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Knowledge, Attitudes, and Practice of Married Men toward Family Planning in Mpigi District, Central Uganda

by

Angela Kanana Kaida 

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Science

in

Medical Sciences – Public Health Sciences

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled *Knowledge, Attitudes, and Practice of Married Men toward Family Planning in Mpigi District, Central Uganda* submitted by Angela K. Kaida in partial fulfillment of the requirements for the degree of Master of Science in Medical Sciences – Public Health Sciences

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5 - JANUARY - 2001

Date of Thesis Approval by Committee Members

I would like to dedicate this work

to Anthony.

Thank you for sharing this journey with me.

Kidole kimoja hakiui chawa. Ninakupenda.

And to my parents,

June and Larry Kaida.

Thank you for your love, support, and incredible sense of humour.

ABSTRACT

Through an examination of data collected from married men in Mpigi District, central Uganda, this study addressed the following overall objectives: (1) assess Knowledge, Attitudes, and Practice (KAP) toward family planning; (2) identify factors that accurately predict use of modern contraceptive methods; (3) identify barriers that may prevent men from using family planning. Complementary quantitative and qualitative techniques were used to address the objectives. An interviewer-administered questionnaire was given to married men (aged 18-54 years) from two sub-counties in Mpigi District (n=395). Complementary key informant interviews and focus group discussions were conducted. Logistic regression analysis and a content analysis of qualitative data were performed. Findings suggest that men were generally knowledgeable about and approved of family planning (FP). Furthermore, men played an important role in the decision to use and actual use of FP. This suggests that male involvement in FP and FP programs is important and necessary to increase contraceptive use in Mpigi District. Recommendations are offered regarding means by which male involvement can be encouraged.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
CBDA	Community Based Distribution Agent
CHW	Community Health Worker
CP	Contraceptive Prevalence
DHMT	District Health Management Team
DHS	Demographic and Health Survey
FGD	Focus Group Discussion
FP	Family Planning
ICPD	International Conference on Population and Development
IPPF	International Planned Parenthood Federation
IUD	Intrauterine Device
HIV	Human Immuno-deficiency Virus
LC1	Local Council 1
LC5	Local Council 5
KAP	Knowledge, Attitudes, and Practice
MHC	Mpigi Health Centre
MoFEP	Ministry of Finance and Economic Planning
MOH	Ministry of Health
NRM	National Resistance Movement
PI	Principal Investigator
RA	Research Assistant
STD	Sexually Transmitted Disease
UDHS	Uganda Demographic and Health Survey
UNDP	United Nations Development Programme
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
WFS	World Fertility Survey
WHO	World Health Organisation
WTO	World Trade Organisation

OPERATIONAL DEFINITIONS

Adult male – A man 18 years of age or above having the right to marry and to found a family (Constitution of Uganda, 1995).

Condoms – Condoms are thin sheaths, usually made out of latex, which are placed over the penis. Condoms act as a physical barrier, preventing semen from entering the woman. Condoms are the only available temporary male modern contraceptive method (Warner and Hatcher, 1998).

Contraceptive/Family Planning Methods – Methods used by a woman or a man to prevent and/or control births.

Contraceptive Prevalence – The percentage of currently married women of reproductive age (15- 49 years) who are using a contraceptive method (MoFEP, 1996).

Current User – An individual who is currently using, himself or his wife, a modern contraceptive method. Also referred to as "User".

Current Non-User – An individual who is not currently using, himself nor his wife, a modern contraceptive method. Also referred to as "Non-User".

Diaphragms/Foams/Jellies – Diaphragms are a form of female barrier contraceptive method that is inserted into the vagina and covers the cervix. It functions by preventing semen from entering the woman's cervix, thereby preventing fertilisation. Foams and jellies are spermicidal preparations used to kill sperm. They can be used alone, with female barrier methods like diaphragms, or with condoms (Cates and Raymond, 1998; Stewart, 1998).

Family planning – Any action taken by individuals or couples to assure the desired number and spacing of children (WHO Expert Committee, 1971).

Female Sterilisation (Tubal ligation) – A surgical, permanent procedure performed on women which involves mechanically blocking the fallopian tubes to prevent the sperm and the egg from uniting (Stewart and Carignan, 1998).

Injections - Injections are a temporary, female modern contraceptive method. Similar to oral contraceptives, injections work primarily by inhibiting ovulation. Depo-Provera is the most commonly used injectable contraceptive (Hatcher, 1998).

IUD (Intrauterine Device) – The IUD is a temporary, female modern contraceptive method. It works primarily by altering the biochemical composition of the uterus, interrupting tubal and uterine transport, and thus preventing sperm from fertilising ova (Stewart, 1998).

Male Sterilisation (Vasectomy) – A surgical, permanent procedure performed on men whereby each vas deferens (the tube carrying sperm from the testes to the urethra) is severed. Sperm continues to be produced as before, however, because each vas deferens is blocked, the sperm is unable to pass into the ejaculate (Stewart and Carignan, 1998).

Married - A man and woman living together in the same household and regarding themselves as married, whether or not there has been any traditional, religious, or civil acknowledgement or ceremony (MoFEP, 1992).

Modern Contraceptive Methods – Contraceptive methods that depend on the use of products, devices, or surgery. Includes pills, IUDs, injections, condoms, vaginal methods (diaphragms, foams, and jellies) and voluntary male or female sterilisation (MoFEP, 1992).

Natural Methods – Natural methods include a variety of herbal, folk, or other traditional methods used to prevent pregnancy.

Oral Contraceptives (the Pill) – Oral contraceptives are a temporary, female modern contraceptive method. They come in the form of pills (essentially a combination of estrogen and progestin) that prevent pregnancy primarily by suppressing ovulation (Hatcher and Guillebaud, 1998).

Periodic Abstinence –Periodic abstinence involves avoiding sexual intercourse during the fertile period of a woman's menstrual cycle (Gallen et al, 1986). Other terms used to describe periodic abstinence include Safe Days, Counting Days, and Calendar Method.

Traditional Family Planning Methods – Contraceptive methods not depending on the use of products or devises. E.g., periodic abstinence and withdrawal. Also known as Natural methods (MoFEP, 1992).

Withdrawal (*Coitus Interruptus*)– Withdrawal is a method whereby a couple engages in sexual intercourse until ejaculation is impending. At this stage, the man withdraws his penis from the woman's vagina and ejaculation occurs completely away from her vagina and external genitalia (Kowal, 1998).

CHAPTER 1
INTRODUCTION

Rapid population growth, which often outpaces economic growth and environmental sustainability, is a reality in most developing countries of sub-Saharan Africa. Since the early 1980s, population growth rates in this region have remained at high levels, and contraceptive prevalence levels in many countries have remained under 15% (World Bank, 1993a; UNDP, 1992).

High rates of maternal and child mortality are often associated with rapid population growth. Early and frequent childbearing means that 1 in 15 women in Africa dies from reasons related to pregnancy, odds over 200 times greater than those faced by women in Canada (Rosen and Conly, 1998). Moreover, one in six African children does not live to see his or her fifth birthday (UNDP, 1992).

Fertility regulation, through the use of family planning, has been shown to be an effective means of slowing population growth rates, which is essential in order to achieve a sustainable balance between socio-economic development and availability of resources. Furthermore, because family planning helps couples avoid high-risk pregnancies, the World Bank considers it to be one of the most cost-effective programs for preventing maternal and filial deaths (Measham and Rochat, 1988).

1.1 Definition of Family Planning

According to the World Health Organisation (WHO), family planning refers to those practices that help individuals or couples avoid unwanted births, bring about wanted births, regulate the intervals between and timing of pregnancies (i.e., child spacing), and determine the number of children in a family (WHO Expert Committee, 1971). Family planning is a fertility regulation approach that is adopted voluntarily by individuals and couples, in order to promote both personal and family health and well-being. According to a resolution of the Twenty-first World Health Assembly:

> Family planning is viewed by many Member States as an important component of basic health services, particularly of maternal and child health, and in the promotion of family health, and plays a role in social and economic development;...every family should have the opportunity of obtaining information and advice on problems

connected with family planning, including fertility and sterility (WHO Study Group, 1971).

1.2 Benefits of Family Planning

The literature contains an abundance of evidence to suggest that declines in fertility accompany reduced maternal and infant morbidity and mortality rates, slower population growth rates, and promote sustainable socio-economic development.

In the context of public health and international health programming, family planning as a means of reducing fertility, constitutes a vital preventive measure for morbidity and premature mortality. It is well established that a large family size, high parity, pregnancy at under 18 or over 35 years of age, short intervals between pregnancies, and abrupt weaning are linked to varying degrees of morbidity and mortality for mother, child, and other family members (WHO Expert Committee, 1971). As women bear fewer children their overall exposure to pregnancy-related risks decreases, thus decreasing their chances of dying. It is estimated that an increase in the use of family planning, could decrease maternal morbidity and prevent 1/4 to 1/3 of maternal deaths (Johnson, 1995). Moreover, UNICEF has endorsed family planning as one of the high priority techniques for improving child health, since by preventing the death of a mother, family planning has the potential to prevent some of the morbidity and mortality in children (Rinehart et al, 1984). The World Bank estimates that when a mother dies, the chances of death for her children under five years of age increase by 50% (World Bank, 1993b).

The impact of family planning must also be assessed from a quality-of-life point of view, with respect to its potential to reduce unplanned and unwanted pregnancies. It is estimated that 1/2 of all pregnancies are unplanned and 1/4 are unwanted (Khanna et al, 1992). Unwanted pregnancy is a major public health concern since it, as with all pregnancies, increases a mother's risk of dying but may also mean that her child cannot be well cared for. Children born at desired times and who are wanted are much more likely to be well cared for, have lower morbidity and mortality, and be raised in a better environment than children who are unplanned and unwanted (Johnson, 1995).

According to WHO estimates, as of 1990 family planning programs had averted more than 400 million births worldwide, and reduced infant mortality rates in developing countries by roughly 10 per thousand (Johnson, 1995). By decreasing maternal and child morbidity and mortality and

encouraging manageable family sizes, family planning has the potential to enhance the overall well-being of the family, and has the long term potential to support the socio-economic aspirations of the individual, the family, and the nation (Musinguzi, 1993).

1.3 Male Involvement in Family Planning

Given the potentially enormous benefits of family planning with respect to the health and well-being of individuals, families, and nations, there has been much interest in uncovering the dynamics of contraceptive use. In the field of public health research, numerous knowledge, attitudes, and practice (KAP) surveys, both quantitative and qualitative, large scale and small, have been carried out in developing countries since the establishment of family planning programs in the 1950s and 1960s. These surveys have focused almost exclusively on women since women have consistently been considered the most reliable source of information regarding fertility and contraceptive KAP. Furthermore, as child-bearers, women's KAP toward contraceptives has been considered much more relevant than the KAP of men (Hulton and Falkingham, 1996).

Family planning services have also traditionally viewed women as their primary clients since, it is women who become pregnant and thus face the health risks associated with pregnancy and childbirth, most contraceptive methods are designed for women, and reproductive health services including family planning can be offered conveniently as part of maternal and child health services. Many family planning programs have avoided serving men partly under the assumption that women desire autonomy and privacy in reproductive health matters and partly under the assumption that men are not interested in family planning issues (Hulton and Falkingham, 1996). This approach, however, has been shown to be limited in terms of improving family planning services and increasing contraceptive use. Studies have shown that the limited impact of many family planning programs, particularly in some developing countries, can be attributed to this continued neglect of men as equal targets of such programs (Agyei and Migadde, 1995; Chipfakacha, 1993; Ezeh, 1993; Terefe and Larson, 1993; McGinn et al, 1989a; Khalifa, 1988).

In part, the neglect of men with respect to their role in family planning has led to the assumption that they are generally uninformed about and opposed to family planning and contraceptive methods. This assumption is held particularly strongly about men in sub-Saharan African

countries, where patriarchy has had a long and prominent history, and traditionally, large families have been desired. These assumptions, however, are largely unsubstantiated, as there are a limited number of studies describing male KAP toward family planning, due in part to a previous lack of male-focused policy commitments.

The 1994 International Conference on Population and Development (ICPD) in Cairo reminded the world audience that good reproductive health is the right of all people, women and men alike, and that together we share responsibility for reproductive matters. For the first time, the conference in Cairo established a clear policy about men's participation and provided a foundation for family planning programs and providers to encourage and involve men in reproductive health matters (ICPD, 1995). In the period since the Cairo Conference, there has been an emerging awareness that men need to be involved in family planning and reproductive health, not only as a means to fulfilling women's reproductive health needs, but also their own (Hulton and Falkingham, 1996).

The importance of including men in family planning programs is heightened by the fact that in most societies (particularly in developing countries) men exercise "preponderant power" in nearly every sphere of life (ICPD, 1995). Men are the economic heads and primary decision-makers in families and often initiate most major fertility and reproductive decisions, including use of family planning methods (Chipfakacha, 1993). Additionally, in a broader sphere of influence, men are often responsible for government policy, program, and funding decisions, some of which affect family planning programs and services. In this role as domestic, economic, and political heads of the family and community, in addition to their responsibility as partners in reproduction, men constitute an important and essential part of the reproductive heath equation.

As individuals, men can use family planning methods as well as encourage their partners and peers to use family planning. As husbands and fathers, men can be more attentive to and aware of their partner's needs and concerns for the family, and can better plan for their children's futures. Finally, as community leaders and government officials they can influence public attitudes and policy towards and encourage use of family planning.

Recent evidence and international policy statements have suggested that in order to increase contraceptive use, men should be included as targets of any governmental family planning program. Currently, however, the limited amount of information about men and family planning has made it difficult to design programs to encourage men's participation and involvement in family planning, and to meet their reproductive health needs.

The present study conducted with married men in central Uganda, focuses on men's knowledge, attitudes, and practice toward family planning. The overall objectives of the study were to: (a) describe male levels of KAP toward family planning; (b) identify those factors that are related to modern contraceptive use; and (c) identify barriers preventing men from participating and means for encouraging male involvement in family planning. It is anticipated that the information presented in this study will be used by family planning program planners in Uganda to develop improved family planning services, which will involve and include men.

CHAPTER 2
BACKGROUND AND SIGNIFICANCE

The purpose of this chapter is to provide a background of the study site, including a discussion of both Uganda and the Mpigi District within. This discussion is intended to provide the reader with a working understanding of the historical, political, economic, social, and cultural climate of Uganda as well as to provide a situation analysis of fertility and family planning in the country as a whole and specifically in Mpigi District. Special reference is given to members of the Baganda[1] tribe, as this is the tribe occupying much of the central region of Uganda, and specifically the area in and around Mpigi District.

2.1 Background of Uganda

2.1.1 Geography

Uganda is a land-locked agricultural country located in East Africa, on the equator (Appendix 1). It is bordered on the north by Sudan, on the east by Kenya, on the south by Tanzania and Rwanda, and on the west by the Democratic Republic of the Congo. Its capital and most populous city is Kampala, which is located on the shores of Lake Victoria.

Uganda has an area of 241 139 square kilometres, of which approximately 80% is potentially arable (WTO, 1995). It is a geographically diverse country boasting the Rwenzori mountains to the west, Lake Victoria (Africa's largest freshwater lake) to the south, tropical jungles and savannah in the interior, and semi-desert to the north. The river Nile flows northwards out of Lake Victoria to begin its long, winding journey to Egypt. Uganda's ecological diversity gives rise to an impressive variety of flora and fauna.

Uganda is divided into 39 administrative districts, of which Mpigi District is one occupying the south central region (Appendix 2). Each district is further divided into counties, sub-counties, parishes, and finally villages, which are the smallest administrative unit. The above hierarchy is administered by appointed chiefs. The Local Council (LC) system is one of elected

[1] The *Baganda* people (singular form *Muganda*) occupy the central part of Uganda, which was formerly called the *Buganda* province. The language of the *Baganda* is *Luganda*. Sometimes, the generic term *Ganda* is used to refer to all of the above.

administrators and corresponds with the above hierarchy; the district level corresponds with Local Council 5 (LC5), county with LC4, and each subsequent division is similarly named until the village, referred to as Local Council 1 (LC1) (MoFEP, 1996).

2.1.2 People

The population of Uganda is approximately 24 000 000 (1999 est.) giving a population density of 142 individuals/sq km[1]. Upwards of 80% of the population lives in rural communities and over 90% of the population is dependent on subsistence farming and light agro-based industries (MoFEP, 1996). As of 1999, 51% of Uganda's population was under 15 years of age while only 2% was aged 65 years or older. The median age of the population was 15.6 years. This imbalance in the age distribution of the population is a result of the massive violence of the 1970s and 1980s which left many widows and orphans, the AIDS epidemic which has killed a disproportionate number of young adults, as well as the high fertility rates (World Bank, 1993a).

Most of Uganda's population belongs to one of thirteen main African ethnic groups, although linguistically, a division is often made between the Bantu-speaking South and the Nilotic-speaking North. About 2/3 of the population are Bantu-speaking, including people of the Baganda tribe, who reside in the central region of the country. The Baganda are the most populous (comprising 17% of Uganda's population) and arguably the most influential Ugandan tribe.

Although approximately 32 languages are used in Uganda, English, Swahili, and Luganda are the most common (Ofcansky, 1996). English is the official language, however, it is generally spoken for government, commerce, academic, and media purposes only, and less than 30% of the population understands it (Ofcansky, 1996). Swahili is mostly a language of trade (particularly with the other Swahili speaking East African countries of Kenya and Tanzania) and is also used by the army. The most widely spoken indigenous language is Luganda, spoken by the Baganda people.

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[1] Although Uganda has a total area of 241 039 sq km, 18% of this area is open water and swamps and 12% is forest and game parks. The population density was therefore computed using the area of the remaining available land, which is 168 727 km sq.

With respect to the religious composition of Uganda's population, Christians account for more than 2/3 of the population, with Catholics slightly outnumbering Protestants. Approximately 16% of the population is Muslim and most of the remaining individuals practice either traditional indigenous religions or do not practice any religion (Byrnes, 1992).

Literacy rates in Uganda are comparable to other East African countries both in absolute magnitude and in differences observed between the genders; 74% of males over the age of 15 are literate compared with 50% of females (MoFEP, 1996).

Many Ugandan tribes, including the Baganda, are comprised of a number of smaller clans. Clans gain power and status and ensure longevity based partly on the size of their membership (Ofcansky, 1996). Traditionally for the Baganda (as with other Bantu-speakers), children's descent, succession, and inheritance follow the paternal line (i.e., children are associated with their father's clan), although gender differences do exist (Van Houten and Porter, 1998). Sons become members of their father's clan while daughters become members of their husbands' clan. Furthermore, a father's land and property are traditionally divided among his sons while his daughters receive little or nothing.

2.1.3 History and Government

In his book *My African Journey*, Sir Winston Churchill described Uganda as the "Pearl of Africa", owing to its lush, beautiful landscape, abundance of flora and fauna, and friendly people (Churchill, 1908). In the years following, Churchill's Pearl would endure more than half a century of British rule and an infamously turbulent post-independence history, marked by major political turmoil and economic devastation on account of two decades of despotic rule.

