

**FACTORS ASSOCIATED WITH UTILIZATION OF POSTPARTUM FAMILY
PLANNING SERVICES BETWEEN 6 AND 12 MONTHS OF DELIVERY AT
NTCHISI DISTRICT HOSPITAL**

MSc (REPRODUCTIVE HEALTH-STI, HIV & AIDS) DISSERTATION

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UNIVERSITY OF MALAWI

KAMUZU COLLEGE OF NURSING

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MSC (REPRODUCTIVE HEALTH-STI, HIV and AIDS) DISSERTATION

By

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**Submitted to the Department of Maternal and Child Health, Faculty of Nursing, in
partial fulfilment of the degree of Master of Science in Reproductive Health**

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August 2012

DECLARATION

I, Chrissy Verles Bwazi, declare that this dissertation on “Factors Associated with utilization of Postpartum Family Planning Services between six and twelve months of delivery at Ntchisi District Hospital, Malawi”, is entirely my own work. I have not presented this thesis for any award at any University within or outside Africa. All sources that I used or quoted have been acknowledged by means of complete reference.

Chrissy Verles Bwazi

Signature

August, 2012

CERTIFICATE OF APPROVAL

The undersigned certify that this thesis represents the student's own work and effort and has been submitted with our approval.

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Postgraduate Dean

Signature:_____Date:_____

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Member, Supervisory Committee

DEDICATION

This dissertation is dedicated to my lovely children Flora, Praise and Worship who effortlessly inspired me through their endurance, encouragement and support throughout the study period; I do not take it for granted. Also, the thesis is dedicated to my late father, Benson Samson Bwazi, my mother, Lifneti Chiwaula-Bwazi and all friends without whom, I could have had a tough academic experience. You have been wonderful people to me, and I will always cherish the contributions you have made to my life. Lastly, the dedication goes to men of God, Pastor William Ng'ambi and Pastor Hassan Mzenda for their continued support through prayers and spiritual guidance wherever I was weak and frustrated.

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ABSTRACT

This study examined factors that determine the utilization of family planning services at Ntchisi District Hospital in the central region of Malawi. The study design was quantitative descriptive. The study sample comprised 193 postpartum mothers who stayed between 6 and 12 months after delivery. The women were recruited using the convenience sampling method. A structured questionnaire was used to collect data and the analysis was conducted using SPSS version 16.0. Cross tabulations were performed to establish the relationships and associations between the utilization of postpartum family planning services and variables such as demographic characteristics, knowledge, culture, subjective norms and the previous experiences faced by the women with use of different contraceptive methods. Chi-square tests were used at 5% level of significance. The Theory of Reasoned Action (TRA) guided the study.

Findings showed that knowledge about PPFP services was almost universal at 94.3% (n = 182). About 75% of the respondents were using the contraceptives in the first year of delivery. Only 59.8% (n = 115) women started using the contraceptives when their children were six (6) months old yet 82.3% (n = 159) respondents were sexually active during the same period. At the end of the first year, 90.2% (n = 174) were sexually active. There were statistically significant associations between PPFP utilization and duration of lactation amenorrhoea, past behaviour and habits related to contraception, time of resuming sexual activity, level of education, marital status, age and parity of respondents, husband's approval and postpartum counselling the mothers received.

Results demonstrated that the women do not effectively utilize postpartum family planning services at Ntchisi District Hospital. Although about 75% were using contraception in the first year of childbirth, they started late. Some of the associated factors were marital status, respondents' level of education, desire for more children as marriage security and inadequate counseling of mothers during ante and postnatal care. Lack of husbands' approval for the services, past behaviour and habits related to contraception as well as the time of resumption of sexual activity after delivery, were the major setbacks for the use of the PPFP services.

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LIST OF ABBREVIATIONS AND ACRONYMS

CHAM	=	Christian Health Association of Malawi
COMREC	=	College of Medicine Research and Ethical Committee
CPR	=	Contraceptive Prevalence Rate
DHMT	=	District Health Management Team
FP	=	Family Planning
HTSP	=	Healthy Timing and Spacing of Pregnancies
IUCD	=	Intrauterine Contraceptive Device
LAM	=	Lactation Amenorrhoea Method
MDGs	=	Millennium Development Goals
MDHS	=	Malawi Demographic Health Survey
MEC	=	Medical Eligibility Criteria
MICS	=	Multiple Indicator Cluster Survey
MMR	=	Maternal Mortality Rate
MOH	=	Ministry of Health
NSO	=	National Statistical Office
PFPP	=	Postpartum Family Planning Programme
PMPB	=	Pharmacy, Medicines and Poisons Board
PPFP	=	Postpartum Family Planning
RVF	=	Rectal Vaginal Fistula

SPSS	=	Statistical Package for the Social Sciences
SRHR	=	Sexual and reproductive Health and Rights
TRA	=	Theory of Reasoned Action
USAID	=	United States Aid for International Development
VVF	=	Vesico-vaginal Fistula
WHO	=	World Health Organization

LIST OF DEFINITION OF TERMS

Post partum refers to the period up to six weeks after a woman has given birth.

Postpartum family planning refers to the initiation and use of family planning services during the first year after delivery

Unmet need for family planning refers to the percentage of women who need family planning (FP) services but are not currently using family planning services

Fertility is the ability to conceive/become pregnant.

Contraceptives are devices, drugs, or methods for preventing pregnancy, either by preventing the fertilization of the female egg by the male sperm or by preventing implantation of the fertilized ovum.

Contraceptive prevalence rate is the number of women that are using family planning methods per annum.

Unsafe abortion refers to the termination of a pregnancy by unskilled persons or in an environment that does not have minimal package for the practice or both.

CHAPTER 1

Introduction to the Study

Introduction

Postpartum family planning (FPFP) refers to the initiation and use of family planning (FP) services during the first year after a woman has given birth (ACCESS-FP, 2008). This is the time when a woman needs contraception most to prevent unwanted conception. In Malawi, statistics show that contraceptive use during this period is low, resulting in unintended pregnancies and unwanted childbearing. This also accounts for about 30% of all births in sub-Saharan Africa (WHO & USAID, 2008). In Malawi, only 26% of the postpartum women used FP methods during this period. While 70% represents women with unmet need, the remaining 4% represents women that did not want to utilize the postpartum family planning services (USAID/ACCESS-FP, 2010). It was also estimated that 40% of women in the first postpartum year worldwide intended to use a FP method but were not able to do so (Stephenson & MacDonald, 2005).

In 2006, the World Health Organization (WHO) gave a recommendation regarding the healthy timing and spacing of pregnancies (HTSP). It states that a woman should wait for a period of two years (24 months) before attempting to become pregnant following a normal pregnancy and delivery of a live infant and, at least 6 months after an abortion /miscarriage (WHO, 2006; Smith, Clifton, Gribble & Ashford, 2009; *USAID & BASICS*, *n.d*; Health Communication Partnership Impact, 2008; USAID/ACCESS-FP, 2010). The benefit of HTSP to the mothers is that they are: mothers are prevented from developing pregnancy related complications (*USAID & BASICS*, *n.d*) such as

preeclampsia, anaemia, ruptured uterus, ante and postpartum haemorrhage and many more. The benefits to the child include a reduction in incidents of low birth weight, preterm births and deaths of infants as well as children that are under five years of age (*USAID & BASICS, n.d*). Based on these facts, women are encouraged to space their pregnancies and births by using either modern or natural methods of family planning.

In countries supported by ACCESS-FP such as Kenya, Malawi, Bangladesh, Pakistan, Tanzania, Zambia and Democratic Republic of Congo, it has been reported that only 3-8% of the postpartum women desired another child within two years of delivery (Borda & Futures Group International, 2007). These results show that there is need to strengthen Postpartum Family Planning Programmes (PFPP) in developing countries including Malawi. This study, therefore, investigated the factors that are associated with the utilization of Postpartum Family Planning (PPFP) services by mothers between six months and one year of delivery at Ntchisi district hospital, Malawi. The study was guided by the Theory of Reasoned Action as described by Fishbein and Ajzen (1980).

Background Information

Countries in Sub-Saharan African have the highest fertility rate in the world, averaging 5.5 per woman (WHO& USAID, 2008; Jacobstain, Bakamjian, Pile and Wickstrom, 2009; NSO, 2010). The rate is double that of Asia and Latin America which is estimated at 2.5 (WHO & USAID, 2008; Jacobstain, et al. 2009) and is almost four times that of Europe (WHO & USAID, 2008). Additionally, Sub Saharan Africa has a contraceptive prevalence rate (CPR) of 16% as compared to 60% in Asia and 70% in Western Europe (WHO & USAID, 2008; World Population Data Sheet, 2007). In 2010,

the National Statistical Office reported a CPR of 46% for Malawi, 42% accounts for modern and 4% for traditional methods.

Malawi's fertility rate is estimated at 5.7 (NSO, 2010) from 6.0 (MICS, 2006) and 6.3 (NSO, 2000). The fertility rate for Ntchisi District has remained stagnant at 6.1 since 2006 (MICS, 2006, NSO, 2008, NSO, 2011). The Health Management Information System (HMIS) Annual Bulletin (2010) recorded a fertility rate of 8.0 for the district. According to a report by USAID/ACCESS-FP (2008), 15% of the births in Malawi occur within 23 months after delivery, while 35% occur between 24 and 35 months. HMIS report at Ntchisi District hospital during the month of November, 2010, revealed that out of the 84 antenatal mothers who reported at the antenatal clinic, 30 had conceived before their last born children were 24 months old. About 7% of the women conceived when their youngest children were less than 12 months of age.

It was also observed that many women in Ntchisi come for PPFPP services after they have resumed coitus and/or their menstrual cycle had resumed. One explanation for this is that many women believe that they cannot conceive after they have given birth and/or before the resumption of menses (USAID/ACCESS-FP, 2010). USAID/ACCESS (2010) conducted studies in 17 countries on postpartum fertility and contraceptive usage. They found that many women are sexually active within 6 months of delivery and they frequently become pregnant before the resumption of menses.

In Egypt, out of the 2,617 postpartum women that were pregnant, 15.1% conceived before resumption of menstrual cycle (Shaaban & Glasier, 2008). Again, 29% of these pregnancies were unplanned and the women sought termination (Shaaban &

Glasier, 2008). In Bangladesh, 50% of postpartum mothers resumed sexual activity within the first three months of delivery and, 97% were sexually active by one year. Menstrual function had returned in 50% of the mothers by six months of postpartum (Borda, Winfrey & Futures, 2007). A study in the Democratic Republic of Congo by Borda & Futures Group International (2009) showed that 55% of the postpartum women in the country resumed sexual activity within 4 – 6 months of delivery and menstrual function had returned in only 31% of the women within the same period. In Malawi, 25% of postpartum women experience resumption of menses within four to six months of delivery while 45% of the women resume sexual activity during the same period (Borda & Futures Group International, 2009).

Closely spaced births pose a health risk to both the mother and the child. The mother may seek an induced abortion and may suffer from complications secondary to the abortion. She is at increased risk for morbidities which include anaemia, pre-eclampsia, ante and postpartum haemorrhage and puerperal sepsis (USAID/ACCESS-FP, 2010).

Risks to the neonate are low birth weight (LBW) and prematurity. Survival for the premature and LBW babies is a major challenge in developing countries and results in neonatal deaths. Additionally, in Malawi, a mother stops breastfeeding once she is pregnant. This poses a risk of malnutrition to the baby related to abrupt weaning. This can also lead to reduced immunity which can make the baby susceptible to various infections and consequently death (Shaaban & Glasier, 2008).

It is estimated that out of the 210 million pregnancies that occur each year worldwide, about 80 million are unintended (Population Reference Bureau, 2009, MOH EmoC assessment, 2010). One hundred and fifty thousand of these pregnancies are terminated by induced abortion every day; accounting for over 50 million abortions worldwide per year (WHO, 2007). It is also estimated that 13% of all maternal deaths worldwide are secondary to unsafe abortions (WHO, 2007). Malawi has a high rate of maternal mortality of 675/100,000 live births (NSO, 2011) many of which are attributed to complications of abortions. The abortions are usually carried out in unhygienic conditions since the practice is illegal in Malawi. These contribute towards the 100, 000 to 200, 000 maternal mortality worldwide per year (WHO, 2007; Guttmacher Institute, 2010). The consequences of abortion include severe bleeding, septicemia, habitual miscarriages and premature deliveries with the concomitant pregnancies, uterine perforation and increased risk for ectopic pregnancy (*Hawkins, n.d.*).

The provision of family planning services has a potential to decrease by the incidence of unwanted pregnancies by 71% thereby eliminating 25 million induced abortions worldwide (WHO, 2010b, Population Reference Bureau, 2009). It is, therefore, important that the PPFP services be utilized in Malawi to reduce maternal and neonatal morbidity and mortality rates, thus improving the lives of mothers and their children (Population Reference Bureau, 2009).

Problem Statement

Knowledge of family planning (FP) services in Malawi is at 98.5%, yet the use of postpartum family planning (PPFP) services is insufficient (42%) (NSO, 2011; Newmann, et al, 2005; Engin-Ustun, et al. 2007; Ijadunola, Orji & Ajibade, 2005;

Kumar, Priyadarshni, Kant, Anand & Yadav, 2006). Reports indicate unmet need of 70% for postpartum family planning services among postpartum mothers during the first year after a woman has given birth (Borda & Futures Group International, 2009).

Studies done in other countries have shown that women are aware of the PPFP services yet only few of them utilize the services (Newmann, et al. 2005; Engin-Ustun, et al. 2007; Ijadunola, Orji & Ajibade, 2005; Kumar, priyadarshni, Kant, anand & Yadav, 2006). In Malawi, few studies have been conducted focusing the on use of the PPFP services. Hence, this study aims at examining the factors that are associated with the utilization of the PPFP services by postpartum women within 6 months to one year of delivery at Ntchisi District Hospital.

Significance of the Study

The results from this study will assist in developing effective and efficient strategies to improve the PPFP services in the District and Malawi as a whole. The family planning providers, family planning programme managers at Ntchisi District Hospital including Reproductive Health Unit (RHU) under the Ministry of Health (MOH) and other stakeholders will be assisted by the results in this endeavour.

Though the results from this study cannot be generalized since it was limited to the district hospital's catchment area, the subsequent strategies that will be developed may be extended to all health facilities not only in the district but also in other districts of the country. This will benefit clients as there will be improved maternal and neonatal health as a result of improved and good quality PPFP services.

Finally, the study will also act as a baseline data for further research in other districts of the country so that the magnitude of the problem can be measured on a larger scale. Furthermore, it is important to point out that this study was guided by the Theory of Reasoned Action (TRA).

Research Questions

The main question answered by this study was “what factors are associated with the utilization of postpartum family planning services by postpartum mothers between 6 months and one year of delivery at Ntchisi District Hospital?” Other questions include:

- How is the postpartum women’s knowledge of the family planning services associated with their utilization?
- How are beliefs of women in relation to family planning services associated with the utilization of postpartum family planning services?
- What is the influence upon the postpartum women of the subjective norms that are associated with their utilization of the postpartum family planning services
- What are the mothers’ experiences within the past five (5) years that are associated with the utilization of the family planning services?

Introduction to the Theory of Reasoned Action (TRA)

A theory is a systematic abstract that explains some aspects of a reality (Polit & Beck, 2010). The Theory of Reasoned Action perceives that behavioural intention is the best predictor for health behavior to be performed or not (Montano & Kasprzyk, 2008).

It is considered that human beings synthesize the information that they are provided and rationally make decisions about behaviour (Rehman, et al. 2003).

This theory has been chosen because the study seeks to examine factors that are associated with health behaviour. In this study, the behaviour is the utilization of the postpartum family planning services by the postpartum women between six and twelve months after delivery. For the postpartum mothers to start and continue using the postpartum family planning services there are behaviour, intentions, knowledge and attitudes involved. Moreover influence from others in the community and culture (both traditional and religious) has a major bearing on their use of the services.

Theory Overview and how it is used in the Study

The Theory of Reasoned Action was developed in 1975 by Fishbein and Ijzek. Later, Ajzen and Fishbein (1970s and 1980s) expanded the theory to incorporate behavioural intentions as major predictors of behaviour. Other theorists that worked on the theory include Strobe, 2000; Polit & Beck, 2006.

This theory finds its origin in the field of social psychology. It is a model that deals with the determinants of consciously intended behaviour (Shumaila, Yousafzai, Foxall, & Pallister, 2010). The theory suggests that there are other factors that influence the stability of intention and that behavioural intention is a function of two determinants. These are personal attribute (attitude toward behaviour) and a person's perception of social pressures named subjective norm (Shumaila, et al. 2010).

This theory therefore is prudent and intuitive in explaining the course of behaviour of individuals (Smith, et al. 2009). The framework is used to explain why

people behave the way they behave since the stronger the intention, the more likely the behaviour is performed and the opposite is true.

Concepts in the TRA and how they were used in the Study

The Theory of Reasoned Action has many concepts. Major concepts of the theory are behavioural intention, behaviour, past behaviour and habit, attitude, knowledge, subjective norms and normative beliefs (See Figure 1). For the purpose of this study, few concepts have been selected to act as a guide. These include are knowledge, normative beliefs, subjective norms, past behaviour and habit and behaviour as well as towards the PFPF services as the outcome (Refer to Figure 2). A concept refers to a thought resulting or contingent from specific instances or occurrences (Online dictionary).

Knowledge.

Knowledge refers to awareness of a situation (Fishbein & Ajzen, 1980). The theory found a significant relationship between the level of knowledge and the intention to engage in behaviour. In this study knowledge refers to the mother's awareness about postpartum family planning services, availability of the services at the hospital and the relevant information on the topic. The utilization of the PFPF services can be affected by the knowledge which the mothers have about the services. The knowledge was assessed because mothers are supposed to have clear information about the services for them to utilize the same.

To assess the knowledge, respondents were asked to mention the FP methods they know, if they were already using the methods or not and the ages of their children when they started using the services. Moreover, the respondents were asked about the places

and moments when they received the information about the services during and after pregnancy. These are: during antenatal care visits, postpartum care, postnatal care, wellbeing clinics; family planning clinics, emergency care; HIV & AIDS service provision and community health outreach (MOH & IntraHealth, 2010).

The respondents were also asked about the clarity of the information which they received as this could as well affect the utilization of the services. Lastly, they were asked on the topics that were covered during the postpartum counseling. These included the return to fertility, fertility intentions, healthy timing and spacing of pregnancies (HTSP), exclusive breastfeeding (EBF), lactational amenorrhoea method (LAM), transition from LAM to other modern family planning methods and all FP methods appropriate to fertility regulation. It is important if mothers are effectively counseled on these topics since their having knowledge of the same could motivate them to utilize the services.

Normative beliefs.

Belief is the ‘confidence in the truth or the existence of something not immediately susceptible to rigorous proof’ (Fishbein & Ajzen, 1980). “Changing minds” defines belief as ‘an assumed truth. Normative beliefs are our beliefs about how people who are important to us expect us to behave. In other words, these are persons’ perceptions regarding what social referents or the people that are important to us would think about performing the behaviour (Yousafzai, Foxall & Pallister, 2010). In this study, normative beliefs are the individual’s perceptions about what is culturally (both traditional and religious) acceptable or unacceptable behavior. They influence one’s

decisions towards using postpartum family planning services. Normative beliefs have impact on the mothers since for the mothers to have positive intentions to utilize the PPFP services, they will first evaluate if the significant others approve of the behaviour. So, they will first evaluate if their culture (both traditional and religious) accepts the use of the services.

To investigate on this, the mothers were asked if they belonged to any religious faith or if they were pagans. Furthermore, they were asked if the various religious faiths accept or did not accept them to use the PPFP services. The mothers were also asked if their tradition permits them to use the contraceptive methods and if there were other women from their villages that were already using the services. The respondents were further asked about the prescription of culture regarding the time when they are supposed to resume sexual activity after they have given birth. Responses on these questions determined whether their traditional and/or religious culture authorize the use of the services or not and when do mothers are expected to start using the services at the hospital.

Subjective norms.

Subjective norms refer to the person's judgment concerning the significant of other's preferences and support to performing or not performing the specific behavior (Fishbein & Ajzen, 1980). It is also assumed to be a function of beliefs that specific individuals/people that are important in one's life (significant others) approve or disapprove of performing the behaviour (Levine, et al, 1998). In this study, the significant others can be friends, husband, parents, uncle, relatives and the entire

community. It is customally assumed that in Malawi, husbands and parents including uncles are the ones that have control over the decision making in relation to the reproductive capabilities of young families. If these do not support the use of the FP services, the families cannot utilize the PPFP services since they could be considered rebellious if they do against the relation's prescriptions.

On the other hand, if the husband (who is traditionally a family decision maker) does not allow his wife to go for the service, this can hinder the utilization of the same in the first year of delivery. To investigate on this, mothers were asked about the people that influence their decisions concerning their family planning services utilization such as the husband, parents, uncles, friends and in-laws.

Additionally, the respondents were asked if their husbands consent the use of the modern family planning methods. Those that answered "yes" to this question were asked about the type of assistance they receive from their husbands as a sign of approval that the wives can use the services. The responses of interest included support through the provision of transport, reminding their wives on the dates of appointments, the provision of items or finances (as pocket money), and the use of condoms or vasectomy. In addition, other responses indicated or if the husband provided no help to the wife.

In short, the influence and opinions which mothers obtain from influential people including their husbands and parents regarding the utilization of the PPFP services affect their behaviour regarding the use of these services. The approval or disapproval of the services by these referents has a greater impact on the PPFP service utilization by the mothers in the first year of delivery.

Past behaviour and habit.

The theory assumes that repetitive performance of behaviour may affect subsequent behaviour as a consequence of habitual processes (Fishbein & Ajzen, 1980). The TRA also suggests that the past behaviour impacts directly on the present behavior (Fishbein & Ajzen, 1980). In this study, the past behaviour and habit is the evaluation of whether the mothers used the methods in the past five (5) years and the experiences they had with the methods as these could impact on the current use of the services.

In order to investigate the past behavior and habits of the respondents with respect to the family planning methods, the mothers were asked to recall their experiences with the methods in the past five years. They were asked if they used the methods during the period or not and the methods they used. Reasons for the non-use of the methods were also explored. Furthermore, they were asked about the problems faced related to the method use and to state the nature of the problems. Additionally, the mothers that used the methods before were asked if they were currently using them while the reasons for not using the methods this time were also investigated. Finally, the mothers were also asked about their experiences concerning the duration of the lactation amenorrhoea and the time when they started using the contraceptives.

Behaviour.

This refers to the individual's observable response in a given situation with respect to a given target (Fishbein & Ijzen, 1980). Fishbein and Ijzen argued that behaviour is a combination of two functions, which are, intentions and perceptions. The theory suggests that the stronger the intention to perform behaviour, the more likely the

behaviour is performed and vice-versa. In this study, behaviour is the utilization of postpartum family planning services (PPFP) by postpartum mothers within the first year of delivery. The use of PPFP services by the mothers was evaluated in relation to whether the services were being used or not and the time when the mothers started using the services. This was done by asking the mothers if they were currently using the services or not.

