning method

Reason for not using FP	***Frequency***	***Percent***
Self	42	10.2
Spouse	43	10.5
Couple	147	35.8
Health care provider	23	5.6
Family/friends	16	3.9
Partner	7	1.7
Any other-No one	133	32.4
Total	411	100.0

As for the women who were suing a preferred type of family planning method, the decision to use a particular method varied from person to person. It was observed that couples made most of the decisions than other determinants (Table 4.3.2).

Table 4.3.3Determinants of a type of family planning method

Variables	***Value***	***df***	***Asymp. Sig. (2-sided)***	***Decision***
Age and method	13.361(a)	3	.004	Significant to reject null hypothesis
Method and education	18.840(a)	3	.000	Significant to reject null hypothesis
Income and method	6.716(a)	3	.082	Not Significant to reject null hypothesis
Religion and method	7.936(a)	5	.160	Not Significant to reject null hypothesis

When determinants of method of contraception were tested at 0.05 using Person chi square to see if any association occurred, it was observed that age and education were not factors in selecting a preferred method but that income and religious affiliation were factors (Table 4.3.3).

CHAPTER FIVE - DISCUSSION OF FINDINGS

5.0 Introduction.

The main objective of the study was to determine factors influencing low utilization of natural family planning among child bearing women in Chilonga Catchment area. This chapter discusses the findings in line with the research questions. In this study the themes that represent the key research question (What are the factors influencing utilization or non-utilization of NFP among child bearing women in Chilonga?) were used.

a) Theme I: Knowledge on natural family planning.
b) Theme II:Utilization of natural family planning methods.
c) Theme III:Knowledge on general family planning methods.
d) Theme IV: Influence of family, religion and health personnel.

The discussion of the study is based on analysis of data collected from a sample of Four hundred and eleven (411) child bearing women who were attending antenatal and children's clinics. Mothers who were randomly selected for interviews by use of a structured interview schedule in five (5) randomly selected health posts in Chilonga Catchment area. The study found some significant findings on factors like socio-demographic, knowledge on NFP,Utilization of NFP methods and Influence of family, religion and health personnel.

5.1 Demographic characteristics of the respondents-Child bearing women

The socio-demographic characteristics of the respondents which were relevant to the study and essential for interpretation included; age, marital status, level of education, occupation and number of children.

In this study majority of Child bearing women were in the age group 25-34years 41.8% (172) and 18-25years 35.5%(146).According to ZDHF 2007, Zambian population is young with average life expectancy between 35-45 years. The majority 88.8 % (365) of the respondents were married with 51.6 % (212) having had 1-3 children and32.6% (134) respondents had 4-6children (table 4).

Thiscould be attributed to the fact that marriage is universal in Zambia and women marry at an early age. By the age of 17, nearly one third (1/3) of women had already had her first child, and by the age of 19, the proportion of child bearing increases to two thirds (Nsemukila et al 1998).This shows that most of the Child bearing women are married and that their utilization of natural family planning could be affected by their marital status and their age. Again, Zambian youth indulge in sexual activity at an early age.

The respondents' education level ranged from primary education 70.6 % (290) to secondary education 16.3% (67)and College level 4.9% (20).8.3% (34) had no education at all (table4). The reason could be due to the fact that when girls drop out of school due to pregnancy they are forced to get married to the man responsible for the pregnancy instead of encouraging them to go back to school. School Health Survey conducted by DCM shows increased dropout rate among teenage girls in the schools.

In addition 86.8% (357) 0f the respondents were housewives or unemployed and only 4.9% (20) were engaged in some form of employment. This scenario would also affect utilization of NFP. Their low educational level could also be the reason for their unemployment. With little education and training, the benefits of NFP could be disseminated among women and their spouses. If practiced properly success rate is somewhere around 70%.

- NFP promotes natural sex between the couples.
- It is safe, inexpensive and has no side effects except pregnancy in case of failure.
- Easy to practice. However, calculation of menstrual cycle and local temperature of the female genetalia is important to its success.

5.2 DISCUSSION OF VARIABLES

Knowledge of NFP

Section B of the questionnaire had questions that aided in determining the basic knowledge that Child bearing women had on natural family planning. Knowledge may influence one's action. As such, having knowledge on natural family planning may encourage one to use the method.