In 1894, Uganda was established as a British protectorate state and 68 years later, on October 9th, 1962, received independence (Ofcansky, 1996). At Independence, Uganda had one of the strongest economies in sub-Saharan Africa. Blessed with a good climate, fertile land, and enough food to feed its population, Uganda seemed to promise a successful and progressive future.

At Independence, British authorities granted special ruling authority to the favoured Baganda tribe, going as far as to install the Baganda king, Kabaka Mutesa II, as Uganda's first president

along with Milton Obote, as its first prime minister. Obote, a member of a minority tribe, resented his second-rate position and the excessive privileges granted to the Baganda. After many years of conflict with the powerful and influential Baganda king, Obote forced him into exile. The exile of Kabaka Mutesa II provided Obote with more control over Uganda's politics and particularly, more control over the members of the powerful and numerous Baganda tribe. The tension between tribes continued to increase until 1971, when Obote was overthrown in a military coupe led by the infamous Idi Amin Dada, his army chief of staff. From 1971 until 1979, Amin embarked on a military dictatorship now referred to as Uganda's 'Reign of Terror' and the name Idi Amin itself has become synonymous with brutal, militant tyrants. It is estimated that during Amin's reign, over 300 000 Ugandans were killed, as many as one million were internally displaced, and approximately 200 000 were exiled or fled the country, leaving Uganda in social and economic chaos. Amin also expelled the 70 000 member Asian community, who controlled much of Uganda's economic activity, resulting in further economic disaster. During Amin's presidency, severe economic mismanagement, gross human rights violations, and civil war all served to radically reverse any economic and social progress attained prior to and during the first few years after Independence. Between 1970 and 1980, Uganda's GDP had declined by 25%, there was no health care system or infrastructure to speak of, and the country was in ruins (Ofcansky, 1996).

In a war in 1979, led by the Tanzanian military and Ugandan soldiers in exile, Amin was overthrown. In 1980, Milton Obote was once again elected leader, in elections widely acknowledged to be fraudulent. Obote II (as he is often referred to) proved to be a brutal and corrupt leader who continued with Amin's economic mismanagement and abuse of human rights. It is estimated that during Obote's second presidency, over 100 000 Ugandans were killed, civil war continued, and economic, political, and social conditions plummeted. By 1985, when Obote was once again overthrown, government expenditure on education was 25% of that in the early 1970s, while expenditure on health was only 9%. Obote was temporarily replaced by Tito Okello whose position as leader of Uganda was forcibly terminated in 1986, when he was ousted by a guerrilla movement called the National Resistance Movement (NRM). The NRM was lead by Yoweri Museveni, who continues to govern as Uganda's current president.

By 1986, the standard of living in Uganda had declined substantially and most quality of life indicators were lower than they had been during pre-Independence. Museveni's government had

the daunting task of lifting Uganda out of absolute economic devastation and country-wide political instability and insecurity. With the support of the international community, the NRM has done much to restore peace, order, and political stability, re-establish a sense of security, restore infrastructure, and revive Uganda's economic and social systems. In fact, by 1994, Uganda's economy was considered the third-fastest growing in Africa and Ugandans have since seen a general improvement in living standards. The NRM has little cause for complacency, however, since living standards remain far below the levels achieved in the 1960s and early 1970s and Uganda remains one of the poorest countries in the world (World Bank, 1993c).

Although the recent political and economic climate in Uganda is relatively stable and prosperous, the early 1990s saw an upsurge in terrorism in northern and western Uganda by rebel groups seeking to overthrow Museveni. In 1995/96, the Lord's Resistance Army, a Christian fundamentalist rebel faction operating out of southern Sudan, killed hundreds of Ugandan soldiers and civilians. The on-going civil war in the Congo has also lead to increased fighting and rebel activity along the Congo-Uganda border, as Congolese rebels terrorise Ugandan civilians in return for Museveni's support of the Rwandan government. The long-term impact of these recent rebel activities is yet to be seen.

Recently, Museveni's government has been facing increasing criticism over the handling of these rebel activities on account of increases in military spending, money which is much needed to continue rebuilding the country's infrastructure and to provide basic health services and education for the population. Museveni has also been facing both national and international criticism for his reluctance to allow multiparty democratic elections, on the basis that partisan politics threaten to divide Uganda along tribal lines.

2.1.4 General Health Indicators

During pre-independence and for a short period post-independence, Uganda had among the best medical services in sub-Saharan Africa. Due to crippling economic and political upheavals during the 1970s and 1980s, however, the health care system (including health care professionals and infrastructure) suffered enormous destruction. With the present government, the situation is gradually improving and Uganda's health infrastructure is slowly being rebuilt.

Despite these advances, the morbidity and mortality toll in Uganda is enormous. Currently, the average life expectancy is 42.9 years, among the lowest in the world. Maternal mortality is 506 per 100 000 live births and infant mortality is 97 per 1000 live births (MoFEP, 1996).

Against a background of debilitating diseases including tuberculosis, gastroenteritis, and malaria, the AIDS epidemic overshadows other medical concerns and poses the greatest threat to Uganda, politically, economically, and socially. The relationship between the quality of health services in Uganda and the AIDS epidemic is somewhat circular. While the overall lack of health services has contributed to the devastating epidemic of AIDS in Uganda, the impact of the epidemic has made the struggle to improve health services extremely difficult. In 1993 it was estimated that Uganda had the highest incidence of AIDS in the world, with 25% of the population suffering from AIDS or infected with HIV (Ofcansky, 1996). Recent studies, however, have shown a decrease in prevalence of AIDS in Uganda, a pattern not seen in any other country in sub-Saharan Africa (Asiimwe-Okiror et al, 1997; Kigotho, 1997).

Although Uganda's AIDS epidemic has been devastating to the country and its people, it has also resulted in some unanticipated positive social side-effects, two of which are particularly important to this study. Firstly, AIDS has put reproductive health matters at the forefront of agendas and budgets promoted by the government and international aid agencies. Secondly, the ubiquitous social devastation of AIDS has provided an opportunity for increased discussion and openness about matters relating to sexuality and reproduction. The combination of these and other factors in Uganda has led to increased awareness and attention focused on reproductive health (including family planning) in terms of research, policy, and programs.

2.2 Situation Analysis of Family Planning in Uganda

Uganda has one of the highest population growth rates in sub-Saharan Africa. Annual population growth is estimated at 2.72%, which will double the population in approximately 26 years (from 24 million to 48 million) (MoFEP, 1996). The 1995 Uganda Demographic and Health Survey (UDHS) data indicate that fertility in Uganda is high, with women having an average of 6.9 births by the time they reach the end of their childbearing years (i.e., the total fertility rate (TFR) is 6.9). The crude birth rate for the 1992-94 time period was 48 live births per 1000 population (MoFEP, 1996).

The low level of contraceptive use in Uganda is one of the leading factors contributing to high fertility. Although levels vary by region, the Ugandan Ministry of Health estimates overall use of family planning by married women to be 15% (MoFEP, 1996). Contraceptive use by married men is estimated to be higher than married women, with 25% reporting current use of family planning—10% using modern methods and 15% using traditional methods. In terms of contraceptive use, Uganda lags behind other East African countries like Kenya and Tanzania, where contraception is more widely practised. For example, the national contraceptive prevalence in Kenya is over 40%, owing, in large part, to a strong political commitment to family planning by the Kenyan government (Hulton and Falkingham, 1996),

UDHS data indicate that both men and women have strong desires for children and a preference for large families. Men tend to be slightly more pronatalist than women and report an average ideal number of children equal to 5.8 compared with 5.3 reported by women. (MoFEP, 1996). Despite these high fertility preferences, the ideal family size reported by women in 1995 was much lower than the average reported by women in 1988-89 (6.5 children). Furthermore, the proportion of women who did not want any more children increased from 19% in 1988/89 to 31% in 1995 (MoFEP, 1996).

Recent evidence has suggested that there is considerable unmet need for family planning services in Uganda. According to UDHS data, approximately 29% of currently married women are in need of family planning services—18% for spacing their next birth and 11% for limiting births. If all married women who say they want to space or limit their births were to use contraceptive methods, the contraceptive prevalence could increase from its current level at 15% to 44%. Thus, of this potential 44% "total demand" for family planning, currently only 34% is being met (i.e., at 15%, the current contraceptive prevalence indicates that only 34% of the 44% "total demand" is being met) (MoFEP, 1996). This low value indicates that there exists a need for increased family planning research, services, and supplies in Uganda.

The Ugandan Ministry of Health (MOH) considers the high fertility of Ugandan women and the common short birth intervals to be a major health risk for mothers, children, and their families. Additionally, the Ugandan government has recognised the threat that a quickly growing population poses on sustainable social development. Accordingly, the MOH has made substantial efforts to provide family planning services to all of its population by promoting

community-based distribution of contraceptives, and by offering family planning services as part of the maternal and child health package. In all past initiatives put forth by Ugandan authorities, efforts involving males are rare.

In 1995, Uganda adopted the National Population Policy which has as its overall goal the "influence of future demographic trends and patterns in desirable directions in order to improve the quality of life and standard of living of the people" (MoFEP, 1996). One of the objectives of the policy is to enhance the role of men in planning for the family, a role that will include the promotion and utilisation of family planning activities. It is anticipated that an increase in male involvement will serve to increase the use of family planning methods (by men and women), thereby achieving the policy's goals of decreased population growth and increased quality of life, health, and well-being of Ugandans.

In any case, prior to the institution of programs designed to increase male involvement and participation in family planning, increased and better information is required about men's KAP toward family planning, and potential family planning motivators and barriers.

2.3 Background of Mpigi District

Mpigi District, the study site, is located in the centre of Uganda and surrounds the capital city, Kampala (Appendix 3). Mpigi is one of the largest districts in Uganda, both in landmass and population. It has a land area of 4 514 sq km and a population of over 1 000 000 individuals, resulting in an overall population density of 222 individuals/sq km (MoFEP, 1992). The vast majority of individuals living in Mpigi belong to the Baganda tribe, Luganda is the most widely spoken language, and approximately 1/2 of the population is Catholic. Close to 85% of the population in Mpigi is considered rural while the remaining 15% is considered urban. The literacy levels of women in Mpigi are 71%, substantially higher than that of women in Uganda overall (50%). Literacy levels of men in Mpigi and Uganda overall are comparable (75% and 74%, respectively).

2.4 Situation Analysis of Family Planning in Mpigi District

Fertility in Mpigi District is high. The 1991 Mpigi District Population and Household Census reported a total fertility rate (TFR) of 7.06, a crude birth rate of 50 live births per 1000 individuals, and a population growth rate of 2.94% (which will double the population in

approximately 24 years). Maternal mortality is estimated at 500 deaths per 100 000 live births (MoFEP, 1992).

Within Mpigi District there are 56 government health service delivery points, which includes hospitals, dispensaries, and health centres. In addition to the government family planning providers there are also a number of private providers in the District. The present study was conducted out of the main government health centre, Mpigi Health Centre (MHC), located in the east-central region of Mpigi District.

The MHC, in collaboration with the District Health Management Team (DHMT), is working to deliver the essential clinical and preventative health services (including family planning) in the District. Both bodies have long recognised the importance and need for continued and improved family planning services. The DHMT along with the MHC have listed reproductive health including family planning as one of the primary focuses of health care services in the District. One of the recent and major reproductive health initiatives in Mpigi District has been to increase modern contraceptive use within the District.

A systematic program for male participation in reproductive health and family planning has been considered in Mpigi District, but not yet planned and developed. The proposed study will provide important and useful information for the MHC and the DHMT to assist in the design of motivational programs for males in family planning.

CHAPTER 3
LITERATURE REVIEW

The purpose of this chapter is to describe and discuss the literature concerning men's KAP toward family planning, those factors that are known to be associated with use of modern contraceptives, as well as male involvement in family planning. Given the dearth of literature about male involvement in family planning, evidence from the literature about women is occasionally substituted to describe the importance and relevance of a particular factor.

3.1 Review of Large Scale Surveys addressing Men's KAP toward Family Planning

The large-scale World Fertility Survey (WFS) provided the principle source of information concerning fertility and contraceptive use during the 1970s and 1980s. Of the 42 surveys conducted, only four interviewed husbands and no meaningful analysis was performed on these data with respect to KAP toward family planning (Hulton and Falkingham, 1996).

Similarly, the Roper Centre's 1979 list of KAP surveys reports that only 18 of the 90 surveys listed at that time had interviewed men as well as women, with some of these 18 asking men only about household status, not about fertility goals or ideals (Hulton and Falkingham, 1996).

Since the mid-1980s, however, the situation appears to be slowly changing. The Demographic and Health Surveys (DHS) are large-scale quantitative surveys that collect information on fertility, family planning, and maternal and child health for a large number of countries (Fisher and Way, 1988). Between 1986 and 1995, 26 of the 74 completed DHS collected data from male respondents who were selected either independently or as husbands of female respondents (Hulton and Falkingham, 1996). The DHS were the first large-scale surveys to collect data about family planning from men, in addition to interviewing women.

Hulton and Falkingham (1996) examined findings about male contraceptive KAP as described in recent DHS Male Surveys from ten countries. DHS findings indicated that men's level of knowledge about family planning and contraceptive methods was surprisingly high. Furthermore, in eight of the ten countries, men knew more contraceptive methods than women, with the remaining two countries demonstrating little difference between the genders. With the

prevailing primary focus of family planning programs on women, it might have been expected to find a lower level of knowledge of contraceptive methods by men than by women. DHS findings indicate, however, that this was not the case.

The 1995 Ugandan DHS (UDHS) reported similar findings with respect to male knowledge about family planning methods. Over 90% of married individuals (men and women) knew at least one modern contraceptive method, and overall, more men than women knew a method (95.2% of men knew at least one modern method compared with 91.6% of women) (MoFEP, 1996).

In nine of the ten countries examined by Hulton and Falkingham (1996), men reported higher ever-use of contraceptive methods (traditional or modern) compared with women. Similarly, the reported current use of a contraceptive method was higher for men than women in all ten countries. It is suggested that higher levels of current use and ever-use by men compared to women are an indication that men are willing to use a contraceptive method.

Past DHS have shown that, in women, high levels of contraceptive knowledge and positive attitudes toward family planning are generally poor predictors of contraceptive use (MoFEP, 1989). Recent DHS have revealed a similar situation in men (Hulton and Falkingham, 1996). Although it was shown that men's level of ever-use and current use of contraceptive methods was higher than women's, overall levels of use remained low. This phenomenon is referred to as a 'KAP gap' - a contradiction between the level of 'Knowledge and Attitudes' toward family planning and actual 'Practice' (i.e., men's contraceptive use is lower than expected given their overall levels of knowledge and approval) (Hulton and Falkingham, 1996).

It is often suggested that these low levels of contraceptive use are partly due to a desire for more children. The DHS findings revealed, however, that in most of the ten countries, the average family size desired by men was lower than actual fertility, suggesting that some men are having more children than they want. This finding is contrary to a wide spread perception that men generally want much larger families than do women. This finding is also related to the measure of "unmet need". Unmet need refers to the number of women or men who report that they do not want any more children yet are not using any form of contraception (MoFEP, 1996). Between 1/4 and 2/3 of men surveyed in DHS reported that they did not want any more

children, yet neither these men nor their partners were using any form of contraception (Hulton and Falkingham, 1996).

The analysis of DHS findings demonstrated that in all ten countries there was a striking consistency regarding high levels of male interest in and knowledge about family planning, enough to suggest a similar level of male interest in countries not included in the study (Hulton and Falkingham, 1996).

3.2 Review of Small Scale Surveys addressing Men's KAP toward Family Planning

Although the DHS provide quantitative, descriptive data about men and family planning, the reasons for low levels of contraceptive use by males requires further research. Since the 1980s, apart from the large scale, quantitative tabulations of the DHS, the literature consists of few small-scale, small-area studies concerning males and family planning (Obiounu, 1998; Were and Karanja, 1994; Chipfakacha, 1993; Mbizvo and Adamchak, 1992; McGinn et al, 1989a; Khalifa, 1988; Olukoya, 1985). Although it is difficult to generalise from these studies due to their nature and size, small-scale studies are able to provide useful contextual and cultural information on male fertility preferences and KAP toward family planning.

There are essentially four main findings from these small-scale studies. The first finding indicates a generally high level of knowledge about family planning and family planning methods (Obionu, 1998; Chipfakacha, 1993; McGinn et al, 1989a; Khalifa, 1988; Gallen et al, 1986; Olukoya, 1985; Mustafa and Mumford, 1984; Belcher et al, 1978). Past studies have shown, however, that although men are generally informed about family planning, they lack detailed knowledge about how the contraceptive methods work and how to use them (Reidlberger, 1994; McGinn et al, 1989a; Olukoya, 1985). Their knowledge of family planning is often superficial because they receive most of their information from mass media, friends, and relatives rather than from health workers or family planning providers (Chipfakacha, 1993). Furthermore, since health authorities have tended to primarily target women for family planning information, men have continually been excluded from receiving detailed knowledge of contraceptive methods (Reidlberger, 1994).

The second type of finding indicates that men generally have positive attitudes toward family planning (Obionu, 1998; Were and Karanja, 1994; Chipfakacha, 1993; McGinn et al, 1989a;

Khalifa, 1988; Gallen et al, 1986; Mustafa and Mumford, 1984; Belcher et al, 1978). In fact, studies have shown that, in general, attitudes of men toward family planning are more favourable than popularly believed by family planning service providers (Mustafa and Mumford, 1984). The majority of those who disapprove of contraceptive use do so on the basis of fear and misinformation, or on religious grounds (Hulton and Falkingham, 1996; Khalifa, 1988; Van de Walle and Traore, 1986). Some fear it will threaten their role as the authoritative head of the family or encourage their wives to be promiscuous and unfaithful (Obiounu, 1998; Chipfakacha, 1993; McGinn et al, 1989a; Lala 1985; Ilori, 1981; Abdulah, 1975). Others fear that using the contraceptive methods will have harmful effects on their wives and/or future children (McGinn et al, 1989b; CPFH, 1986; Lala, 1985; IPPF, 1981; Abdulah, 1975). A few studies have suggested that men may be opposed to family planning simply because having many children is a show of their virility and enhances their status and prestige within their community (Lala, 1985; Ilori, 1981; IPPF, 1981).

The third type of finding indicates that husband-wife communication about family planning is associated with and is often essential to increase levels of KAP toward modern contraceptives (Agyei and Migadde, 1995; Chipfakacha, 1993; McGinn et al, 1989a; Khalifa, 1988). The lack of communication between a husband and wife has been suggested as a greater obstacle to practising family planning than male opposition (Chipfakacha, 1993). The literature indicates that there is still a lack of positive communication between husband and wife about fertility and sexuality, even among men who have positive attitudes toward family planning.