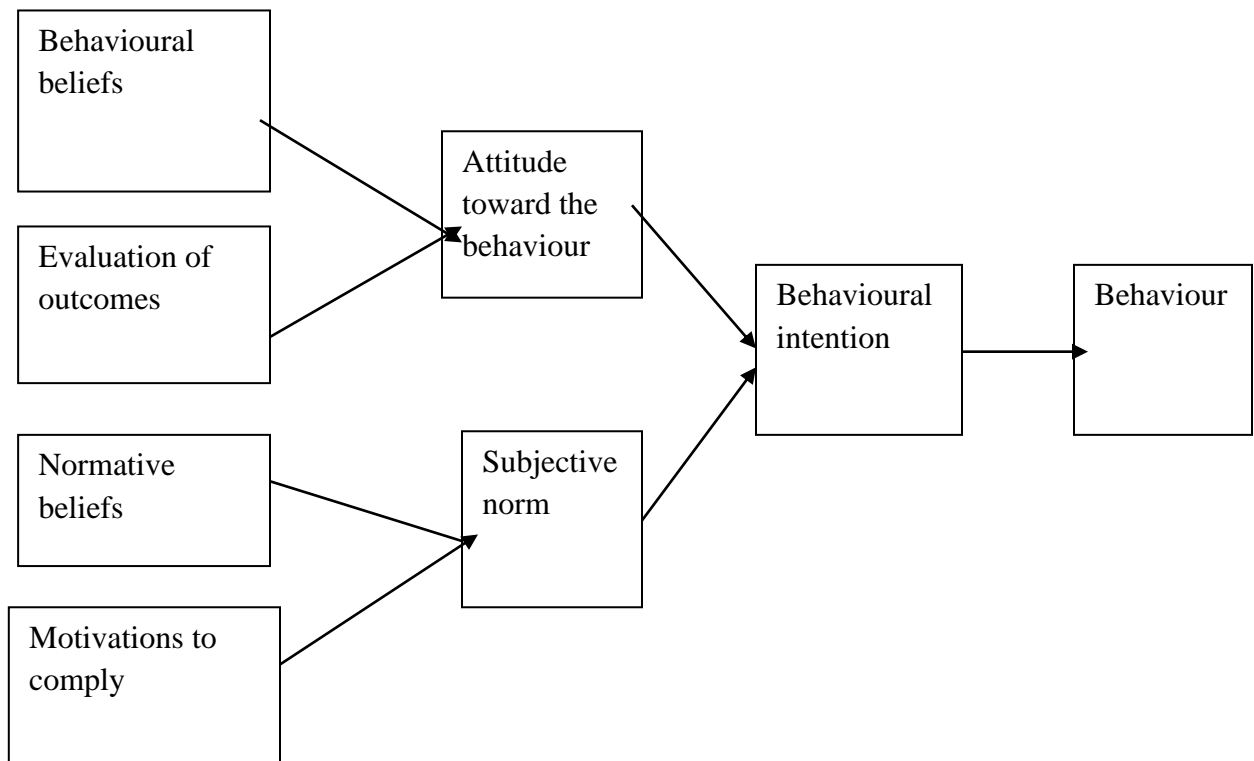


Figure 1: Summary of the Theory of Reasoned Action as **adopted from Ajzen & Fishbein, 1980.**

The modified TRA by the author from Ajzen and Fishbein, 1980

Figure 2, below shows the selected concepts from the Theory of Reasoned Action. The concepts have been selected because of their application in relation to the way people

choose to behave in a society. The concepts are knowledge, normative beliefs, subjective norms, past behaviour and habits and behaviour.

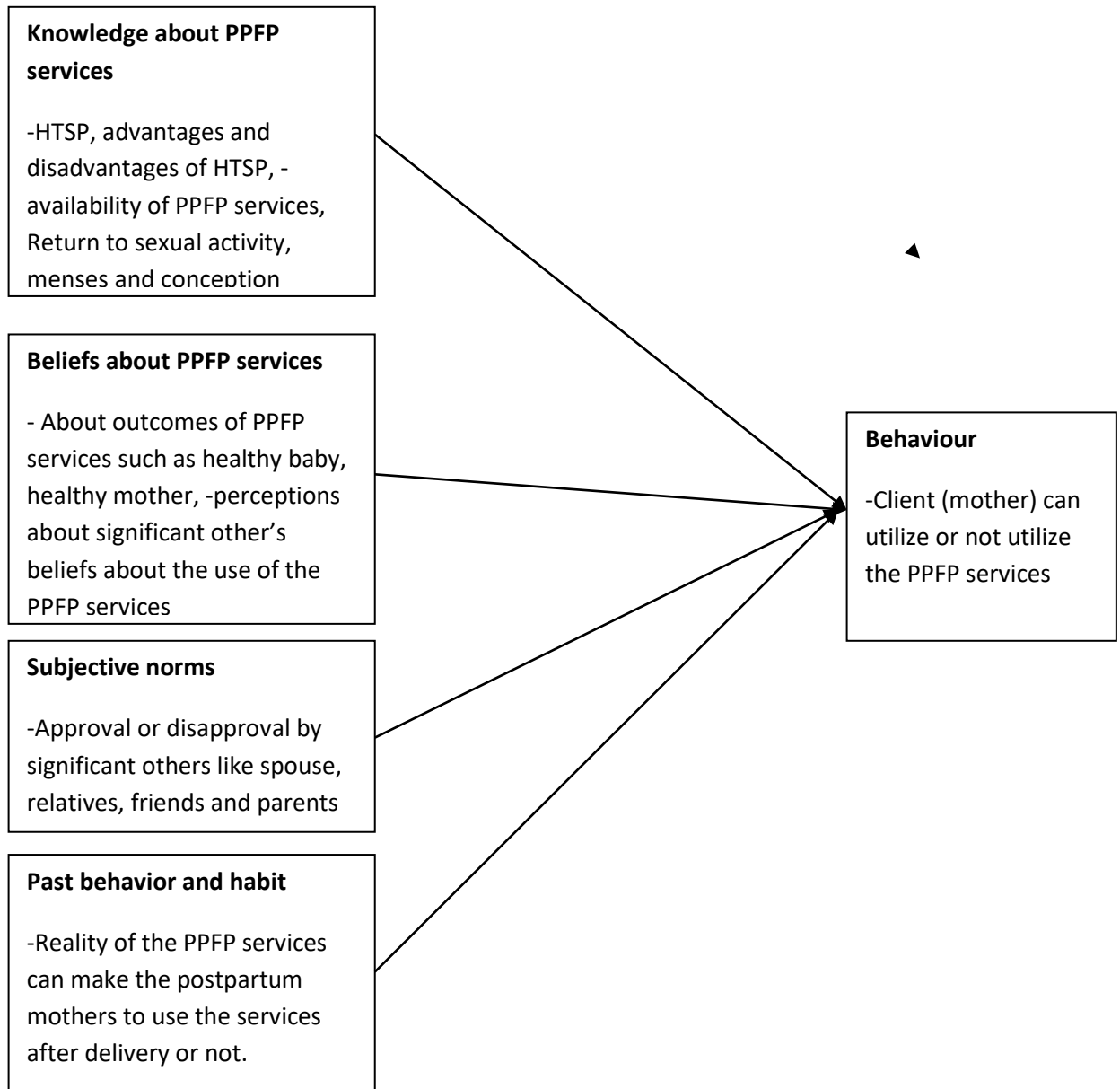


Figure 2: A modified model of the Theory of Reasoned Action (TRA)

Aim of the Study

The aim of this study was to investigate the factors that are associated with the utilization of postpartum family planning services among postpartum mothers between 6 months and one year of delivery at Ntchisi district hospital.

Specific objectives

The specific objectives of this study were to:

- Assess the mothers' knowledge about postpartum family planning services and its association with the utilization of postpartum family planning services.
- Determine the beliefs of the mothers in relation to the utilization of the postpartum family planning services at the district.
- Identify the influence of subjective norms related to the utilization of the postpartum family planning services.
- To identify the mothers' previous experiences with the methods in the past five (5) years that are associated with the utilization of the services.
- To determine the associations between the utilization of the family planning methods with the other variables like knowledge of the services, beliefs, subjective norms, past behaviour as well as habits and demographic characteristics.

CHAPTER 2

Literature review

Introduction

This section presents most recent literature that has been reviewed regarding family planning services with more emphasis on postpartum family planning (PPFP) services. The reviewed literature was mostly on factors that influence positively or negatively the use of postpartum family planning services during pre-conception and after delivery. The study followed an integrative method of literature review. According to Whitemore and Knafl (2005), Integrative literature review is a traditional method of reviewing literature that provides summary of past study results on a specified topic. This type of review critiques and synthesizes research findings to determine study strengths and weaknesses, guides current knowledge and finally identifies areas for further study (Russel, 2011; Torraco, 2005; Whitemore and Knafl, 2005; Souza, Silva & Carvalho, 2010).

First part of the literature review presents a general overview of FP services utilization in and outside Malawi. This section is followed by review of literature that is specific to the topics of study which was guided by the components of the questionnaire. Thus, after the general review, studies that were specific to the study topic were reviewed to ensure validity and reliability (Cochrane Collaboration, 1993, (Whitemore and Knafl, 2005; Souza, et al. 2010).

Specific databases were consulted during the literature review. These databases were Hinari, Pubmed, Medcol, Biomed, Knowledge for Health (k4health), and Ijbsnet.

Google advanced search engine was also used. Relevant published online articles and journals were accessed through these databases. In addition, hard copies of published research articles were also accessed through the College library on the Malawiana collection. Malawiana collection refers to publications by Malawians and about Malawi. Other information was obtained from the Malawi Demographic Health Surveys, Multiple Indicator Cluster Surveys, and write-ups and publications by WHO and National Statistical Office on sexual and reproductive health issues. The search terms for this study were family planning, postpartum family planning, contraception, normative beliefs, subjective norms, past experience, and knowledge.

Organization of the literature review

The general literature on family planning and PPFP services worldwide centered around contraceptive prevalence rates, unmet need for PPFP services and the possibility of women becoming pregnant while on exclusive breastfeeding and before resumption of menses. After the general overview, the systematic review was guided by components of the questionnaire. As a result, the literature was searched in relation to demographic characteristics of the study respondents and the selected concepts of Theory of Reasoned Action (TRA). The concepts of TRA were knowledge of family planning services, effects of normative beliefs, influence of subjective norms and past behaviour and habits related to FP services utilization.

General overview of PPF and pregnancy risk during the first year after delivery

Introduction

This section presents the general overview of studies on family planning that give an insight of PPF services. The section reports on contraceptive prevalence rate (CPR), unmet need for family planning, incidents of pregnancies during breastfeeding period and effects of infrastructure for FP programme on PPF services.

Contraceptive prevalence rate for family planning among postpartum mothers

The review of literature shows that worldwide, there is low prevalence for contraceptive methods across nations. Agampodi, Angampodi and Chadrasekara (2009), conducted a cross-sectional, descriptive study in Beruwala, Sri Lanka whose aim was to determine the prevalence rate for FP among postpartum women. The study revealed that the CPR for Sri Lanka was 41.1%. Among the women, 28% had decided on a method of contraception, while 41.9% had not yet decided and had not tried to use any FP method before (Angampodi, et al. 2009). Another study by USAID/ACCESS-FP, (2008) indicated CPR of 46% for Bangladesh. The study results show that utilization of contraceptives in many countries is still low. These findings are important because they inform family planning programme managers about the uptake of the methods so that strategies can be formulated to increase the utilization of family planning services worldwide. The review of literature however revealed some information gaps. For example, the above studies did not include other search parameters like age and parity of the respondents which can also have an impact on the utilization of the services. Consequently, the reported low CPR has been generalized to all women regardless of age and parity. In addition, reviewed studies did not mention whether the CPR was for all

family planning methods or just for modern or natural methods or combination of both. The results therefore may not truly represent the utilization of the services for the country under study.

According to NSO (2011), Malawi's CPR is at 46% (42 for modern and 4 for natural methods). Specifically for Ntchisi district hospital, the contraceptive prevalence rate for modern methods of contraception was at 31% (HIMS, 2010). To fill the knowledge gap, the current study also focused on the contraceptive use in relation to age and parity. In addition, the study investigated the knowledge and use for both modern and natural family planning methods.

Unmet need for the PPFP services

Studies that were conducted to investigate the use of family planning methods showed high unmet need for general and postpartum family planning. A prospective study conducted in Ile-Ife, Nigeria by Adeyemi, et al. (2005) showed unmet need of 59.4% for PPFP despite the fact that the women had a high level of information and awareness related to PPFP services. Other studies that showed the high unmet need for family planning were done by Borda, Winfrey and Futures (2007), who did an analysis of PPFP services in Bangladesh on postpartum women in the first year post delivery. The study recorded the unmet need of 59% for FP among the others within one year after delivery. Results also indicated that 17% of all births in Bangladesh occur within a period of 23 months after a woman had given the last birth while 26% of the births occurred between 24 and 35 months after the delivery. In Malawi, USAID/ACCESS-FP (2008) found the unmet need of 70% for contraception among postpartum women within

the first year of delivery. These results show that generally there is high unmet need for family planning during the postpartum period not only in Malawi but also in other parts of the world.

The findings are important as they bring awareness and a basis for improvement by family planning managers worldwide. The results further indicate that many women in and outside Africa would want to space or limit births by using contraceptive methods but they do not usually access the family planning services (USAID/ACCESS-FP, 2008). However, these studies show some gaps in knowledge. The results of these studies could have been more specific if it was possible to segregate age and parity of the participants.(MOH & IntraHealth, 2011; MOH, 2009). Age and parity are some of the inevitable parameters that can impact utilization of the services. In addition, these studies did not include issues of accessibility, availability and affordability of the services which were also important parameters for such studies (MOH & IntraHealth, 2011; MOH, 2009). The current study therefore focused on the utilization of the PPFP services in relation to age, and parity, and, accessibility, availability and affordability of the services.

Further, the studies above showed high prevalence of closely spaced pregnancies and birth for the countries that were studied (USAID/ACCESS-FP, 2008). Closely spaced pregnancies put women and infant's health at risk which also accounts for high maternal and neonatal/infant mortality rates (MOH & IntraHealth, 2011; IMNH, 2009). However, the causes of the closely spaced births were not explored in these studies. In addition, the issues of number of live children, gender and traditional culture were also not explored but these factors have an influence on the women's and couple's decision

towards contraception use. This study therefore, investigated the effect of the number of live children, sex and traditional culture on closely spaced births.

Prevalence of pregnancies during breastfeeding period

Results of various studies that were reviewed show that women still get pregnant during breastfeeding period. Further, the studies have shown that pregnancies occur before return of menses and even when women are exclusively or nearly exclusively breastfeeding their babies. These pregnancies are usually unwanted.

A descriptive study was done by Shaaban and Glasier (2008), among 2617 parous women in Egypt with an aim of determining the prevalence of pregnancy during breastfeeding period, contraceptive practice and incidents of unintended pregnancies. The study indicated that 25.3% of the women got pregnant while breastfeeding. Out of these, 4.4% of the pregnancies occurred within the first 6 months after delivery. About 15% of the mothers conceived before return of menses whereas 28.1% conceived while exclusively or nearly exclusively breastfeeding their babies. Shaaban and Glasier also stated that 29% of the pregnancies were unintended and 10% of the women had wanted to abort. Similarly, about 7% of women at Ntchisi district hospital conceived within the first year of delivery (HIMS, 2010). The above literature show that women's fertility can return even when they are exclusively or nearly exclusively breastfeeding and these pregnancies are usually unintended. Such pregnancies contribute to high rates of abortion which constitutes 13% of all annual maternal deaths globally (W H O & USAID, 2008). Exclusive breast feeding is one of natural family planning methods that is difficult to monitor at home. There is, therefore, need for women to start reliable family planning

methods as soon as 6 weeks after delivery (MOH & IntraHealth, 2010). The current study therefore investigated the time when the women started using the PFP services.

In addition, the literature reviewed showed that other women wait for the return of menses before they start using the PFP methods. Waiting for return of menses exposes the women to closely spaced and unwanted pregnancies. There was therefore need to investigate the reasons why women wait for return of menses before they started family planning methods. The current study therefore investigated if the participants also waited for the return of menses before they started using contraceptives.

Influence of infrastructure on the PFP

Infrastructure for family planning services barred men's involvement in PFP. According to a study conducted by Ziyade & Ehlers, (2007), the results demonstrated that health care system impacted negatively regarding the participation of men in family planning services. Men expressed concern that family planning services were attached to maternal and child health services department which made it difficult for men to access the services (Ziyade & Ehlers, 2007). This was a crucial finding as it showed that structures for maternal and child health services across the nations do not favour male attendance, which in turn retards uptake of family planning services. However, the effects of infrastructure on male involvement could give a true representation if an experimental study design was done to compare the two scenarios (Polit & Beck, 2010). FP programme managers need to strategize in order to accommodate men with an aim of improving male involvement in the SRH services including FP. There is also a need for

further studies to investigate other factors hindering male participation in FP in addition to the infrastructure.

Effects of socio-demography on the PPFP services

Age and PPFP services.

Investigations have shown that age has either negative or positive impact on the PPFP services. Studies show that the PPFP services utilization decreases when women are advancing in age and parity. A study done by Tehrani, et al. (2001) on factors that influence contraceptive use found that age was one of the major predictors for the use of the PPFP services. Similar results were reported by studies conducted by Okech, et al (2011); Makanani, et al (2010) and Newmann, et al. (2005). The literature showed that use of the PPFP contraception methods decreased as women advanced in their ages. The results were important as they inform the family programme that older women are at risk for pregnancy related complications since their reproductive system is already weakened with age (MOH & USAID, 2008; MOH, 2009; WHO, 2006). There is a need to conduct a study in Malawi to investigate the factors hindering the use the PPFP services by such women to ensure that the services are fully utilized by such women. The current study investigated the relationship that existed between the utilization of the PPFP services on one hand and age and parity of the study participants on the other hand.

Education and the PPFP services.

Studies have shown that the level of education has a positive impact on the PPFP services utilization. Newmann, et al. (2005) conducted a study on the effects of education, contraceptive knowledge and the type of relationship regarding contraceptive

use among postpartum mothers in El Salvador. The mothers that had higher level of education had a high probability of using the services than those that did not attain any form of education and those who had lower level of education. The results showed that education and literacy played a positive impact towards the utilization of the PPFP services (Newmann, et al. 2005). Similar results were reported by studies conducted by Okech, et al (2011); Tehrani, et al. (2001) and MDHS (2010); NSO (2011).

The literature above may reflect the fact that the family planning service providers may only make awareness about the services but not concentrate on information giving. According to MOH & IntraHealth (2010); NSO (2011), many women and men are aware of the methods but do not have in-depth information about the contraceptive methods which contribute to the low utilization of the services. Nevertheless, the studies did not focus on other variables like age, culture, religion, and type of postpartum education received. The current study investigated the effect of age, religion and type of postpartum counseling on the utilization of the services at a health facility. The relationship between the level of education and PPFP services utilization was also investigated.

Effects of marital status on PPFP services.

Marital status has been found to have a bearing on the PPFP services. Women that are married tend to use the PPFP services compared to their counterparts. Below are some of the studies that investigated on marital status and the PPFP:

According to a study by Newmann, et al. (2005) in El Salvador, married women were using postpartum contraception while those that were single were not utilizing the services. The findings concurred with the results of a study conducted in Ukraine which

found that postpartum family planning services were significantly associated with the marital status of the study participants (Saxton, et al. 2010). About 77% of the married women were using contraception as these were sexually active compared to their counterparts (Saxton, et al. 2010). The result that the married women had high probability of contraceptive is not strange as other studies reported similar results. Other studies that reported similar results were done by Okech, et al. 2011; Romo, et al. 2004).

The above literature may indirectly indicate bias in the way the FP information is provided to communities. FP information may be targeting married women which give the latter the impression that family planning is more appropriate for married women because they may not engage in regular sexual intercourse (Saxton, et al. 2010). On the other hand, the literature may also reflect a misinterpretation of the concept “family planning” by the community or cultural values of the society. A study needs to be conducted to focus on the reasons why unmarried women do not usually patronize the FP services. The current study investigated the use of Emergency contraceptive pills (ECPs) at the hospital which can be helpful to the unmarried women if they wanted to use a contraceptive method in times of emergency.

Knowledge about PPFP services

Awareness and use of PPFP services.

Investigations have shown that the awareness of the family planning services among men and women is high but utilization of the services is low. A survey that was conducted in the Democratic Republic of Congo (DRC) revealed that women and men in the country had a high level of awareness about contraceptives which was at 96% since they were able to mention at least one contraceptive method (Mathe, Kasonia, & Maliro,

2011). Despite the high level of awareness, the typical use of the services was at 44% (Mathe, et al. 2011). Other studies that focused on the knowledge and contraceptive use were conducted by Newmann, et al (2005), Engin-Ustun, et al. (2007), Ijadunola, et al. (2005), Kumar, et al. (2006) and Okech, et al. (2011). According to NSO (2011), the awareness for family planning methods for Malawi is at 98.5% with a contraceptive use of 42%.

The literature above demonstrated that the knowledge and information are not the same. The literature further showed that the FP services providers do not spend more time on information giving. The women need information on top of having the knowledge about the contraceptives for them to comfortably use the contraceptive methods (WHO, 2007). However, the studies above did not indicate the topics that were discussed during the education sessions. The current study, therefore, investigated the type of the PPFP counselling mothers got in order to measure the quality of information received regarding the services. In addition, the relationship between the level of knowledge the women had about contraceptives and utilization of the PPFP services was investigated.

Fears and misconceptions about contraception among women.

Literature has shown that other women and men do not use contraceptive methods because of fear of health related side effects and misconceptions about the methods. Some of the studies that investigated on the fears and misconceptions about contraception have been highlighted in the subsequent paragraph.

A survey done in the Democratic Republic of Congo established that fear of side effects was one of the major barriers against the use of modern contraceptives among

postpartum women (Mathe, et al. 2011). Similar results were found by Wambuli and Alehagen (2009) who also found that misconceptions by men related to contraception was a hindrance to the use of contraceptives by women. Other studies that had similar findings were reported in North Wales, U.K, by Roberts and Noyes, 2009 and Ziyade & Ehlers (2007) in Swaziland. Swazi men believed that they could die early if their wives used the modern methods of contraceptives. In Iran, postpartum women believed that contraceptives were hazardous to the body as such they preferred to use the withdraw method of family planning as they felt it was natural (Rahnama, Hidarnia, Shokravi, Kazemnejad, Oakley, & Montazeri, 2010; Rahnama, et al. 2010; Saxton et al. 2010).

The above literature showed that many women are exposed to pregnancy related complications because they are afraid of the side effects from the use of contraceptives. Furthermore, the literature seems to indicate that the FP services providers do not spend time to dispel the rumours, fears and misconceptions related to contraception (MOH & IntraHealth, 2011; WHO, 2006). FP programme managers need to intensify the FP counseling that should deal with the myths, fears and misconceptions in order to increase the use of family planning services. However, these studies did not investigate the details that were covered during the FP counseling sessions. The current study investigated the myths, fears and misconceptions which the women at the hospital may have had about the contraceptive methods that may have had an effect on their current use of the PPFP services.

FP counseling and accuracy of FP messages.

Studies have established that counseling has either positive or negative impact on PPFP services. Accurate and clear information increases acceptance and the use of the

PPFP services. A study carried out by Agampodi, et al. (2009), in Sri Lanka showed that accurate or inaccurate information has an impact on the utilization of the PPFP services. The study indicated that 22.2% of the postpartum women who received inaccurate information failed to decide on a method of contraception as compared to 61.1% of the women who received accurate information about the services and were using or ready to use the services. Weston, et al. (2012) found similar results in the United States of America. Studies by Rahnema, et al. (2010); Wambuli and Alehagens, (2009); Binery, (2011) demonstrated that women were not conversant with the advantages of using the modern methods. Hence they did not use them.

The results from the above studies were important as they inform the programme that other providers are lacking information about the FP methods. Lack of information by providers is a serious finding which needs to be corrected in order to improve the FP services utilization. The FP programme managers need to regularly carry out a need assessment of the FP services providers to keep them fully equipped with necessary information and skills in the provision of the services (MOH, 2009; USAID/ACCESS-FP, 2008). Postpartum counseling should contain information on HTSP. Fertility intentions, return to fertility, transition from LAM to the other modern FP methods and counseling on all FP methods (MOH & IntraHealth, 2011). Effective counseling improves the use of postpartum contraception (Warren, Mwangi, Oweya, Kamunyi & Koskel, 2010). The current study, therefore, investigated the clarity and adequacy of the FP information which the women received at the hospital under the study.

A study conducted in Kenya that focused on the quality of the postpartum family planning counseling established that counseling during the first 48hours and 2 weeks of

child birth produced more positive results (Warren, et al. 2010). Many women started using contraceptives by 6 weeks after delivery. The results inform the FP services providers that women need to be offered detailed information about the PPFP services soon after delivery to increase acceptance and the use of the services.

However, the study did not indicate whether the mothers had live babies or still births in which there is a recommendation that such women should start using contraception as early as at 2 weeks after delivery (WHO, 2006; MOH, 2009; MOH & IntraHealth, 2011). The current study investigated the times for the PPFP counseling as this can impact on the utilization of the services. Furthermore, the current study tried to relate utilization of the PPFP services and time when the PPFP education was offered to mothers.