The findings showed that 74% (304) of respondents hadheardof natural family planning and of these 36.5% (150) heard from the health care provider while 17.3% (71) their source of information was from their family .41.8%(172) could correctly state what natural family planning is while14.6% (60) of respondents knew that natural family planning is spacing of children with the other 10.2% (42)knowing that it prevents from having children but 33.3% (137) had no idea at all, an indication that about 58.2% of the respondents have had limited knowledge on natural family planning. The findings also showed that only 41.6% (171) of respondents could state at least one method of NFP while 58.4% (240)had no knowledge of any method .These findings are similar with findings in the study "factors leading to underutilization of natural family planning at Chilenje clinic'' (Tolosi 1993) findings that stated that majority of clients were using other methods of family planning and had no knowledge about natural family planning .In a Health Demographic Survey conducted by CSO in 2007, it was discovered that knowledge is a precondition to higher utilization of any given service.

The findings showed that 28.2% (116) of the respondents had no knowledge of benefits of NFP, 29.7% (122) said it has no side effects, 33.2% (151) said to space children or avoid unwanted pregnancy, 7.5% (31) said it is cheap and easy to use while 1.7% (7) said it has no benefit (table 5).The findings corresponds with a study by Catherine Nakiboneka and Maniple2008in which it was found that,Knowledge about NFP methods was insufficient among clients and that NFP methods are known to be free from side effects, with no continuous costs, and was used to space and limit childbirth. The findings also relates with Fehring2010 findings that stated thatNFP use is related to its benefits, among which are: no side effects, few health risks, affordable, and compatible with many women's value systems. The findings of this study have brought to light the fact thatLactational Amenorrhea is the most known type of NFP that women use for family planning.

The findings further showed that 42.6%(175) of the respondents had no idea/knowledge of disadvantages of NFP, but 21.4% (88) said that one can become pregnant if she misses, 16.1% (66)said that it is difficult to abstain and to use, 4.1% (10) said it is not 100% safe and that no protection from HIV/AIDS, 1% (4) said that it requires discipline and commitment while 14.1% (58) said that it has no disadvantage **(**table 4**).**Despite some (43.3%) of respondents citing various disadvantages of NFP, 14.1% of respondents said there are no disadvantages.

Generally, the study revealed that 58.4% of respondents had no idea/ knowledge of NFP**.** This poses a great challenge on the part of health workers who have to ensure that knowledge is disseminated to all the concerned people.

Utilization of natural family planning methods

The researcher explored a number of factors that were thought to have influence on use of NFP. One of the factors explored was age. The result showed that about half 50.4% (207) of respondents had ever used NFP and about half 49.6%(204) had never used NFP.When determinants of method of contraception were tested at 0.05 using Pearson chi square to see if any association occurred, it was observed that age and education were not factors in selecting a preferred method but that income and religious affiliation were factors (Table 4.3.3).

The study showed that most 67.9 % (279) of the respondents were in favour of NFP though only half of 100% had ever used NFP. The researcher also wanted to establish whether source of advice/information had any influence on utilization of NFP. The results showed that 48.6% and 36.5% of respondents got advice and heard from the health worker while 18.7% and 30% from family/friends respectively. Majority of these got advice and had information from the health worker. The health worker therefore seemed to have greater influence on use of NFP. This could be due to the fact that health workers are more knowledgeable on NFP and are able to give adequate advice or to counsel clients adequately.From this study it is evident that NFP services are not adequately being utilised. As 74% had knowledge but very few are using it.

This study revealed that religious denomination influences utilization of NFP (table 4.3.3). 63% (259) said their religious denomination prefers one method of family planning to another and the most preferred method was NFP by 51.3% (211)compared to 9% (32) whose denomination preferred artificial methods while the remaining 3.9% (16) were not sure. An association was done and the results were statistically significant (p-value =0.000).We therefore, reject the null hypothesis which states that there is no association between religion and utilization of natural family planning. There is an association between religion and utilization of natural family planning.