The final type of finding indicates that while men's knowledge of contraceptive methods is quite widespread and general attitudes are quite positive, actual contraceptive use remains uncommon (Obionu, 1998; McGinn et al, 1989a; Khalifa, 1988). Other published literature has attributed this "KAP gap" to social and cultural factors as well as to administrative factors whereby there is a general scarcity of affordable, accessible, and high quality family planning supplies and services (Gallen et al, 1986). The impact of administrative factors may be particularly pronounced for men since there exists a limited number of male-oriented contraceptive methods and family planning staff may not be adequately trained to meet the needs of male clients.

As generally revealed from studies involving both men and women, there is indication that when husbands approve of family planning or when wives believe that their husbands approve of it, the wives are more likely to use contraception (Ezeh, 1993; Khalifa, 1988; Olukoya, 1985). The authors of a 1993 study conducted in Ethiopia found that the inclusion of husbands in family planning programs and the subsequent increased discussion about family planning between husbands and wives resulted in relevant short- and long-term increases in the use of modern contraceptives; overall use at 12 months was higher and default rates were lower in the group that included husbands compared with the group with wives alone (Terefe and Larson, 1993). Similar findings have been reported from the Philippines (Laing, 1988), Bangladesh (Bhatia, 1982), Turkey (Fisek and Sumbuloglu, 1978), and Iran (Siassi, 1972).

Together these findings indicate that male involvement in family planning has the potential to promote increased and widespread use of modern contraceptives in Africa and elsewhere. Findings from both large-scale and the limited number of small-scale studies demonstrate, however, that there exists an urgent need for more information regarding men's KAP toward family planning to address how family planning programs can reach and involve men and to tailor educational and service programs toward the needs of male clients, to ultimately increase overall contraceptive prevalence.

3.3 Factors Associated with Contraceptive Use

Basic descriptive KAP studies have come under recent criticism since the analyses employed seldom go beyond describing the population of interest and there is often little discussion about if and how particular variables are associated with contraceptive use. Without this minimal level of bivariate associative analysis, it is difficult to identify those factors (socio-demographic, family size related, knowledge related, and attitude related) that may be more sensitive and responsive to an intervention program to increase use of family planning.

While the literature does contain a limited number of studies that have identified particular factors that appear to influence contraceptive use in most societies, given the potentially vast differences between settings (economically, politically, and socially), it is difficult to make generalisations. Any findings should thus be interpreted with caution. In addition, the literature advises that it is more prudent to identify factors related to contraceptive use that appear more

important than others in the setting of interest, with the intent of utilising this information to design tailored and specific policies and action.

In analysing the relationships between variables and contraceptive use, one should bear in mind the possibility of a two-way causation, a difficulty that should be particularly emphasised when evaluating the results of cross-sectional studies. An example of two-way causation is the relationship between contraceptive use and knowledge of where to obtain family planning methods. Use may result in knowledge of where to obtain methods and as well, knowledge of where to obtain methods may result in use.

Due to the lack of male focused studies, some of the variables discussed here are taken from the literature about women.

3.3.1 Socio-Demographic Factors

The majority of the published literature concerning factors associated with contraceptive use examines the influence of socio-demographic factors. There is only one published Ugandan study investigating socio-demographic factors associated with contraceptive use in women (Agyei and Migadde, 1995). Due to limited amount of evidence from Uganda itself, the literature about factors relating to contraceptive use for men and/or women was also reviewed from other countries.

Urbanisation has been found to play an important role in contraceptive use in men and women. Individuals who live in urban areas have been found to be significantly more likely to use contraceptive methods compared with individuals living in rural areas (Agyei and Migadde, 1995; Bongaarts et al, 1984; Sathar and Chidambaram, 1984; Khalifa, 1982; Lightbourne, 1980; Pool, 1970). It is theorized that an urban environment promotes the use of contraception through both increased access to family planning and general health care services and better education possibilities (Kirumira, 1991).

The pattern of the relationship between age and use of family planning methods is reported two ways. Some studies have shown a negative relationship whereby contraceptive users as a whole tend to be younger than non-users (Khalifa, 1982). Other studies have demonstrated a U-shaped pattern whereby in the early part of the reproductive life, the incidence of contraceptive use is

low, it increases in the middle ages, and then decreases again at older ages (Ramesh et al, 1996; Monteith et al, 1988; Sathar and Chidambaram, 1984).

Tribal affiliation in Uganda has been found to be significantly associated with contraceptive use. Individuals of tribes classified as Bantu (to which the Ganda tribe belongs) were significantly more likely to have ever used a modern contraceptive method, compared to individuals of other tribes (e.g, Nilotic, Hamite, and Nilo-hamite) (Agyei and Migadde, 1995).

Traditionally, religion has played the role of a moderator and extreme inhibitor to the acceptance and use of family planning. The literature on Ugandan women reports that Anglicans are the most likely to be using modern contraceptive methods, followed by Muslims (Agyei and Migadde, 1995). The Anglican Church has been among the more supportive churches with respect to the use of contraception, and has recently been advocating for increased responsibility by men in family planning. The Catholic Church has been notorious for its disapproval and discouragement of contraceptive use. More recently, however, the Catholic Church has endorsed the use of family planning when it is practised using natural family planning methods. Although Islam promotes procreation and emphasises the value of children, the religion does support family planning for use in protecting women from the dangers of child birth and to enable a family to have the number of children that can be well supported and cared for (Hata, 1994). Seventh Day Adventists have promoted the ideal of a small family, based on the number of children that can be adequately supported. There is evidence to suggest, however, that membership to a religion is less important in determining approval and use of family planning than "practiced religiousness" (Riedlberger, 1994).

Throughout the literature, education level and occupation or income are reported to be strongly associated with contraceptive use (Agyei and Migadde, 1995; Monteith et al, 1988; Sathar and Chipambaram, 1984; Khalifa, 1982; Ukaegbu, 1981; Abdulah, 1975), however, education level of men is not always seen as being as decisive as it is with women (Peng and Abdurahman, 1981). Nonetheless, men with higher levels of formal education are more likely to have positive attitudes toward family planning, desire fewer children, and/or are more likely to be using modern contraceptive methods than men with lower levels of formal education (MoFEP, 1996; Duseka and Silbermann, 1990). It is theorized that education is associated with a sense of responsibility for one's own well-being (Caldwell, 1982). Furthermore, the literature suggests

that individuals with more education are also more likely to have an attitude of autonomy, are less inclined to be fatalistic, and thus, are more likely to use methods of birth control (Pillai, 1993). Similarly, individuals who belong to a higher socio-economic class and/or are engaged in professional and clerical occupations are more likely to be using family planning methods (Sathar and Chidambaram, 1984; Khalifa, 1982).

An individual's age at first marriage has been identified as a proximate determinant of fertility (MoFEP, 1996) as well as a predictor of contraceptive use (Bongaarts and Potter, 1983). Agyei and Migadde (1995) reported that Ugandan women who married at or after the age of 20 years were more likely to have ever practiced family planning compared with women who married before their 20th birthday.

Polygamy is commonly practised in Uganda and recent data indicate that 30% of women and 15% of men are involved in a polygamous union (MoFEP, 1996). The literature suggests that individuals who are involved in polygamous unions are likely to be more traditional and thus less likely to be using modern contraceptives (Berelson, 1969).

3.3.2 Factors Related to Family Size, Composition, and Preference

In examining the relationship between number of children and use of modern contraceptive methods it is important to keep in mind the cross-sectional nature of this study since, the potential exists for a circular relationship between these two variables. Specifically, although many studies have shown that higher numbers of living children is an important determinant of contraceptive adoption (MoFEP, 1996; Ramesh et al, 1996; Agyei and Migadde, 1995; Monteith et al, 1988; Caldwell, 1982; Khalifa, 1982), it is also known that use of contraceptive methods is a prime determinant of number of children (Sathar and Chidambaram, 1984).

Gender preference for children is common among couples (Cleland et al, 1983). Furthermore, the gender of living children has been shown to have a significant influence on contraceptive behaviour (Williamson, 1976). Couples who do not achieve preferred gender combinations of children are less likely to use contraception compared with those with desired gender combinations (Krishnan, 1993). In Uganda, as with numerous other countries worldwide, the most common preference is for sons.

One of the explanatory factors of fertility behaviour is the amount of child care and support that an individual or couple has already assumed (Cleland, 1972). While number of children has been shown to be a strong predictor of use for women, number of children being supported may be an equally or stronger predictor of use for men; as financial support is often the man's responsibility. Given difficult economic conditions, those men who are supporting more children are likely to feel the pressure of a large family, leading them to limit or space their children (Agyei and Migadde, 1995).

The literature provides evidence to suggest that women who desire no more children are more likely to be using family planning compared to women who desire more children (Peng and Abdurahman, 1981). A distinction is often made between the desire for no more children and a desire for no more children in two years, as these represent separate family planning concerns. Individuals who state they desire no more children are likely to have achieved or surpassed their family size ideals, and thus require family planning to prevent future births. Those who desire no more children within two years may require family planning for spacing concerns in addition to limiting births.

3.3.3 Knowledge Related Factors

Knowledge of family planning, family planning methods, and related issues comprise an essential component of the decision to use a contraceptive method. Individuals with higher levels of knowledge about family planning and family planning methods are more likely to be using contraceptives (MacCorquodale, 1984). Since husbands are often involved in the decision to use family planning, their knowledge of family planning and family planning methods is considered an important determinant of contraceptive use.

Moreover, it has been suggested that knowing about contraceptive methods is of little use if an individual does not know where to obtain the methods (MoFEP, 1996; Gallen et al, 1986). The number of contraceptive sources known measures the perceived availability of contraceptives (Joesoef et al, 1988). In the literature about women, those individuals who knew where to obtain methods were much more likely to use them than individuals who did not know sources (Pebley and Brackett, 1982).

The length of time between two births in a family (often referred to as the "birth interval") greatly influences child mortality and morbidity (Maine and McNamara, 1985). When two children are born with a short birth interval, both have a much greater chance of dying than do children with a longer birth interval (Maine and McNamara, 1985). Birth intervals of less than two years are particularly hazardous and health professionals normally consider intervals of three years or more to carry the least risk. Therefore, with respect to knowledge about family planning, it is important to determine whether individuals know about spacing and the importance of longer birth intervals.

3.3.4 Attitude Related Factors

The literature indicates that a husband's approval of family planning is an important predictor of use. In fact, in a study conducted with married women in Indonesia, husband's approval was consistently found to be the most important determinant of contraceptive use (Joesoef et al, 1988). In addition, among married female students in Nigeria, one of every five who were not using a modern contraceptive method stated that it was because their husbands objected to it (Olukoya, 1985). In a study in Sudan, male contraceptive users were significantly more likely to hold favourable attitudes toward family planning than non-users (Khalifa, 1982).

In most societies (particularly in developing countries) men are the primary decision-makers in families and often initiate most major fertility and reproductive decisions, including use of family planning methods (Chipfakacha, 1993). Regardless of which partner actually uses the contraceptive method, men are often responsible for the *decision* to use the method (Khalifa, 1988). It is assumed that worldwide, 1/2 of men make the decision to use family planning, 1/3 of women share the decision with their partners, and for the remaining proportion, family planning is decided through older persons in the family or women by themselves (Rinehart et al, 1984). Therefore, for 80% of all couples, men are involved in the decision to use family planning. It should be emphasised that even though many men see the decision-making process for using family planning as a joint responsibility, many still prefer that women assume the responsibility of actually using contraceptives (Fox, 1983).

It is often assumed that in Africa, large families are the norm and that men want more children than women do. The evidence on this is sometimes conflicting. Some studies have shown that men want more children (although the difference in number of children is often quite small)

(Khalifa, 1979), while others show that men and women want the same number of children (Aliaga and Novak, 1985; Hallouda et al, 1983). A study with Sudanese wives indicated that contraceptive users were significantly less likely to desire a large family (defined as 'more than five children') compared with non-users (Khalifa, 1982).

Increasing information is demonstrating that discussion of family planning by a woman with her husband/spouse is a strong predictor of use of modern contraceptives (Hulton and Falkingham, 1996; Agyei and Migadde, 1995; Ramesh et al, 1996; Chipfakacha, 1993; Khalifa, 1988; McGinn et al, 1989a). Couples who talk about the number of children they desire are also more likely to use contraceptive methods than those who do not (Burger and Inderbitzen, 1985). According to a study of women and family planning by Chipfakacha (1993), a lack of communication between a husband and wife was found to be a greater obstacle to using family planning than disapproval and opposition by husbands.

3.3.5 Administrative Factors

Administrative factors inhibiting use of family planning include a shortage of contraceptive supplies, a shortage of competent family planning personnel, and a lack of comprehensive and supportive family planning services. In some regions, especially rural areas, family planning supply or program factors are considered to be largely responsible for the low use of modern contraceptive methods (Rajaretnam and Deshpande, 1994).

Perceived accessibility (with respect to time, distance, and quality of services) to family planning services has been shown to be associated with use (Peng and Abdurahman, 1981). An individual who has ever gone for family planning services, either alone or with his partner may view the services as being more supportive and accessible and/or may have a positive attitude toward family planning. Furthermore, those individuals who perceive family planning services to be more accessible both time- and distance-wise have been shown to be more likely to use contraceptive methods (Peng and Abdurahman, 1981).

3.3.6 Psychological and Cultural Factors

The literature identifies numerous cultural and psychological factors that may also influence use of modern contraceptives. Some of the literature relating to psychological factors associated with family planning examines the theorised relationships between masculinity and family

planning. Results from qualitative studies have suggested that men have fears about family planning that relate to sexual failure, loss of control over their partners, and insecurity about their role and expectations with regard to social sexual behaviour (Riedlberger, 1994).

With respect to cultural factors, studies have shown that the level of traditionalism may be an important predictor of family planning practice (Berelson, 1969). For example, traditional societies often place immense significance on fathering many children (especially boys) as a continuation of the family lineage and/or clan. Social prestige of men is sometimes also defined by the number of descendants, the more numerous the decedents the greater prestige.

The importance and role of psychological and cultural factors and their association with use of family planning methods has been explored in a number of other fields. For the purposes and scope of this study, the full extent of the impact of these factors cannot and will not be fully examined. It is anticipated, however, that some insight with respect to the influence of psychological and cultural factors on contraceptive use will be gained from the qualitative portion of the study.

3.3.7 Literature Employing Multivariate Analysis Methods

One of the difficulties encountered in assessing the associations between various factors and use of modern contraceptive methods is that many of the potential predictor variables are highly associated with one another, making it difficult to examine their effects on use separately. A multivariate analysis allows the researcher to observe the independent effect of the factor while controlling for the effect of other variables (Kleinbaum, 1994). Very few studies have attempted a multivariate analysis to identify those factors that accurately predict use of modern contraceptives (Ramesh et al, 1996; Ageyei and Magginde, 1995; Peng and Abdurahman, 1981), and none were found that have attempted this analysis on information relating to men.

It is difficult to assess the findings of these studies with reference to the present study since different variables were considered important and relevant to the different settings. Overall, however, all three studies reported the importance of education, urbanisation, age, and number of children in predicting use of modern contraceptives.

3.4 Summary of Literature Review

In conclusion, the literature provides evidence to suggest that men have a major influence and an important role in fertility and family planning decisions and actual practice. Moreover, without men's approval and support of family planning, women may have a limited opportunity to utilise family planning services and contraceptive methods. Any program or initiative with the intention of encouraging men's involvement in family planning must be based on evidence about men's KAP toward family planning, factors that are associated with the use of contraceptives, as well as potential barriers and motivators that may be influencing male involvement in family planning.

Through the use of complementary quantitative and qualitative methods, the present study endeavours to provide this evidence in order to identify those factors that may be more responsive to an intervention program to increase male involvement and ultimately increase use of family planning in Mpigi District.

CHAPTER 4
MATERIALS AND METHODS

The purpose of this chapter is to provide the objectives and hypotheses for this study and to describe the methodology utilised to address the stated objectives.

4.1 Objectives

Through an examination of data collected from married men in Mpigi District, central Uganda, this study addressed the following four objectives:

(1) Assess the levels of Knowledge, Attitudes, and Practice (KAP) toward family planning.

(2) Determine the prevalence of use of modern contraceptive methods.

(3) Examine the extent to which differences in socio-demographic factors, family size, composition, and preferences, knowledge of, and attitudes toward family planning accurately predict use of modern contraceptives.

(4) Identify barriers that may inhibit or prevent men from using family planning and the means by which male involvement and participation in family planning can be encouraged.

In an attempt to maximise the reliability and validity of the data collected, a method-driven approach integrating qualitative and quantitative methods was used to address the presented objectives. The data collected were triangulated through the use of questionnaires, semi-structured interviews, and focus group sessions. The study findings will be used by the Mpigi Health Centre (MHC) and the District Health Management Team (DHMT) to develop and improve family planning programs and services in Mpigi District.

4.2 Hypotheses

It was hypothesised that although many variables would be associated with use of modern contraceptives in the bivariate analysis (due to the inter-relatedness of many of the measured variables), few would end up demonstrating statistical association with use in the multivariate analysis. It was hypothesised that those men with higher levels of formal education, who were supporting more children, who discussed family planning with their wives, and who were more

knowledgeable and had positive attitudes toward family planning would be more likely to be using modern contraceptives.

4.3 Research Team

The research team consisted of a diverse and knowledgeable group of individuals. In Uganda, six male research assistants were recruited to assist in the design of the questionnaire and to administer the questionnaires in the Community Sample. These research assistants were all trained as Community Health Workers and had previous research experience. Three female research assistants were recruited to identify participants from the Mpigi Health Centre family planning clinic and administer questionnaires to individuals in the Clinic Sample. These three women are professional health care workers and family planning providers and each had previous research experience. All research assistants were fluent in both English and Luganda.

A field supervisor, Sister Sarah Kabuye, was hired to assist in the design of the data collection instruments, supervise the research assistants in the field, and provide advice and suggestions for the study logistics. Sister Kabuye is the District Health Visitor in Mpigi District responsible for Reproductive Health and Family Planning in the District. The project supervisor in Uganda was Dr. JK Konde-Lule, a professor at the Institute of Public Health at Makerere University. Dr. Konde-Lule provided advice for data collection methods as well as the sampling technique.

The author and Principal Investigator (PI) was responsible for designing and testing the data collection instruments, designing and implementing the sampling strategy, supervising the data collection by the research assistants, and overseeing the overall conduct of the study. The PI was supported by a committee from the University of Alberta. The committee comprised two co-supervisors from the Department of Public Health Sciences, Dr. Patrick Hessel and Dr. Walter Kipp, and Dr. Nancy Gibson, a committee member from the Department of Human Ecology.

4.4 Quantitative Methodology

4.4.1 Study Design

All participants were identified from two sub-counties in Mpigi District, namely Mpigi Town Council and Mutuba I. These two sub-counties constitute the catchment area for Mpigi Health Centre. Mpigi Town Council is considered an urban sub-county while Mutuba I is considered a

rural sub-county. The study population consisted of married men (aged 18-54 years) who either were or were not currently using family planning methods (themselves or their partners).