Locations for conducting PPFP counseling.

In practice, the family planning messages and counseling can be done from several departments/locations. Some of the literature showed that the counseling done at the antenatal and postnatal clinics yields more positive results. Moreover the results showed that counseling should be an ongoing process to ensure continuity in the use of the services.

Yee and Simon (2011) did a qualitative study in the United Kingdom which demonstrated that contraceptive counseling during antenatal period produced more positive results compared to counseling during postpartum. The women reported that the antenatal counseling gave them time to plan ahead, process the information received and use it in decision making towards the services (Yee & Simon, 2011). Moreover the study

established the need for provider-client communication and counseling throughout the antenatal period. Method mix and provider initiated counseling were important to achieve the best contraceptive counseling (Yee & Simon, 2011).

The above literature showed that counseling is not a one day activity to ensure that clients understand every detail about the contraceptive methods (MOH & IntraHealth, 2011). The FP counseling should not be an emergency. As such the counseling sessions need to be deliberately targeted to increase acceptance and use. In addition, the literature informs the FP services providers the need to strengthen the PPFP counseling during the ante and postnatal periods. At Ntchisi hospital, the family planning counseling is done from several departments like under five, antenatal, family planning clinics, postnatal, labour and female medical/gynaecological wards. The current study investigated locations where most of the women got education about the PPFP services. Further, the study examined the relationship that existed between current utilization and locations where counseling was done.

Normative beliefs (both traditional and religious beliefs)

Normative beliefs have shown to have an impact on the PPFP services utilization. This was found by studies which focused on influence of religious and traditional culture on the FP methods utilization. Furthermore, the studies showed that other religions and traditions have restrictions regarding contraception use.

Influence of religion on PPFP services.

A study conducted on religious teachings in relation to family, sexual relations and family planning by Srikanthan & Reid (2008) in Canada found that religious

teachings had a major bearing on the utilization of family planning services by women and their couples. Most religious faiths believe that sexual intercourse should result in procreation; contraception use is an act against God's marriage fundamentals. Therefore, the use of any form of modern contraception is unacceptable. The religious faiths that were studied were Catholicism, Islam, Buddaism, Hinduism, Christianity and Protestantism (Srikanthan & Reid, 2008).

Other studies on religious teachings were conducted in Somalia and Islamic Republic of Iran by Comerasary, Reads, Francis, Cullings & Gordon, 2003 and Ranhshan, Niknami & Moghaddam, 2005 respectively, Navarro Nunez (2002) and Walsh, n.d. In the Democratic Republic of Congo, a survey done on postpartum women showed that many of these did not use the contraceptive methods because they were abiding in their religious norms (Mathe, et al. 2011). The results are crucial as there are numerous denominations in the world where men and women are affiliated to. Some of these denominations are available in Malawi. So if many denominations restrict the use of contraceptives then many women cannot use the services.

The FP programme managers need to deliberately target church leaders with the FP information with an aim of motivating these so that they can also allow their members to use the services. However, the studies did not indicate whether the churches have forums where issues of FP were discussed. The current study, therefore, investigated whether religious culture was a barrier to the use of the contraceptives. The women were asked if their respective denominations permitted or barred the use of contraception.

Influence of traditional culture on PPFP services.

A study conducted in five (5) Asian countries (India, Thailand, Pakistan, Malaysia and Philippines) by Manson & Smith (2000) established that the fertility goals of husbands and wives affected the use of the contraceptives. In Swaziland, adult men were believed to be responsible for controlling the fertility of their wives since they were considered to be the family heads (Ziyade & Ehlers, 2007). No woman was allowed to decide about her own reproduction. However, Ziyade & Ehlers (2007) also found that adolescent men had opinion that women should be able to make decisions about their own reproduction.

The results are crucial as they give an alert that women are not empowered to make decisions related to their reproduction (Mbweza, et al. 2008). Hence there is a need for the FP service providers to target men with information about sexual and reproductive health including the FP to improve the utilization of the services. Women empowerment could also be crucial to solve the problem. The current study investigated about the decision maker in relation to the PPFP contraception.

Another study conducted in the United States of America, results show that acculturation played an important role in shaping couple's/individual's decision towards contraception use (Romo, Berenson & Segars, 2004). This was evident in that those couples and/or individuals that dwelt long in America were more likely to use contraceptive methods compared to those that stayed briefly in the States (Romo, et al. 2004). Similarly, David (2008) found that the influence of the household and the community was important and affected the line between the individual's desires and the community norms. For instance, in other cultures, raising more children was found to

be a sign of respect and dignity in the communities. As such, individuals and families rejected the use of the contraceptive methods (David, 2008).

Another study conducted by Rubardit and Echevarria (2010) in Ethiopia found that most households in the country had an intention giving birth to more than seven (7) children because they believed that larger families were desirable in their country for social and historical purposes. In Swaziland, many children meant strong social security for parents. Thus using contraception was weakening love, security and reducing wealth (Ziyade & Ehlers, 2007). A qualitative study focusing on men's perceptions about contraception in Kenya found that children were regarded as a source of wealth (Wambuli & Alehagens, 2009). The results further demonstrated that people in Libya and believed that more daughters meant parents will have a lot of wealth from dowry (Wambuli & Alehagens, 2009).

The above literatures demonstrate that by choice, both men and women intend to have more children since they abide by the prescription of their various traditional cultures. The FP programme managers need to take advantage of the fact that if males are the ones that determine the fertility of their wives, then husbands should be fully involved in the issues of sexual and reproductive health including family planning. However, the studies did not record the proportion of households where women participated in making decisions about reproduction. Therefore, the current study investigated the role of traditional culture on the utilization of the services at the hospital. Autonomy of the women was investigated by asking them how many children they planned to have in their lives and this was rated against the total number of children

desired after discussion with their husbands. Furthermore, information was obtained of male partner involvement in family planning.

Influence of subjective norms

Husband and PFP services.

Several studies have established that husbands are the main decision makers on issues regarding SRHR and family planning. A husband's approval or disapproval of the services determines whether a woman should use the methods or not. Some of the studies that investigated the influence of husbands on the use of the PFP methods by their wives have been highlighted in the next paragraph.

A study done by Manson and Smith (2000) revealed that husbands' disapproval of FP services led to their wives non use of the methods. Similar results were reported in a study by Okech, et al. (2011) which investigated the use of contraceptives among women of reproductive age in Kenya's City Slums. Similarly, Mathe, et al. (2011); Roberts & Noyes (2009) and Rubardit & Echevarria (2010) found out that husbands' opposition of the contraceptive methods was the biggest barrier to the use of the FP service in the Democratic Republic of Congo. In Ethiopia, Rwanda and Kenya many women do not use the contraceptives for fear of being divorced (Rubardit & Echevarria, 2010).

The above literature informs the FP programme manager that men are the decision makers across the cultures in households and that a woman's decisions are not respected (mbweza, et al. (2008). If the men are reached with adequate information about sexual and reproductive health including family planning, they could use their autonomy to increase the utilization of the services.

The current study, therefore, investigated if the woman had a chance to discuss with their husbands on the number of children to be born in their families and the intervals between births. Further, the study investigated if the husbands allow them to use contraception or not. This was done to find out if the husbands were in support of the FP services.

Studies have indicated that men do not have in-depth and accurate information about contraceptive methods (both modern and traditional). In Western Kenya, a qualitative study that focused on men's knowledge related to contraception found that men had inadequate information about both modern and traditional methods of family planning (Wambuli & Alehagens, 2009). Inadequacy of information led to the disapproval of the services resulting in low utilization of the same by the women (Wambuli & Alehagens, 2009).

The results further illustrated that other men thought they had information about the services yet they had false messages. The majority of them thought they would develop a serious illness/disease of unknown origin if their wives used the contraceptives (Wambuli & Alehagens 2009). Other studies with similar results were done by Ziyade and Ehlers (2007).

The results are important for the FP programmes managers to work on how to involve males in the FP to contraception to improve the male participation and use. The current study therefore, investigate the involvement of males in family planning either directly (if they used condoms or vasectomy) or indirectly (if they offered support to their wives) which could also encourage the women to adequately use the PPF services. Furthermore, the study examined the existing relationship between a husband's opinions

and the current contraceptive usage. Involvement of men in the issues of family planning impacted positively regarding the use of the services by women in Ethiopia (Haile and Enqueselassie, 2006), USA (Weston, et al, 2012) and North Wales (Roberts & Noyes, 2009).

Influence of couple counseling on PPFP services.

Kukzycki (2008) conducted a study in Turkey which focused on the influence of couple communication, decision making and power differentials on the use of contraceptive methods. The findings demonstrated that there was increased utilization of the PPFP services when both partners supported their usage than where there was approval of the services by one partner (Kukzycki, 2008). The study further disclosed that no partner could fully represent views of the other in issues related to contraception (Kukzycki, 2008).

The results of the study were important as they showed the importance of counseling the wife and her husband together to ensure that they both have the first hand information from the service provider. Once a husband and a wife understand the information about contraception together, they can easily accept and use the services since they all work towards their decision (Kukzycki, 2008). The current study therefore, investigated if husbands escort their wives to the FP clinic and if the husbands attend the counseling sessions.

Influence of social networks on PPFP services.

Family members and friends have been found to have an influence on the PPFP services. Several studies show that family members and friends can either encourage or discourage women concerning the use of contraception. For example, the USAID (2005)

conducted a study in developing countries which found that mothers-in-law and other family members were involved in a couple's decision towards the use of contraceptive methods. Rakhshan, et al. (2005) found similar results among the Sunnis in the Islamic Republic of Iran. This concurred with the findings of the study by Rubardit & Echevarria (2010) and Roberts & Noyes, (2009) which revealed a significant relationship between the approval of the family planning services by friends and the use of contraception use.

Other studies that investigated on opinion makers regarding the sexual and reproductive health issues were conducted by Mbweza, et al. (2008) in Malawi and Gutierrez (2001 and 2003) in Spain and Mexico respectively, Comerasamy, et al. (2003), Rakhshani, et al. (2005), Behrman, et al (2012), Duong, et al. (2005), in Rural Vietnam and Rodgers and Kinraid (2004). The findings were also reported by Stash (2000) and Valute, Watkins, Jato, Vanderstrates and Tsitsol (2000). Moreover, Behrman, Kohler and Watkins (2002) did a study on social networks and the use contraception in the Rural Kenya which found similar results.

The above literature showed that there is a significant interaction/connection between women and the social network such that the women's decisions regarding the use of family planning services is influenced by these networks (Behrman, et al. 2002). The same literature further showed that the women that came from the community where other women were using the services were more likely to use the contraceptives as well (Behrman, et al. 2002). The FP service providers need to take comprehensive history from the FP clients to effectively structure their counseling sessions.

The current study investigated if interactions between the women and their social networks influenced their decisions towards contraception at the study site. In order to investigate this, the women were asked if there were other women that were using contraceptive methods from their communities. The type of family planning method used was also probed to determine if the method choice was also affected.

A study conducted in the United States of America found out that family members and friends had great influence regarding the postpartum adolescents' decision making towards contraceptive usage (Weston, Martins, Neustadit & Gilliam, 2012). These discouraged the adolescents from using IUCD for the fear of infection, infertility, hair loss and the actual insertion process (Weston, et al. 2012). The study results are vital as they show the importance of community education on the PPFP issues to ensure a universal sharing of the FP information and the subsequent increase in the acceptance and use of the services.

From the above literature, it can be generalized that social referents have an important bearing on the contraceptive usage across the Sub Sahara African countries. The current study investigated if the women's decisions towards the PPFP contraception were influenced by the social referents (Weston, et al. 2012). The study also investigated if the women were empowered to make independent decisions about their own reproduction.

Past behaviour and habit

According to studies done worldwide, past experience with the methods has an impact on PPFP services. Women that had bad experiences with the methods did not use

them again. Women that had pleasant experiences or were satisfied with the methods used the same methods subsequently.

One study by Gutierrez (2001), focused on the factors which influence contraceptive usage in Spain at a hospital of Obstetrics and Gynaecology in Leon. The study showed that satisfaction from the previous methods was one of the reasons for accepting and utilizing postpartum contraception. The study which was duplicated in Mexico found similar results (Gutierrez, 2003).

Other studies that had similar results on the effects of past behaviour and habit were done by Tehrani, Farahani and Hasheni (2001), Frost, Singh & Finer (2007) in the United States as well as Roberts & Noyes (2209) in the United Kingdom. The women who had method related side effects did not use the contraceptives again compared to their counterparts (Frost, et al, 2007; Saxton, et al. 2010).

In the Greater Accra Region, Ghana, Biney (2011) found that women developed fear in addition to the bad experiences they had with the methods, as such they did not use any contraceptive method. The above results were also found out that women developed fear with the methods; as such, they did not use any contraceptive method. A study from Nang Rong, Thailand, also showed that the past behaviour had a direct effect on the way women make their decisions related to contraception (Edmeades, 2008).

Other studies that focused on past experience and contraceptive usage were conducted by Kumariddin (2009), Navaro-Nunez (2002), Kumar, et al. (2005), David (2008) and Creanga, et al. (2011).

The above literature showed that experience is the best teacher. The results from the above studies were crucial in informing the FP service providers on the need for that proper counseling which should also focus on the side effects of each method (MOH & IntraHealth, 2011). If the women understand about each method, they can easily switch from one FP method to the other. However, the study did not record how the side effects were managed which could also contribute to the women's satisfaction with the methods (MOH & IntraHealth, 2011; WHO, 2007).

The current study investigated the problems which the women had with each method of contraception. Furthermore, the study examined the association between the current usage of contraception and the problems faced, percentage of women that experienced the problems and were currently using or not using the contraceptives. The study also investigated the magnitude of the side effects on the part of the users.

In addition, the above literature informs FP programme managers why current contraceptive methods like implants, female condoms and vasectomy are not popular in Malawi (MICS, 2006; NSO, 2011). Those that started using contraception before the introduction of the new methods resist turning from the old methods such as DMPA, oral contraceptive pills and male condoms. There is therefore a need for the service providers to strategize on how introduce new methods to increase acceptance and use of the same.

Summary

The above review of the literature revealed high unmet need for the family planning among postpartum mothers during the one year post delivery period. Some of these included inaccurate information given to mothers and husbands about the PPFP

services, age and parity of the mothers, lack of knowledge of husbands about the PPFP service, traditional and religious beliefs including families as well as poor administration technique and inadequate education of the mothers pertaining to the PPFP services. The literature also showed that many women have closely spaced births worldwide and that the utilization of the FP services is low in many countries including Malawi. This has contributed to high maternal and neonatal morbidity and mortality rates.

The major gap with this review was that there were few studies that were done in Malawi in relation to the general FP and PPFP practices. Most of the information represented what is done in other countries other than the country where the current study was being conducted which may not be a true representation of the PPFP services in Malawi. The limited information on the PPFP in Malawi can also make this study to be one of the basic studies on the PPFP services for the country.

The current study investigated the effects of the demographic characteristics of the women on the PPFP programme (e.g. age, marital status, education level, number of living children, and desired number of children both by mother and her husband and the plan on when respondent wanted to have another child and many more). In addition, the study investigated the influence of both the religious and traditional cultures on the PPFP services. The impact of the subjective norms and past experiences with PPFP services were also studied. The study also examined the relationships/associations between the utilization of the PPFP services and other variables like age, marital status, number of living children, duration of lactation amenorrhoea, resumption of sexual activity and many more. Also investigated were the reasons for nonuse of the services.

CHAPTER 3

Methodology

Introduction

This section gives details of the research methods and structures that were followed to conduct this study. Research methods are procedures that are employed in order to structure a study, gather and analyze information pertinent to answer a research question with an aim of developing evidence (Polit & Beck, 2006; Creswell, 2006). The purpose of the study was to investigate factors that are associated with the utilization of postpartum family planning services between 6 and 12 months of delivery at Ntchisi District Hospital, Malawi.

The research followed a positivist research paradigm to investigate the factors associated with the utilization of the PPFP services (Cohen & Crabtree, 2000; Shanks & Parr, n.d; Crossan, n.d; Nightingale, 2012). Positivism is an approach to research which has a belief that things can be studied as hard facts. It also assumes that an objective reality exists which is independent of human behaviour and can be established through an experiment and/or observation (Crossan, n.d Cohen & Crabtree, 2000; Kiim, 2003; Nightingale, 2012).

Furthermore, positivists also believe that the full understanding of a phenomenon can be achieved by experimentation and observation (Ryan, n.d; Cohen & Crabtree, 2000; Nightingale, 2012); Kiim, 2003). In this approach, the researcher also establishes relationships that exist between variables. Specific to this study, data analysis involved finding relationships that existed between the use of the PPFP services and maternal age,

education level, marital status, number of live children, age of the youngest child, duration of amenorrhoea and the resumption of sexual activity (to mention a few) to identify the associated factors for the use of the PPFP services by the women.

The study adopted an objectivist epistemological view which is in line with the positivist approach. According to Crotty (1998), epistemology refers to the way in which people understand and explain/interpret things they come across. Epistemologists try to identify the relationship that exists between individuals and their environment since it is believed that people and environment influence each other. Furthermore, they try to find the knowledge people have on a particular subject and the sufficiency of the knowledge (Jimmy-Gama, 2009). Objectivist approach is independent of the researcher and bias is greatly reduced or avoided. Objectivism is an approach to research where there are already predetermined responses and there is no subjectivity (Crotty, 1998).

Specific to this study, for women to use contraceptive methods, they are always interacting with their social environment which may contribute to the use or non-use of the methods. Through their interaction, they acquire certain values and beliefs that may affect the women's decisions towards contraception. It was therefore, the aim of this study to investigate the factors surrounding the utilization of PPFP services at Ntchisi District Hospital.

Presented in this section are research design, research setting, study population, sample and sampling method, inclusion and exclusion criteria, sample size, data collection and data collection instrument, recruitment of the study sample, data management, method of analysis, plan for the dissemination of the study findings

(results), ethical considerations, study limitations and study period as described by Wood and Haber (2006).

Research Design

Research design is a structure or a master plan that stipulates in detail how data will be collected, stored and analyzed or in short, this entails a process in which a research will be conducted (Kumar, Runjit, 2005; Polit & Beck, 2006; Hedges, 2009).

This was a quantitative descriptive study. Quantitative descriptive study is a type of research in which findings are clearly defined using numbers and percentages (Holland & Rees, 2010; Polit & Beck, 2010). The major emphasis in a quantitative study is to show relationships between variables (Holland & Rees, 2010). The study aimed at examining the factors that are associated with the utilization of the PPFP services by women between six and twelve months of delivery. A structured questionnaire with components of open ended questions was used to collect data. The open ended questions were quantified during data analysis. The provision of the open ended questions allowed for more responses from the respondents. Hence reducing bias in the process.

Research setting

Research setting refers to the catchment area in which a study is carried out (Schneider, Whitehead, Elliott, Lobiondo-Wood & Haber, 2007). This study was conducted at Ntchisi District hospital. Ntchisi district is allocated in the Central Region of Malawi with an estimated size of 1655 km². It stands at an average altitude of 1500m. It is hilly in the South and East with very bad roads during rainy season, and flat in the North and West (Refer to Figure 3 below for the location of Ntchisi District.. The

district has a population of 237, 748 [District Population Survey (DPS), 2010], accounting for 47, 428 households [District Household Census (DHC), 2010].

Ntchisi District Hospital was selected for the study because it serves the largest population of 10, 390 women who are within the child bearing age [Ntchisi Health Management Information System Bulletin (NHMISB), 2010], as compared to the figures for other health facilities in the district. The figure excludes those cases that were referred from the other health facilities within the district and bordering districts. The hospital conducted 7117 deliveries for the period between July, 2010 and June, 2011. In this sense, the facility manages many postpartum women within 6- 12 months of delivery which was the target group for this study. The data collection took place at the maternal and child health (MCH) department where women who brought their children for the under five clinic were targeted.

In addition, the district hospital offers postpartum family planning services to women, men, and families. Ntchisi Annual Bulletin (August, 2010) reports that a total of 41578 (78%) visits were made by women of childbearing age for different types of family planning methods for the period between July, 2009 to June, 2010. Lastly, the health facility was easily accessible during the study period (see Figure 4).