The study reveals that there was a significant relationship between utilization of NFP with marital status (p value=0.001). 93.7 %(192) of the respondents who were married had used NFP. This result was statistically significant there by rejecting the null hypothesis which states that there isno association between marital status and utilization of natural family planning. In addition some respondents stated that they can't use family planning because they are not married.

The study also discovered that there was a significant relationship between having knowledge of NFP and use (p value=0.000).Majority 95.6%(196) of the respondents who used NFP had heard of NFP (table 9).This result was statistically significant there by rejecting the null hypothesis which states that there is no association between knowledge of a service and utilization. The major reasons for not using family planning methods included lack of knowledge and partner refusal. Thus knowledge may result in utilization of NFP.

Influence of Family, Religion and Health Personnel

The findings revealed that 69.6% (286) of the respondents discuss FP issues withtheir spouse and that 10.5% (43) of the respondent's decisions to use FP comes from their spouses. The findings also revealed that out of 205 respondents whose region preferred NFP, 70.2% (144) had used NFP whereas 29.8% (61) of those whose religion had no preference had used it as well. Slightly above half54.7% (225) of the respondents had visited the family planning clinic and 58.6% (241) of the respondents revealedthat they received information on family planning when they visited the clinic. These findings oppose the evidence that was given that both health personnel and some members of the community have been against the use of natural family planning.

Implications to the Health Care System

The study findings have implications for policy, operation and institution. Family planning is promoted as amechanism to address the reproductive health needs of men and women, as well as the crucial challenge of rapid population increase (PAI 1999).

The study on factors influencing utilization of natural family planning among child bearing women in Chilonga Catchment area has demonstrated that utilization of natural family planning ispromoted to

enable individuals and couples to space and limit childbirth. This is based on demographic and health concerns and basichuman rights. The results of this study have revealed adequate levels of knowledge about NFP but very few are using it. This implies that health workers need to motivate couples to use NFP. The findings have shown that utilization of natural family planning can be improved from 50% to 100% through increased IEC in the community.

Health care providers are expected to be in the forefront in disseminating information and delivery of family planning services. Information on family planning should be accessible to all.Health care providers need to know that natural family planning just like any other method of fertility control can be effective and widely accepted if they promote it by disseminating information about it to all clients of family planning so that they can wisely make informed choice. It clearly demonstrated that utilization of natural family planning was average because the percentage of non-users was 50%.This means that the method is under utilised. Although matters of sexuality are sensitive and regarded as secret in our society, health workers should still sensitize the population at large to discuss sexual issues in public. This calls for the health worker to promote community involvement in dissemination of information. This can be achieved by forming supportive groups.

CHAPTER SIX- CONCLUSSION ANDRECOMMENDATIONS

6.0 Introduction

The purpose of the study was to determine factors influencing utilization of natural family planning in Chilonga Catchment area. A descriptive study design was used whose study unit comprised of antenatal mothers aged 18- 49 years. Data was collected using structured interview schedule. The sample consisted of 411 randomly selected respondents.

The study revealed that 50.8% of the respondents ever used natural family planning. Age was not significant as similar percentages were both for and against the practice .Marital status seemed to have played a role as88% of the respondents were married probably the husbands had some influence on their wives utilization of NFP.However,74% of the respondents are aware of NFP.

Educational level played a big role in utilization of natural family planning. Most of the respondents had attained primary education and very few secondary and college levels of education. This affected their employment status such that most of them were just housewives and their socio economic status was also affected. Also most respondents' monthly income was below K300, 000.00 which signifies poor socio economic status. These findings had an impact on utilization of natural family planning.

When it came to knowledge and utilization, most of the respondents had no knowledge of NFP and were not sensitized about it. The majority of the respondents were in favour of NFP although they had not used it.Almost all catholic respondents said their religion preferred NFP to other family planning methods. The study also revealed that even the respondents from other religious denomination were in favour of NFP and that they would recommend it to other people.

6.1 Recommendations for improving utilization of natural family planning

To the Government

The Ministry of Health in collaboration with government through partnership should plan for training natural family planning teachers as they are the ones who can teach people on family planning in their

communities.This will also improve on utilization as some clients cited that they had never heard of NFP.