With the help of personnel from Mpigi Health Centre, participants were identified through two primary means. Firstly, husbands of women visiting the Mpigi Health Centre family planning clinic (alone or with their wives) for family planning services were asked to participate in the study. These participants were identified prospectively with the help of personnel from the family planning clinic. This sample was designated the Clinic Sample.

Secondly, a cross-sectional survey of married men in the community was conducted. These men were identified via cluster sampling from lists of residents kept by Local Councils 1 (LC1) (the smallest administrative unit in Mpigi). This sample was designated the Community Sample

4.4.2 Sampling and Recruitment of Study Participants

Individuals from the Clinic Sample were recruited for participation in the study via prospective sampling. All husbands who were present at the family planning clinic were approached by a worker to determine whether they were eligible and willing to participate in the study. If the husbands were not present, women attending the clinic were asked to give consent for a member of the research team to contact their husbands to ask if they were willing to participate in the study. All requests of participation, directed at either male or female clients, were done *after* the client had received his/her desired services or goods from the family planning clinic. Of the 91 eligible participants approached for participation in the study, 65 men were contacted and completed the survey. Only four of the 65 participants were identified while at the family planning clinic. The remaining 61 male participants were not at the clinic and were contacted at their homes after obtaining consent from their wives.

In the Community Sample, a stratified cluster sampling technique was used to identify individuals for participation in the study (Appendix 4). A list of all LC1s in Mpigi Town Council and Mutuba I were assembled and 33 LC1s from the list were randomly selected. Each sub-County was divided into its component Parishes (LC2) which were then divided into its Villages (LC1). Owing to difficulties in obtaining population estimates for each Village, stratified random sampling was done on the basis of the number of Villages in each Parish rather than by population. For each LC1 selected, the LC1 Chairman was contacted and invited

to a meeting at Mpigi Health Centre to describe and discuss the study (Appendix 5). Each attending Chairman was asked to abstract a list of all married men (aged 18-54) living in his LC1. Each list of married men was assumed to comprise the most complete, current, and accurate sampling frame available. From each list, one married man was randomly selected (using a table of random numbers) to serve as the starting point of the cluster for data collection. From this starting point, the interviewer was instructed to proceed to the next closest household with an eligible participant. The interviewer continued with this 'next closest household' method until a cluster size of ten respondents was achieved. In this way, 330 individuals were recruited for participation in the study and completed the questionnaire.

Special attention was afforded to differences identified between Users in the Community Sample and Users in the Clinic Sample. It appeared, upon preliminary analysis, that the two groups of men could not be validly aggregated, therefore they were analysed separately. This is discussed in further detail in Chapter 5.

4.4.3 Inclusion and Exclusion Criteria

Individuals were considered eligible for participation in the study if they met the following inclusion criteria:

a) Aged 18 – 54 years.
b) Married adult male.
c) Resided in either Mpigi Town Council or Mutuba I.

Individuals were excluded from the study if:

a) Their wives were currently pregnant.
b) Their wives were past menopause or otherwise involuntarily infertile.

In the Community Sample, if an individual did not satisfy the inclusion and exclusion criteria for participation in the study, he was replaced by an eligible individual in 'the next closest household' in the cluster. If a sampled individual was eligible for participation but was not available when the interviewer arrived at the household, the interviewer was instructed to make two additional visits to the household to approach the selected individual for participation. If

upon the third visit the individual was not available, a married male in the 'next closest household' was selected.

In the Clinic Sample, if an individual was not eligible for participation in the study, the next eligible individual from the clinic was recruited.

4.5 Quantitative Data Collection

4.5.1 Questionnaires

Upon identification and consent, the study participants were asked to complete an interviewer-administered questionnaire with questions relating to socio-cultural and demographic factors, knowledge of, attitudes toward, and practice of family planning (Appendix 6). The questionnaire was constructed using selected validated questions from past DHS and other questionnaires from grey literature relating to men's KAP toward family planning and factors associated with modern contraceptive use. The questionnaires were translated from English into Luganda and administered in Luganda. Although the research assistant administered the questionnaires in Luganda, he or she recorded the answers in English for the purposes of analysis.

4.5.2 Sample Size and Power Considerations

Sample size and power are related concepts that can both be used to determine the probability of statistically detecting an effect of a specified magnitude, if the effect truly exists (Hennekens and Buring, 1987). Owing to differences in sampling techniques for the two study samples, sample size calculations were conducted for the Community Sample while power calculations were conducted for the Clinic Sample.

Sample size consideration – Community Sample

One of the primary objectives of this study was to estimate the prevalence of contraceptive use in the community. In order to estimate the prevalence of use with a pre-determined level of significance, the required sample size was calculated using the following formula:

$$n = \frac{pq\,(z_{1-\alpha/2})^2}{d^2}$$

in which,

n = number of individuals required for inclusion in the sample

p = the estimation of the prevalence of contraceptive use

q = $1 - p$

$z_{1-\alpha/2}$ = the value of the standard normal distribution corresponding to a significance level of α (eg., 1.96 for a two-sided significance test at the 5% significance level)

d = number of units on either side of the estimator (i.e., ±%)

Adapted from Daniel, 1974.

The Ministry of Health estimates the prevalence of contraceptive use in Uganda to be 15% ± 4%. Using $\alpha = 0.05$ ($z=1.96$) the required sample size was calculated to be:

$$n = \frac{(0.15)(0.85)(1.96)^2}{(0.04)^2}$$

$n = 306.13$

Thus, the required sample size for the Community Sample was 307 individuals. To account for potential refusals, incomplete, or invalid questionnaires, the required sample size was increased by 5%, resulting in a Community Sample size of at least 321 individuals. To achieve a sample size of at least 321 individuals with a pre-set cluster size of 10 individuals per cluster required the identification of 33 clusters (LC1s). Thus, through the use of the cluster sampling method, the desired sample size for the Community Sample was 330 individuals.

Previous studies employing cluster sampling methodology have reported that when sampling more than 30 clusters with less than 12 individuals per cluster, the resulting statistical analyses can proceed as though the sample was selected using random sampling methods (Abramson and Abramson, 1999). With 33 LC1s and 10 individuals per LC1, the employed cluster sampling method met the criteria and the data were therefore analysed using statistical methods appropriate for analysing data collected using random sampling. The failure to account for the use of cluster sampling in the analysis may have resulted in inflated and generally less precise risk estimates.

Power consideration – Clinic Sample

The recruitment of contraceptive users from the family planning clinic was limited by a low prevalence of contraceptive use in the community, time constraints, and other logistic problems. Although it was planned to recruit 100 users from the clinic, only 65 cases (i.e., modern contraceptive users) were available for and thus comprised the Clinic Sample. Given this sample size, a power calculation was computed to determine the probability of detecting a statistically significant effect among the Clinic Sample if one truly existed. The formula for calculating power is as follows:

$$z_{1-\beta} = \sqrt{\frac{n\,(d^*)^2\,r}{(r+1)\,(\bar{p})\,(1-\bar{p})}} - z_{1-\alpha/2}$$

in which,

- $z_{1-\beta}$ = the value of the standard normal distribution corresponding to the level of power
- n = the number of available cases
- r = the control to case ratio
- p_1 = the estimated proportion of cases with exposure
- p_0 = the estimated proportion of controls with exposure
- q_1 = $1 - p_1$
- q_0 = $1 - p_0$
- r = the ratio of controls to cases
- d^* = the difference in the proportion of cases and controls with exposure
- $\bar{p}$ = the weighted average of p_1 and p_0
- $z_{1-\alpha/2}$ = the value of the standard normal distribution corresponding to a significance level of α (eg., 1.96 for a two-sided test at the 5% significance level)

Adapted from Kelsey et al, 1996.

The formula for determining the power of the Clinic Sample was based on the hypothesis that individuals with some Secondary School education would be more likely to be using modern contraceptives than individuals with only Primary School education or less. Reports from the 1991 Mpigi District Population and Household census, estimated that approximately 20% of men in Mpigi have at least some Secondary School education. For the purposes of this calculation, we were interested in detecting a magnitude of effect of at least two times (i.e., OR is equal to at least 2.0). Therefore, with 65 users (cases) and a planned control to case ratio (r) of 3, the available power for the Clinic Sample was:

$n = 65$

$r = 3$

$p_0 = 0.20$ Proportion of adult males with some Secondary School education

$OR = 2.00$ Minimum expected magnitude of effect

$p_1 = p_0 OR = (0.20)(2.00) = 0.40$

$q_0 = 1 - p_0 = 1 - 0.20 = 0.80$

$q_1 = 1 - p_1 = 1 - 0.40 = 0.60$

$d^* = p_1 - p_0 = 0.40 - 0.20 = 0.20$

$\bar{p} = \frac{p_1 + rp_0}{1 + r} = \frac{0.40 + (3)(0.20)}{1 + 3} = 0.25$

$z_{1-\alpha/2} = 1.96$ for a two-sided test at the 5% significance level

$$z_{1-\beta} = \sqrt{\frac{(65)(0.20)^2(3)}{(3+1)(0.25)(1-0.25)}} - 1.96$$

$$= \sqrt{\frac{7.8}{0.75}} - 1.96$$

$$= 1.26$$

Power = 89.6%

Thus, the power available to detect a twofold increased odds ratio of modern contraceptive use associated with higher education with 65 contraceptive users (cases), a 3 to 1 control to case ratio, and a type I error of 5%, was 89.6%. Individuals from the Community Sample who were not using modern contraceptive methods (non-users) served as the controls.

4.6 Qualitative Methodology and Data Collection

Given the overall complex and sensitive nature of the research topic, qualitative methods were used in an attempt to further explore and uncover some of the intricate relationships between factors associated with contraceptive use and male involvement in family planning.

Specifically, there was one main objective for the qualitative portion of the study; to identify some of the barriers inhibiting or preventing men from participating in and/or practising family planning and to identify means by which male involvement could be encouraged. A secondary objective of the qualitative analysis was to supplement the quantitative findings, explore and

elucidate men's actual or perceived role in family planning matters, and to provide context (both cultural and otherwise) to the findings.

To accomplish these objectives, semi-structured interviews with key informants and focus group discussion sessions were conducted.

4.6.1 Key Informant Interviews

Upon completion of the questionnaire data collection, semi-structured interviews with seven key informants were conducted (Appendix 7). The key informants were identified, on the advice of the field supervisor and the project supervisor, as knowledgeable individuals with a vested interest and involvement in family planning issues in the District and could therefore offer various perspectives to address the objectives of the qualitative portion of the study. The key informants included the following individuals:

1) The Health Visitor for Reproductive Health in Mpigi District
2) The Director and Medical Officer of Mpigi Health Centre
3) A female family planning provider at a private family planning clinic in Mpigi Town Council
4) The LC3 Chairman for Mpigi Town Council
5) The Chairperson of the Family Planning Association of Uganda (FPAU) representing Mpigi District
6) The family planning Focal Person for Mpigi District and male family planning provider at a private family planning clinic in Mpigi Town Council
7) The District trainer for the Community Based Distribution Agents (CBDA)

It was hoped that interviews would be conducted with the District Medical Officer and the LC3 Chairman for Mutuba I, however, both of these individuals were unavailable at the time of the interviews.

The interview guide consisted of questions designed to address some of the barriers to using family planning as well as some ways to encourage male involvement (Appendix 8). The interview guide also consisted of questions to address the validity of the questionnaire and its findings to allow further exploration of those factors related to KAP of married men toward family planning.

The PI conducted the key informant interviews in English, as all of the key informants spoke English fluently. The interviews were tape-recorded and transcribed prior to analysis.

4.6.2 Focus Group Discussions

Complementary to the interviews, four focus group discussion (FGD) sessions were conducted. Two of the focus groups were assembled using men from the community who fit the eligibility criteria as described for participation in the quantitative portion of the study. The FGD participants were, however, different men from those who completed the questionnaires. The first FGD was composed of individuals who were currently using family planning (themselves or their wives) and the second FGD was composed of individuals who were not currently using family planning (themselves or their wives). The remaining two FGD sessions were conducted with members of the research team.

Sampling and Recruitment of FGD participants – Community Members

Unlike most quantitative sampling methods, the purpose of sampling for qualitative research is not to select a random and representative sample so that statistical inference can be made, rather it is to purposively identify individuals who either possess characteristics of interest to or have distinctive experience with the research topic (Creswell, 1998). The participants for these two FGDs were selected through the use of a snowball sampling method. Using this method, participants are identified by people who know people who would provide information about the research topic, who would be interested in participating, and who meet the eligibility criteria for the study (Miles and Huberman, 1994). In this way, as selected individuals recommend and recruit other individuals, the sample grows or "snowballs" until the desired sample size is attained. For the purposes of sampling in each of the two focus groups, two individuals were chosen to serve as the starting points of the snowball, one from Mpigi Town Council and one from Mutuba I. In this way, a reasonably similar number of individuals from each of the sub-counties of interest formed the focus groups. Eight participants were identified for participation in the FGD with family planning users, while seven participants were identified for participation in the FGD with family planning non-users.

Data Collection – Community Members

A female facilitator, who was highly trained in qualitative research methods and familiar with family planning issues, led the two FGD sessions with the community members. During the

sessions, the field supervisor was present to observe and take notes (in English). The PI was also present to take notes on the order of the speakers, body language, and other elements that would not be captured on the audio tape. Although there was initial concern related to the use of a female facilitator for FGD sessions with men, it was determined that the most important characteristics of a facilitator were that he/she be highly trained in the techniques of qualitative data collection and be very knowledgeable about family planning. Given our facilitator's training and demeanour, she was considered the most suitable individual to facilitate the FGDs.

The interview guide for the FGDs consisted of questions intended to identify some of the barriers to using family planning as well as some ways to encourage male involvement (Appendix 9). The interview guide also consisted of questions designed to explore the context and meaning behind the quantitative findings concerning men's KAP toward family planning and the dynamics of contraceptive use.

The FGD sessions were conducted in Luganda and were audio-taped. The translation of the audio-taped sessions from Luganda to English was done by the facilitator with the assistance of notes taken during each FGD session. The PI transcribed the verbally translated information. In an attempt to maximise the linguistic reliability of the translations, the transcripts were translated from English back to Luganda (i.e., transcripts were back-translated) and reviewed with the help of the field supervisor and individuals from the Institute of Languages at Makerere University.

Marshall and Rossman (1995) have advised that research participants should benefit in some way. In this study, the FGD participants were provided with drinks, snacks, and compensation for travel expenses related to participation in the study.

Sampling, Recruitment, and Data Collection – Research Assistants

The third FGD was conducted with the male research assistants (RA) at the end of the quantitative data collection. As each research assistant was trained as a Community Health Worker (which includes training in family planning) and also conducted the field research, the RAs functioned as a focus group of key informants. The PI facilitated this focus group in English and an assistant was present to take notes.

The fourth and final FGD was conducted with the female research assistants at the end of the quantitative data collection. All of these individuals were trained health care professionals, administered the study questionnaires, and were also women from the community. Together they functioned as a focus group of female key informants and were able to provide information about women's perceptions of the research findings. The PI facilitated this focus group in English and a male research assistant, external to the initial study team, was present to take notes. Prior to the FGD session, the women were asked if they were uncomfortable or uneasy with the presence of a male note-taker, and it was assured that there was no problem with having him present.

The interview guide for these FGD sessions was similar to that utilised for the key-informant interviews (Appendix 10). The guide consisted of questions intended to identify some of the barriers and motivators to using family planning, questions to assess the validity of the quantitative findings, and questions designed to discuss any surprising and/or interesting findings identified through the questionnaire and the interviews. In this way, the validity of the questionnaires and the key informant interviews was assessed in the focus groups (i.e., triangulation of the findings).

In an attempt to compensate the participants in the final two focus groups, they were all provided with lunch.

All four FGD sessions were held at Mpigi Health Centre.

4.6.3 Personal Journal

A personal journal was kept to help the author understand the cultural and contextual setting in which the project was being conducted as well as to record personal reflections and experiences while conducting the research.

4.7 Critique of Data Collection Methods

Collecting information about sexual and fertility behaviour is a difficult task requiring very stringent checks to ensure high degrees of reliability and validity. This problem is compounded in cross-cultural family planning research because sexuality is often surrounded by strict social, moral, and religious beliefs, which may be unknown to the researcher (Khanna et al, 1992). In

an attempt to maximise the reliability and validity of the present study's results, a method-driven approach and the triangulation of findings was employed. The purpose of this section is to provide a critique of the three data collection methods used in this study.

Quantitative surveys, such as self- or interview-administered questionnaires, are the most commonly used method for collecting data on sexual behaviour (Konings et al, 1995). Surveys employ a standard questionnaire to ensure that all respondents are asked an identical set of questions in the same sequence. It is this structured property of the questionnaire that makes surveys a useful method for collecting standardised data on a number of variables from a large sample of individuals. These data are then used to make predictions, probabilistic statements, and generalisations about the sample population with respect to, in this case, men's KAP toward family planning (Fisher et al, 1991).

The standardisation of responses, which proves advantageous for a quantitative analysis, is also the cause of one of the survey method's significant weaknesses; it offers little or no room for elaboration or clarification of responses, and classifies given responses into a few categories regardless of the distinct qualities of each response (Okolo, 1990). Furthermore, quantitative findings about contraceptive use, as collected through KAP surveys, have come under increasing criticism because it is said that they collect superficial information, hide the real dynamics of contraceptive use and behaviour, and fail to address some of the more important issues behind contraceptive use, including psychological and cultural factors. These limitations of the KAP survey method, emphasised by the complex and sensitive nature of the topic and cultural contexts, may threaten the reliability and validity of the findings.

In an attempt to minimise these potential threats related to the reliability and validity of data collected through standardised questionnaires, complementary semi-structured interviews were conducted. Semi-structured interviews are often used in qualitative studies looking at sexual behaviour and contraceptive use (Huygens et al, 1996). Semi-structured interviews maintain much of the openness and freedom of response of unstructured interviews, yet exercise some control over the respondent's responses through the use of an interview guide (Rubinson and Neutons, 1987). The interview guide provides direction to the interviewer as to what questions to ask, and in what order. The guide contains a core of structured questions from which the interviewer may move in related directions for in-depth probing, allowing collection of accurate

information on certain questions with the opportunity for exploration. As a result of these qualities, semi-structured interviews are highly useful for generating supplementary, explanatory and exploratory data to augment the sometimes relatively superficial findings of quantitative surveys (Fisher et al, 1991).

In an attempt to triangulate and further validate findings, focus groups were used. Focus groups involve exploring an issue in-depth with a small group of participants. The focus group facilitator employs an interview approach similar to that utilised in semi-structured interviews, however the interview is conducted with a group rather than a single individual (Marshall and Rossman, 1995). Participants are often sampled purposively to reflect population variations that are of particular relevance to the research topic (e.g., in this study, one group of married men who were currently using family planning and a second group comprised of married men who were not using family planning) (Rubinson and Neutons, 1987). Three important advantages of focus group discussions include: (1) they are socially oriented allowing study of participants in a natural, real-life atmosphere; (2) they allow the facilitator the flexibility to explore unanticipated issues as they arise in the discussion; and (3) they provide a way of reducing the amount of time and personnel required for conducting and analysing in-depth interviews and yet allow collection of detailed qualitative information from a relatively large number of respondents (Marshall and Rossman, 1995; Fisher et al, 1991).