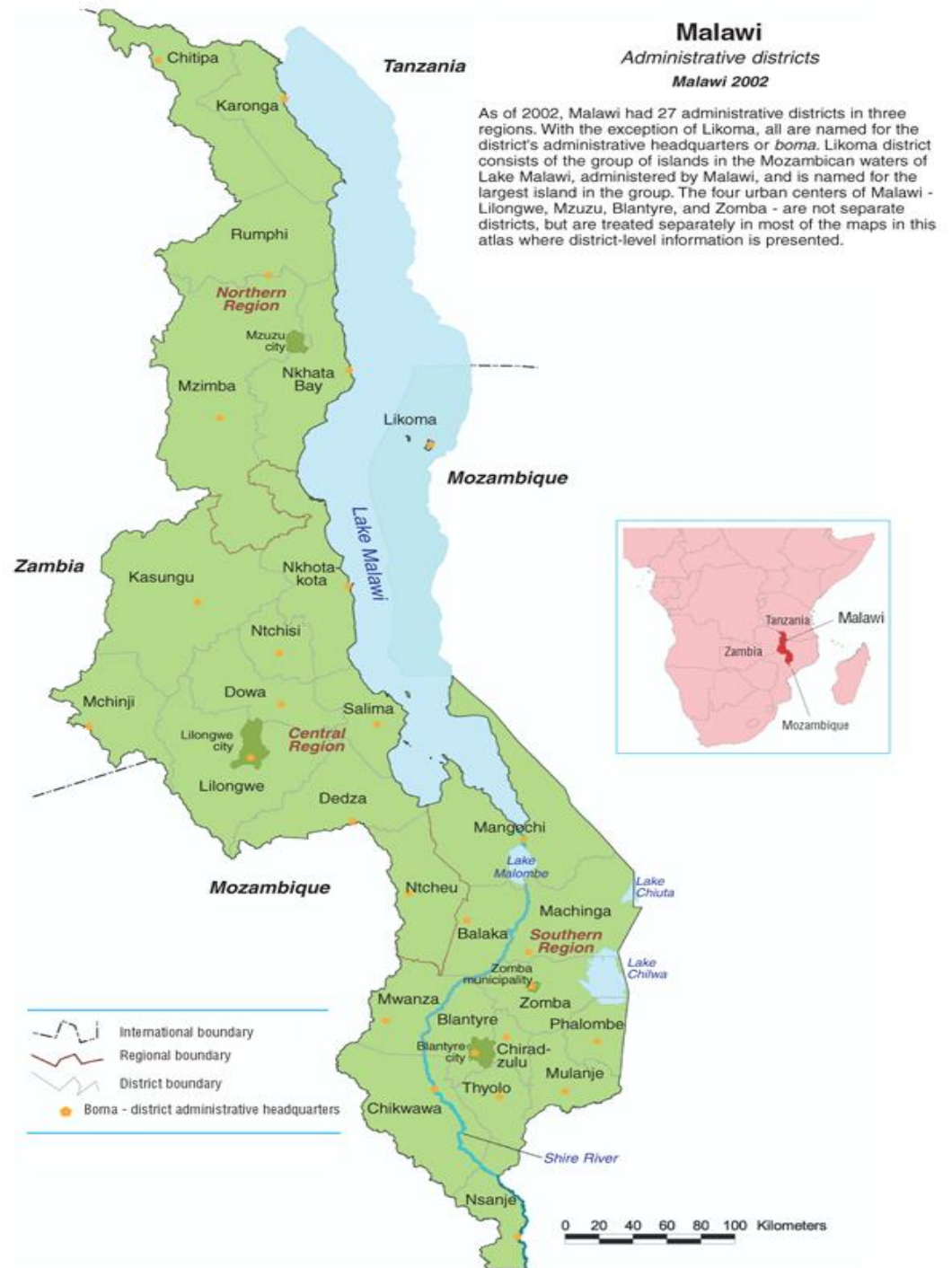


Figure 3: Map of Malawi showing Ntchisi and its bordering districts

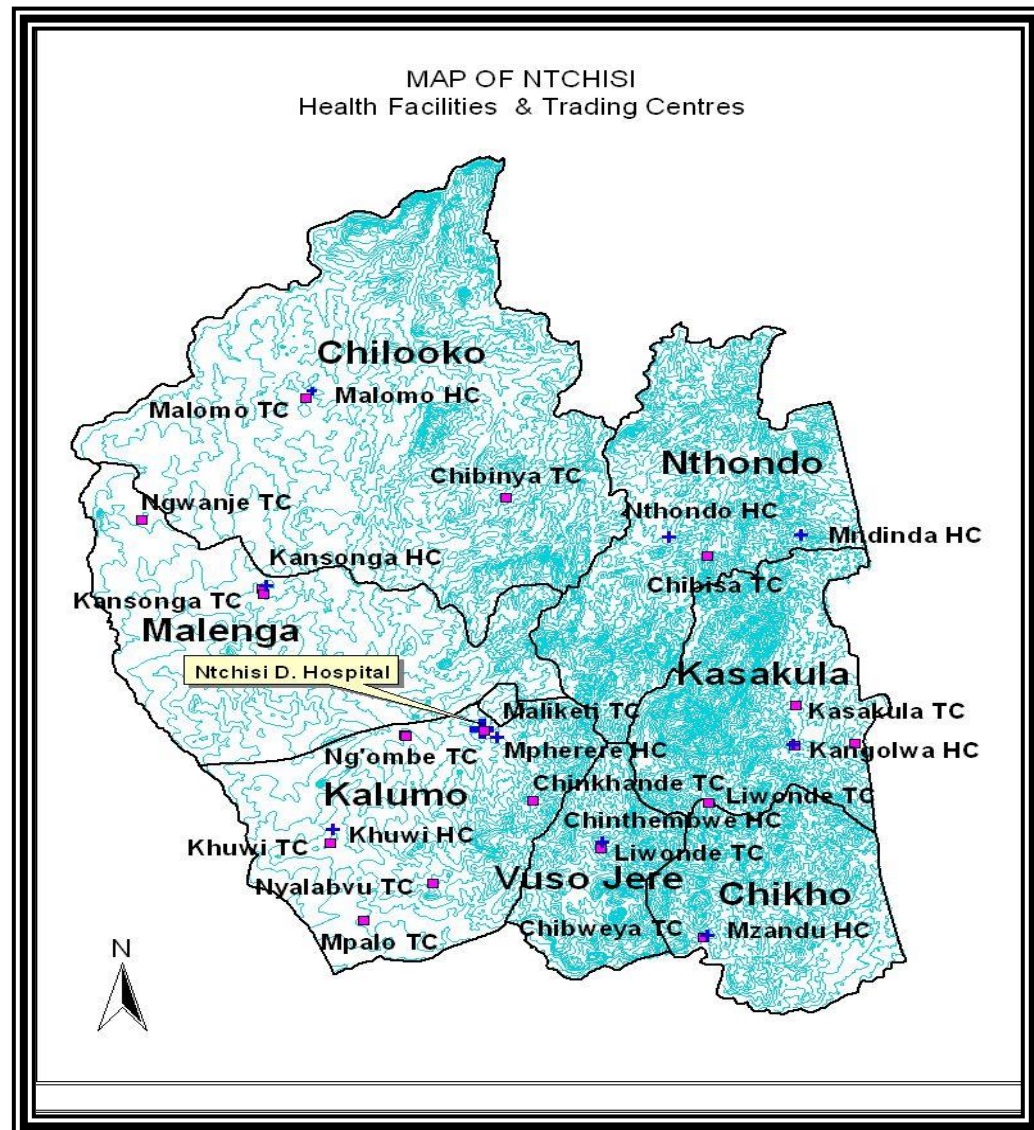


Figure 4: Map of Ntchisi District showing the location of Ntchisi District Hospital

Study population

A study population is a group of people/elements drawn from a general population where a sample is selected from (Polit & Beck, 2008). This is a fundamental determinant of the study sample (Salama, *n.d*). The target population for this study was

mothers who had given birth to live children and was within a period of six to twelve months after delivery.

Study sample and sampling method

Sampling is the procedure of selecting a proportion of subjects/elements from the entire study population so that the finding from this group can be used to make conclusion about the population under study (Polit & Beck, 2008; Schneider, et al. 2007). A study sample is a subset of a population drawn from the study population (Schneider, et al. 2007). The sample population comprised women with babies aged 6 to 12 months.

This category of women was used to study the behaviour of postpartum women in relation to family planning utilization within the first year of delivery. This group was considered for the study because at this age of the child, the mother was likely to have resumed sexual activity. Moreover, during this period the mothers would also have started planning for the next pregnancy. Thus the factors for the use or non use of the postpartum family planning services during the first year of delivery were easily identified among this group.

The sample selection was done using convenience method of sampling. Convenience sampling is a method of sample selection where subjects that are readily available and accessible are used for data collection (Polit & Beck, 2008: 309). In this study, the method was used because every woman who had a child aged between 6 and 12 months and was present during the study period was invited to participate in the study.

Inclusion criteria

Inclusion criteria refer to the requirements that must be met for one to participate in a particular study (Polit & Beck, 2008). The criteria guarantee collection of data from the appropriate subjects. In this study, the inclusion criteria for the study population were postpartum mothers whose children were between the ages of 6 to 12 months regardless of their parity, religion, culture, education and maternal age.

Exclusion criteria

Exclusion criteria refer to the circumstances that are used to decide on who should not be involved in a study (Polit & Beck, 2008). In this study, the women who were excluded from the study sample were those with children aged 13 months and above, those with babies below 6 months of birth, those who had recently had an abortion, those who had had tubal ligation and total abdominal hysterectomy as well as those who had still births and/or neonatal deaths with the previous pregnancy.

Sample size

The targeted sample size was 192 postpartum women who were within six months to one year of delivery. The sample size was arrived at using the population of mothers within the child bearing age and under one attendance for the district hospital. The sample size was calculated by utilizing the district and under one population statistics and monthly under one attendance. According to 2010 District Population Survey (DPS), the district has a population of 237, 748. Under one children population comprise 5% of the entire population.

$$\frac{237,748 \times 5}{100} = 11,887.4 \text{ (under one population)}$$

Total attendance of under one children = 5,556 per year (for the district hospital).

Sample calculation

$$n = Z^2 P \frac{(1-P)}{e^2} \text{ (Lemesho, Hosmer, Klar \& Lwanga, 1990).}$$

Where: n = sample size

Z = value of a normally distributed variable which for a 95% confidence interval takes the value of 1.96.

P = proportion of mothers with under one children attending underfive clinic at Ntchisi hospital.

e = maximum allowable standard error which in this study was set at 5%

$$n = 1.96^2 \times 0.4674 \times \frac{(0.5326)}{0.05^2}$$

$$n = 383$$

Since the study targeted mothers with children aged between 6 and 12 months (which is half of the under one population), then the sample was divided by 2 (383 divide by 2 = 191.5). Hence the targeted study sample was 192 women. Though 192 was the targeted sample, one woman was added to the sample. Thus 193 mothers with children aged between 6 and 12 months were recruited for the study.

Data collection

Data collection is a process of planning and obtaining handy information with an aim of instituting a factual basis (Basic tools for Process Improvement, *n.d*). This section contains information on data collection instrument, recruitment of a sample and the method of recruitment.

Data collection instrument.

A structured questionnaire was used for data collection. This is type of data collection tool where a researcher gives alternative answers from which respondents choose responses (Poilt & Beck, 2008). This ensures that the respondents give similar information as expected by the researcher (Polit & Beck, 2008). The questionnaire also had some components of open ended questions which were quantified during data analysis. This was so to source more information from the respondents that was not captured in the questionnaire.

The data collection tool was developed following the study objectives and selected concepts of TRA. The tool had five sections. These were demographic data, knowledge of mothers about the PPFP services, normative beliefs (culture and attitude) on the PPFP services, subjective norms and past experience with the methods (Appendix 3). The questionnaire was orally administered in that a research assistant read the questions and filled the responses on the questionnaire. It took about twenty minutes per respondent to complete a questionnaire. This was because other respondents were not able to read. Three research assistants were trained by the researcher prior to the data collection exercise for this purpose. This was done to ensure collection of reliable data for the study.

Pre-testing of the data collection instrument.

With an aim of ensuring reliability and validity of the data collection instrument, pretesting of the same was done. Pre-test of an instrument refers to the trial done to examine if the instrument is reliable to gather the expected information (Polit & Beck, 2008: 345). Therefore, the instrument was pre-tested on five (5) postpartum mothers at

Khuwi Health centre within Ntchisi district. The facility was chosen for the pretesting of the instrument because the researcher wanted to modify the questionnaire according to the Chichewa vocabulary of the district.

During the pre-testing exercise, only those mothers that met the inclusion criteria for the study were informed about the details of the study to obtain their consent. After the explanation, the mothers were then encouraged to ask any question they had on the subject for clarification to ensure their understanding. Furthermore, it was made clear to the participating mothers that their participation was on voluntary basis. As such, they were free to choose to withdraw from participating at any point during the exercise. When all was made clear, the mothers were asked to sign a consent form to show their informed choice to participate in the pre-testing exercise. Then they were taken through the questionnaire one by one to ensure privacy. The main purpose of the pre-testing was to ensure correct wording and phrasing during the actual data collection in order to avoid any uncertainty (Polit & Beck, 2006).

The lessons learned from the pre-testing exercise were that some of the questions needed to be rephrased to match the vocabulary of the study participants. Other questions required more clarification, and that there were other important expected responses that needed to be included in the answer guide. Furthermore, the exercise gave an insight of time that would be spent to collect data from one study participant. In short, the pre-testing helped in preparing the data collectors for the real data collection exercise and again the modification of the data collection instrument to sure that the questions were answering the research objectives and questions.

Reliability of data collection instrument.

Reliability of an instrument refers to the extent of consistency with which the data collection instrument measures the attribute it intended to measure (Lobiondo-Wood & Haber, 2006; Polit & Beck, 2008). To ensure consistency of the data collection instrument, the researcher adopted some of the elements of the check list for the PFPF services provision developed by USAID & BASICS (n.d) and MOH & IntraHealth (2010). Tools that were tested and pre-tested by other organizations were adopted because postpartum family planning (PPFP) programme has a standard performance which needed to be followed and evaluated. Moreover, the instrument was pre-tested on postpartum mothers in their first year of delivery. This group of women was targeted for the pre-testing exercise with an aim of ensuring consistency since the study targeted postpartum women between 6 to 12 months of delivery.

Validity of data collection instrument.

The validity of an instrument refers to whether a data collection instrument precisely measures what it intended to measure (Lobiondo-Wood & Haber, 2006). It represents the extent to which the study conclusions signify the reality (Romano, *n.d*). To ensure this, experts in sexual and reproductive health services were consulted to review the instrument before it was put into use. The experts included those with expertise in sexual and reproductive health such as family planning providers and programme managers. This was important as the structured questionnaire was checked for accuracy and adequacy to ensure that the questions represented a true reflection of what the study intended to measure (Lobiondo-Woods & Haber, 2006).

In addition, the tool was pretested on postpartum women at Khuwi health centre before the actual data collection exercise as already explained earlier. This stage was important in order to assess the instrument for its accuracy and validity. This would ensure collection of reliable data from which conclusions would be drawn about the utilization of the postpartum family planning services at the district hospital under the study.

Recruitment of sample.

Once the mothers had gathered at the under five clinic with their children, and soon after a group health talk in the morning, the researcher introduced herself and her assistants. It was brought to the awareness of the mothers that there is a research underway that is looking at factors that are associated with the postpartum family planning services utilization among mothers who delivered within the year at the hospital. Thus all the mothers with children aged within twelve months were asked to find the researcher or her assistants in a room where mothers with children aged between 6 to 12 months were selected as a study sample.

The researcher/her assistants then explained the details of the research to these mothers. Those mothers that were willing to participate in the research were asked to meet the researcher or her assistants in a private room, one at a time to ensure privacy and confidentiality. This room was arranged within the department and was clearly identified.

The individual mothers were then taken into the private room where the researcher explained in detail the purpose of the study that is, examining the utilization of

family planning services at the hospital (see Appendix 1). Furthermore, the researcher or her assistant made it clear that she would ask the respondent for information related to the family planning services. At this stage, it was emphasized that the mothers have a right to refuse or consent to participate in the study. Only those that were willing were eligible to participate in the study while those that were not willing were not forced to participate.

The aim of giving detailed information to the participants was to ensure that the mothers understood the purpose of the study and its implications so that they were able to make the informed decision about their participation in the study. The mothers were given freedom to choose whether to participate in the study or not. This ensured that mothers participated by choice and not by being coerced. At this juncture, the researcher addressed concerns that the mothers had and finally, an informed consent was obtained (see Appendix 2).

After the mother had given the consent, data collection started. The questionnaire was orally administered. Upon completion of the questionnaire, the mother was appreciated for participating in the study and then she was allowed to leave. The above process was repeated as needed for those who reported late at the clinic. This was to make sure all women within the targeted group were given chance to participate in the study.

Data management and analysis

Each data collector checked his/her forms for completeness on daily basis and then at the end of the day, the researcher rechecked all forms for completeness. The information was then entered in a computer and was first cleaned of any extreme values.

After this, the data was ready for analysis. The data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 16.0. Chi-Square tests were used to determine the associations of the relevant variables. After analysis of the data, the results were presented in tables, charts and graphs.

Dissemination of results

The results of this study will be disseminated through Kamuzu College of Nursing, the College of Medicine Research Dissemination Conferences and international conferences. The results will also be disseminated during a general staff meeting at Ntchisi District Hospital. Copies will be made available to RHU, MOH, KCN library, COMREC and all stakeholders in the Family Planning programme. Lastly, the results will be publicized in a magazine, journal and on internet.

Ethical considerations

Privacy and confidentiality.

To ensure confidentiality and privacy, names of the respondents were not indicated on the questionnaire. The researcher and her assistants used numbers to label the questionnaires. The assistants were trained on how to keep the data gathered from the respondents to ensure confidentiality. They were told not to reveal any information gathered to other people. All the filled forms were kept in a locked cupboard and the keys were secured to make sure no one other than the researcher gets access to the information.

Respect of clients' rights.

To ensure that the rights of the respondents were respected during and after the research, ethical considerations were observed. Before starting with the research, a

request was made seeking for permission to conduct the study at the hospital (Appendix 4). Then, the study was approved by the Kamuzu College of Nursing (KCN) Research and Publications Committee – RPC (Appendix 5) and the College of Medicine Research and Ethical Committee – COMREC (Appendix 6). In addition, the District Health Officer for Ntchisi District Hospital gave an approval to conduct the research in his catchment area (Appendix 7). The permissions were done in writing for formality.

Moreover, in order to observe that the rights of the respondents were taken into consideration, the researcher obtained consent from the same and respected their decisions whether to participate in the research or not. The respondents were not coerced or forced to participate. This was also done to avoid harming the respondents psychologically.

Minimizing harm and discomfort.

To avoid/or minimize harm and discomfort on part of the respondents, the principle of beneficence was applied during the study. In this study, the researcher ensured that the respondents were protected from physical, emotional and social harms. Essentially, the researcher observed the respect of human dignity by making sure that respondents' participation was voluntary.

Fair treatment of study participants.

Fair treatment of the research participants was observed in that the selection of the participants for the study followed the sampling method of this study and not on vulnerability or compromised position of certain people (Polit & Beck, 2006). This helped to avoid ambiguity in the sample selection which could have brought about false

results of the study. Lastly, privacy and confidentiality was ensured and maintained during and after the study. The names of the respondents were not disclosed as the researcher used numbers other than the respondents' names on the questionnaires.

CHAPTER 4

Presentation of findings

Introduction

This chapter presents the findings of this study. The findings have been presented in accordance with the sections of the study in relation to study objectives and the Theory of Reasoned Action (TRA) which guided this study. The sections are demographic characteristics of respondents, knowledge of the postpartum family planning services, influence of subjective norms, cultural beliefs (both religious and traditional) and lastly, past experience with the family planning methods. The sample size consisted of 193 postpartum women between 6 and 12 months of delivery.

Demographic characteristics of respondents

Age and parity of respondents.

The age range of the respondents was 16 to 49 years with a mean of 25 years. Characteristics of the study respondents are shown in Table 1 below. The parity of the respondents ranged from 1 to 11 but between six to twelve months of childbirth. One hundred and fifty nine respondents (82%) had 1-4 live children; the rest had more than 5 children. Women are encouraged to have 1 - 4 pregnancies in their lives since these are considered to be healthy pregnancies as recommended by WHO (2006) and MOH (2009). About 21% (n = 41) of the respondents reported to have had 1-2 abortions while 1% (n = 2) had 3 – 4 abortions (see Table 1). In terms of the age of the respondent's previous child (nthumbidwa), 9.3% (n = 18) had children aged 1-2 years.

Table 1: Demographic characteristics of respondents (N = 193).

Characteristics	Frequency	Percentage
<i>Age of respondents in years</i>		
15-19	21	10.9
20-24	79	40.9
25-34	78	40.4
35 and above	15	7.8
<i>Marital status</i>		
Single	10	5.2
Married	180	93.3
Divorced	3	1.6
<i>Education level</i>		
No education	19	9.8
Primary	126	65.3
Secondary	48	24.9
<i>Parity</i>		
1-4	149	77.2
5-8	41	21.2
9 and >	3	1.6
<i>Age of last child</i>		
No child	49	25.4
1-2 yrs	18	9.3
2-4 yrs	68	35.2
5 yrs and >	58	30.1

Period when mothers wanted to give birth to the next child.

The respondents had different preferences as to when they would like to have their next child. Twelve respondents (6%) intended to have the next child within 1-2 years compared to 43% (n = 82) who preferred to have the next child within the next 5 years or more (Figure 4).

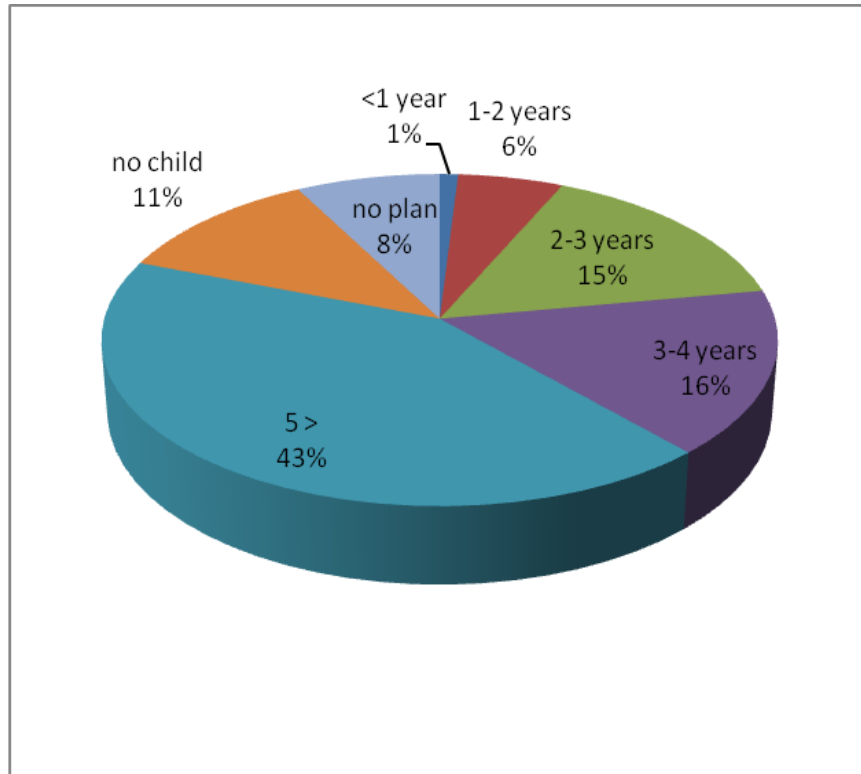
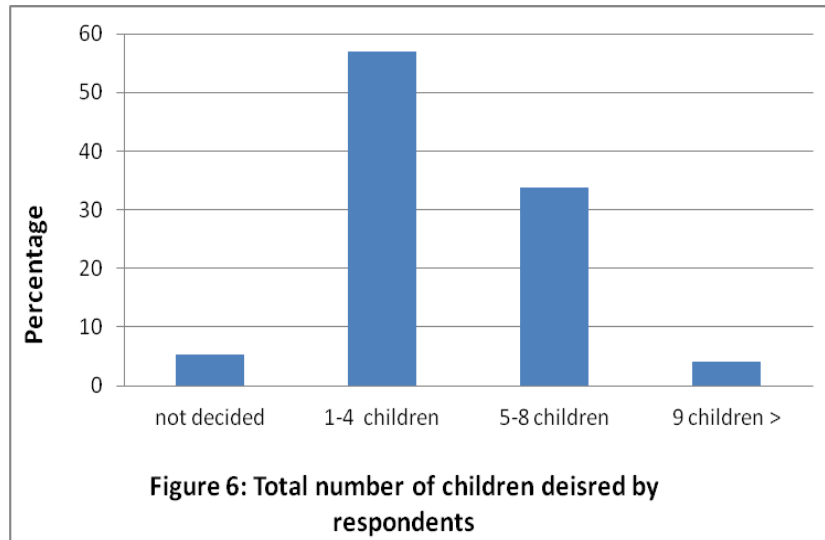


Figure 5: Period when the respondents would want to have another child

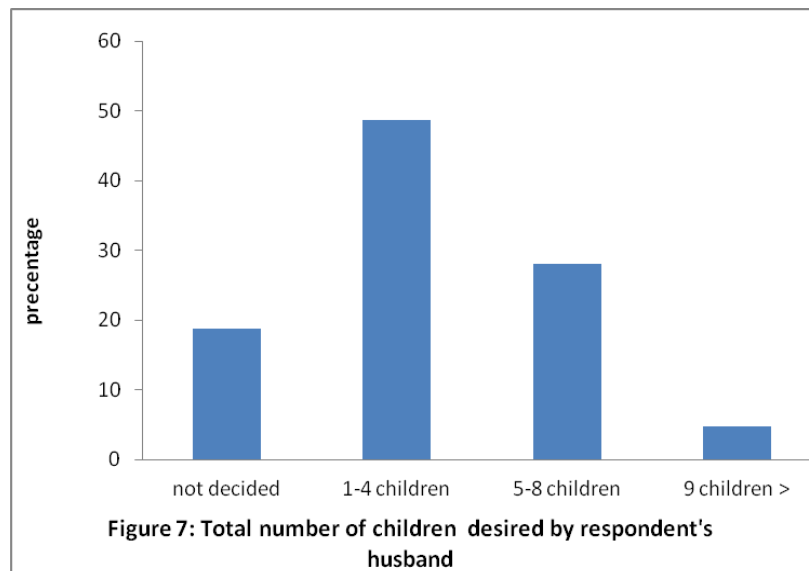
Total number of children desired by the mothers.

In relation to the total number of children each respondent would want to have in her life, 38% (n = 73) of the respondents showed their intention to have 5 children and above while 5% (n = 10) had not yet decided (refer to Figure 6). Eighty two percent (n = 158) of the respondents discussed with their spouses on the number of children to be born to them while 18% (n = 35) did not.



Number of children desired by the husbands.

Regarding spouse wish, 33% (n = 63) of the respondents reported that their spouses would want to have 5 children and above in their lives. Nineteen percent (n = 36) had not yet decided on the number of children (see Figure 7).



Knowledge of postpartum family planning services by the respondents

On this objective, the areas of focus were the knowledge the respondents had about the family planning methods that were available at the hospital's clinic for postpartum mothers within the first year of delivery; methods of family planning known and if the mothers were currently using the methods or not. The respondents were also asked about the places where they received the information regarding the services before and after the delivery of their youngest children. Also important were the topics that were covered during postpartum counselling.

Ninety four percent ($n = 182$) of the respondents had knowledge of family planning services that were available at the hospital and were able to mention one or more family planning methods. 24.4% ($n = 47$) of all respondents knew lactation amenorrhoea as a method of family planning while 75.6% ($n = 146$) was not aware.