Ministry of Health should develop a program targeting tutors as many midwifery tutors are ill equipped to provide accurate and effective teaching /information on midwifery issues including natural family planning. This should include developing training materials on these issues aimed at preparing student lecturers /tutors to be effective incoming tutors.

There is need for the Ministry of health and the district to ensure that there is continuous community sensitization on family planning utilization throughout the year using different channels of communication, so that the messages reach the intended target groups in the community especially women. A program to sensitize communities on knowledge, attitudes, beliefs, practices and about women rights on family planning should be put in place. Such programs should involve combined effort from local counselors, the chiefs and their village heads to ensure a strong advocacy and social support.

The Ministry of education should strengthen the FAWEZA to ensure that girls that drop out of school due to pregnancy are followed up so that they return to school. This will improve their education, social status and level of understanding and analysis of situations including utilization of NFP.

There is need for Ministry of Education to incorporate fertility awareness in the curriculum at secondary school level so that children are aware of the family planning methods available, natural family planning inclusive.

To the DHMT/Hospital

To work in collaboration with government to ensure implementation of the programs that will be initiated by the government.

The DHMT to educate parents on the importance of educating the girl child through workshops involving PTA members, teachers, union officials, teachers' trainers, administrators, policy makers and the media, all working together can create a supportive learning environment for all girls that drop out of school due to pregnancy.

The district administration should plan for and introduce weekly or monthly dialogue sessions with married women and their spouses concerning family planning.

Since Chilonga residents seem to favour natural family planning, the district/hospital should embark on capacity building in this area.

The method of creating awareness on family planning needs should be evaluated by health care provider. Clients should be exposed to the methods of family planning available before they make a choice. Currently, Zambia is facing human resource crisis resulting in shortage of health workers in rural and urban clinics such as FP educators. There is therefore need to train TBA's, CHW and members of the community on the advantages of NFP.

There is urgent need to improve family planning delivery and accessibility by health care providers for example running family planning clinic in schools and communities.

Further Research

The study must be duplicated on a larger scale in other geographical areas to enable generalization of the results a study should involve the following as well:

Policy makers and top government leaders views on utilization of natural family planning.

Natural family planning teachers: to identify their gaps and challenges they are facing during their service delivery and how they can be addressed.

Determining factors influencing utilization of natural family planning bymen.

6.2Study limitations

There are few studies that have been done in relation to utilization of natural family planning in Zambia and the region which have been documented. This made it difficult to make comparisons with other studies.

The study was undertaken in some parts of Chilonga catchment area making it difficult to generalize the findings country wide. The ideal situation would have been to collect data from all heath posts in Chilonga. This was hindered by geographical barrier, time, and financial limitations.

To overcome the limitations, focus group discussion and interview schedule (triangulation) were used to help obtain quality data and reduce bias. The results however, can be used as baseline data for use in implementation of family planning programmes in Mpika District and Northern Province as a whole. The results could also be used as baseline data for further research in natural family planning.

6.3Dissemination of findings

The research findings will be presented to Chilonga Hospital Management team by conducting a one day workshop where the research findings, implications and the way forward will be discussed.

The respondents will be informed about the research findings through a talk that will be organized by the researcher and Hospital authorities.

A copy of the research report will be submitted to Chilonga Hospital management for formulation of policies on community sensitization on natural family planning.

A copy of the research will be submitted to the Community Medicine Department and School of Medicine library to save as a source of information for literature review for other researchers and to the Ministry of Health for planning measures to improve on family planning services.

Other copies of the research report will be sent to relevant authorities for journal publications of research findings as opportunities arise.

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APPENDIX 1- INFORMED CONSENT

TOPIC: FACTORS INFLUENCING LOW UTILIZATION OF NATURAL FAMILY PLANNING AMONG CHILD BEARING WOMEN IN CHILONGA.

INTRUDUCTION

I, Sr.Rosemary Kabonga, a student of Masters in Public Health from University of Zambia is kindly requesting for your participation in the research study mentioned above.

PURPOSE OF THE STUDY

The purpose of the study is to enable health workers to understand the factors that influence women to use natural family planning. The data from the study will assist provide feedback to a variety of audiences including sponsors, donors, service users, managers and staff which will influence decision making or policy development in family planning services which in turn will improve natural family planning utilization. It is hoped that your participation in this study will help the implementation of natural family planning.