4.8 Quality Control

Validity and reliability are highly sensitive to various data collection methods, instrument variables, attributes of the researcher and the respondents themselves, and the data collection and/or interview site (Huygens et al, 1996). Each of these factors has an influence in determining the degree of measurement error and the quality of the research findings (Fisher et al, 1991). The validity of the participants' responses is influenced by the terminology, linguistic reliability, and the question wording and order of the research instrument, as well as the overall length of the survey or interview session. To address these issues, a number of quality control techniques were employed.

Prior to administering the questionnaire, an informal focus group discussion was held with all of the research assistants as well as the field supervisor. The purpose of the focus group was to discuss and assess the proposed questionnaire with respect to clarity of questions,

appropriateness of terminology, and question wording, acceptability, and utility. Proposed changes were incorporated into the questionnaire, which was then taken to the Institute of Languages at Makerere University for translation from English into Luganda. After the translations were completed, a meeting was held with the research team to discuss the reliability of the translations. Changes were made (mainly to make the translations less like formal, grammatically proper Luganda and more consistent with spoken Luganda) and a training session was held with the research assistants on how to administer the questionnaire.

The training session involved instruction on how to conduct an interview, and included a discussion on how to describe the study, the importance of providing the participant with the information letter, how to request and obtain the participant's consent to participate in the study, as well as how to use the questionnaire, including instructions on probing, filters, and skips. The research assistants were each asked to pilot test the questionnaire on four individuals from the community. They were asked to pre-test the questionnaire on a variety of individuals, i.e., some who didn't speak any English, some with less education, some who lived in urban areas, some who lived in rural areas, men of different ages and occupations. After analysing the results of the pilot test and meeting with the research assistants to identify problem questions or ordering, some of the questions were removed, others added, and still others clarified. A copy of the final proposed questionnaire was given to the project supervisor and the Medical Director of Mpigi Health Centre for review. After including some minor adjustments, the questionnaire was considered ready for use. The research assistants were provided with one more training session consisting of a thorough review of the questionnaire, as well as a discussion of the sampling technique which included a description of how to use a table of random numbers to randomly select the starting point for each cluster and subsequently how to proceed with the 'next-closest-household' cluster sampling technique. Research assistants were also trained as to how to properly introduce themselves and the study (Appendix 11).

Each day that the male research assistants went into the field for data collection, either the field supervisor or the PI would accompany them to ensure that sampling was done properly and to deal with any difficulties encountered in administering the questionnaires. The PI collected completed questionnaires and consent forms the day following the data collection. At this point, questionnaires and consent forms were reviewed for missing information, to ensure

completeness, and to address any problems that may have occurred during the previous day's data collection.

The research assistants administered the questionnaires in Luganda, however recorded the answers in English for the purposes of analysis. It was agreed that as each research assistant was fluent in both English and Luganda and was present at the time of the interview, he/she would be able to provide the best translation of the participants' responses. Although most of the questions simply required a check mark in the proper categorical response box, a few of the questions were open-ended and may have required a written synopsis of the participants' response. In this case, the research assistant was relied upon to provide an accurate and reliable translation of the response from Luganda to English. During the training session for the research assistants, a number of exercises were conducted to assess the similarity and consistency of the translated synopses provided by each RA. After the training session, it was determined that the RAs were able to provide sufficiently similar translated synopses to open-ended questions.

To maximise the reliability and consistency of the quantitative findings, it was hoped that male interviewers could be used throughout the quantitative data collection. It was suggested, however, that female interviewers be responsible for contacting husbands of wives from the Clinic Sample to alleviate any suspicions that a husband may have of his wife returning from the family planning clinic in the company of another man. Minimising potentially risky situations (for the interviewer as well as the wives) was considered a priority and it was therefore agreed that female interviewers should administer the questionnaires to participants identified in the Clinic Sample.

The literature suggests that measurement errors may be influenced by the respondents themselves in their willingness and ability to accurately recall details of past and/or present contraceptive use (Fisher et al, 1991). Two restrictions were imposed in an attempt to minimise errors associated with the reporting of contraceptive use. Firstly, only married men were eligible for participation in the study. By restricting participation to married men it was anticipated that the data collected about use of contraceptives would be more accurate. The men were being asked to provide information about whether they were practising family planning and often this involved determining whether or not his partner was using a contraceptive method. It was felt that married men, with at least one continuous sexual partner, would be better able to state

whether his partner was using contraception, compared with a non-married man who may or may not be involved in a continuous sexual relationship.

Secondly, the analysis of contraceptive use was conducted using only individuals reporting use of modern contraceptives, and not traditional methods. There were a number of reasons for this. Firstly, use of traditional methods is not always as regular or consistent as use of modern contraceptive methods. Secondly, individuals who are using modern contraceptives require some contact with the health system and it was therefore thought that they would be better able to provide evidence related to barriers associated with administrative issues within the health system. Thirdly, since modern contraceptive methods are typically more effective than traditional methods, their use in curbing and/or predicting fertility is commonly considered more relevant (Trussel and Kowal, 1998).

4.9 Data Management

4.9.1 Quantitative

A coding dictionary was designed and used to code the quantitative data. The coded data were then entered into SPSS version 10.0 for statistical analysis purposes. The SPSS database did not contain any names of the participants, rather individuals were given identification codes. Data cleaning and verification were performed on the database. Each data record was double-checked against its hard copy questionnaire to ensure accuracy during data entry. Any noted discrepancies were checked and the correct data were entered into the database.

All completed questionnaires are now stored in a locked filing cabinet at the University of Alberta.

4.9.2 Qualitative

The PI transcribed and entered the qualitative data (interviews and FGDs) into Microsoft Word 97. The data were checked for reliability of the transcription and applicable translations (as described earlier). Research notes, including journal and field notes, were also transcribed into Microsoft Word.

4.10 Data Analysis

4.10.1 Quantitative Analysis

The quantitative analysis was conducted on each sample (Community and Clinic Samples) separately. The analysis was conducted in three parts, using SPSS software throughout.

4.10.1.1 Descriptive Analysis

Firstly, using simple descriptive statistics, the study population was described with respect to socio-demographic composition and male KAP toward family planning. Prior to running the descriptive analyses, open-ended questions were entered into Microsoft Excel and categories were created. Each category was then coded and this code was entered into the SPSS database. If a given response fell into two separate response categories, it was included twice. In this way, the number of responses for some of the open-ended questions exceeded the number of cases. The results of this analysis are presented in Chapter 5.

4.10.1.2 Bivariate Analysis

Secondly, differences between modern contraceptive users and non-users were measured and analysed using standard contingency table methods. The purpose of this analysis was to identify variables that were significantly associated with the outcome variable (use of modern contraceptives) in a bivariate analysis without taking into account the possibility of confounding by other variables.

The significance of the association between the outcome and continuous variables was tested using the Independent Samples t-test. The significance of the association between the outcome and nominal variables was evaluated using Pearson's chi-square test statistic, while the significance of ordinal variables was evaluated using chi-square for linear trend. Associations were considered statistically significant if the corresponding p-value was equal to or less than 0.05. Odds ratios (or Mean differences) and 95% confidence intervals were computed to determine the magnitude of the association between an independent variable and the outcome.

The results of this analysis were compared to findings reported in the literature and were used to identify significant variables for entry into the multivariate analysis. The results of the bivariate analysis are presented in Chapter 6.

4.10.1.3 Multivariate Analysis – Logistic Regression

In an attempt to observe how the independent variables function together to predict use of modern contraceptives, a multivariate analysis was conducted. Specifically, logistic regression was used to determine the independent contributions of a set of explanatory variables (e.g., socio-cultural and demographic factors, family size, composition, and preferences, and knowledge and attitudes toward family planning) in predicting use of modern contraceptive methods. In this way, the logistic regression model provided the magnitude of association for those variables that are most strongly associated with contraceptive use, while controlling for the effect of all other significant predictors.

Two methods, one manual and one automated, were used to create the final logistic regression model. Firstly, after completing the variable selection process, a manual forward stepwise selection technique was conducted to obtain the most parsimonious model. Using forward stepwise selection, variables are entered sequentially into the model on the basis of the significance of the Likelihood Ratio (LR) test statistic. The LR test statistic considers the significance of the variable upon inclusion in the model with the current model variables (Kleinbaum, 1994). If the addition of a new variable makes a current variable non-significant, then the current variable will be dropped in favour of the new variable. In selecting variables for entry into the model, consideration was also given to the practical significance of the variable. The final model contained only those variables that were significant at the 5% level, based on the LR test statistic.

Each variable not included in the model was tested to assess its significance as the next variable in the model as well as to assess whether it confounded any of the relationships in the model. Interaction terms between all variables in the final model were examined. An interaction was considered to be present if the corresponding p-value (based on the Wald test statistic) of the interaction term was significant at the 5% level ($p<0.05$).

Secondly, a computer automated backward stepwise elimination technique was conducted to serve as a comparison for the results obtained using the manual method, and to ensure that no bias was introduced by the investigator in manually creating the model. Using this method, at each step of the model building process, the variable demonstrating the least significance in its association with use of modern contraceptives (based on the Likelihood Ratio test statistic) is

removed from the model. For the purposes of this analysis, variables were considered significant enough to be entered in the model if they demonstrated significance at the 20% level, and existing variables were dropped from the model at the 30% level. These generous entry and exit cut-off points were chosen such that variables that may be predictive of use were not prematurely excluded. The final model contained only those variables that were significant at the 5% level, based on the LR test statistic. Covariates and associated coefficients from the two models were compared.

The goodness of fit of the final regression model was assessed using Hosmer-Lemeshow's goodness of fit test (Hosmer and Lemeshow, 1989). In this test, samples are divided into ten categories based on various combinations of the independent variables. A comparison is performed within each category between the observed (actual) proportion of individuals with the dependent variable (i.e., proportion of modern contraceptive users) and the expected proportion of individuals with the dependent variable (based on the logistic regression formula). The differences between the expected and observed proportions are evaluated using Hosmer-Lemeshow's test statistic. If the test statistic is statistically significant (based on Pearson's chi-square), this indicates that the expected and observed proportions significantly differ from one another and therefore the model is not a good fit. If, however, the test statistic is not statistically significant, this indicates that the observed and expected values do not significantly vary and thus the model fits the data well.

The results of the multivariate analysis are presented in Chapter 7.

4.10.2 Qualitative Analysis

The interviews and the focus group discussion sessions were taped (by an audio tape recorder), transcribed, and subjected to a content analysis (Marshall and Rossman, 1995). The analysis was separated into two main components; the first to identify barriers and motivators to male involvement in and use of family planning and the second to validate and further explore quantitative findings. Key themes were extracted from the transcripts and compiled. A coding framework was developed from this list of key themes and was used to code the transcripts for analysis. Quotes were extracted from the raw data to provide evidence for each of the themes and categories extracted. The analysis was completed using manual categorisation methods.

Reliability and internal validity of coding of themes extracted from the interviews and FGD sessions were tested through the use of two independent coders. Percent agreement values between the investigator and the independent coders were calculated and are reported.

The results of the qualitative analysis are presented in Chapter 8.

4.11 Ethical Implications

In June 1999, the Health Ethics Research Board B (formed by members of the University of Alberta, Capital Health Authority, and Caritas Health Group) granted ethical approval for this study. In August 1999, the National Science and Research Council of Uganda granted ethical and scientific approval of the study. Upon receiving ethical approval, a letter of introduction was offered by Makerere University to enable the PI to officially introduce herself to members of the research community.

Introductions were made to key gatekeepers within the District and included the District Medical Officer, the Director of the Mpigi Health Centre (MHC), the Head Nurse of the MHC family planning clinic, and the LC3 Chairmen for Mpigi Town Council and Mutuba I sub-counties. All five of these individuals provided their consent for the study to be conducted in the proposed study site.

A meeting was held with the Chairmen of the sampled LC1s to obtain consent for their villages to participate in the study. During the meeting the research team was introduced, the study was described and the LC1 Chairmen were encouraged to ask questions about the study and their responsibilities to the project. Twenty-seven of the 33 invited LC1 Chairmen (or their representatives) attended the meeting. Attendees were compensated for their travel expenses associated with attending the meeting. The remaining six Chairmen who were unable to attend the meeting were contacted separately at a later date. All of the LC1 Chairmen offered consent for their communities to participate in the study.

The sensitivity of the study topic necessitated careful attention to privacy and confidentiality. An information sheet outlining the study's purpose, scope, and possible outcomes was given to each of the study participants to ensure informed consent (Appendix 12). The information letter also stated the policy on confidentiality and that the participants were free to withdraw from the

study at any time without repercussions. The intentions of the study were made clear to ensure that participants trusted that their anonymity and the confidentiality of their responses were protected. Additionally, all study participants (including questionnaire respondents, key informants, and focus group discussion participants) were asked to give their consent for participation in the study by signing a consent form (Appendix 13). The wives of men identified through the clinic were also asked to give consent for the study investigators to contact their husbands. For participants who could not read and/or write the information letter and consent form was read to them and a witness signed on their behalf to certify that the information was fully read to them and understood. The information letters and consent forms were available in both English and Luganda.

The research assistants and focus group facilitator received training about ethical considerations necessary for the collection of sensitive data. This included protecting the participant's privacy and the confidentiality of responses and assuring the individual that he was free to withdraw from the study or refuse to participate at any time, without any repercussions. The research assistants were also trained to ensure that consent to participate in the study was given voluntarily and without coercion. Neither the names of participants nor the names of those LC1s selected to participate in this study will be revealed at any time.

4.12 Dissemination

Following the data collection and preliminary data analysis, a presentation was made in Mpigi to members of the research team, the DHMT, key informants, and other interested individuals to discuss the preliminary results of the study. During the presentation, individuals were also given a copy of a report describing the preliminary results. Collaboration with the supervisory team in Uganda was maintained throughout the data analysis. Upon completion, the supervisory team received a copy of and provided feedback on the final study report. A shorter, summary report highlighting the key findings of the study was provided to each of the research assistants and key informants, the Institute of Public Health at Makerere University, the Uganda Ministry of Health, and the UNFPA office in Kampala, Uganda.

Upon receiving feedback from all involved individuals, a collaborative effort will be undertaken to identify the most appropriate and suitable means by which to disseminate the study findings to the community members.

CHAPTER 5
RESULTS – DESCRIPTIVE ANALYSIS

The purpose of this chapter is to provide an overall descriptive analysis of the study population as defined in Chapter 4. This chapter will address the first two objectives of this study: (1) assess the levels of male KAP toward family planning and (2) determine the prevalence of use of modern contraceptive methods.

The levels of socio-demographic factors between modern contraceptive users in the Community Sample and the Clinic Sample were compared to determine whether they were reasonably similar and could be validly combined. It was determined that the two samples differed with respect to key socio-demographic factors and thus warranted separate analyses. The results of this analysis are presented in Section 5.3.

5.1 Study Participation

In the Community, 397 individuals were approached to participate in the study. Of these, 67 refused to participate, yielding a response rate of 83.1%. Of the 330 completed questionnaires, 11 could not be used due to either incompleteness of the information or an inability of the individual to satisfy the study's eligibility requirements. Therefore, of the 330 individuals who agreed to participate in the study, 319 completed valid questionnaires (80% of the original number of individuals approached for participation in the study).

From the Clinic Sample, 91 individuals were approached for participation in the study. Of these, 65 individuals agreed to participate and completed valid questionnaires, yielding a participation rate equal to 71.4%.

5.2 Descriptive Examination of Selected Socio-Demographic Factors

Distributions of selected socio-demographic characteristics of the study population are presented in Table 5.1 for the Community and Clinic Sample participants.

In the Community Sample, 73% of participants lived in Mutuba I, 89% were of Baganda tribe, and the average age was 33.9 years (range: 20 – 54 years). These values were all higher than observed in the Clinic Sample where 49% were from Mutuba I, 82% were of Baganda tribe, and

the average age was 32.8 years. In both samples, similar proportions of individuals were Christian (85% in each sample) and Muslim (Community Sample 14%; Clinic Sample 11%). A higher proportion of Community participants, however, were Catholic (64%) compared with Anglican (21%) while in the Clinic Sample the proportion of Catholic and Anglican participants was similar (43% and 42%, respectively). In the Community Sample, 52% of participants had either no formal education or only some Primary School education, while 7% had completed Secondary School or gone on to post-secondary education. Participants in the Clinic Sample were more highly educated with 15% having completed Secondary School or more. Similarly, a higher proportion of individuals from the Clinic Sample were engaged in Professional occupations[1] (15%) compared with the Community Sample (7%). In both samples, the greatest proportions of participants were subsistence farmers (Community Sample 46%; Clinic Sample 39%). Comparable proportions of participants in each sample were involved in a polygamous marriage (Community Sample 12%; Clinic Sample 15%), with number of wives ranging from 2 to 6. Individuals in both samples first married at comparable ages (Community Sample 21.9 years; Clinic Sample 22.3 years).

5.3 Comparison of Users from the Community and Clinic Samples

An analysis was conducted to assess the comparability of levels of socio-demographic factors between modern contraceptive users in the Community Sample and the Clinic Sample.
As shown in Table 5.2, some significant differences between Users were evident. A significantly greater proportion of Users from the Clinic lived in Mpigi Town Council than was found in the Community Sample (p=0.032). In addition, a significantly greater proportion of Users from the Clinic was Anglican (0.008). Individuals in the Clinic Sample were non-significantly younger than Users from the Community Sample (p=0.078).

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[1] Categories for 'Occupation' were constructed from the open-ended responses on the questionnaire. Categories were loosely based on the occupational categories utilised in the 1995 UDHS (MoFEP, 1996). It should be emphasised that any differences observed between occupational status may be due to the real effect of this variable or to the difficulty in measuring and coding occupation. An example of the complexity of the occupational categories was 'Businessman/Trader', which encompassed individuals who were performing a wide range of business activities including those who owned and operated small, local kiosks and those who owned larger businesses such as gas stations.

The observed differences may be due to a biased selection technique from the clinic whereby individuals who refused to participate in the study were systematically different from those who agreed, in a way that was related to these socio-demographic factors.

These differences necessitated separate analysis and description of the results for each sample. Throughout this chapter, the analysis, presentation, and discussion of descriptive findings from the Community Sample are provided more thoroughly than for the Clinic Sample. The reasoning for this is based on the fact that the Community Sample comprised a more representative sample of the population and included both family planning users and non-users. Participants from the Clinic Sample, however, were a select group of contraceptive users whose characteristics may not be generalisable to a larger population. Nonetheless, the Clinic Sample served as a type of "gold standard" of Users since all participants were known to be modern contraceptive users.

5.4 Descriptive Examination of Selected Factors Relating to Family Size, Composition, and Preference

Selected variables relating to family size, composition, and preference of the study population are shown in Table 5.3.