The famous method known by the respondents was injectable contraception commonly called Depot medroxy progesterone acetate (DMPA) or Depo Provera mentioned by 94.3% ($n = 182$) of the respondents. The second was male condoms known by 74.6% ($n = 144$) and implants known by 72.5% ($n = 140$). The least known method was emergency contraceptive pills (ECP) which was acknowledged by only 1.6% ($n = 3$) followed by Standard Days Method (SDM) by 2.6% ($n = 5$) and finally, natural family planning method (NFP) which was mentioned by 4.7% ($n = 9$).

Current behaviour (Family planning methods utilization).

A total of 73% of the respondents were using contraceptives during the time of the study (see Figure 8). The most used method was DMPA (62.7%; $n = 121$) while the

least was COC. Other respondents (27.5%; n = 53) were not using any contraceptive methods and none reported the use of the female condom and vasectomy.

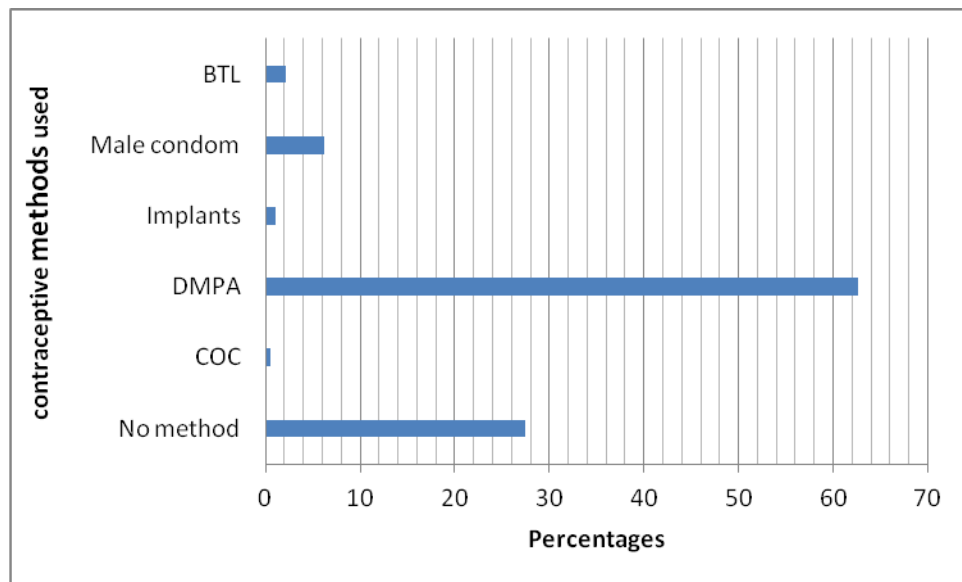


Figure 8: Family planning methods currently in use by the respondents

Source of knowledge about PPFP services before delivery.

The mothers had different places where they received information about family planning services before delivery. Seventy four percent (n = 142) of the respondents received the information at antenatal clinic (see Figure 9 below). The mothers that had the information during the antenatal visits were more likely to use the contraceptive methods (58%; n = 112) than the women who received the information from elsewhere.

Source of knowledge about PPFP services after delivery.

After delivery, 54.4% (n = 142) of the respondents received information while at the postnatal ward (PNC) before their discharge from the hospital and 46% (n = 89) of these were more likely to use contraceptives. About 28% (n = 40) of the mothers had the

information during labour and delivery in the labour ward (see Figure 10 below). The ones that received the information while in labour reported that they could not remember much of the information because of the labour pains which made them not to be attentive to the educator.

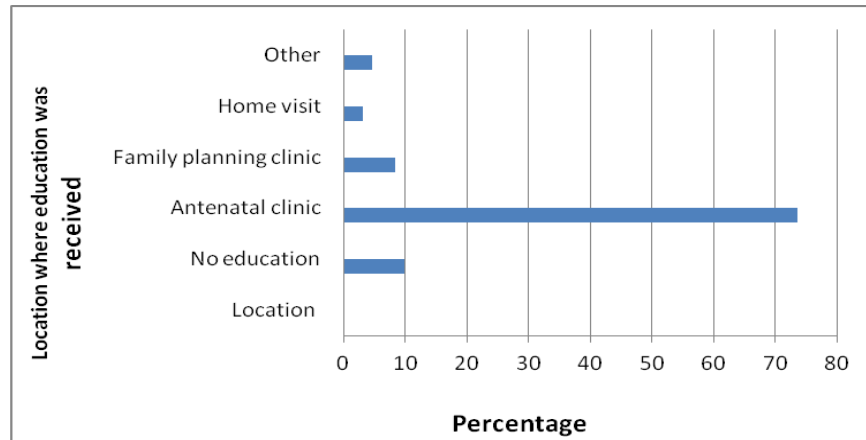


Figure 9: Places where the respondents received information about FP services before delivery

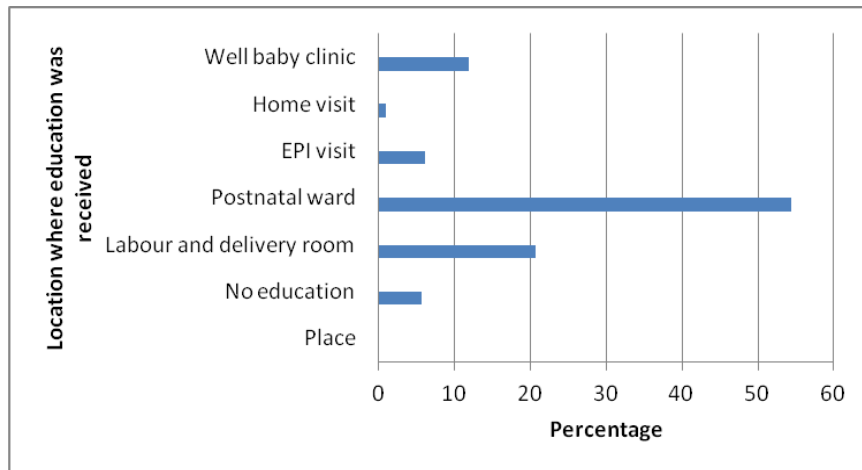


Figure 10: Places where the respondents received information about the FP services after delivery

Postpartum counselling.

About 79% (n = 152) of the women received information on Exclusive breast feeding (EBF) while about 66% were educated on all methods of family planning (refer to Figure 11). Sixty six percent (n = 127) said the information they received was clear.

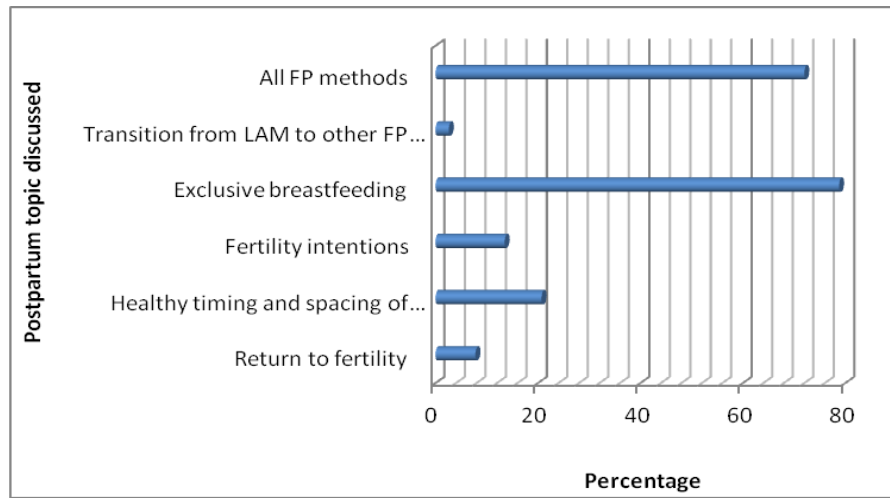


Figure 11: Percentage of the mothers who received postpartum counselling.

Reasons for current non-use of contraceptive methods.

The mothers were asked if they had already started using the family planning methods after the delivery of their youngest children. Others had already started using the methods while others had not yet started. The respondents that were not using the contraceptive methods at the time of the study gave various reasons for not using the methods. Twenty two respondents (11.4%) were not using any contraceptive methods because they were waiting for the return of the menses; 5.2% (n = 10) said they did not use the methods because they were not willing to use them.

Six respondents (3.1%) said they could not use the methods as they were married.

Two percent (n = 4) of the respondents stated that their children were still young and

were afraid that if the children die, they would take long before they conceive. Three mothers (1.6%) said they were not using the methods because they had no knowledge of the services while the same percentage wanted to have bilateral tubal ligation (BTL). Two percent ($n = 4$) stated that they were not using the family planning methods because they were nursing the only child and they were afraid of being infertile due to the effects of the contraceptives. One respondent said she was medically restricted from using the contraceptives.

Influence of normative beliefs regarding family planning services

According to the Theory of Reasoned Action, normative beliefs (both religious and traditional) have a major bearing on health related habits. In order to explore the influence of the respondents' normative beliefs related to the utilization of the family planning services, the respondents were asked if they were affiliated to any denomination and if their denominations accepted or restricted the use of the services. Furthermore, the respondents were asked if their traditions restricted or permitted them to utilize the FP services. Lastly, the mothers were asked if there were other women that were using the methods in their respective communities in order to find out if it is an acceptable behaviour in their society.

All of the respondents belonged to a particular denomination. Sixty respondents (31.1%) belonged to the CCAP followed by Anglicans, 24.4% ($n = 47$) and the Roman Catholics comprising 11.9% ($n = 23$). The least belonged to the Baptist Church 1% ($n = 2$) and United Methodist and Islam 0.5% ($n = 1$) respectively. Ten percent ($n = 20$) of the respondents said their denominations do not allow them to use FP services (these were

mainly Roman Catholics and Bible Believers) while 2.1% (n = 4) did not know whether their churches permitted or restricted the use of the contraceptive methods.

One percent (n = 1) of the respondents reported that their tradition did not allow them to use the services. However, all mothers reported that there were other women that were using the contraceptive methods in their communities.

Influence of subjective norms on postpartum family planning services

Izeck and Fishbein (1980) in the TRA eluded that people that are significant to individuals have a major bearing on one's behaviour. The researcher therefore wanted to find out if the subjective norms had influence regarding the utilization of the PFPF services at the hospital. The main focus under this scenario were the individuals whose influence were important in decision making related to the family planning services usage, if the husbands accepted the use of the services by their wives as well as the type of support the respondents get from their spouses to indicate their approval for the use of the services. Lastly, the mothers were asked about the important decision maker in issues of reproduction.

Thirty two respondents (16.6%) said their spouses do not permit them to use the family planning services while 82.9% (n = 160) reported that their husbands approved the use of the services. Thirty percent (n = 58) of the respondents decided on their own to use the services (see Figure 12). Seventy nine respondents (40.9%) said husbands' opinions were more important in issues of reproduction while only 5 respondents (2.6%) said they were given chances by their spouses to decide or participate on the issues regarding their reproduction.

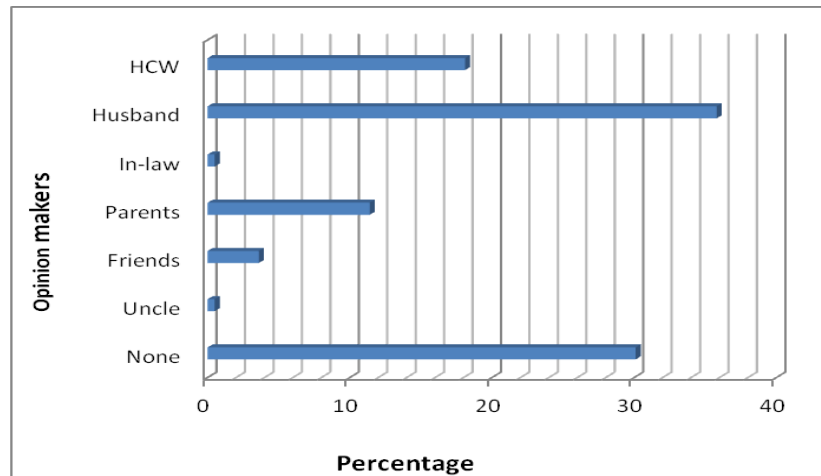


Figure 12: Opinion makers on issues of reproduction

Assistance husbands provide to show their approval of FP service utilization.

Here the respondents were asked to comment if their husbands offered any assistance that could motivate them to use the services. Twenty one percent (n = 40) of the respondents said their spouses provided them with transport by means of transport to FP clinic. Forty seven percent (n = 90) were assisted in forms of items or finances (see Figure 13).

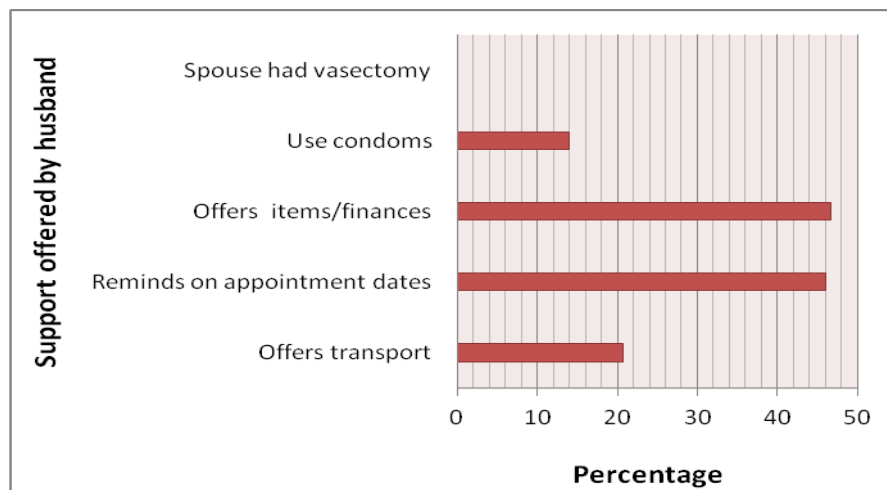


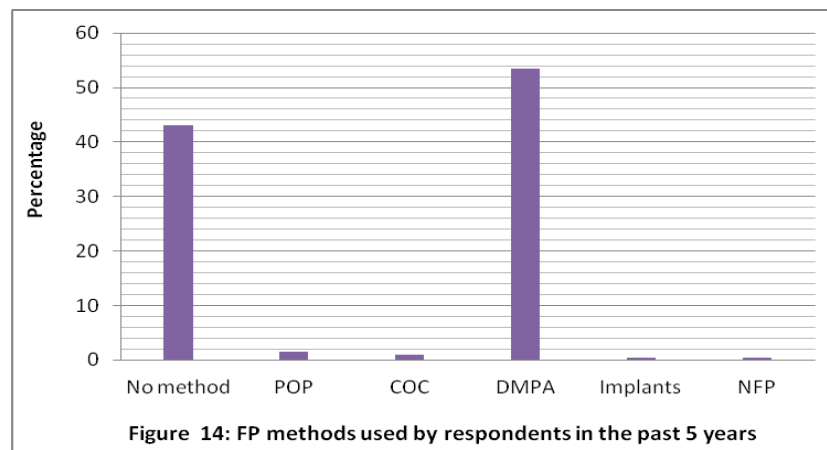
Figure 13: Type of assistance spouses offer to their wives with regard to the FP utilization

Past behaviour and habit

The major focus here was to find out if past experience with the FP methods within the past five years would have a bearing on the use of the PPFP services. The components here were the number of respondents that used the methods before, the methods used and the problems faced in relation to the use. Also covered were the ages of the youngest child at the time when the mothers started using the methods, duration of lactation amenorrhoea, and period in months when mothers were sexually active after childbirth.

Utilization of FP services and methods used in the past 5 years.

About 59% (n = 110) of the respondents used the FP methods within the past five years while 41.5% (n = 80) never used the methods (see Figure 14) in the same period.



Problems faced by the respondents in the past 5 years.

About 59% (n = 72) of those respondents that used the methods before had no problems while 41.5% (n = 80) experienced problems. The highly scoring problem was prolonged vaginal bleeding (23.9%; n = 27) seconded by backache (9.7%; n = 11),

followed by then abdominal pains (7.1%; n = 8). The least scoring problems were leg pains (2.7%; n = 3) and numbness of body organs (1.8%; n = 2).

Reasons for non-use of contraceptive methods in the past five years.

Those who used the contraceptives in the past five (5) years and were not currently using the contraceptive methods had various reasons for not utilizing the services this time. The most reported reasons were that the respondents were still single (30.1%; n = 25), fear of infertility (27.7%; n = 23) and that the respondents lacked knowledge of the services which was reported by 26.5% (n = 22) of the respondents (Figure 15).

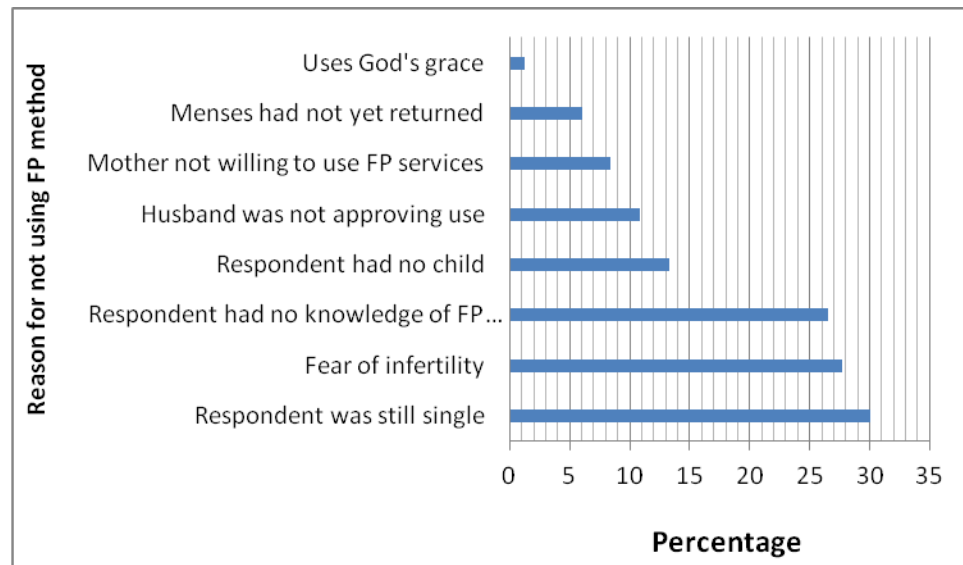


Figure 15: Reasons for not using contraceptive methods in the past 5 years

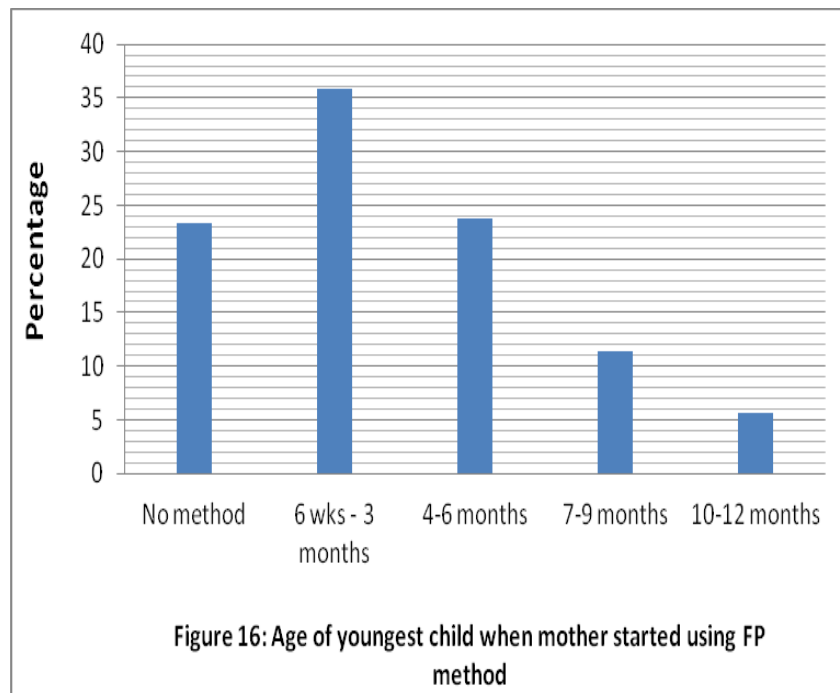
Period when mothers started using contraceptives

Some of the respondents again used the FP methods after delivery of their youngest children while others did not use. Those who used the methods had different

times of starting utilizing the contraceptive methods. Thirty six percent (n = 69) started using the contraceptive methods when their children were six weeks to three months of age while 23.8% (n = 46) started the contraceptives when their children were four to six months old (see Figure 16).

Duration of lactation amenorrhoea

About 30% (n = 58) of the respondents had resumed having menses while their children were 6 weeks to 3 months old. By 6 months, almost fifty percent (49.7%) had menses resumed while by the end of the first year, 76.7% (n = 148) had their menses returned (see Figure 17).



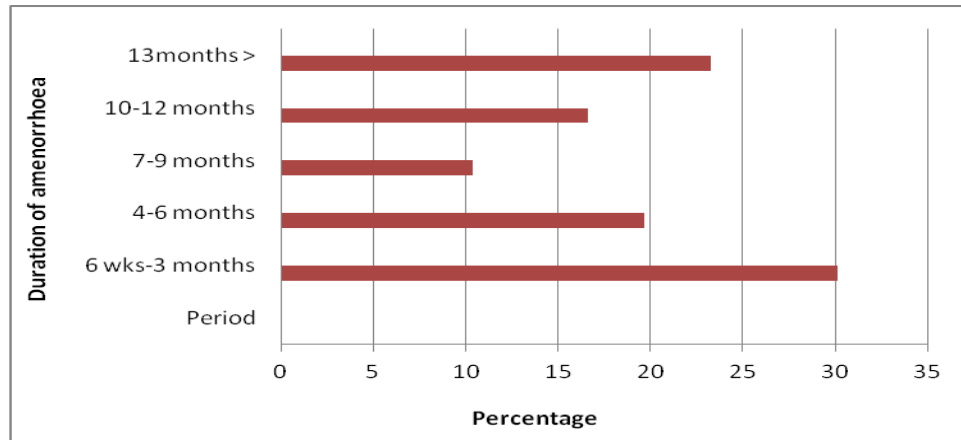


Figure 17: Duration of Lactation Amenorrhoea after delivery

Return to sexual activity after delivery

The other interesting component was the period when the mothers start being sexually active after giving birth to a live child. About 61% (n = 118) of the respondents were already sexually active when their children were between 6 weeks and 3 months. By the end of the first year of delivery, 90.2% (n = 174) of the respondents had resumed sexual activity while only 9.8% (n = 19) had not yet started being sexually active (see Figure 18).

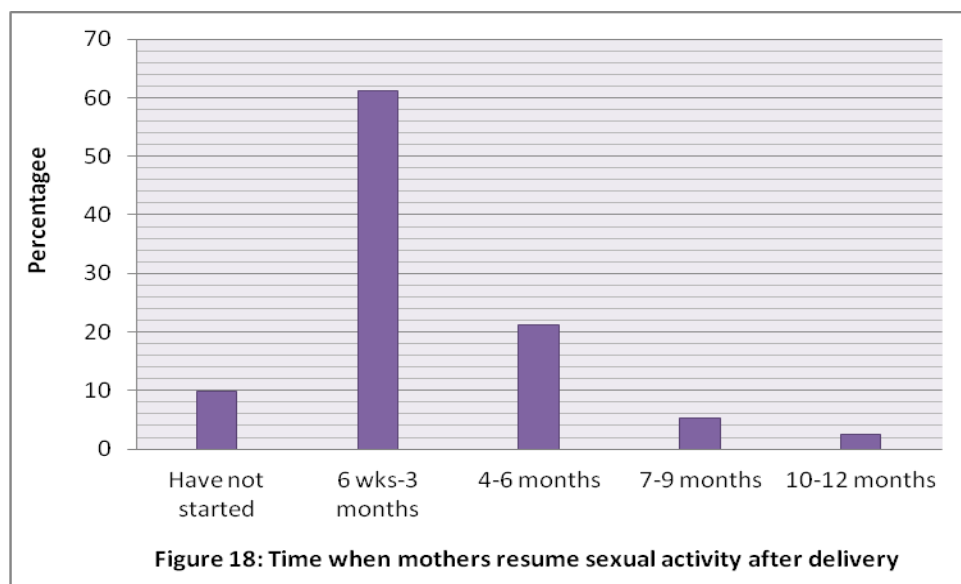


Figure 18: Time when mothers resume sexual activity after delivery

Relationships/associations of variables

Some variables were computed using the Chi-Square tests to find out if there were relationships/associations between the variables and the utilization of the postpartum family planning services.