VOLUNTARY PARTCIPATION

Your participation in this study is voluntary. You are not being forced to participate. You are free to decline to participate and to withdraw from the study at any time you wish to do so.

RISKS AND DISCOMFORT

There is no risk and discomfort involved apart from the use of your time in answering questions which will take about 30 minutes. However, I acknowledge that discussing family planning is a sensitive issue.

BENEFITS

Taking part in this study will provide with information that will help relevant authorities and policy developers to come up with strategies and policies that will help improve natural family planning services.

No monetary favours will be given in exchange for information obtained.

CONFIDENTIALITY

All information you will give will be confidential and privacy will be maintained. The MoH, the UNZA and School of Medicine may review your records and the research findings will be disseminated to the relevant authority but such information released will not lead directly to you as anonymity will be maintained.

INFORMATION AND CLARIFICATION

Any time you want clarification or to ask for any question you are welcome. Contact the following:

Sr.Rosemary Kabonga,
Chilonga Nursing School,
P.O.BOX 450030,
Mpika, Zambia.
E-mail:srkabonga@yahoo.com
rkmwaba@gmail.com
Cell phone number: +260977611180
+260966611180
+260955611180

The Chairperson,
The University of Zambia,
Research Ethics Committee,
P.O.BOX 50110,
Lusaka, Zambia.
E-mail:unzarec@zamtel.zm
Fax: +260-21-250753
Telephone number: 01 256067

APPENDIX 11: CONSENT FORM TO PARTICIPATE IN THE STUDY

The purpose of this study has been explained to me and I understand the purpose, the benefits, risks and confidentiality of the study. I further understand that; if i agree to take part in this study, I can withdraw at any time without having to give an explanation and taking part in this study is purely voluntary.

I---------- (Names)

agree to take part in this study designed to find out factors that influence women of child bearing age to use natural family planning.

Signed/Thumb print ----------Date :----------(Participant)

Signed: ----------Date :----------(Witness)

Signed: ----------Date :----------(Researcher)

APPENDIX 111- STRUCTURED INTERVIEW SCHEDULE

THE UNIVERSITY OF ZAMBIA

SCHOOL OF MEDICNE

DEPARTMENT OF COMMUNITY MEDICINE

STRUCTURED INTERVIEW SCHEDULE

TOPIC: FACTORS INFLUENCING LOW UTILIZATION OF NATURAL FAMILY PLANNING AMONG CHILD BEARING WOMEN IN CHILONGA.

Site Code:

Chilonga	1
Kaole	2
Kapoko	3
Mufubushi	4
Kasenga	5

Name of Interviewer: ----------Date: ----------

Respondent's identification number: ----------

INSTRUCTIONS FOR THE INTERVIEWER

1. Always greet and introduce yourself before starting the interview.
2. Explain the purpose of the study and ask for permission to interview the participant.
3. Assure the respondent of maximum confidentiality.
4. Explain that the respondents have a choice to participate and the option to withdraw. If the respondent is unwilling to take part, do not force them.
5. Make the respondent sign the consent form before you start the interview, or use the thumb print for those who cannot sign.
6. Do not write the name of the respondent on the interview schedule.
7. Write the appropriate responses in the spaces provided.
8. Tick or circle the correct answers where they are provided.
9. Thank the respondent at the end of the interview.

	SECTION A DEMOGRAPHIC DATA	CODING CATEGORY
1.	How old are you? a. 18 – 24 years b. 25 – 34 years c. 35 – 44 years d. 45 and above	 1 2 3 4
2.	What is your marital status? a. Single b. Married c. Divorced d. Widowed	 1 2 3 4
3.	What is your highest educational level? a. Never been to School b. Basic education c. High secondary education d. College e. University f. Any other (specify) ……..	 1 2 3 4 5 6
4.	What is your spouse's highest level of education? a. Never been to school b. Basic education c. High secondary education d. College e. University f. Any other (specify) ……..	 1 2 3 4 5 6
5.	What is your occupation? a. Unemployed b. Employed c. Attending school d. Housewife e. Any other (specify) …….	 1 2 3 4 5
6.	What is your tribe? a. Tonga b. Lozi c. Bemba d. Bisa e. Nyanja f. Other (specify) ……	 1 2 3 4 5 6
7.	What is your spouse's occupation? a. Unemployed b. Formal employment c. Informal employment d. Farmer e. Any other (specify) …….	 1 2 3 4