With respect to family size, participants in the Community Sample reported a slightly higher average number of children compared with individuals in the Clinic Sample (5.6 and 4.9 children, respectively), with more daughters, on average, than sons. 50% of participants in the Community Sample and 40% of those in the Clinic Sample were supporting 'other' children (e.g., grandchildren, nieces, nephews, etc.) in addition to their own. The average total number of children being supported was 5.9 in the Community Sample and 5.2 in the Clinic Sample, both higher than the average number of living children.

One of the indicators of the demand for family planning is the proportion of participants stating that they do not want more children (McGinn et al, 1989). The question relating to the desire for more children attempted to differentiate between individuals who desired no more children and individuals who desired no more children in the next two years. In this way, it was possible to differentiate those individuals who may require family planning to stop births from those who may require family planning to space births. In both samples, the majority of participants

(approximately 60%) desired more children. There were differences, however, in terms of the timing of the desired children. Although approximately 35% of individuals wanted to stop child bearing (i.e., desired no more children), 67% of Clinic participants and 53% of Community participants desired no more children in two years. These individuals comprise a considerable target group for family planning services. Furthermore, this suggests that, compared with the Community Sample, a higher proportion of individuals from the Clinic Sample were interested in spacing children rather than stopping childbirth.

Participants were asked to provide reasons why they desired or did not desire more children[1]. In both samples, having not yet reached their preferred family size and a specific desire for male or female children were the most commonly stated reasons for desiring more children. For those Community participants who desired no more children, financial concerns and an expressed ability to support the current number of children were the most commonly provided reasons. The primary reason given by participants from the Clinic Sample was that he was satisfied with his present number of children.

5.5 Descriptive Examination of Knowledge Related Factors

Knowledge related characteristics of the study population are shown in Tables 5.4 to 5.7.

Knowledge of the term 'family planning' was very high; 95% of participants from the Community Sample and 99% of participants from the Clinic Sample had heard of it. Those participants who had heard of family planning were asked to provide a definition. The three most commonly provided definitions of family planning included 'Having the number of children that I can support/afford', 'A method used to space children', and 'A method used to produce few children'.

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[1] This was a Multiple Response variable meaning that participants were free to provide any and more than one response to the question. Upon categorisation of responses, some responses fell into more than one category and were counted once in each relevant category. In this way, the total number of responses exceeded the total number of cases. Proportions of responses were still based on number of cases. Subsequent Multiple Response variables (as marked in Tables 5.3-5.4, 5.7 – 5.8, and 5.10) are reported the same way.

Knowledge of family planning methods

To ascertain knowledge about the various family planning methods, each participant was asked the following question: 'There are many methods that a couple can use to delay or avoid pregnancy. Can you tell me the ways or methods that you have heard about?'. In this way, the respondent was first asked to name methods that he had heard of, without any prompting. After these methods were named, method-specific probes were used to assess knowledge of the method after probing. Those methods not known after probing were coded as 'Unrecognised'. This method of recording data about knowledge of methods allowed a distinction to be made between those family planning methods known 'Spontaneously' and those known only after 'Probing'. Methods known 'Spontaneously' and those known after 'Probing' may represent differences in degree of association of the method with family planning since those methods known spontaneously are likely to be strongly associated with family planning and family planning messages. Table 5.5 shows the percentage of participants who had heard of specific family planning methods.

Recognition of at least one family planning method was nearly universal. 92% of Community participants and 99% of Clinic participants were able to spontaneously name a family planning method. Overall, traditional methods were less well known than modern methods. While over 90% of participants in both samples could spontaneously name at least one modern method, less than 1/3 could name a traditional method. After probing, however, nearly all of the participants knew at least one modern method and over 90% knew at least one traditional method.

Knowledge of the various family planning methods ranged substantially between the different methods. In both samples, the most common spontaneously known modern method was the pill followed closely by condoms and then injections (Community Sample 78%, 71%, and 59%, respectively; Clinic Sample 86%, 85%, and 77%, respectively). Of the permanent methods, in both samples, female sterilisation was more commonly known than male sterilisation. After probing, over 80% of participants in both samples had heard of female sterilisation, however, less than 50% had heard of male sterilisation. With respect to traditional methods, spontaneous knowledge for each method was low. Prior to probing less than 15% of participants had heard of periodic abstinence or natural methods, and less than 5% had heard of withdrawal. Most knowledge of traditional methods appeared only after probing.

Table 5.6 displays the average number of family planning methods known by participants. Participants from the Community Sample spontaneously knew an average of 2.8 family planning methods, and spontaneously knew more modern (2.5) than traditional (0.29) methods. After probing, participants knew an average of 7.2 family planning methods. Similar findings were observed in the Clinic Sample.

Problems with family planning methods

In order to elicit information about possible misconceptions about or actual problems with specific methods, for all known family planning methods, participants were asked to provide their opinion of the main problem associated with using that method. Only individuals who provided a problem were counted in the total number of cases (n).

The main problems reported were similar between the two samples. The main problems associated with using modern methods were generally related to reported effects on the health of a woman (including high risk of cancer, destruction of the uterus, and menstrual problems), high risk of producing abnormal children, the inconvenience and/or difficulties associated with using the method, and the permanence of the method (in the case of sterilisation). The main problems associated with using traditional family planning methods, were that these methods were not reliable or effective, and that they were difficult and/or inconvenient to use. Table 5.7 provides the responses given relating to the main problems associated with each method.

Where to Obtain Family Planning Methods

Family planning services in Uganda are provided through a network of government health centres and hospitals. In addition to these government outlets, private hospitals and clinics, private doctors, pharmacies/drugshops, and non-governmental organisations also provide family planning services. 95% of Community participants and 100% of Clinic participants could list at least one location where they could obtain family planning methods (Table 5.4). Over 3/4 of participants in both samples indicated that they could obtain family planning methods from a Government Health Centre, of which Mpigi Health Centre was most commonly specified. The next most commonly mentioned locations were private clinics, the Family Planning Association of Uganda (F.P.A.U) clinic, and government hospitals. It is interesting to note that less than 10% of participants mentioned that they could obtain family planning methods from Community Health Workers (CHWs) and Community Based Distribution Agents (CBDAs).

Questions and Information about Family Planning

As shown in Table 5.4, the vast majority (Community Sample 85%; Clinic Sample 100%) of participants indicated that they would talk to a health care worker/family planning provider if they had questions about family planning but currently, the majority (86%) of participants from the Community Sample get information about family planning from the radio. In comparison, over 90% of Clinic Sample participants get information about family planning from health workers/family planning providers and only 55% get information from the radio. In both samples, few individuals (less than 3%) indicated that they would approach a CHW or CBDA with questions about family planning. In the Community Sample, however, 22% of participants reported that they get at least some of their information about family planning from these individuals. It appeared that family planning messages from these community based family planning providers were reaching the community members, however, respondents did not consider these workers as sources of contraceptives nor as people to talk to about family planning matters.

All participants stated that there should be time/space between the birth of one child and the birth of the next, however, the ideal length of time varied between one and seven years. A space of three years between children is commonly considered a minimally ideal length of time between births (Maine and McNamara, 1985). A higher proportion of Clinic participants reported that the ideal length of time between births was three or more years, compared with Community participants (60% and 47%, respectively).

In both samples, approximately 90% of participants reported that they were interested in receiving more information about family planning. Following the questionnaire, participants indicated what type of family planning information they desired. These data are discussed and included in the qualitative analysis.

5.6 Descriptive Examination of Selected Attitude Related Factors

Attitude related characteristics of the study population are shown in Table 5.8 for the Community and Clinic Samples.

Overall, men shared a largely positive view of family planning. 93% of participants in the Community Sample and 100% of participants in the Clinic Sample indicated that, in general,

they approved of the use of family planning. Those who disapproved provided reasons pertaining to religion and health, as well as a desire to produce many/more children.
In both samples, the most frequently provided response as to the most important reason why someone would want to avoid having more children was for financial reasons (Community Sample 73%; Clinic Sample 66%). The second most commonly provided response was an inability or difficulty in supporting children, which is likely closely related (and perhaps overlapping) with financial reasons. Less than 7% of participants offered concerns related to 'the ill health of the mother and/or spouse' and 'spacing'. This is particularly important since many family planning programs emphasise the importance of family planning with respect to these two concerns.

In the Community Sample, 61% of participants stated that the decision to use family planning should be that of the couple while 29% believed the decision should be made by the man and only 9% believed it should be made by the woman. In the Clinic Sample, a similar proportion of participants stated that the decision should be made by the woman (9%), however, compared with the Community Sample, a higher proportion stated that the decision should be made by the man (37%) (the remaining 54% stated that the decision should be made by the couple). This indicates that in both samples, approximately 90% of respondents believed that men should have a role in making the decision to use family planning, either as part of a couple or independently.

The participants indicated that not all groups of individuals should have equal access to family planning methods. Over 95% of participants stated that married adults should have access to family planning methods. Just over 3/4 believed that unmarried adults should have access while a slightly higher proportion believed that adolescents should have access.

Discussion of family planning with their wives was very common. The majority of participants reported that they discussed family planning with their wives (Community Sample 82%; Clinic Sample 99%). After their wives, the respondents most commonly discussed family planning with other men, their family members, and doctors and nurses. 83% of participants from the Clinic Sample also reported that they discuss family planning with CBDAs.

In both samples, approximately 3/4 of participants indicated that they had discussed their desired number of children with their wives, a lower proportion than had discussed family planning. Approximately 60% of participants indicated that their wives wanted the same number of children. For those who indicated that their desired family size differed from their wives', a higher proportion indicated that they wanted more children than their wives (14%) than the proportion who indicated that their wives wanted more children (8%).

Individuals were asked what they would consider an ideal number of children. A measure of the 'ideal' number of children is theoretically based on ideals that are not constrained by such factors as the current financial situation and/or current gender composition of the family. When asked how many children would comprise an ideal family size, 13% of the Community participants and 19% of the Clinic participants offered non-numerical responses. Non-numerical responses to this question included 'However many I get', 'Don't know', 'However many I can afford'. The reluctance to specify an ideal family size is often associated with strong fatalistic beliefs, thus the exclusion of these men from the subsequent analysis may have led to an underestimation of the average ideal number of children.

For those who provided numerical responses, the reported average ideal number of children reported by Community participants was 6.2 (SD=4.4), which was much higher than the average reported by Clinic Sample participants (4.9, SD=1.3). This suggests an overall preference for smaller families in the Clinic Sample than was found to be the case in the Community Sample. Furthermore, for those who provided a numerical response for ideal number of children, a comparison was done with actual number of children. Overall, in both samples, the average ideal number of children was higher than the average actual number of living children for the participants. Moreover, in the Community Sample it was found that approximately 1/2 of participants had fewer children than their ideal number, 22% had more children than they would classify as ideal, and 11% indicated that the number of children they currently had was ideal. This distribution roughly corresponded with the proportions observed for those participants who desired more children. Participants in the Clinic Sample demonstrated similar results. In both samples, concerns about 'child survival' and 'an ability to support/afford children' were the two reasons that dominated the decision for ideal family size.

A question about the population in Uganda was designed to attain the participant's impression of the country's perceived population/over-crowding issues. In the Community Sample, 45% indicated that there were 'Too many' people living in Uganda. This was over two times as many individuals as those who answered 'Not enough' or that the number was 'Just about right' (approximately 20% each). 14% of the participants responded 'Don't Know'. Similarly, participants in the Clinic Sample most commonly reported that there were 'Too many' people living in Uganda (38%).

Reported attendance to a centre with family planning services was relatively uncommon; 23% of Community participants and 34% of Clinic participants had ever gone for family planning services alone or with their partner(s). A substantially higher proportion indicated that they would go to a family planning clinic with their partner if she asked (Community Sample 88%; Clinic Sample 99%).

To assess perceived accessibility to family planning services, participants were asked how long it took to get to the nearest place with family planning services. The question was phrased to take into account the fact that individuals had different forms of transportation (e.g., personal vehicles, public transport, bicycles, or by foot) and therefore time to services was considered more important than actual distance. Participants in the Clinic Sample lived nearer (time-wise) to a centre with family planning services compared with individuals from the Community. Half of the participants in the Clinic Sample and only 1/4 of participants in the Community Sample lived less than half an hour from the nearest centre with family planning services. In the Community Sample, 5% of participants did not know how long it would take to get to a centre with family planning services, which corresponded with the proportion that did not know a place where family planning methods could be obtained.

5.7 Descriptive Examination of Selected Practice Related Factors of the Study Population

Practice related characteristics of the study population are shown in Tables 5.9 and 5.10.

In the Community Sample, 74% of the participants indicated that they had ever used a family planning method. Of these, 56% reported ever use of a modern contraceptive method while 52% indicated that they had ever used a traditional method[1] (Table 5.9).

Owing to the study design, all of the participants in the Clinic Sample were currently using modern methods and thus were all classified as ever users. While all (100%) of the participants reported ever use of a modern contraceptive method, 39% indicated that they had ever used a traditional method.

When examining ever use of specific family planning methods, it is important to note that a single individual may have ever-used more than one method. In the Community Sample, the condom was the most common modern contraceptive method ever used by participants (36%), followed by the pill (23%) and injections (20%). In the Clinic Sample, the pill was the most common method ever used (71%) followed by condoms (66%) and injections (40%).

Information about reasons for never use of family planning methods is crucial for understanding obstacles inhibiting use of family planning. Of the 23% of Community participants who indicated that they had never used a family planning method, the most common reason for non-use was that the respondent still wanted children (33%), followed by a lack of information about family planning (20%). Only 11% indicated that they never used family planning because they were opposed to it.

Current Use of Family Planning Methods

The prevalence of current use of modern contraceptive methods in the study's Community Sample was 36.4% (n=116). 6.2% (n=20) of individuals reported that they were currently using a traditional family planning method[2]. Therefore, the overall prevalence of use (including use of both modern and traditional methods) was 42.6% (n=136) (Table 5.9). Figure 5.1 displays the distribution of individuals according to current practice (or use) of family planning.

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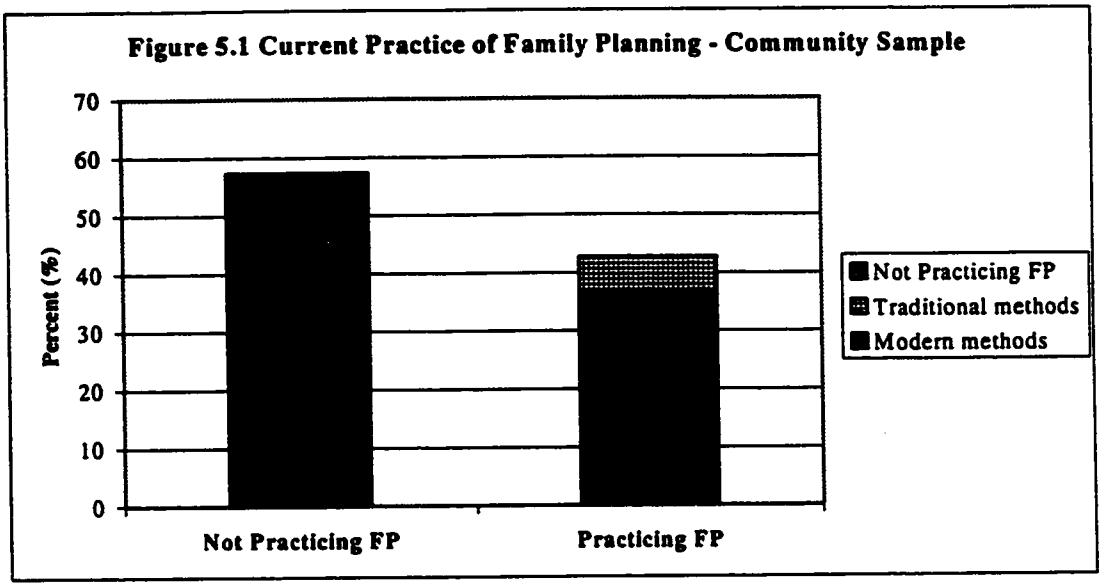
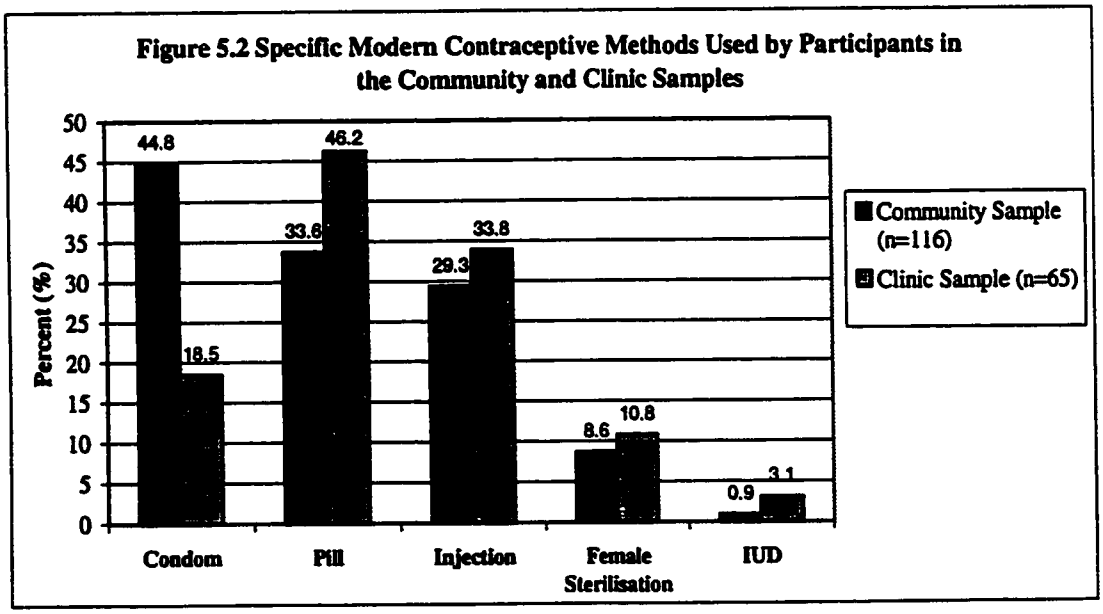
[1] There were 108 individuals who reported ever use of both modern and traditional methods.

[2] If a participant reported that he was currently using both a traditional and modern method, he was considered a modern contraceptive user.



As shown in Figure 5.2, of the 116 Community participants who were currently using a modern contraceptive method, 45% were using condoms, 34% were using the pill, 29% were using injections, and 9% had wives who had been sterilised. These proportions differed somewhat from those observed in the Clinic Sample where 19% were using condoms, 46% were using the pill, and 34% were using injections. When examining current use of different methods it should be noted that some of the men reported use of more than one method.



Participants who reported that they were currently using family planning methods were asked where they went to obtain the method. The majority of modern contraceptive users obtained their services and supplies from government health clinics (Community Sample 61%; Clinic Sample 79%) followed by private clinics (25%) (Table 5.10). 96% of participants were satisfied with the services at the location where they received modern contraceptive methods. The 4% who indicated that they were not satisfied listed reasons relating to side effects, the ineffectiveness of the method, and a lack of information and advice available at the family planning centre.