The associations which have been presented below include the following among others:

- The level of education and clarity of the FP information;
- The utilization of the family planning services and the level of education;
- The resumption of sexual activity after delivery and the utilization of the PPFP services;
- Husband's approval of the FP services and the utilization of PPFP services;
- Marital status and the utilization of the PPFP services;
- Knowledge of the FP methods and the utilization of the FP services

Maternal age and utilization of PPFP services.

There was a significant association between the age of the mothers and utilization of the FP services as shown in the formula: $\chi^2 = 7.836$, $df=2$. $p=0.050$. This result shows that the more advanced in age the mothers were, the less likely they used the contraceptives and visa-versa. There was a significant reduction in the utilization of the contraceptive methods among the mothers aged 35 and above compared to those aged between 18 and 34 years where the level of utilization steadily increased.

Clarity of information and level of education.

The study found a significant association between clarity of the family planning information the mothers got from the family planning providers and the level of education of the mothers as shown in the Chi-square results as shown $\chi^2 = 8.499$, $df=2$, $p=0.014$. This indicates that those that attained secondary level of education had better understanding of the services than those that had primary level of education.

Knowledge of FP methods and utilization of PPFP services.

There was also a strong relationship between the knowledge of the FP services and utilization as shown in the Chi-square results $\chi^2 = 26.436$, $df=1$, $p=0.001$ showing that knowledge was a strong determinant on utilization of contraceptive methods by the women. This means that the women that have information about the family planning services are more likely to use contraceptives after childbirth.

Level of education and utilization of PPFP services.

The study found a positive relationship between the women's level of education and their utilization of the PPFP services as shown in the Chi-square results $\chi^2=10.905$, $df=2$, $p=0.004$. This indicates that the women that had formal education were more likely to use contraception compared to their counterparts. Put in a nutshell the higher the level of education, the more the mothers used the contraceptive methods and visa versa.

Marital status and utilization of PPFP services.

A Chi-square test done demonstrated a significant association between marital status and the utilization of the services as shown in the Chi-square results $\chi^2=0.670$,

df=2, p=0.008 indicating that those women that were married were more likely to use contraception than their counterparts.

Resumption of postpartum sexual activity and utilization of PPFP services.

The study found a strong relationship between the time women resumed sexual activity after delivery and the utilization of the PPFP services as shown in the Chi-square results $\chi^2=28.975$, df=2, p=0.001. This shows that those women that resumed postpartum sexual activity used contraception compared to those who had not yet resumed the activity. Resumption of the postpartum sexual activity was found to be one of the strong determinants for the initiation and use of the PPFP services. The earlier the women resumed the sexual activity, the earlier they started using the contraceptives and vice-versa.

Husband's approval of FP services and utilization of PPFP services.

The association between husband's approval of the FP services and the current use of the services was examined using the Chi-square tests and there was a strong relationship between the two variables as shown in the Chi-square results $\chi^2=32.946$, df=2, p=0.001. These results indicate that those women whose husbands approved of the family planning services used contraception compared to their counterparts. Put in a nutshell, husbands' approval was more important to determine utilization of the FP services by their wives.

Discussion with husband and utilization of PPFP services.

A Chi-square test done established a significant association between the discussions women had with their husbands on the number of children the couple would

like to have and the current use of the FP methods as shown in the Chi-square results of $\chi^2 = 8.0038$, $df=2$, $p=0.018$. This result indicates that the women that had discussion with their husbands used contraception than those that had no discussions with their husbands. Put succinctly, couple communication was found to be important for the use of the contraceptives.

Husbands' assistance and utilization of PPFP services.

The association between the assistance which the mothers received from their husbands and the utilization of the family planning services established a significant relationship namely $\chi^2 = 32.946$, $p=0.001$. This indicated that many mothers who were offered any form of assistance by their husbands used the contraceptive methods compared to those who did not receive any support from their husbands.

Number of live children and utilization of PPFP services.

In relation to the relationship between the number of live children the mothers had and family planning utilization, this indicated a significant result of $\chi^2 = 13.197$, $df=1$, $p=0.001$. This showed that the mothers who had five live children and above used the contraceptive methods more than those with 1 to 4 children. On the contrary, the study established that the higher the parity, the fewer the mothers who used methods of family planning. When tested using the Chi-square method, this relationship established a significant association $\chi^2 = 15.624$, $df=2$, $p=0.001$.

Desired number of children by women and utilization of PPFP services.

The results of the study revealed a relationship between the total number of children desired by the women and their utilization of contraceptives as shown in the Chi-

square of $\chi^2=9.802$, $df=3$, $p=0.020$. This indicated that those women who want to have more children did not effectively utilize the PPFP services compared to those who wanted fewer children.

Previous problems with the methods and utilization of PPFP services.

A Chi-square test demonstrated a strong relationship between the women's past experience with the family planning methods on one hand and the current use of contraceptives on the other hand as shown in the test results of $\chi^2=14.873$, $df=2$, $p=0.001$. This indicated that the women that had bad past experiences with the methods avoided the current use of the services compared to their counterparts. Hence, the test revealed that the respondents used a contraceptive method which they successfully used before as shown by a significant association ($p=0.001$).

Postpartum counselling and utilization of PPFP services.

Concerning the association between the postpartum counselling and utilization of the FP services, counselling on the fertility intentions exhibited a significant association of $\chi^2=4.967$, $df=1$, $p=0.026$ with the utilization of the services. Many mothers who were counselled on the topic used the FP methods as compared to those who were not counselled. However, counselling on return to fertility, exclusive breastfeeding (EBF), transition from lactational amenorrhoea method (LAM) of family planning and education on all FP methods did not indicate any significant associations ($p=0.264$, $p=0.520$, $p=0.779$ and $p=0.114$ respectively) with utilization of the methods. In other words this indicated that these variables did not impact on the use of the contraceptives by the women.

Denomination and utilization of PPFP services.

There was no significant association ($p=0.882$) between the church's approval or disapproval of the family planning services and the utilization of the methods. Mothers used the contraceptive methods despite being restricted by their denominations. Even those mothers who knew about their churches' norms regarding the services used the FP methods.

Lactation amenorrhoea and utilization of PPFP services.

Duration of lactation amenorrhoea determined the time when the mothers started to use the family planning services. This was indicated by a high significant association of $\chi^2 = 23.238$, $df=4$, $p=0.001$ between the duration of lactation amenorrhoea and the time when the mothers started using contraceptive methods. This indicated that many mothers whose menses had returned used the FP methods as compared to those whose menses had not yet returned. Other women did not use the contraceptives up to one year after delivery for the reason that their menses had not yet resumed.

CHAPTER 5

Discussion

Introduction

This section focuses on the discussion which is based on the findings of this study. The main purpose of the study was to examine the factors that are associated with the utilization of the postpartum family planning (PPFP) services at Ntchisi District Hospital in the Central Region of Malawi. The interpretation of the study results used a reductionist approach to bring about meaningful conclusions about the findings (Quale, 2009). Reductionists believe that subjects can be fully understood if studied in their small and isolated constituents, or an idea in terms of uncomplicated concepts (Quale, 2009). In order to come up with these components or constituents, a structured questionnaire was used for data collection. An analysis of the findings was also done systematically following the components of the questionnaire.

The use of a structured questionnaire for data collection was helpful in collecting data from a large study sample from where a reliable conclusion could be drawn. Furthermore, the questionnaire contained some components of open ended questions which ensured collection of in-depth data for the study, thus minimizing bias. To avoid misinterpretations of the study questions, a pre-test of the data collection instrument was done before the actual data collection exercise. On the other hand, the components of the open ended questions helped in avoiding and reducing bias through the process.

Demographic characteristics

Age and parity of respondents.

The study results established that the age range of the study respondents was 16 to 49 years with a mean of 25. In the study population, those that were below 20 years accounted for 11% (n = 21). Only 8% (n = 15) of mothers were aged 35 years and above. The finding concurs with the report by National Statistical Office (2004) that child bearing in Malawi starts at an early age. Although only 11% were below 20years, this was a vital finding because youths are supposed to avoid getting pregnant in their teens to prevent pregnancy related complications arising from early pregnancies. The complications to the mother are malnutrition, anaemia, abortions, pregnancy related hypertension, obstructed labour, vesico-vaginal fistula (VVF) and recto-vaginal fistula (RVF). Complications of early pregnancies to the infant are fetal distress, still births, failure to thrive, prematurity and infants deaths (MOH & IntraHealth, 2010).

Pregnancies conceived after 35 years of age expose women to pregnancy related complications as a consequence of too late pregnancy (MOH & IntraHealth, 2010). Complications of late pregnancies to the mothers are cephalo-pelvic disproportion (CPD), obstructed labour, ruptured uterus (RU), ante and post partum haemorrhages (MOH & IntraHealth, 2010).

The study further revealed that the utilization of the family planning methods declined as mothers advanced in age and parity. The more the women became advanced in age and parity, the lesser the use of the contraceptives. The majority of contraceptive

users (76%; n = 119) were aged between 20 and 34 years compared to those women that were more than 35 years old.

Eighty one percent (n = 149) of the women that had 1-4 pregnancies in their lives used the contraceptives compared to 54 % (n = 41) and 33% (n =3) of those that had 5-8 and 9 pregnancies and respectively above. This study finding is supported by Okech, et al. (2011) as reported in their study in Kenya, Makanani, et al. (2010) and Newmann, et al. (2005).

The finding above suggests that women who are advanced in age and parity do not effectively utilize the PFP services at the hospital for reasons well known to them. Family planning providers need to disseminate the information on HTSP and the cut out points for having healthy pregnancies. Dangers of pregnancies in relation to age are stated above.

Marital status.

Results for this study portrayed the picture that the family planning services are mainly patronized by married women which is not surprising. Out of the 193 study participants, only 6.8% (n = 13) were single mothers while the rest were married. The finding corresponds to the study results by Okech, et al. (2011) that in Kenya, more married women used the contraceptive methods than unmarried ones due to the frequent episodes of sexual activities among married women. In United States of America, married women used contraceptives to plan their pregnancies and childbirths (Romo, et al. 2004). The study finding is also supported by Newmann, et al. (2005).

This finding suggests that the unmarried women are at risk for unplanned pregnancies and unwanted child bearing. This is so because it was found to be a cultural

norm that women that are not married are not expected to use the services since they have no husbands. The respondents insisted to say “no woman can plan a family alone without a spouse. If a woman does this she is considered to be a prostitute in the community”.

This finding implies that the respondents were still following the concept of child spacing and not family planning. This informs the FP programme managers and RHU that the concept of “family planning” is not yet adopted by the beneficiaries of the hospital; rather they are still following the old “child spacing” concept. It is important here that the concept of family planning be discussed with the people (both men and women) so that they should understand the difference between the two concepts. Traditional leaders also need to be the key people to be informed so that they should speak for single ladies regarding the use of the contraceptives and break such culture in their respective communities.

Level of education.

The results from this study have also disclosed the fact that the family planning services at the hospital were mainly patronized by women who had some form of education. Nineteen women (52.6%) of those who had no formal education used the contraceptives as compared to 72.2% (n = 126) and 89.6% (n = 48) who attained primary and secondary education respectively. The study finding agrees with the study results in Kenya which found that contraceptive methods were mainly used by those women that had formal education while the least users were those that had no formal education (Okech, et al. 2011; NSO, 2011; Population Reference Brueau, 2000).

This has the implication that women without formal education may have closely spaced pregnancies and child births. These may also end up developing pregnancy related complications leading to maternal and neonatal morbidity and mortality. Similarly, Tehrani, et al. (2001) also found that respondent's and husband's level of education was a major predictor for the use of the PFP services. The implication on service provision is that the FP service providers should know the education level of their clients for proper counseling to ensure that clients understand the information thereby increasing the use of the methods.

Number of children.

The study further revealed that the use of contraceptive methods declined with the increased number of live children which the mothers had. The more the number, the less likely the mothers used the family planning services. Only 50% (n = 34) of those who had 5 – 8 live children used contraception. This is an important finding in that there is need for family planning providers to intensify education on family planning. In addition, there is need to investigate on the factors that hinder the use of the services by these women at the hospital.

On when the mothers intended to have another child, the study found out that 4.7% (n = 193) of the mothers wanted another child within 2 years which is consistent with the study findings by Borda and Winfrey (2009) which found out that only about 8% of the women in Malawi wanted to have another child within 2 years. Thirty five percent of the respondents (n = 193) wanted another child within 5 years. This shows that many women wanted to space their births and there is, therefore, need to address the

factors that prevent them from accessing the contraceptive methods. This agrees with the reports by NSO (2011) that very little percentage of women in Malawi would want to have another child in the next two years. This finding is again important as it revealed that there was unmet need for PFP services at the hospital among the postpartum women. Clinically, the family planning providers need to review the family programme with an aim of improving the use of the contraceptive methods. This will reduce incidents of pregnancy related complications to both the mother and her infant.

Five percent ($n = 193$) of the women were not yet decided on when to have another child. This shows that a good number of pregnancies at the hospital are unintended and untimed. As such, a woman can conceive at any time without considering the HTSP concept in planning a family. Family planning providers at the hospital should intensify education on HTSP so that mothers and families should understand the effects of closely spaced pregnancies.

The findings of this study further revealed that only 9.3% ($n = 193$) of the respondents had given birth to another child when their youngest born child was between 1 and 2 years. This is also a vital finding in that it confirms that some women get unwanted pregnancies since they do not use the FP services within the first year of delivery. This is hazardous to both the mothers and their unborn children. It is recommended that women should wait for a period of 2 years before attempting to get pregnant again (WHO, 2006; MOH & IntraHealth, 2010).

This also supports the finding through a mini survey at the district hospital where it was found that of all the mothers who attended ANC at the hospital in November, 2010, 7.1% of the women had conceived before their youngest children were 24 months

old. This calls for the family planning providers at the hospital and community levels to intensify counseling of the women and their families on the consequences of the 4 “TOOs”. It is also of important that traditional leaders encourage people in their respective communities to practice HTSP with an aim of reducing and halting maternal and neonatal mortality and morbidity as results of pregnancy related complications.

Furthermore, the study results established that 37.8% (n = 73) of the mothers had desired to give birth to five (5) or more children whereas 32.7% (n = 63) of their spouse had intended to have more than five children. This finding is very important as it informs the family planning services providers that other families or individuals do not effectively use the services deliberately because they want to give birth to more children. The study results are in line with the finding by Okech, et al. (2011) that it was cultural in Kenya for families and individuals to have more children. In addition, people in Kenya aspired to have more children because these were considered the source of wealth. In Ethiopia, having more children was for social and historical purposes (Rubardit, et al. 2010). These findings were also supported by David (2008). This is a crucial finding because it will have an impact in structuring the counseling of clients for the PFP services at the hospital.

The above finding has an implication on the service delivery in that providers need to educate the community on the consequences of “TOO” frequent (pregnancies occurring within two years interval) and “TOO” many (more than four pregnancies) on the women and the newborn.

Discussion with husband.

The study again found that 81.9% (n = 158) of the study participants discussed with their husbands on the number of children to be born to them. This was important since communication is encouraged among spouses in order to involve males in issues of sexual and reproductive health (Ministry of Health, 2009). The implication here is that the service providers and programme managers need to strategize on how men can be reached with the information related to family planning to ensure their participation in the service utilization.

Knowledge of postpartum family planning services

The study results demonstrated that 94.3% (n = 182) were aware of the family planning services. Further, the results established that though the level of knowledge about the services was high, 74.6% (n = 144) used the postpartum family planning (PPFP) services by the end of 12 months of childbirth. This finding is higher than the national statistics (NSO, 2011). The reason may be because the respondents were found at the clinic which meant that they already had positive health seeking behaviour and their probability of using the FP services was high.

This finding supports the results by MOH and IntraHealth, 2010; NSO, 2011 which indicated that the knowledge level of the FP services was high (99%) among men and women in Malawi yet there is low utilization (46%) of the services. Furthermore, the results correspond with findings by Newmann, et al. 2005 ; Engin-Ustun, et al. 2007; Ijadunola, et al. 2005; Kumar, et al. 2006; Okech, et al. 2011; Mathe, et al. 2011 who also found that knowledge of the FP services did not predict PPFP services utilization.

On the other hand, 25.4% (n = 49) of the women during the first 12 months postpartum did not use any form of contraception. The implication on services delivery is that there is still a good number of women that are at risk for unwanted pregnancies. Borda, et al. (2010) reported in their study that women do not use contraception during this period because they do not feel the risk of being pregnant since they are breastfeeding and having lactation amenorrhoea. As such the family planning service providers need to work and cover the gaps that bar the women from utilizing the services at the hospital.

On the contrally, this study found that education of the family planning services was a major prerequisite for the use of the services. This was so as only 9.1% (n =11) of the women that did not attain any form of education used the services as long as they had knowledge thereof. The clinical implication is that family planning providers should intensify one-on-one counseling to all the FP clients to ensure that even the women that are illiterate can have clear information about the services thus increasing the use of the services. This finding was supported by a qualitative study conducted in the United States of America where many postpartum adolescents used the IUCD since they had clear information from their service providers regarding the method (Weston, et al. 2012).

The results also portrayed that awareness of natural family planning methods (NFP) including standard days method (SDM) is low at 4.7% (n = 9) and 2.6% (n = 5) respectively. The figures tally with the national figures (NSO, 2011). The implication here is that women that cannot use the modern methods due to religious/traditional beliefs and other health risks have no alternative methods to plan their births. In this

case, healthy timing and spacing of pregnancy (HTSP) becomes a challenge; hence incidents of closely spaced pregnancies which are usually unplanned and unwanted. This view is supported by the study findings by Audu, Yahya and Bassi (2006) that in Sub Saharan Africa the awareness of natural family planning methods is relatively low which also contributes to the low utilization of all contraceptive methods in general. Therefore, improving the level of information on natural family planning methods would likely improve the use of both natural family planning and modern contraceptive methods. On the contrary, a cross-sectional survey in DRC revealed that there was high level of knowledge for natural/traditional methods of contraception that 65% of the postpartum mothers used these. The commonly used method was Calendar method at 72% (Mathe, et al. 2011).

Very few respondents (1.6%; n = 3) were aware of the emergency contraceptive pills (ECPs) and nobody used the emergency contraception. Emergency contraception is a method of family planning that women use sporadically when they engage themselves in unprotected sex and would want to prevent pregnancy. Clinically, this has a consequence in that women do not know how to prevent themselves from having unplanned and unwanted pregnancies. There is, therefore a need for the family planning providers and programme managers to intensify education on the method. Community awareness on the method could also be one of the best strategies to improve its use. This will help to reduce incidents of miscarriages at the hospital.

Concerning lactational amenorrhoea method (LAM) of family planning, it was learnt with regret as the study exposed that only about 24% knew LAM as one method of

planning their pregnancies and childbirths. The inference here is that many mothers are exposed to closely spaced pregnancies since exclusive breast feeding is not effectively practiced, meaning that fertility can return at any time within the lactation period. Moreover, the same study has revealed that these women resume sexual activity early before resumption of the menses and the initiation of the family planning methods. It is, therefore, vital that the family planning providers improve the counseling on the LAM to ensure that mothers are aware of the method. Apart from being a method of family planning, LAM is encouraged during the first six months of childbirth because it is also regarded as a source of the best nutrition for the baby (Borda, et al. 2010).

Family planning methods currently in use by respondents

Concerning family planning methods that were currently in use by the respondents, the results demonstrated that 62.7% (n = 121) of the women used Depot-medroxy progesterone acetate (DMPA), an injectable contraceptive, seconded by male condoms which was consistent with the national figures (MOH & Intrahealth, 2010; NSO, 2011). This suggests that clinically, once DMPA is in short supply or is out of stock, many women are at risk for unplanned and unwanted pregnancies. In line with the study finding, a study that involved thirteen (13) Sub Saharan countries established that those women who have intentions only to space their childbirths used the short-term methods of contraception compared to those who wanted to stop bearing children in Malawi, Cameroon, Mozambique, Namibia, Uganda, Tanzania and Zambia (Creanga, et al. 2011). Chipeta, et al. (2010) reported that women prefer DMPA to other contraceptive methods because it is easy to use and can hide its use from their husbands.

The study findings on contraceptive method usage are contrarily to the study finding by Okech, et al. (2010) who found through their study that in Kenya, the most used method was the condom at 35%. This was followed by pills (33%), the injectable at 19% and lastly, the intrauterine contraceptive device (IUCD) at 4%. In Swaziland, the commonly used method was the traditional method (Ziyade & Ehlers, 2007) as was the case in Iran and Turkey (Erfani, 2010). The finding from Okech and friends indicates the need to establish the strategies that might improve the utilization of these methods at the hospital under this study.

Moreover, a study conducted in Sub Saharan countries revealed that women have their own choices regarding which method of contraception they want to use despite effective counseling on all methods by the service provider (Creanga, et al. 2011). The study found that traditional methods of family planning were popular among the postpartum women in Mozambique because the people thought these were not harmful to the body (Creanga et al. 2011). Furthermore, a longitudinal study in USA established that mothers did not effectively use the intrauterine contraceptive device even though they had full understanding on its benefits for the fear of side effects (Weston, et al. 2012).

It is also worth noting that none of the study respondents identified the use of the female condoms. The female condom was introduced to empower women regarding their prevention against STIs, HIV and AIDS and unplanned pregnancies. The finding gives a clue on the effectiveness of the female condom programme. They inform family

planning programme managers and providers that there is need to intensify the sensitization programmes on family planning.

Locations where mothers received information about FP services.

The findings from this study once again established that many mothers (73.6%; n = 142) got information about the FP services during antenatal care (ANC) visit and 54.4% (n = 105) had the education while at the postnatal ward (PNW) before they were discharged from the hospital. This is a crucial finding as it informs the programme managers and providers of maternal and neonatal care (MNH) services that those women that do not attend ANC and those who have home deliveries are at the risk of closely spaced pregnancies and childbirths.

Similarly, Duong, Lee & Binns (2005) found that many mothers remember education received during ante and postnatal care visits and this counseling brought a more positive impact on the utilization of the PFP services. Though ante and postnatal counselling was recommended, a study by Barber (2007) unveiled the fact that there was a high possibility of using the contraceptives among the women who received the family planning counselling during prenatal care than postnatal care (Borda, et al. 2010; Zerai & Tsui, 2001). This is contrarily to the finding by Smith, van der Spuy, Cheng, Elton and Glasier (2002) who found out in their experimental design study in Edinburgh, Scotland; Shanghai, People's Republic of China; and Cape Town, South Africa that despite the women having expert contraception counselling during antenatal care, there was very little impact on contraceptive usage and subsequent pregnancy rates.

This finding also concurs with the results from a survey by Glazer, Wolf and Gorby (2010) in USA which found that many women did not use oral contraceptive pills despite having received counseling during antenatal care and postnatally during hospital discharge. After the counseling session, 55% showed interest to use the method but only 20% used the method at 4 to 6 months post delivery (Glazer, et al. 2010; Smith, et al. 2002).

This study further revealed that there is inadequate counseling of the postpartum mothers and as such, mothers start using the PFP services late even after the first year of delivery. For instance only 7.8% (n = 6) had counsel on return to fertility, 13.5% (n = 20) were educated on fertility intentions, 20.7% (n = 40) were counseled on HTSP and 2.6% (n = 6) had counsel on transition from LAM to other modern methods of contraception. This has an implication on the FP services provision as it leads to delays in starting the postpartum contraceptive methods since the mothers do not understand the importance of early initiation of the methods.