8.	What is your monthly household income?	5
	a. Below K300, 000.00	
	b. K300, 000 – K500, 000.00	1
	c. K500, 000 – K 700, 000.00	2
	d. Above K700, 000.00	3
9.	How many children do you have?	4
	a. None	
	b. 1 – 3	1
	c. 4 – 6	2
	d. 7 and above	3
10.	How old is your last child?	4
	a. 1 year	
	b. 2 years	1
	c. 3 years	2
	d. More than 3 years	3
11.	What is the interval between your children?	4
	a. 1 year	
	b. 1 – 2 years	
	c. 2 – 3 years	1
	d. More than 3 years	2
12.	Do you plan to have more children?	3
	a. Yes	4
	b. No	
13.	Explain your answer in question 12.	1
	.....	2
	.....	
	.....	
	.....	
14.	How many children would like to have?	
	a. 1 – 3	
	b. 4 – 6	1
	c. 7 – 9	2
	d. 10 and above	3
15.	What are your reasons for the answer in questions 14?	4
	.....	
	.....	
	.....	
	SECTION B: KNOWLEDGE ON NATURAL FAMILY PLANNING	
16.	Have you ever heard of natural family planning?	1
	a. Yes	2
	b. No	
17.	If your answer in 16 is yes who was your informant?	1
	a. Family	2
	b. Friends	3
	c. Health care provider	4
	d. Media	5
	e. Any other (specify) ……	

18.	What do you understand by the term natural family planning?	
19.	Do you know any method of natural family planning? a. Yes b. No	1 2
20.	If your answer to question 19 is Yes, state the methods of natural family planning you know? a. ..... b. ..... c. ..... d.	
21.	What do you think are the benefits of natural family planning?	
22.	What do you think are the disadvantages of natural family planning?	
	SECTION C: UTILIZATION OF NFP METHODS	
23.	Have you ever used natural family planning methods before? a. Yes b. No	1 2
24.	If yes, which ones? a. Cervical mucus(ovulation/Billings) b. Sympto-thermal c. Lactational amenorrhea d. Basal body temperature	1 2 3 4
25.	Are you in favour of natural family planning? a. In favour b. Not in favour	
26.	Where do you get your advice on natural family planning methods? a. Health centre b. Private Clinic c. Hospital d. Other, specify……	1 2 1 2 3 4

SECTION D: KNOWLEDGE ON GENERAL FAMILY PLANNING METHODS

27. Have you ever used any method of family planning?
    a. Yes — 1
    b. No — 2

28. If yes to answer 27, which methods have you used?
    a. Oral contraceptive(pill) — 1
    b. Injection — 2
    c. Condoms — 3
    d. Traditional — 4
    e. Natural — 5
    f. Any other specify)..... — 6

29. If no to question 27, what are the reasons for not using any Family planning method?
    a. Didn't know about it — 1
    b. Want to have more children — 2
    c. Religious and traditional beliefs — 3
    d. Husband disapproval — 4
    e. Any other (specify)..... — 5

30. Are you currently on any method of family planning?
    a. Yes — 1
    b. No — 2

31. If yes to question 30, which method are you using?
    a. Oral contraceptive — 1
    b. Injection — 2
    c. Condoms — 3
    d. Loop — 4
    e. Natural — 5
    f. Traditional — 6
    g. Any other (specify) …… — 7

SECTION E: INFLUENCE OF FAMILY, RELIGION AND HEALTH PERSONNEL.