On average, users from the Clinic Sample first started using family planning methods when they had fewer children than did users in the Community Sample (3.8 and 4.6 children, respectively). Continuation of use is an important variable because it is a proxy for an individual's satisfaction with his current contraceptive method. It is generally assumed that the longer an individual has used a method (without interruption) the more satisfied he/she is with that method and the family planning services. Community users had been using their modern contraceptive method, without interruption, for a longer period of time than users from the Clinic Sample (33.4 months and 27.5 months, respectively).

Preferred Family Planning Methods

All participants (users and non-users) were asked which family planning methods they would prefer to use. In the Community Sample, the most frequently cited preferred methods were the condom and injections (32% and 31%, respectively) followed by the pill (21%). In the Clinic Sample, the pill and injections were the most frequently cited preferred methods (37% each). Worthy of note is that 4.1% of Community participants indicated that male sterilisation was their preferred family planning method. Overall more individuals preferred to use a modern method to a traditional method. After indicating their preferred method, individuals were asked for their reason(s) for preferring the method. In both samples, by far the most common concerns were that the method had no or fewer side effects and that the method be easy and convenient to use.

5.8 Summary of Descriptive Results

In summary, the results of the descriptive analysis revealed that men's knowledge about family planning was high and widespread and their attitudes were generally positive. In comparison to

widespread knowledge and positive attitudes, however, practice of family planning was relatively low. The prevalence of modern contraceptive use in the Community Sample was 36.4% (n=116), with the majority of users using condoms, oral contraceptives, and injections.

Table 5.1 Descriptive Examination of Selected Socio-Demographic Factors

a) Dichotomous and Polychotomous Variables

Variable	Community Sample n (%)	Clinic Sample n (%)
PRESENT RESIDENCE		
Mpigi Town Council	86 (27.0%)	33 (50.8%)
Mutuba I	233 (73.0%)	32 (49.2%)
TRIBE		
Baganda	285 (89.3%)	53 (81.5%)
Other	32 (10.0%)	12 (18.5%)
Missing	2 (0.6%)	---
RELIGION		
Catholic	204 (63.9%)	28 (43.1%)
Anglican	67 (21.0%)	27 (41.5%)
Muslim	43 (13.5%)	7 (10.8%)
Other	5 (1.6%)	3 (4.6%)
EDUCATION		
Incomplete Primary or less	165 (51.7%)	16 (24.6%)
Complete Primary	58 (18.2%)	11 (16.9%)
Incomplete Secondary	73 (22.9%)	28 (43.1%)
Complete Secondary or higher	23 (7.2%)	10 (15.4%)
OCCUPATION		
Subsistence Farmer	145 (45.5%)	25 (38.5%)
Unskilled Manual Labour	37 (11.6%)	2 (3.1%)
Businessman/Trader	79 (24.8%)	13 (20.0%)
Skilled Manual Labour	37 (11.6%)	15 (23.1%)
Professional	21 (6.6%)	10 (15.4%)
NUMBER OF WIVES		
Monogamous (1)	280 (87.8%)	55 (84.6%)
Polygamous (2+)	39 (12.2%)	10 (15.4%)
Total (n)	319	65

b) Continuous variables

Variable	Community Sample Mean (SD)	Clinic Sample Mean (SD)
AGE (years)	33.9 (8.8)	32.8 (8.8)
AGE AT FIRST MARRIAGE (years)	21.9 (3.7)	22.3 (3.3)

Table 5.2 Comparison of Users from the Community vs. Clinic Sample by Selected Socio-Demographic Factors

a) Dichotomous and Polychotomous Variables

Variable	Community Sample Users n (%)	Clinic Sample (Users) n (%)	p-value*
PRESENT RESIDENCE			0.032
Mpigi Town Council	40 (34.5%)	33 (50.8%)	
Mutuba I	76 (65.5%)	32 (49.2%)	
TRIBE			0.082
Baganda	105 (90.5%)	53 (81.5%)	
Other	11 (9.5%)	12 (18.5%)	
RELIGION			0.008
Catholic	77 (67.0%)	28 (45.2%)	
Anglican	25 (21.7%)	27 (43.5%)	
Muslim	13 (11.3%)	7 (11.3%)	
EDUCATION			0.111
Incomplete Primary or less	41 (35.3%)	16 (24.6%)	
Complete Primary	28 (24.1%)	11 (16.9%)	
Incomplete Secondary	31 (26.7%)	28 (43.1%)	
Complete Secondary or higher	16 (13.8%)	10 (15.4%)	
OCCUPATION			0.215
Subsistence Farmer	41 (35.3%)	25 (38.5%)	
Unskilled Manual Labour	12 (10.3%)	2 (3.1%)	
Businessman/Trader	32 (27.6%)	13 (20.0%)	
Skilled Manual Labour	18 (15.5%)	15 (23.1%)	
Professional	13 (11.2%)	10 (15.4%)	
NUMBER OF WIVES			0.981
Monogamous (1 wife)	98 (84.5%)	55 (84.6%)	
Polygamous (2+ wives)	18 (15.5%)	10 (15.4%)	
Total (n)	319	65	

* p-value based on Pearson's chi-square test

b) Continuous variables

Variable	Community Sample Mean (SD)	Clinic Sample Mean (SD)	p-value**
AGE (years)	35.2 (8.4)	32.8(8.8)	0.078
AGE AT FIRST MARRIAGE (years)	22.5 (4.2)	22.3 (3.3)	0.849

** p-value based on t-test statistic

Table 5.3 Descriptive Examination of Selected Family Size, Composition, and Preference Related Factors

a) Dichotomous and Polychotomous Variables

Variable	Community Sample n (%)	Clinic Sample n (%)
ANY LIVING CHILDREN		
No	4 (1.3%)	3 (4.6%)
Yes	315 (98.7%)	62 (95.4%)
SUPPORTING OTHER CHILDREN		
No	160 (50.2%)	39 (60.0%)
Yes	159 (49.8%)	26 (40.0%)
DESIRE MORE CHILDREN		
No	116 (36.4%)	22 (33.8%)
Yes	197 (61.8%)	39 (60.0%)
Don't Know	6 (1.9%)	4 (6.2%)
DESIRE MORE CHILDREN IN 2 YEARS		
No	170 (53.3%)	41 (67.2%)
Yes	142 (44.5%)	20 (32.8%)
Don't Know	7 (2.2%)	---
REASONS FOR DESIRING MORE CHIDLREN*		
Not yet reached preferred family size	73 (37.8%)	22 (56.4%)
Specific desire for male or female children	41 (21.2%)	9 (23.1%)
Able to support/afford more children	20 (10.4%)	2 (5.1%)
Wants to enlarge extended family and/or clan	19 (9.8%)	4 (10.3%)
Fear of children's chances of living	15 (7.8%)	2 (5.1%)
Has a new and/or young wife	15 (7.8%)	2 (5.1%)
Other reasons	10 (5.2%)	1 (2.6%)
Don't Know	6 (3.1%)	---
Religious reasons	4 (2.1%)	---
REASONS FOR NOT DESIRING MORE CHILDREN*		
Financial reasons	45 (41.7%)	4 (18.2%)
Able to support the children he has	41 (38.0%)	4 (18.2%)
Satisfied with current number of children	19 (17.6%)	10 (45.5%)
Due to old age	9 (8.3%)	1 (4.5%)
Already has more children than desired	7 (6.5%)	3 (13.6%)
Other	4 (3.7%)	2 (9.1%)
Total (n)	319	65

* Multiple response variable. Percentages based on number of cases rather than number of responses.

Table 5.3 Continued

b) Continuous variables

Variable	Community Sample Mean (SD)	Clinic Sample Mean (SD)
NUMBER OF CHILDREN	5.6 (4.1)	4.9 (3.9)
NUMBER OF SONS	2.7 (2.3)	2.2 (1.9)
NUMBER OF DAUGHTERS	2.8 (2.5)	2.7 (2.4)
TOTAL NUMBER OF CHILDREN SUPPORTED	5.9 (4.0)	5.2 (3.9)

Table 5.4 Descriptive Examination of Selected Knowledge Related Factors

Variable	Community Sample n (%)	Clinic Sample n (%)
HEARD OF FAMILY PLANNING		
No	15 (4.7%)	1 (1.5%)
Yes	304 (95.3%)	64 (98.5%)
DEFINITION OF FAMILY PLANNING*		
To produce children you can support/afford	107 (35.2%)	15 (23.4%)
Technique used to space children	106 (34.5%)	25 (39.1%)
To produce few children	61 (20.1%)	19 (29.7%)
Preparing/planning for your children/family	59 (19.4%)	10 (15.6%)
To stop or prevent producing children	19 (6.3%)	7 (10.9%)
Other	5 (1.6%)	---
Don't Know	19 (6.3%)	---
KNOW WHERE TO OBTAIN METHODS		
Yes	304 (95.3%)	65 (100%)
No/Don't Know	15 (4.7%)	---
WHERE TO OBTAIN METHODS*		
Government Health Centre	234 (77.0%)	51 (78.5%)
Private Clinic	172 (56.6%)	29 (44.6%)
F.P.A.U. Clinic	150 (49.3%)	41 (63.1%)
Government hospital	76 (25.0%)	55 (84.6%)
Pharmacy/Shop	76 (25.0%)	8 (12.3%)
Traditional Healer	40 (13.2%)	1 (1.5%)
Community Health Worker & CBDA	28 (9.2%)	3 (4.6%)
Other	7 (2.3%)	---
Traditional Birth Attendant	8 (2.6%)	---
Friends/Relatives	6 (2.0%)	---
ASK QUESTIONS ABOUT FAMILY PLANNING*		
Health worker/Family planning provider	272 (85.3%)	65 (100%)
Wife	16 (5.0%)	---
Have not (don't want) talked about family planning	12 (3.8%)	---
Community Health Workers & CBDA	9 (2.8%)	1 (1.5%)
Traditional healer	6 (1.9%)	1 (1.5%)
Friends	5 (1.6%)	---
Other	3 (0.9%)	---
Don't Know	11 (3.4%)	---

* Multiple response variable. Percentages based on number of cases rather than number of responses.

Table 5.4 Continued

Variable	Community Sample n (%)	Clinic Sample n (%)
WHERE DO YOU GET INFORMATION ABOUT FP?*		
Radio	275 (86.2%)	36 (55.4%)
Health workers/Family planning providers	143 (44.8%)	59 (90.8%)
Community Health Workers	70 (21.9%)	4 (6.2%)
Newspapers/Books	56 (17.6%)	16 (24.6%)
Wife	27 (8.5%)	1 (1.5%)
Other	26 (8.2%)	2 (3.1%)
LC1 Chairperson	24 (7.5%)	1 (1.5%)
Seminars	20 (6.3%)	---
T.V.	14 (4.4%)	---
IDEAL SPACE BETWEEN BIRTHS		
Less than 3 years	168 (52.7%)	26 (40.0%)
3 years or more	149 (46.7%)	39 (60.0%)
Don't Know	2 (0.6%)	---
DESIRE MORE INFORMATION		
Yes	276 (86.5%)	59 (90.8%)
No	41 (12.9%)	3 (4.6%)
Don't Know	2 (0.6%)	3 (4.6%)
Total (n)	319	65

* Multiple response variable. Percentages based on number of cases rather than number of responses.

Table 5.5 Knowledge of Family Planning Methods

Method	Community Sample (n=319)				Clinic Sample (n=65)			
	Spont. (%)	Probed (%)	Total (%)	Unrec. (%)	Spont. (%)	Probed (%)	Total (%)	Unrec. (%)
Pill	78.1	19.7	97.8	2.2	86.2	12.3	98.5	1.5
IUD	16.3	42.0	58.3	41.7	16.9	35.4	52.3	47.7
Injection	59.2	35.1	94.3	5.6	76.9	23.1	100	0
Diaphragm/Foam/Jelly	3.8	11.9	15.7	84.3	0	20.0	20.0	80
Condom	70.5	27.0	97.5	2.5	84.6	15.4	100	0
Female Sterilisation	12.9	69.6	82.5	17.6	18.5	75.4	93.9	6.2
Male Sterilisation	6.0	39.5	45.5	54.5	6.2	41.5	47.7	52.3
Periodic Abstinence	13.8	68.3	82.1	17.9	12.3	61.5	73.8	26.2
Withdrawal	3.1	64.3	67.4	32.6	4.6	70.8	75.4	24.6
Natural Methods	11.0	62.1	73.1	27.0	6.2	60.0	66.2	33.8
Other Methods	3.1	0.3	3.4	96.6	1.5	0	1.5	98.5
At least one modern method	91.8	7.2	99.0	1.0	98.5	1.5	100	0
At least one traditional method	32.3	59.2	91.5	8.5	18.5	78.4	96.9	3.1
At least one method	92.2	7.2	99.4	0.6	100	0	100	0

Note: 'Spont.' = Spontaneous; 'Unrec.' = Unrecognised

Table 5.6 Average Number of Family Planning Methods Known

Variable	Community Sample Mean (SD)	Clinic Sample Mean (SD)
Spont. Knowledge of Modern Methods (max=8)	2.5	2.9
Spont. & Probed Knowledge of Modern Methods (max=8)	4.9	5.1
Spont. Knowledge of Traditional Methods (max=4)	0.29	0.23
Spont. & Probed Knowledge of Traditional Methods (max=4)	2.2	2.2
Spont. Knowledge of All Methods (max=12)	2.8	3.1
Spont. & Probed Knowledge of All Methods (max=12)	7.2	7.3
Total (n)	319	65

Table 5.7a Main Problems with Family Planning Methods – Community Sample

Main problem with METHOD*	Pill (n=266)	IUD (n=60)	Inject. (n=143)	DFJ (n=11)	Condom (n=125)	F. Steril. (n=82)	M Steril. (n=44)	P. Abst. (n=66)	Withdrawal (n=66)	Natural (n=89)
Causes death and/or general sickness	15.8	11.7	11.9	9.1	0.8	4.9			1.5	2.2
Destroys uterus/cancer	22.9	21.7	7.0	9.1	1.6	8.5	2.3	1.5	1.5	
Menstrual pain/bleeding/problems	10.9	6.7	27.3			1.2				
Abnormal Delivery/Abnormal Baby	22.6	5.0	6.3	9.1	0.8	1.2	2.3	1.5	1.5	
Weight Gain or Weight Loss	8.6	1.7	26.6	9.1		4.9				
High Blood Pressure/Giddiness/Pain	13.5	13.3	12.6	9.1						
Difficult or Inconvenient to Use/Difficult to put into practice	7.1	1.7	4.2		15.2			47.0	47.0	4.5
Leads to Infertility/Impotence	6.8	1.7	5.6		0.8		6.8	1.5		1.1
Can disappear/remain in woman		25.0			25.6					
Sex is not enjoyable	0.4	3.3	0.7	36.4	11.2	3.7		1.5	10.6	
Loss of desire for sex		1.7	1.4			3.7				
Expensive	0.8		4.2			1.2				1.1
Permanent						56.1	75.0	1.5		
Pain & risk associated with operation						11.0	4.5			
Fears/Dislikes method	2.3	1.7	1.4	9.1	3.2	1.2	11.4		1.5	
No longer available										4.5
Not effective	7.1	6.7	3.5	18.2	2.4	1.2		21.2	12.1	48.3
Not reliable	3.0	8.3	2.1		40.0	1.2		22.7	25.8	38.2
Other	0.4				5.6	4.9	2.3	3.0	1.5	2.2
Total % of Cases	122.2	110.0	114.7	109.1	107.2	104.9	104.5	101.5	103.0	102.2

* Multiple response question – individuals were free to provide more than one response, % based on number of valid cases (n)

Note: 'Inject.' = Injections; 'DFJ' = Diaphragm/Foam/Jellies; 'F. Steril.' = Female Sterilisation; 'M Steril.' = Male Sterilisation; 'P. Abst.' = Periodic Abstinence

Table 5.7b Main Problems with Family Planning Methods – Clinic Sample

Main problem with METHOD*	Pill (n=33)	IUD (n=17)	Inject. (n=34)	DFJ (n=5)	Condom (n=24)	F. Steril. (n=20)	M Steril. (n=17)	P. Abst. (n=21)	Withdrawal (n=32)	Natural (n=11)
Causes death and/or general sickness	15.2	11.8	26.5	40.0						
Destroys uterus/cancer	27.3	23.5	2.9	20.0						
Menstrual pain/bleeding/problems	3.0	41.2	17.6							
Abnormal Delivery/Abnormal Baby	21.2	5.9	11.8	20.0						
Weight Gain or Weight Loss	18.2		23.5			5.0				
High Blood Pressure/Giddiness/Pain	3.0		14.7		4.2					
Difficult or Inconvenient to Use/Difficult to put into practice	18.2		5.9	20.0	12.5			42.9	25.0	
Leads to Infertility/Impotence	6.1		5.9				23.5			
Can disappear/remain in woman					25.0					
Sex is not enjoyable		17.6		40.0	16.7				15.6	
Loss of desire for sex			2.9							
Expensive										
Permanent					4.2	85.0	70.6			
Pain & risk associated with operation		5.9				10.0				
Fears/Dislikes method		5.9			8.3		5.9		12.5	
No longer available										
Not effective		5.9	2.9		4.2			33.3	34.4	81.8
Not reliable					33.3	5.0		28.6	18.8	18.2
Other										
Total % of Cases	112.1	117.6	114.7	140.0	108.3	105.0	100.0	104.8	106.3	100.0

* Multiple response question – individuals were free to provide more than one response, % based on number of valid cases (n)

Note: 'Inject.' = Injections; 'DFJ' = Diaphragm/Foam/Jellies; 'F. Steril.' = Female Sterilisation; 'M Steril.' = Male Sterilisation; 'P. Abst.' = Periodic Abstinence

Table 5.8 Descriptive Examination of Attitude Related Factors

a) Dichotomous and Polychotomous Variables

Variable	Community Sample n (%)	Clinic Sample n (%)
APPROVE OF USE OF FAMILY PLANNING		
Approve	298 (93.4%)	65 (100%)
Disapprove	16 (5.0%)	---
Don't Know	5 (1.6%)	---
MOST IMPORTANT REASON TO AVOID HAVING MORE CHILDREN*		
Financial reasons	232 (73.4%)	43 (66.1%)
Inability or difficulty in supporting children	54 (17.1%)	9 (13.8%)
Ill health of mother and/or spouse	20 (6.3%)	2 (3.1%)
Spacing concerns	12 (1.9%)	3 (4.6%)
Other reasons	25 (7.9%)	5 (7.7%)
Don't Know/Missing	7 (2.2%)	4 (6.2%)
DECISION TO USE FAMILY PLANNING		
Couple's Decision	193 (60.5%)	35 (53.8%)
Man's Decision	93 (29.2%)	24 (36.9%)
Woman's Decision	29 (9.1%)	6 (9.2%)
Other	4 (1.3%)	---
SHOULD MARRIED ADULTS HAVE ACCESS TO FAMILY PLANNING		
No	13 (4.1%)	1 (1.5%)
Yes	306 (95.9%)	64 (98.5%)
SHOULD UN MARRIED ADULTS HAVE ACCESS TO FAMILY PLANNING		
No	74 (23.2%)	12 (18.5%)
Yes	243 (76.2%)	53 (81.5%)
Don't Know	2 (0.6%)	---
SHOULD ADOLESCENTS HAVE ACCESS TO FAMILY PLANNING		
No	54 (16.9%)	9 (13.8%)
Yes	264 (82.8%)	56 (86.2%)
Don't Know	1 (0.3%)	---
DISCUSS FAMILY PLANNING WITH PARTNER(S)		
No	59 (18.5%)	1 (1.5%)
Yes	260 (81.5%)	64 (98.5%)

* Multiple response variable. Percentages based on number of cases rather than number of responses.