This finding agrees with the study results which revealed that women delayed the use of contraceptives after delivery in the USA and this led to more unplanned and undesirable pregnancies (Glazer, et al. 2010). The reason was that these women did not receive enough counseling on the services, from their service providers (Glazer, et al. 2010). The family planning providers, therefore, need to inform individuals and families about HTSP as recommended by WHO (2006), return to fertility, fertility intentions, lactation amenorrhoea method (LAM), and the transition from LAM to other FP methods. At the same time, they should emphasize on the importance of early initiation and

utilization of the FP methods. The study results were also supported by (Ministry of Health, 2009; MOH & Intrahealth, 2010).

Lastly on knowledge, the study disclosed that those women (32.2%; n = 174) who had some form of formal education had a better understanding of the messages about the family planning services compared to 19 (52.6%) women who had no formal education. The finding harmonizes the report by NSO (2011) which revealed that educated people (men and women) had a better understanding of issues such as the PPFP services which can improve its utilization. It is, therefore, important that the providers take into consideration the education level of their clients for effective counseling on the methods to increase the acceptance and utilization of the services.

The current study has demonstrated that for women to use PPFP services, they need clear and adequate information about the services. They, then synthesize the information received to come up with a positive decision towards the service which is in support of the TRA. The TRA states that people evaluate the information they have received for them to make rational decisions towards health related behaviour (PPFP services utilization in this study).

Normative beliefs in relation to FP method utilization

Influence of religious culture on PPFP services.

The majority of the denominations (12 out of 14 churches) allowed their members to use modern and natural contraceptive methods except for the Roman Catholic and Bible Believers churches which only permitted their members to use natural methods of family planning. The Catholic Church had a larger representation of 12% (n = 23) which

was not a surprise. The consequence is that if the members are dedicated to the faiths that restrict the use of the services, they cannot use the methods resulting in closely spaced and complicated pregnancies.

The study results concur with the finding from a study done by Walsh (*n.d*) which found that religious teachings were hindrances to the use of the modern contraceptives giving examples of Catholicism, Hinduism, Protestantism and Budhaism except for North America. The study further reported that in Canada, the use of contraceptives was more among the women who were not affiliated to any religious faith (Walsh, *n.d*).

On the other hand, it was found through this study that though some church norms do not permit their members to use contraceptive methods, the members (10%) were still using the methods. This shows that the decision to use the methods relied on the individual respondents (mother) or families and this was seen as an opportunity for increasing the access and utilization of the services. A good understanding of the services will help increase the use of the same at the hospital.

Influence of traditional culture on PPFP services.

Tradition was found not to be a barrier to the use of the FP services. This study indicated that very few mothers (1%; n = 2) reported to be restricted by their traditional culture regarding the use of the PPFP services. The respondents also reported that other women from the same tradition in their villages were using the contraceptive methods. This finding opposes the finding by Navarro Nunez (2002) which found out that traditional and religious cultures were hindrances to the utilization of the PPFP services.

The results also established that some of the mothers do not use the contraceptive methods because they would want to please their husbands and secure their marriages by

giving them more children. This was perceived to be tradition culture of the study participants. This has an implication that women are exposed to complications related to many and frequent pregnancies and deliveries. Family planning providers at the hospital need to work hand in hand with husbands (male involvement) to halt this cultural practice as it is hazardous to families. The desire for many children comes from the husbands as they feel it is a sign of power and wealth.

Furthermore, the mothers reported that they are forced to bear more children as a preventive measure to restrict their husbands from polygamy which is another harmful reproductive health practice. In the era of HIV infection, traditional leaders need to advocate for families to be faithful only to one partner to reduce the incident and reduce maternal and neonatal morbidity and mortality.

Normative beliefs have been found to be one of the factors that influence use of PPFP services as revealed by the current study. What the study participants believed was the desirable behaviour in the community (traditional culture) influenced their behaviour towards the use of the contraceptives. The results supports the TRA which states that people make health related decisions to conform to the culturally prescribed norms and practices of communities they belong (e. g PPFP utilization).

Impact of subjective norms on PPFP service utilization

Decision making regarding family planning services utilization.

The study found a strength that other women (30%; n =58) were able to make their own informed choices without being hindered by their husbands. This was

perceived as an achievement by the mothers since many women in Malawi are not empowered to make decisions in a family setting. This has a positive inference that if many mothers could have power to make their own decisions related to the FP method usage, the PPFP services would be fully utilized. This could prevent closely spaced pregnancies and births. This being the case, there is need for women empowerment so that the mothers can decide on their own to use the services.

This study also found that the decision for other mothers (40.9%; n = 79) to use the PPFP services was influenced by their husbands. The latter's approval or disapproval regarding family planning determined use of the services by the women. Few of the mothers (2.6%; n = 5) made their own decisions towards the use of the services. This finding supports the argument by TRA that people that are significant to the subject can have an influence on one's decision towards his/her health related behavior (Fishbein & Ajzen, 1980); in this case, using the PPFP services. This also concurs with one finding by Duong, et al. (2005) who found out that partner's opinions played a big role regarding contraception usage. Moreover, the study finding was supported by Mante, et al. (2011), Okech, et al. (2011), Behrman, et al. (2012), Haile and Enqueselassie (2006), Rubardit and Echevarria (2010), Comerasamy et al. (2003), Rakhshani, Niknami, and Ansari Moghaddam (2005).

The above finding brings about an implication in that the mothers whose spouses do not approve the services do not use the services and such families are prone to closely spaced births which contribute to high maternal and neonatal death rates for the hospital. There is also a need to strengthen male involvement during antenatal, family planning

and postpartum counseling so that the husbands understand the benefits of the PPFP services and influence their wives to use the contraceptives. Furthermore, mothers should be encouraged to make informed decisions about contraceptive use as supported by (Ziyade & Ehlers, 2007).

This study appreciates the development that uncles and in-laws have unnoticeable influence on mothers' and families' decisions about their reproduction as it has been a culture among the Chewas previously (Human Rights Commission, *n.d*). The study established that uncles and in-laws were able to influence only 2.1% (n = 4) and 1% (n = 2) of the respondents respectively which translated into a small fraction of the population. This is a critical finding as it informs the custodians of culture that other cultural practices are being modified to suit the present trends.

Hence traditional leaders need to work on other cultural norms so that harmful reproductive health practices should be stopped. Once this is done, the reproductive health of the families will be improved as the spouses will be able to make their own decisions regarding reproduction. It is therefore, important that the health care providers educate traditional leaders on harmful practices such as uncles, in-laws and parents who impose decisions on a couple regarding reproduction. This will, in turn, lead to the full utilization of the PPFP services by families and individuals.

Support for family planning services by husbands.

Although the majority of the respondents (82.9%; n = 160) reported that their husbands permitted them to use the services, the study found out that there was little support/assistance offered to the mothers by their husbands. This finding shows that men

are not in full support of the services yet the same study disclosed that men are decision makers in the families. Family planning providers should encourage male participation to increase the utilization of the services by women. Traditional leaders should also form forums where men could discuss issues of reproduction since shared experiences are better teachers. Model families should also be established to model fellow families in the community.

The study also demonstrated that husbands do not effectively use the family planning services. Only 14% (n = 27) of the respondents' husbands used condoms and none had vasectomy which is consistent with reports by the Malawi Demographic Survey for the district (NSO, 2010). This finding shows that FP is taken as a female's phenomenon. Men think that FP should only be practical to women (their wives) and not themselves. This is why there is low utilization of the services among men at the hospital. This is an important finding since husbands are opinion makers in families as demonstrated by this study. It could be of vital importance if males are encouraged to be fully involved in issues of family planning. In addition, the government should consider developing a variety of male contraceptive methods so that men can also have a wide range of the FP methods from which they could choose. This could help reduce the incidents of closely spaced pregnancies and births.

The current study established that women's decisions towards the use of PPFP services were dependent on the opinions by subjective norms. In this study, husbands had a major bearing on the women's decisions towards the use of the contraceptives. Lack of male involvement in SRHR impacted negatively on the services. This finding supports

the TRA that subjective norms influence people's decisions towards health related behaviour.

Past behaviour, habits and experiences

The study results established that 24.8% (n = 48) respondents encountered problems with the past use of the methods and this hindered the current use of the methods in about 10% of the women. This was also reported by Fishbein and Ijzen, (1980) in their Theory of Reasoned Action. The theory states that past experiences influence peoples' current decisions related to health behaviour. This has an implication on the quality of service provision in that the health service providers at the hospital need to educate women about a method. Furthermore, they need to make sure that the mothers understand the mode of actions of the contraceptives including their side effects or change method in case of their unbearable side effects. This is important because the mothers will understand about the genuine problems caused by the methods and which are not problems as a result of contraception use.

The above finding supports reports by Gutierrez (2001 and 2003) in Spain and Tehrani, Farahani and Hasheni (2001) in Mexico who also found that the previous experience with the FP methods determined the current use of the PPFPP services. Navarro Nunez, 2002; Kumariddin, 2009; Kumar, et al. 2005; David, 2008, also reported in their studies that the past experience with the methods were found to have a bearing on the use of the postpartum contraception. This was also in agreement with the findings by Roberts and Noyes, 2009; Edmeades, 2008; Creanga, et al. 2011. This shows that satisfaction with the previous methods is one of the factors for the mothers to accept and continue using the contraceptive methods among the postpartum mothers.

The clinical implication for problems with the methods is the underutilization of the FP services. It is, therefore, vital that family planning providers do thorough assessment/screening of FP clients using the medical eligibility criteria (MEC) during both initiation and continuation phases. This will help in the identification of clients that are at risk for developing the side effects with particular FP methods. Further, this will help improve the provision of good quality FP services at the hospital. Furthermore, it is necessary that the providers make the side effects of all family planning methods known to the clients and the remedy thereof so that mothers know what to do in case they develop these effects.

Reasons for non use of contraception in the past 5 years.

The results of the study findings demonstrated that women did not use contraceptive methods in the past 5 years because 13.0% (n = 25) of the mothers were single, 11.9% (n = 23) were afraid of becoming infertile from side effects of the methods while 11.4% (n = 22) lacked knowledge about the family planning services. This is consistent with the reports by MOH/IntraHealth (2010). Similarly in Bangladesh, women were not adopting the use of the family planning methods for the belief that the modern contraceptive methods were ‘strong’ and potentially damaging to their health (Salway & Nurani, 1998). As such, they were reluctant to use the methods after child birth despite the desire to avoid closely spaced pregnancies (Salway & Nurani, 1998).

Return of menses, resumption of sexual activity and PPFP utilization

Concerning the time mothers started using contraceptive methods after live childbirth, the study found that women delay the initiation and use of the contraceptive methods at the hospital. Out of 193 respondents, 115 (59.8%) mothers were using

contraceptive methods when their children were six (6) months of age. This percentage was higher compared to 17.6% (Borda, et al, 2010). This is an important finding as it indicates that 40.1% of the women were at a risk for pregnancy due to non use of the contraceptives during the first six (6) months of delivery. This being the case, the family planning providers at the hospital need to strategize their counselling to bring awareness to the mothers and their families/partners that fertility can return as early as at six (6) weeks after childbirth. As such, mothers should be educated and be encouraged to start the methods early to avoid unwanted pregnancies and childbirths.

The study further established that 49.7% of the study participants experienced the return of the menses when their children were six (6) months of age. Thirty percent of these resumed the menses when their children were three (3) months old. This is a vital finding in that it shows that more women are at risk for closely spaced pregnancies and childbirths. This has an implication on the provision of good quality family planning services. There is therefore, a need for the family planning service providers to intensify counseling on the fertility return after delivery and the risk for pregnancy.

Despite that menses return early in most study participants, the study found out that mothers delay the use of contraceptives yet 82.3% (n = 159) of the respondents resume sexual activity six (6) months after delivery. Other women reported to have started being sexually active 2 weeks after they had given birth. This defeats the purpose of family planning as women can get pregnant before they start using the methods and before the return of the menses. This has an implication in that many postpartum women can conceive again as early as at two months after delivery. This result agrees with Borda and Futures Group International (2009) who established that many (25%) of the

postpartum women in Malawi have menstrual cycles returned by four to six months of delivery. This also explains the high fertility rate for the district which remains at 6.1 (NSO, 2011). It is therefore, important that mothers and their spouses be counseled on the significance of using the contraceptive methods and the risks if FP is not practiced. Once again, the finding indicates the need for the FP providers at the hospital to be vigilant in offering PPFP services so that the mothers can start using the services earlier to prevent closely spaced births as they are at risk for closely spaced births.

Study limitations

The limitations of this study are threefold 1) since the study was conducted at a district hospital, it would not be possible for the results to be generalized to the whole district. As such, the magnitude of the problem in the district would not be measured. However, the strategies that were developed from this study can be replicated to all the health facilities in the district. Moreover, the use of women available at the hospital could mean that women with positive health seeking behaviour were used in the study. 2) The use of convenience sampling may lead to biased information but this was minimized by components of open ended questions. 3) The time for conducting the study was limited as it was tied up with the academic study calendar requirements to fulfill a Master's Degree in Sexual and Reproductive Health and Rights (SRHR).

Conclusion

There is ineffective use of the PPFP services at Ntchisi District Hospital. About 25% of the women do not use the services during the first year of delivery although this was better than the corresponding national statistics. About 72% of the women used the

services, although others started late in the year which puts many women at risk for unplanned pregnancies and childbirth. The factors leading to the ineffective use of the services are single mothers, respondents' level of education, normative beliefs (for example, desire to have many children), inadequate counselling of the mothers, and parity of the women. Influence of the subjective norms such as husbands and parents, past experience with the methods, duration of amenorrhoea and time of resumption of the sexual activity after delivery were major determinants for the use of the PPFp services by the postpartum mothers between six and twelve months of delivery. However, many postpartum mothers delayed the use of the services after they had delivered at the hospital.

The study findings above support the TRA in the sense that women needed clear and adequate knowledge for them to make rational decisions about PPFp services utilization. Furthermore, normative beliefs, subjective norms and past experiences with the FP methods influenced the women's decisions towards the services.

Summary of study findings and Recommendations

Study's major findings

Childbirth started early below the age of 18 years while others were grandmultiparas after 35 years of age. There were also other respondents who did not plan their pregnancies and births suggesting that these could become pregnant at any time with the concomitant risks of closely spaced or unwanted childbirths. Other women (9.8%) had delivered within 1-2 years of delivery. Although this was a smaller percentage, the women were at the risk of pregnancy related complications.

This study observed that husbands were the main decision makers in issues of reproductive health. About 92% of the respondents discussed with their husbands on the number of children to be born in their families. The majority of these women had approval from their husbands to use the modern contraceptive methods. Although husbands permitted their wives to use contraception, they offered little support to their wives regarding the use of PPFP services. Furthermore, only 14% of the respondents' husbands used condoms and none reported the use of vasectomy (male sterilization). The little support offered to women and inadequate use of family planning methods by spouses indicated the lack of male involvement in the PPFP services.

There was inadequate counselling of mothers at the hospital in relation to the PPFP services. This led to the non use of the PPFP services in 25.4% of the study respondents during the first year of childbirth. Though this seems to be a lesser percentage, the women are still at risk for pregnancy related complications and unwanted child bearing. The inadequate counseling also contributed to a delay in the initiation of the contraceptive methods for those women who used the services between 6 and 12 months of delivery yet 82.3% were sexually active by 6 months after delivery. However, the study also established that contraceptive use was determined by the duration of lactation amenorrhoea and the resumption of postpartum sexual activity.

The women lacked information on emergency contraception. Hence the emergency contraceptive pills (ECPs) were not used yet many women delayed the use of contraceptives in the first year of childbirth and were sexually active. Furthermore, lactational amenorrhoea method (LAM) was not known as a method of contraception by the women. As such breastfeeding was only considered a tradition. Other women were

deliberately not using contraception at the hospital. This was because they were pleasing their husbands by giving birth to more children with an aim of securing their marriages.

Recommendations from the above outlined study findings

The MCH in-charge in collaboration with the District Health Office (DHO) and the environmental health department should organize a campaign to sensitize the community on the consequences of early and late pregnancies in order to discourage the women from having early and late pregnancies. The Ministry of Health (2009) recommends that a woman should have the first pregnancy at the age of 18 years and that childbearing should stop at 35 years of age. Literature records show that pregnancies conceived before the age of 18 and after 35 years pose a risk for pregnancy related complications to both the mother and her infant (MOH, 2009; MOH & IntraHealth, 2010; WHO, 2006; USAID/ACCESS-FP, 2009).

There is a need therefore, that family planning providers target individuals and families with the information on healthy timing and spacing of pregnancies (HTSP). This will ensure that women and families should normally space their pregnancies and births. WHO (2006) gave a recommendation that a woman should wait for a period of 24 months before attempting another pregnancy.

The MOH should consider reviewing the sexual and reproductive health (SRH) policy to incorporate issues of male involvement in family planning. Moreover it is pertinent that the traditional leaders, in collaboration with the family planning providers, should establish strategies to make sure that men are involved in issues concerning the planning for their families. These may include holding public meetings with villagers and sensitize the males to accompany their wives when going for family planning

services, use of incentives where the village that is sending more couples for the services should be recognized with a gift. Also introduction of men to men peers could another important strategy to involve men in PPFP.

The above strategy worked in Malawi with an aim of involving men in maternal and neonatal health services as disclosed in a study by Kululanga, et al (2010). In addition, each traditional leader should identify men who are involved in the issues of family planning and these should be role models to other men in their respective communities. These should share their experiences with fellow men so that others can follow suit.

Family planning providers in collaboration with the MCH in-charge should consider appropriate organization and scheduling of postpartum health education and counselling to ensure that vital topics are covered for effective use of the PPFP services at the hospital. In addition, family planning providers at the hospital should intensify proper counseling of mothers so that they know the methods in detail including their side effects and what to do if these arise. Once again, the providers should make sure all family planning clients are properly screened using the medical eligibility criteria (MEC) to reduce the chances and severity of the side effects, thus improving the service utilization.

The Reproductive Health Unit (RHU) under the Malawi Ministry of Health (MOH) in collaboration with the District Health Management Team (DHMT) should consider training more family planning providers on the PPFP service provision. This will ensure increased utilization of the services. Moreover, the ministry should ensure that all health training institutions have incorporated the PPFP package in the training

modules as part of the contemporary issues in family planning service provision. This will help in equipping the newly trained staff with the necessary knowledge and skills in the PPFP service provision.

The family planning service providers should intensify the education on the lactation amenorrhoea method of family planning as this is the readily available method after a woman has given birth. This will help to make sure that pregnancies are prevented during the first half of the year after a woman has given birth.

The MCH in-charge and family planning should intensify education on emergency contraception. This will ensure that women are prevented from unwanted pregnancies since the study has revealed that women delay the use of contraceptives yet they resume sexual activity early after delivery. Needless to state that awareness campaign should also be considered in this endeavour.

The RHU should conduct a study to review the female condom programme as this is an entity within the family planning programme. There may also be need to review the policies of the programme and formulate new strategies for improvement. for instance, addition of more postnatal visits within the year a woman has given birth could be points where the women would be monitored regarding contraception use.

The RHU in collaboration with Traditional leaders and the Ministry of Gender and Child Development should empower women to enable them make their own informed decisions related to reproduction.

The DHO in collaboration with the RHU should carry out a research to examine the magnitude of unmet need for family planning among postpartum mothers for the

entire district. Furthermore, the study should focus on the factors that bar the use of the services. This will guide further studies as it will act as a basis for future references.

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APPENDICES

Appendix 1 (a): Information sheet

Introduction and purpose

My name is Chrissy V. Bwazi. Currently, I am a student at Kamuzu College of nursing (one of constituent colleges of the University of Malawi), pursuing a Masters Degree in Reproductive Health. As part of course requirement, I am carrying out a study on ‘utilization of family planning services by postpartum mothers’ in Ntchisi district. The study will be conducted at the district hospital. The study aims at examining the factors that have influence on the utilization of postpartum family planning services by women who have given birth within six months to one year in the district.

The results from this study will be used to improve postpartum family planning service delivery thus improving lives of mothers and their children in the district. This in turn will improve health status of Ntchisi population as a whole. Since the results of the study will be disseminated nationwide, they will also help to improve lives of Malawian people as a whole. I will explain the risks, benefits and rights to you so that you understand the process before you participate including my expectations from you. I invite you to participate in this study because you have a child within 6 months to one year of age. Your participation will be of great importance as it will provide reliable data so that at the end, a true picture of the district is analyzed and solutions are sought.

Procedure

I have formulated questions that will be used to guide data collection for the study. I or my research assistant will read the questions one by one and you are asked to

give answers to these questions. After you have given your response, I or my assistant will write the answer in the appropriate box or space on the questionnaire. You will not be forced to respond to a question you do not want to, this is to ensure that you give the information at your own free will and not being forced.

Rights

After you have been understood about the study and you have decided to take part in it, I will ask you to sign a consent form to make sure that your participation in the study is voluntary without being coerced. You are free to refuse or withdraw from the study at any point you feel like doing so as it is your right either to withhold information or pass it on to the researcher. I assure you that your refusal or withdraw from the study will not affect your care by the facility. I will ensure confidentiality of whatever information you disclose to me by not indicating your name(s) on the questionnaires instead, numbers will be used. Furthermore, I will keep the information gained under lock and key in a cupboard. The information will be available only for me and my research supervisor. Publications from this study will not bear your name to ensure confidentiality. I will also ensure privacy (both audio and visual) during the process so that all information is held in confidence. I allow you to ask any question or seeking for clarifications.

Risks and Benefits

There will be no physical risks. The only risk that is I anticipated is psychological stress since you will be required to respond to sensitive questions concerning

reproduction. It will take 20 minutes to go through the questionnaire. As such, I will provide you with refreshments for energy.

For more information or questions please contact:

Chrissy V. Bwazi

OR

The COMREC Chairperson

Kamuzu College of Nursing, Box 415, Blantyre

Prof. Mfutso-Bengo

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**Appendix 1 (b): KALATA YOFOTOKOZERA WOTENGAPO MBALI
MUKAFUKUFUKU**

Mawu oyamba ndi kufunika kwa kafukufuku ameneyu

Dzina langa ndine Chrissy V. Bwazi. Ndine m'modzi mwa ophunzira za unamwino ku sukulu ya ukachenje ya Kamuzu College of Nursing. Ndikuchita kafukufuku wa kagwiritsidwe ntchito kanjira zakulera m'boma lino la Ntchisi kwa amayi omwe ali ndi ana kuyambira miyezi isanu ndi umodzi (6) mpaka chaka chimodzi. Kafukufukuyu achitikira pa chipatala cha boma chachikulu chantchisi. Cholinga cha kafukufuku ameneyu ndikufuna kupeza zinthu zomwe zimachititsa kuti amayi azigwiritsa ntchito thandizo lomwe limaperekedwa lokhudzana ndi njira zolera.

Zotsatira za kafukufukuyu zidzathandiza kupititsa patsogolo chithandizo chomwe chimaperekedwa kwa amayi omwe ali ndi ana aang'ono kuti miyoyo yawo ikhale yathanzi m'boma lino la Ntchisi. Komaso poti zotsatirazi zidzatumizidwa kuunduna wa zaumoyo ndi maboma ena m'dziko lino la Malawi, amayi ambiri adzathandizidwa bwino lomwe koterokuti miyoyo yawoso idzapita patsogolo.

Zochitika kuti mutenge nawo mbali mukafukufukuyu ndi ufulu wanu

Mukupemphedwa kutenga nawo mbali mukafukufukuyu poti muli ndi mwana wa miyezi isanu ndi umodzi (6) mpaka chaka chimodzi chakubadwa. Muli ndi ufulu wovomera kapena kukana kutengapo mbaliyi malingana ndi kusankha kwanu. Kukana kutengapo mbali mukafukufukuyu sikusinthachithandizo chanu pa chipatala chino cha Ntchisi. Ngati muvomera kutenga nawo mbali, ndikupemphani kuti mulembe ndi kusayini dzina

lanu m'chikalata chosonyeza kuti mwasankha nokha kutengapo mbali mkafukufukuyu, opanda kuumirizidwa. Mukatha kulemba ndikusayinaku, ndikufunsani mafuso ndipo mayankho ake ndizilemba pa chikalata cha mafusochi. Muli omasuka kufusa mafuso pamene simunamvetse munthawi imene mukuyankha mafusowa. Muliso ndi ufulu kusiira panjira ngakhale mutayamba kale kuyankha mafuso ena. Sindilemba dzina lanu paliponse pofuna kuwonetsetsa kuti chinsisi chanu chasungidwa. Zonse zomwe mwayankha zikasungudwa mwachisisi ndipo zotsatira sizidzakhala ndi mayina. Tidzawonetsetsa kuti pasadzakhale anthu ena pamene mukuyankha mafusowa kuti zokambirana zathu zidzakhale zachisisi.