32. Whose decision was it that you use a family planning method?
    a. Yourself — 1
    b. Spouse — 2
    c. Couple — 3
    d. Health care provider — 4
    e. Family/friends — 5
    f. Partner — 6
    g. Any other (specify)..... — 7

33. Do you discuss family planning with your spouse?
    a. Yes — 1
    b. No — 2

34.	Is your spouse/partner in favour of family planning? a. Yes b. No c. Not applicable	1 2 3
35.	Which Religious Denomination do you belong to? a. Catholic b. UCZ c. SDA d. Pentecostal e. Others (Specify) ……	1 2 3 4 5
36.	Does your religious denomination encourage you to use one family planning method in preference to others? a. Yes b. No	1 2
37.	Which method is preferred by your religious denomination? ……	
38.	…….. Have you ever visited a family planning clinic? a. Yes b. No	1 2
39.	When you visited the clinic did you receive any information on family planning? a. Yes b. No	1 2
40.	What information did you receive?	
41.	What suggestions would you like to make to make in order to encourage Women accept family planning? …… …… …… THANK YOU FOR SPARING TIME TO ANSWER THIS QUESTIONNAIRE.	

APPENDIX IV- FOCUS GROUP DISCUSSION WITH NATURAL FAMILY PLANNING TEACHERS

TOPIC: FACTORS INFLUENCING LOW UTILIZATION OF NATURAL FAMILY PLANNING AMONG CHILD BEARING WOMEN IN CHILONGA.

Selection criteria: Natural family planning teachers.

Before we start, I would like to remind you that there is no right or wrong answer in this discussion. We are interested in knowing what each of you think about factors that influence low utilization of natural family planning. Please feel free and be frank to share your point of view, regardless of whether you agree or disagree with what you hear. It is important that we hear your opinions.

You probably prefer that your comments not be repeated to people outside of this group. Please treat others in this family group as you want to be treated by not telling anyone about what you hear in this discussion today.

First of all let's start by going around the circle introducing oneself. (Members of the research team also to introduce themselves and describe each of their roles).

DISCUSSION QUESTIONS

1. What information do you know about natural family planning?
2. How different is natural family planning to artificial methods of family planning?
3. Could you please tell me how decisions are made in your family?
4. Among the methods of family planning you know, which one would you recommend and why?

SUMMARY

Let's summarize some of the key points from our discussion. Is there anything else?

Do you have any questions?

Thank you for taking part in the discussion.

APPENDIX V- LETTER OF AUTHORITY

The University of Zambia
School of Medicine
Department of Community Medicine
P.O.BOX 50110
LUSAKA.

1st April, 2010.

The Medical Superintendent,
Our Lady's Hospital,
P.O.BOX 450030,
MPIKA.

U.F.S.
The Head of Department,
Department of Community Medicine,
University of Zambia,
LUSAKA.

Dear Sir,

RE: PERMISSION TO CARRY OUT A RESEARCH STUDY

I am a student undertaking a Master's degree in Public Health at the University of Zambia-School of Medicine. In partial fulfillment of the requirements of this program, I am required to conduct a research study.

I hereby seek permission to carry out a study in your catchment area. The purpose of the study is to explore and analyse factors influencing low utilization of natural family planning among women of child bearing age (18-45 years) in Chilonga catchment area.

During my study, I shall interview child bearing women and Natural family planning teachers. The results will be communicated to you hoping that such information will be helpful when developing programmes in family planning services.

Hoping that my request will meet your favourable considerations.

Yours faithfully,

Sr.Rosemary Kabonga.
MPH STUDENT

APPENDIX: VI LETTER OF INTENT

The University of Zambia
School of Medicine
Department of Community Medicine
P.O.BOX 50110
LUSAKA.

2nd June, 2010

The Royal highness Chief Chikwanda,
P.O.BOX 450021,
MPIKA.

U.F.S.
The Head of Department,
Department of Community Medicine,
University of Zambia,
LUSAKA.

Dear Sir,

RE: PERMISSION TO CARRY OUT A RESEARCH STUDY IN YOUR AREA

I am a student undertaking a Master's degree in Public Health at the University of Zambia-School of Medicine. In partial fulfillment of the requirements of this program, I am required to conduct a research study.

I hereby seek permission to carry out a study in your chiefdom. The purpose of the study is to explore and analyze factors influencing low utilization of natural family planning among women of child bearing age (18-45 years) in Chilonga catchment area.

During my study, I shall interview child bearing women and Natural family planning teachers.

Hoping that my request will meet your favourable considerations.

Yours faithfully,

Sr.Rosemary Kabonga.
MPH Student