Zovuta ndi cholowa chimene chingakhale potenga nawo mbali mkafukufukuyu

Palibe chovuta chimene muchiyembekezere kukumana nacho kuthupi lanu: koma mwina mafuso ena okhudzana ndi nkhani za ubereki zomwe zikhoza kukhala zokudandaulitsani. Popeza zidzakutengerani pafupi mphindi makumi awiri (20 minutes) kuti mafunso onse athe kuyankhidwa, mudzapatsidwa chakumwa choziziritisa kukhosi kuti muwonjezere mphamvu m'thupi. Ngati muli ndi mafunso kapena mwakumana ndi zovuta zili zonse zokhudzana ndi kafukufukuyu, mukhoza kuyimba lamya (foni) kapena kulemba kalata kwa:

Chrissy V. Bwazi
Kamuzu College of Nursing, P. O. Box 415, Blantyre.
Cel: 08 88 384 132 / 09 99 465 745. E-mail: chrissybwazi@yahoo.com

KAPENA

The COMREC Chairperson
Prof. Mfutso-Bengo, College of Medicine,
Private Bag 360, Blantyre.
Tel. 01 871 911

Appendix 2 (a): Consent form

I..... have understood all the information about the research on factors affecting utilization of family planning services by women at Ntchisi district hospital. I have agreed with the risks and benefits of the study. I have understood that I have the right to hold information I do not want to disclose and that I can withdraw from the study at anytime as I wish. My participation in this study is voluntary and has not being coerced.

Signature of participant.....

Signature.....

Thumb print of participant.....
(If participant cannot write)

Date.....

Name of Data Collector.....

Signature.....

Date.....

**Appendix 2 (b): KALATA WOVOMEREZA KUTENGAPO MBALI
MKAFUKUFUKU**

Inendamvetsetsa za kafukufuku woona za
kagwiritsidwe ntchito ka chithandizo cha zakulera m'bomalino lino la Ntchisi.

Ndamvetsetsa za zovuta zomwe zingakhalepo komaso cholowa chimene ndingachipeze
potenga nawo mbali mukafukufukuyu. Mwandilongosolera momveka bwino lomwe
ndipo ndinapatsidwa mpata wofunsa mafunso. Ndasankha mwaufulu ndi
mosaumilizidwa kutengapo mbali mkafukufukuyu.

Dzina la wotenga nawo mbali mkafukufuku.....

Sayini

Chidindo cha chala cha wotenga nawo mbali.....

Tsiku

Dzina la wofusa mafuso.....

Sayini ya wofusa mafusa mafunso.....

Tsiku.....

Appendix 3(a): Questionnaire

Respondent's identification number:.....

PART A: Demographic data. Please tick in the appropriate boxes provided.

1. Age of respondent

- a) 15-19 years ☐
- b) 20-24 years ☐
- c) 25-34 years ☐
- d) 35 years and above ☐

2. Marital status of the respondent

- a) Married ☐
- b) Single ☐
- c) Divorced ☐
- d) Widowed ☐

3. Level of education of the respondents

- a) No education ☐
- b) Primary ☐
- c) Secondary ☐
- d) Tertiary ☐

4. Number of pregnancies

- a) 1 – 4 ☐
- b) 5 – 8 ☐
- c) 9 and above ☐

5. Number of living children

- a) 1 – 4 ☐
- b) 5 – 8 ☐
- c) 9 and above ☐

6. Number of miscarriages/abortions

- a) 1 -2 ☐
- b) 3 – 4 ☐
- c) 5 and above ☐

7. Age of last child

- a) 1 -2 ☐
- b) 3 – 4 ☐
- c) 5 and above ☐

8. When do you intend to have another child?

- a) Within 2 years ☐
- b) Within 3 years ☐
- c) Within 4 years ☐
- d) Within 5 years ☐

9. How many children do you intend to have in life?

- a) 1 – 4 ☐
- b) 5 – 8 ☐
- c) 9 and above ☐

10. Have you ever discussed with your husband on how many children he is willing to have?

Yes ☐ No ☐

If yes, how many children does your husband prefer to have?

- a) 1 – 4 ☐
- b) 5 – 8 ☐
- c) 9 and above ☐

If “No”, why?

.....

.....

.....

PART B TO E: Read the questions below and either tick the appropriate answer or fill in the boxes provided below:

PART B: Knowledge of postpartum family planning (PPFP) services

11. Are you aware of family planning methods that are available at the clinic for postpartum mothers within the first year of delivery?

Yes ☐ No ☐

If yes, which are these methods?

- a) Lactation Amenorrhoea Method ☐
- b) Progestin Only Pill ☐
- c) Combined Oral Contraceptive pill ☐
- d) Intrauterine Contraceptive Device ☐
- e) Injectable contraception (DMPA) ☐
- f) Implants ☐
- g) Male condoms ☐
- h) Female condoms ☐
- i) Natural family planning methods ☐
- j) Standard Days Method ☐
- k) Tubal Ligation ☐
- l) Vasectomy ☐
- m) Emergency Contraception ☐

Other, please specify

.....
.....

12. Are you currently using any method of contraception since the delivery of your last born child to delay or avoid getting pregnant?

Yes ☐ No ☐

If "No", why?

.....
.....

If "Yes", which method(s) are you currently using?

- a) Lactation Amenorrhoea Method ☐
- b) Progestin Only Pill ☐
- c) Combined Oral Contraceptive pill ☐
- d) Intrauterine Contraceptive Device ☐
- e) Injectable contraception (DMPA) ☐

- f) Implants ☐
- g) Male condoms ☐
- h) Female condoms ☐
- i) Natural family planning methods ☐
- j) Standard Days Method ☐
- k) Tubal Ligation ☐
- l) Vasectomy ☐
- m) Emergency Contraception ☐

Other, please specify

.....

.....

13. Where did you receive education about family planning services before delivery of last child (please check location)

- a) Antenatal clinic ☐
- b) Family planning clinic ☐
- c) During home visits by providers ☐
- d) Other, please specify

.....

.....

14. Where did you receive education about family planning services after delivery of last child (please check location).

- a) Labour and delivery room ☐
- b) Postnatal ward ☐
- c) Expanded programme on immunization visit ☐
- d) Home visit ☐
- e) Well baby visits ☐

Other, specify

.....

.....

15. What information about family planning was covered during your postpartum counselling? (Check all that apply)

- a) Return to fertility ☐
- b) Fertility intentions ☐

- c) Health timing and spacing of pregnancies ☐
- d) Exclusive breastfeeding ☐
- e) Lactation Amenorrhoea Method ☐
- f) Transition from LAM to other modern methods of family planning ☐
- g) All family planning methods appropriate to fertility regulation ☐

Other, specify

.....

16. Was the information clear?

Yes ☐

No ☐

PART C: Normative beliefs of the respondent on PPFP services

17. Do you belong to any denomination?

Yes ☐

No ☐

If yes, to which denomination do you belong?

.....

18. Does your denomination allow you to use modern family planning methods to limit your family?

Yes ☐

No ☐

19. Does your traditional culture allow you to use family planning services?

Yes ☐

No ☐

20. Do people in your village use modern methods of family planning?

Yes ☐

No ☐

PART D: Subjective norms' influence on PPFP services

21. Who influences your decisions about family planning practice?

a) Uncle ☐

b) Friends ☐

- c) Parents ☐
- d) In-law ☐

Other, please specify.....

22. Does your husband support you in issues related to family planning services?

Yes ☐ No ☐

If “no”, skip to question 24.

23. How best does your husband assist you regarding the use of family planning services?

- a) Supporting through provision of transport ☐
- b) Reminding on dates of appointment ☐
- c) Gives items or finances ☐
- d) Use of condoms ☐

Any other (specify).....

24. Whose opinion is important in your family concerning issues of reproduction?

- a) Uncle ☐
- b) Friends ☐
- c) Parents ☐
- d) In-law ☐

Other (specify)

PART E: Past behaviour and habits

25. Have you ever used any modern method of contraception within the past five (5) years?

Yes ☐ No ☐

If “No”, why?

.....
.....

If yes, what method(s) of contraception did you use?

- a) Lactation Amenorrhoea Method ☐
- b) Progestin Only Pill ☐
- c) Combined Oral Contraceptive pill ☐
- d) Intrauterine Contraceptive Device ☐
- e) Injectable contraception (DMPA) ☐
- f) Implants ☐
- g) Male condoms ☐
- h) Female condoms ☐
- i) Natural family planning methods ☐
- j) Standard Days Method ☐
- k) Tubal Ligation ☐
- l) Vasectomy ☐
- m) Emergency Contraception ☐

26. Did you experience any problem(s) with the method(s)?

Yes ☐ No ☐

If "Yes", what was the problem(s)?

.....

.....

27. At what age of the last child did you start using the family planning method above?

- a) 6 weeks to 3 months ☐
- b) 4 to 6 months ☐
- c) 7 to 9 months ☐
- d) 10 to 12 months ☐

Other (please specify).....

28. For how long do you have lactational amenorrhoea after you have given birth?

- a) 6 weeks to 3 months ☐
- b) 4 to 6 months ☐
- c) 7 to 9 months ☐
- d) 10 to 12 months ☐

Other (please specify).....

29. Have you resumed sexual activity since the birth of your child?

Yes ☐

No ☐

30. At what age of your child did you resume sexual intercourse?

a) 6 weeks – 3 months ☐

b) 4 – 6 months ☐

c) 7 – 9 months ☐

d) 10 – 12 months ☐

e) More than 12 months ☐

Appendix 3(b) KALATA YA MAFUSO A KAFUKUFUKU

Nambala ya kafukufuku _____

GAWO LOYAMBA: Mbiri ya woyankha mafuso

1. Zaka za woyankha mafunso

- a) 15-19 ☐
- b) 20-24 ☐
- c) 25-34 ☐
- d) 35 ndi kuposera ☐

2. Za moyo wa pabanja

- a) Ndiwokwatiwa ☐
- b) Aliwokha ☐
- c) Banja linatha ☐
- d) Mwamuna anamwalira ☐

3. Maphunziro a woyanhka mafuso

- a) Sanapite kusukulu ☐
- b) Pulayimale ☐
- c) Sekondale ☐
- d) Maphunziro a pamwamba ☐

4. Munayimapo mimba zingati pamoyo wanu wonse?

- a) 1 – 4 ☐
- b) 5 – 8 ☐
- c) 9 ndi kuposela ☐

5. Ana a moyo alipo angati?

- a) 1 – 4 ☐
- b) 5 – 8 ☐
- c) 9 ndi kuposela ☐

6. Zinachokapo mimba zingati pamoyo wanu?

a) 1 – 2

b) 3 – 4

c) 5 ndi kuposela

7. Mwana wanu wotsiriza ali ndi zaka zingati?

a) Zaka 1 – 2

b) Zaka 3 – 4

c) Zaka 5 ndi kuposela

8. Mufuna kuti mwana wina adzabadwe liti?

a) m'mzaka ziwiri

b) m'mzaka zitatu

c) m'mzaka zinayi

d) m'mzaka zisanu ndi kuposela

9. Mumafuna mutabereka ana angati m'moyo mwanu?

a) 1 – 4

b) 5 – 8

c) 9 ndi kuposela

10. Kodi munakambiranapo ndi amuna anu kuti mudziwe nambala ya wana omwe iwo angasangalatsidwe kukhala nayo?

a) Inde

b) Ayi

Ngati “inde”, amafuna ana angati?

a) 1 – 4

b) 5 – 8

c) 9 ndi kuposela

Ngati ayi, chifukwa chiyani?

.....
.....
.....

Gawo lachiwiri mpaka lachisanu; werengani mafuso ndi kuchonga mtimabokosi kapena kulemba yankho m'malo operekedwa woperekedwawo

GAWO LACHIWIRI: kudziwa kwanu pa za zithandizo za njira za kulera

11. Kodi mukuzidziwa njira zolerera za makono zomwe zikupezeka kuchipatala chanu?

Inde ☐

Ayi ☐

Ngati “inde” ndinjira iti?

- a) Kuyamwitsa mwakathithi ☐
- b) Mapiritsi a mphamvu imodzi ☐
- c) Mapiritsi amphamvu ziwiri ☐
- d) Lupu ☐
- e) Jakisoni wolera ☐
- f) Noropulanti ☐
- g) Mpira wa abambo ☐
- h) Mpira wa amayi ☐
- i) Njira zolerera zachilengedwe ☐
- j) Mkanda wolerera ☐
- k) Kutseka amayi ☐
- l) Kutseka abambo ☐

m) Njira zina

(tchulani).....

12. Kodi mukugwiritsa ntchito njira yolerera iriyonse chiberekereni cha mwana wanu wa mng'onoyu?

a) Inde ☐

b) Ayi ☐

c) Ngati “ayi”chifukwa chiani?

.....
.....

Ngati “inde”, mukugwiritsa njira yanji?

- a) Kuyamwitsa mwakathithi ☐
- b) Mapiritsi a mphamvu imodzi ☐
- c) Mapiritsi amphamvu ziwiri ☐
- d) Lupu ☐
- e) Jakisoni wolera ☐
- f) Noropulanti ☐
- g) Mpira wa abambo ☐
- h) Mpira wa amayi ☐
- i) Njira zolerera zachilengedwe ☐
- j) Mkanda wolerera ☐

- k) Kutseka amayi ☐
- l) Kutseka abambo ☐

Njira zina (tchulani)

.....

.....

13. Ndi malo oti komwe munalandirira utenga wa kulera musanabadwitse mwana wanu womaliza?

- a) Sikelo yamimba ☐
- b) Sikelo yolera ☐
- c) Kuyenderedwa pakhomo ☐
- d) Malo ena (tchulani).....

14. Ndi malo oti komwe munalandirira uthenga wa kulera mutabereka mwana wanu wamng'onoyu?

- a) Mchipinda choberekera ☐
- b) Chipinda cha amayi obereka kumene ☐
- c) Nthawi yoyenderedwa kumudzi ndi alangizi a zakulera ☐
- d) Malo ena (tchulani).....

15. Ndi uthenga wanji wokhudzana ndi zakulera yomwe munaphunzitsidwa?

- a) Kubwereranso kwa msambo ☐
- b) Nambala yauchembere ☐
- c) Kutalikitsa uchembere kwa thanzi ☐
- d) Kuyamwitsa mwakathiti ☐
- e) kusiya kulera kwa kuyamwitsa ndi kuyamba njira zamakono zolerera. ☐
- f) Kutengela mwana kumphasu ☐
- g) Njira zamakono zolerera ☐

Uthenga wina, (utchuleni)

.....

.....

.....

.....

16. Uthenga womwe munaphunzitsidwa wokhudzana ndi zolerawo unali woveka bwino?

- a) Inde ☐
- b) Ayi ☐

GAWO LACHITATU: Mphavu ya zikhulupiriro pa kagwiritsidwe ntchito ka njira za kulera

17. Mumapemphera ku mpingo wina uli wonse?

- a) Inde ☐ b) Ayi ☐

Ngati yankho lanu ndi “inde” mumapemphera mpingo wanji?

.....

18. Kodi mpingo wanu umakuvomerezani kugwiritsa ntchito njira zamakono zolerera?

- a) Inde ☐ b) Ayi ☐

19. Nanga chikhalidwe chanu chimakulolani kugwiritsa ntchito njira zolera?

- a) Inde ☐ b) Ayi ☐

20. Nanga anthu a m'mudzi mwanu amagwiritsa ntchito njira zamakono zolerera?

- a) Inde ☐ b) Ayi ☐

GAWO LACHINAYI: Mphamvu za anthu ena pakagwiritsidwe ntchito ka zithandizo zakulera

21. Ndi ndani yemwe amakupangitsani kuti mugwiritsire kapena muasgwiritse ntchito njira zakulera?

- a) Atsibweni ☐
b) Abwenzi ☐
c) Makolo ☐
d) Alamu ☐

Ena, (atchuleni)

.....
.....

22. Kodi amuna anu amagwirizana nanu kuti muzigwiritsira ntchito njira zolerera?

- a) Inde ☐ b) Ayi ☐

Ngati yankho lanu ndi “ayi”, pitani ku funso nambala 24.

23. Mwamuna wanu amathandizapo motani pa nkhani ya kagwiritsidwe ntchito ka njira zakulera?

- a) Amapereka mayendedwe ☐
- b) Kukumbutsa masiku okatengaso chithandizo cholera ☐
- c) Amapereka chithandizo kapena ndalama ☐
- d) Amagwiritsa ntchito makondomu ☐

Zina (tchulani)

24. Ndi ndani amene amakhala ndi ulamuliro pankhani zauchembere m'yumba mwanu?

- a) atsibweni ☐
- b) abwezi ☐
- c) makolo ☐
- d) alamu ☐

Ena (atchuleni).....

GAWO LACHISANU: Za mbiri yogwiritsapo ntchito njira zamakono zolerera

25. Munagwiritsirapo ntchito njira zamakono zolerera zaka zisanu (5) zapitazi?

- a) Inde ☐
- b) Ayi ☐

Ngati ayi, chifukwa chiyani?

.....

.....

Ngati yankho ndi “Inde”, munagwiritsapo njira ziti?

- a) Kuyamwitsa mwakathithi ☐
- b) Mapiritsi a mphamvu imodzi ☐
- c) Mapiritsi amphamvu ziwiri ☐
- d) Lupu ☐
- e) Jakisoni wolera ☐
- f) Noropulanti ☐
- g) Mpira wa abambo ☐
- h) Mpira wa amayi ☐
- i) Njira zolerera zachilengedwe ☐
- j) Mkanda wolerera ☐

- k) Kutseka amayi ☐
l) Kutseka abambo ☐

26. Kodi munapeza mavuto aliwonse okhudzana ndi njira yolerera yomwe munagwiritsapo ntchito?

- a) Inde ☐ b) Ayi ☐

Ngati yankho lanu ndi “Inde”, ndi mavuto yanji amene munakumana nawo?

.....
.....

27. Munayamba kugwiritsa ntchito njira zolera mwana wanu wang’ono ali ndi miyezi ingati?

- a) Pakati pa masabata 6 ndi miyezi 3 ☐
b) Miyezi 4 mpaka 6 ☐
c) Miyezi 7 mpaka 9 ☐
d) Miyezi 10 mpaka 12 ☐
e) Miyezi 13 ndi kuposela ☐

28. Ana anu mumawasambira ali ndi miyezi kapena zaka zingati?

- a) Pakati pa masabata 6 ndi miyezi 3 ☐
b) Miyezi 4 mpaka 6 ☐
c) Miyezi 7 mpaka 9 ☐
d) Miyezi 10 mpaka 12 ☐
e) Miyezi 13 ndi kuposela ☐

29. Mwayambapo kugonana chibadwireni cha mwanayu?

- a) Inde ☐ b) Ayi ☐

30. Munayamba kugonana mwana wanu ali ndi miyezi zingati?

- a) Pakati pa masabata 6 ndi miyezi 3 ☐
b) Miyezi 4 mpaka 6 ☐
c) Miyezi 7 mpaka 9 ☐
d) Miyezi 10 mpaka 12 ☐
e) Miyezi 13 ndi kuposela ☐

Appendix 4

University of Malawi
Kamuzu College of Nursing
Blantyre Campus
P. O Box, 415
Blantyre.

29th January, 2011

The District Health Officer
Ntchisi District Hospital
P. O Box 44
Ntchisi.

Through: The Research Supervisor
Dr A. Chimwaza
Kamuzu College of Nursing
Blantyre Campus
P.O Box, 415
Blantyre.

Dear, Sir/Madam,

**REQUEST FOR PERMISSION TO USE NTCHISI DISTRICT HOSPITAL AS A
RESEARCH SITE**

I am a student at Kamuzu College of Nursing currently pursuing Masters of Science Degree Programme in Reproductive Health and am in the final year. As a requirement of the programme, I am supposed to conduct a research in any area related to reproductive health. This letter, therefore, seeks to request for your permission to conduct a research on “Factors affecting utilization of postpartum family planning services by mothers within one year after delivery in Ntchisi district”.

College of Medicine Research and Ethical Committee (COMREC) await your acceptance to approve my proposal.

Yours faithfully,

CHRISSY V. BWAZI

(MSc RH – KCN student)

Cc: The DNO, Box 44, Ntchisi.

TELEFAX: 01 285 286
TELEPHONE: 01 285 264 / 297
Cell: 0991 674 297/0888 763 924
chirambowebsterdr@yahoo.com



In reply please quote NTS/ADMIN/...
**THE DISTRICT HEALTH OFFICER,
NTCHISI DISTRICT HOSPITAL,
P.O. BOX 44
NTCHISI,
MALAWI
30th January, 2011**

COMMUNICATIONS TO BE ADDRESSED TO:
THE DISTRICT HEALTH OFFICER

Dear Mrs Bwazi,

RE: AUTHORITY TO CARRY OUT RESEARCH PROJECT

Reference to your letter dated 29th January, 2010, in which you requested the above-mentioned office if you could carry out a research project at Ntchisi District Hospital on "*Factors affecting utilization of postpartum services in Ntchisi*"; authority is hereby granted. However, you are advised that you should carry out only those activities that are requested in your research proposal. Any activity that is outside the proposal will not be accepted. You are also supposed to carry out the research project only during the requested period of time. For further information, contact the undersigned on the above-mentioned postal address or chirambowebsterdr@yahoo.com or 0888 763 924. Wish you good luck.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'W.A.M Chirambo'.

Dr W.A.M Chirambo

District Health Officer

Copy: The Chairperson. COMREC, College of Medicine, P/Bag 360, Blantyre.

: DNO, Ntchisi District Health Office, Box 44, Ntchisi.



UNIVERSITY OF MALAWI
KAMUZU COLLEGE OF NURSING

PRINCIPAL
A MALATA, DIP NURS, MRM
B.Sc, MN, PhD

P.O. BOX 415, BLANTYRE, MALAWI
TELEPHONE: + 265 1 873 623
FAX : + 265 1 875 341
TELEGRAMS: NURSING
EMAIL : viceprincipal@kcn.unima.mw

28th February 2011

TO WHOM IT MAY CONCERN

LETTER OF SUPPORT FOR RESEARCH: MRS C BWAZI

Mrs C Bwazi is doing a study on post partum family in partial fulfillment for her masters degree in Reproductive health. This study is approved by the College. The results of the study will add valuable information that will improve postpartum family planning services in Ntchisi.

Dr A Chimwaza

Dr A Chimwaza

DEAN OF POSTGRADUATE STUDIES AND RESEARCH



UNIVERSITY OF MALAWI

Principal

K.M Maleta, MBBS PhD

Our Ref.:

Your Ref.: P.03/11/1047

College of Medicine

Private Bag 360

Chichiri

Blantyre 3

Malawi

Telephone: 01 877 245

01 877 291

Fax: 01 874 700

Email: comrec@medcol.mw

12th May 2011

Mrs. C. Bwazi

KCN

P.O Box 415

Chichiri

Blantyre 3

Dear Mrs. Bwazi

RE: P.03/11/1047 – Factors Affecting Utilization of Postpartum Family Planning Services within 6-12 months of Delivery at Ntchisi District Hospital Version 2 dated April 2011

I write to inform you that COMREC reviewed the above mentioned proposal which you resubmitted for expedited review and I am pleased to inform you that COMREC **approved** your proposal but you need to take into consideration the following factor:

- On page 1 under type of study maintain the statement "This is a cross sectional design utilizing quantitative methodology." The rest of the words in italics "with component of open ended questions which will be quantified during data analysis." does not make sense and brings in some controversies and should just be deleted. Would you therefore, submit an amended protocol for our file?

As you proceed with the implementation of your study I would like you to take note that all requirements by the college are followed as indicated on the attached page.

Yours Sincerely,

Dr. W. Mandala

For: CHAIRMAN - COMREC

WM/ck