Table 5.8 Continued

Variable	Community Sample n (%)	Clinic Sample n (%)
PERCENTAGE WHO DISCUSS FAMILY PLANNING WITH		
Other men	201 (63.0%)	52 (80.0%)
Family members	194 (60.8%)	52 (80.0%)
Doctors or nurses	171 (53.6%)	63 (96.9%)
Community Health Workers	140 (43.9%)	53 (81.5%)
Other women	130 (40.8%)	35 (53.8%)
Traditional Birth Attendants	116 (36.4%)	27 (41.5%)
Community-Based Distribution Agents	105 (32.9%)	54 (83.1%)
Traditional healers	87 (27.3%)	25 (38.5%)
Other individuals	13 (8.5%)	8 (12.3%)
ACTUAL vs. IDEAL NUMBER OF CHILDREN		
Actual # < Ideal #	173 (54.2%)	32 (49.2%)
Actual # = Ideal #	35 (11.0%)	6 (9.2%)
Actual # > Ideal #	69 (21.6%)	15 (23.1%)
Non-numerical Ideal	42 (13.2%)	12 (18.5%)
WHY NOT MORE CHILDREN (IDEAL)? *		
Financial reasons/Ability to support	252 (91.3%)	45 (84.9%)
Personal preferred number of children	8 (2.9%)	4 (7.5%)
Achieve gender balance	5 (1.8%)	---
Children's chances of living	4 (1.4%)	---
Other	7 (2.5%)	3 (5.7%)
Don't Know	2 (0.7%)	1 (1.9%)
WHY NOT FEWER CHILDREN (IDEAL)? *		
Children's chances of living	107 (39.5%)	15 (29.4%)
Financial reasons/Ability to support	64 (23.6%)	12 (23.5%)
Personal preferred number of children	49 (18.1%)	12 (23.5%)
Achieve gender balance	15 (5.5%)	---
To enlarge extended family and/or clan	13 (4.8%)	4 (7.8%)
Other	14 (5.2%)	3 (5.9%)
Don't Know	11 (4.1%)	5 (9.8%)
DISCUSS NUMBER OF DESIRED CHILDREN WITH WIFE		
Yes	231 (72.4%)	51 (78.5%)
No	88 (27.6%)	14 (21.5%)

* Multiple response variable. Percentages based on number of cases rather than number of responses.

Table 5.8 Continued

Variable	Community Sample n (%)	Clinic Sample n (%)
COMPARED WITH THE NUMBER OF CHILDREN YOU WANT, DOES SHE WANT:		
Same number	194 (60.8%)	36 (55.4%)
More	27 (8.5%)	5 (7.7%)
Fewer	43 (13.5%)	9 (13.8%)
Don't Know	53 (16.6%)	14 (21.5%)
Other	2 (0.6%)	1 (1.5%)
DO YOU THINK THE NUMBER OF PEOPLE LIVING IN UGANDA ARE:		
Too many	142 (44.5%)	24 (37.5%)
Just about the right number	64 (20.1%)	17 (26.6%)
Not enough	68 (21.3%)	8 (12.5%)
Don't know	45 (14.1%)	15 (23.4%)
EVER GONE FOR FAMILY PLANNING SERVICES		
Yes	73 (22.9%)	22 (33.8%)
No	246 (77.1%)	43 (66.2%)
WOULD EVER GO FOR FP SERVICES		
Yes	279 (87.5%)	64 (98.5%)
No	28 (8.8%)	1 (1.5%)
Don't Know	12 (3.8%)	---
PERCEIVED TIME TO FP SERVICES		
Less than 30 minutes	84 (26.3%)	33 (50.8%)
30 minutes or more	219 (68.7%)	31 (47.7%)
Don't Know	16 (5.0%)	1 (1.5%)
Total (n)	319	65

b) Continuous variables

Variable	Community Sample Mean (SD)	Clinic Sample Mean (SD)
IDEAL NUMBER OF CHILDREN	6.2 (4.4)	4.9 (1.3)
Variable (n)	277	53

Table 5.9 Ever Use and Current Use of Family Planning

	Community Sample		Clinic Sample	
	Ever Use	Current Use	Ever Use	Current Use
Total (n)	319	319	65	65
Any method	235 (73.7%)	136 (42.6%)	65 (100%)	65 (100%)
Any modern method*	179 (56.1%)	116 (36.4%)	65 (100%)	65 (100%)
Pill	72 (22.6%)	39 (12.2%)	46 (70.8%)	30 (46.2%)
IUD	2 (0.63%)	1 (0.31%)	2 (3.1%)	2 (3.1%)
Injections	63 (19.7%)	34 (10.7%)	26 (40.0%)	22 (33.8%)
Diaphragm/Foam/Jelly	---	---	---	---
Condoms	116 (36.4%)	52 (16.3%)	43 (66.2%)	12 (18.5%)
Female Sterilisation	10 (3.1%)	10 (3.1%)	7 (10.8%)	7 (10.8%)
Male Sterilisation	---	---	---	---
Any traditional method*	164 (51.4%)	30 (9.4%)	25 (38.5%)	10 (15.4%)
Periodic Abstinence	137 (42.9%)	21 (6.6%)	16 (24.6%)	6 (9.2%)
Withdrawal	75 (23.5%)	5 (1.6%)	9 (13.8%)	2 (3.1%)
Natural methods	52 (16.3%)	12 (3.8%)	6 (9.2%)	2 (3.1%)
Other methods	4 (1.3%)	---	---	---

* Some individuals reported using more than one type of family planning method

Table 5.10 Descriptive Examination of Practice Related Factors

Variable	Community Sample n (%)	Clinic Sample n (%)
REASONS FOR NEVER USE (n=84)*		
Still desires more children	28 (33.3%)	---
Not well informed about family planning	17 (20.2%)	---
Don't know or no reason	13 (15.5%)	---
No need for family planning	11 (13.1%)	---
Opposed to family planning	9 (10.7%)	---
Religious reasons	6 (7.1%)	---
WHERE MODERN METHODS ARE OBTAINED*		
Government health clinic	70 (61.4%)	51 (78.5%)
Private Clinic	28 (24.6%)	16 (24.6%)
Shops	16 (14.0%)	2 (3.1%)
Government hospital	11 (9.6%)	9 (13.8%)
Community health workers & CBDAs	3 (2.6%)	---
Traditional healers	1 (0.9%)	1 (1.5%)
SATISFIED WITH SERVICES		
Yes	111 (95.7%)	62 (95.4%)
No	5 (4.3%)	3 (4.6%)
PREFERRED FAMILY PLANNING METHOD*		
Pill	66 (20.7%)	24 (36.9%)
IUD	9 (2.8%)	3 (4.6%)
Injections	98 (30.7%)	24 (36.9%)
Diaphragm/Foam/Jelly	3 (0.9%)	---
Condoms	103 (32.3%)	7 (10.8%)
Female Sterilisation	25 (7.8%)	7 (10.8%)
Male Sterilisation	13 (4.1%)	1 (1.5%)
Periodic abstinence	54 (16.9%)	4 (6.2%)
Withdrawal	19 (6.0%)	1 (1.5%)
Natural methods	22 (6.9%)	2 (3.1%)
Other methods	10 (3.1%)	---
None	16 (5.0%)	---
Don't know	4 (1.3%)	---

* Multiple response variable. Percentages based on number of cases rather than number of responses.

Table 5.10 Continued

Variable	Community Sample n (%)	Clinic Sample n (%)
REASONS FOR PREFERRING METHOD*		
No or fewer side effects	99 (33.6%)	33 (51.6%)
Easy to use/Convenient	93 (31.5%)	16 (25.0%)
Method is effective	41 (13.9%)	4 (6.3%)
Accessible/Obtainable	36 (12.2%)	---
Inexpensive	29 (9.8%)	4 (6.3%)
Method is desired/preferred	26 (8.8%)	6 (9.4%)
Method is reliable	26 (8.8%)	---
Method is permanent	20 (6.8%)	2 (3.1%)
Reversible/Not permanent	6 (2.0%)	7 (10.9%)
Other	5 (1.7%)	4 (6.3%)
Total (n)	319	65

* Multiple response variable. Percentages based on number of cases rather than number of responses.

b) Continuous variables

Variable	Community Sample Mean (SD)	Clinic Sample Mean (SD)
NUMBER OF CHILDREN WHEN FIRST STARTED USING FP	4.6 (3.7)	3.8 (3.4)
CONTINUATION OF USE (in months)	33.4 (25.2)	27.5 (27.4)
Variable (n)	116	65

CHAPTER 6
RESULTS – BIVARIATE ANALYSIS

The purpose of this chapter is to examine the bivariate relationships between potential predictor variables and the outcome of interest, use of modern contraceptives. This chapter will primarily address the third objective of this study: to examine the extent to which differences in socio-demographic factors, family size, composition, and preference, knowledge of, and attitudes toward family planning accurately predict use of modern contraceptives. This analysis was also used to screen each sample for significant predictors of modern contraceptive use prior to conducting the multivariate analysis (Chapter 7).

The bivariate analysis was performed separately on two sets of data. Firstly, an analysis was performed on the data collected from the Community Sample, which included contraceptive users and non-users from the community. Secondly, an analysis was performed using contraceptive users as identified from the family planning clinic (Clinic Sample) and non-users from the Community Sample.

Not all of the variables discussed in the previous chapter were included in this analysis. The analysis only included variables whose statistical and practical association with use of modern contraceptives was of interest and relevance, and/or whose significance has been reported in the literature. Furthermore, owing to the cross-sectional nature of this study, any significant bivariate associations identified in this analysis should be considered associative, and not causal.

6.1 Socio-Demographic Factors

6.1.1 Community Sample

Numerous socio-demographic characteristics of the population were associated with use of modern contraceptives. The results of the analysis are presented in Table 6.1.

Participants who lived in Mpigi Town Council (i.e., semi-urban residence) had significantly increased odds of using modern contraceptives compared with individuals who lived in Mutuba I (i.e., rural residence) [OR=1.80; 95% CI: 1.08 – 2.98]. The mean age of Users was 35.2 years (SD=8.4), non-significantly older than Non-Users (33.2 years, SD=9.0; p=0.059). No difference

in Use by tribe was observed [OR=1.11; 95% CI: 0.52 – 2.40]. Although the association between religion and Use was statistically non-significant (p=0.644), Catholics and Anglicans were more likely to be using contraceptives compared with Muslims.

There was a significant trend of Use associated with higher levels of education (p<0.001). Individuals who had completed Secondary School or higher were more likely to be using modern contraceptives compared with individuals with some Primary School or no formal education [OR=6.91; 95% CI: 2.66 – 18.0]. Occupation was also significantly associated with use of modern contraceptives (p=0.010), with individuals in skilled, business, and professional occupations more likely to be Users than individuals in minimally skilled and farming occupations.

Participants involved in polygamous marriages were more likely to use modern contraceptives compared with individuals in monogamous relationships, although the association was statistically non-significant [OR=1.59; 95% CI: 0.81 – 3.13]. Caution must be exercised in interpreting this variable. An individual with more than one wife[1] had increased opportunity to be classified as a User since, if one wife was using a modern contraceptive method while the other was not, the respondent was classified as a User. The continuous variable Age at First Marriage was dichotomised into 'married at 20 years or younger' and 'married at 21 years and older'. Although this variable was a statistically non-significant predictor of Use, individuals who first married at or after the age of 21 were more likely to be using modern contraceptives compared with those who first married at 20 years or younger [OR=1.39; 95% CI: 0.87 – 2.22].

6.1.2 Clinic Sample

The results of a parallel analysis of associations between socio-demographic characteristics and modern contraceptive use in the Clinic Sample are presented in Table 6.2.

Participants who lived in Mpigi Town Council were significantly more likely to use modern contraceptives compared with individuals who lived in Mutuba I [OR=3.52; 95% CI: 1.96 – 6.33]. The average age of Users (32.8 years, SD=8.8) did not differ from that of Non-Users (33.2 years, SD=9.0; p=0.753). Individuals from 'Other' tribes were more likely to be using

[1] If a participant had two or more wives, information about use of modern contraceptives was only collected for his first two wives.

modern contraceptives than individuals of Baganda tribe, although the association was statistically non-significant (p=0.088). Although in the Community Sample religion was non-significantly associated with Use, in this (Clinic) sample, the association between religion and Use achieved statistical significance (p=0.002). Catholics and Muslims had similar levels of Use, while Anglicans had significantly increased odds of using modern contraceptives compared with the reference category (Muslim) [OR=2.76; 95% C.I.: 1.06 – 7.15]. There was a significant trend of Use associated with higher levels of education (p<0.001). Individuals who had completed Secondary School or higher were more likely to be using modern contraceptives compared with those who had some Primary School or less [OR=11.1; 95% CI: 3.70 – 33.2]. Occupation was also significantly associated with use of modern contraceptives (p<0.001). Individuals engaged in 'Professional' occupations were 5.20 times more likely to be Users compared with subsistence farmers [95% CI: 1.86 – 14.5]. Participants involved in polygamous marriages had non-significant increased odds of using modern contraceptives compared with individuals in monogamous relationships [OR=1.58; 95% CI: 0.70 – 3.55]. Again, although age at first marriage in the Community Sample was non-significantly associated with Use, in this sample, the association achieved statistical significance (p=0.001). Participants who first married at or after the age of 21 were 2.82 times more likely to be using modern contraceptives compared with those who first married at 20 years or younger [95% CI: 1.52 – 5.25].

6.2 Factors related to Family Size, Composition, and Preference

6.2.1 Community Sample

Associations between factors related to family size, composition, and preference and use of modern contraceptives are presented in Table 6.3.

Although number of living children showed an increasing trend of Use associated with more children, the increase was statistically non-significant (p=0.130). Participants with no or one child (0-1) had the lowest levels of use. Use increased quite dramatically in those with 2 – 4 children and then increased more slowly after that. Use was not statistically significantly associated with number of sons or number of daughters. It appears that gender of the children is not an important predictor of use of modern contraceptives. Participants who were supporting other children (e.g., grandchildren, nieces, nephews, etc.), in addition to their own, had increased odds of currently using a modern contraceptive [OR= 1.56; 95% CI: 0.99 – 2.47]. Furthermore, participants who were supporting more children were significantly more likely to

be Users (p=0.032). It appears that, for men, number of children being supported is a better predictor of use than number of living children.

The largest (absolute and relative) difference in modern contraceptive use for number of living children and number supported was for those with 0 –1 children living/supported. This difference was not seen in the remaining three categories.

Participants who desired no more children and those who desired no more children in the next two years were significantly more likely to be using modern contraceptives. Compared with individuals who desired more children, participants who desired no more children were 2.17 [95% CI: 1.36 – 3.47] times more likely to be Users while participants who desired no more children in the next two years were 2.58 [95% CI: 1.59 – 4.18] times more likely to be Users. Approximately 52% of individuals who indicated that they desired no more children were not using a modern contraceptive, while approximately 54% of individuals who desired no more children in the next 2 years were not using a modern contraceptive. These percentages are indicative of high levels of unmet need.

The average ideal family size for Users (5.6 children, SD=2.1) was non-significantly smaller than that of Non-Users (6.6 children, SD=5.3). It should be noted that 42 cases were excluded from this analysis due to non-numerical responses such as 'However many children God gives me' or 'However many children I get'. Participants whose actual number of children was greater than their ideal number of children were significantly more likely to be Users than participants whose actual number was less than their ideal [OR=3.04; 95% CI: 1.71 – 5.41].

6.2.2 Clinic Sample

The results of an analogous analysis of associations between factors related to family size, composition, and preference and modern contraceptive use in the Clinic Sample are presented in Table 6.4.

No significant association was demonstrated between the independent variables number of living children, number of sons, number of daughters, supporting other children, and number of other children being supported and the outcome variable, use of modern contraceptives. Unlike as observed in the Community Sample, the association between Use and a desire more children

was statistically non-significant (p=0.208). Participants who desired no more children in the next two years, however, were 2.51 [95% CI: 1.38 – 4.55] times more likely to use modern contraceptives compared with those who desired more children in the next two years. This suggests that, compared with the Community Sample, Users from the Clinic Sample were using modern contraceptive methods for the purposes of delaying or spacing births, moreso than stopping births. The average ideal family size for Users (4.9 children, SD=1.3) was significantly smaller than that of Non-Users (6.6 children, SD=5.3). However, participants whose actual number of children was greater than their ideal number were non-significantly more likely to be Users compared with those whose actual number was less than their ideal [OR=1.92; 95%CI: 0.92 – 4.01].

6.3 Knowledge Related Factors

6.3.1 Community Sample

Associations between knowledge related factors and use of modern contraceptives are presented in Table 6.5.

No statistically significant association between having heard of family planning and Use was noted (p=0.271). Only three individuals who indicated that they had never heard of family planning were currently using a modern contraceptive method. This suggests that not having heard of the term 'family planning' may actually have been a linguistic issue rather than one of association with Use.

Knowledge of the various family planning methods was significantly associated with Use. Participants who were using modern contraceptives knew, on average, more family planning methods compared with Non-Users. Furthermore, Users consistently knew more methods than non-users whether knowledge was assessed spontaneously or after probing, or about modern or traditional methods. Upon examining the distribution of variables measuring knowledge of family planning methods, it was determined that not all would be amenable for entry into the multivariate analysis, owing to non-normal distribution and categories that hid too much information. One variable, spontaneous knowledge of family planning methods, was thus chosen to represent knowledge of family planning methods. Participants who spontaneously knew four or more family planning methods were significantly more likely more likely to be

using a modern contraceptive method than those who spontaneously knew no or one method [OR=2.64; 95% CI: 1.27 – 5.48].

Participants who knew where to obtain family planning methods were significantly more likely to be using modern contraceptives (p=0.013). As only one User did not know where to obtain family planning methods, the 95% confidence interval of the risk estimate was very wide [OR=8.52; 95%: 1.11 – 65.6]. Participants who reported that the ideal space between births was three or more years had significantly increased odds of using modern contraceptives compared with participants who reported an ideal space of less than three years [OR: 2.64; 95% CI 1.65 – 4.22].

6.3.2 Clinic Sample

The results of a parallel analysis of associations between knowledge related factors and modern contraceptive use in the Clinic Sample are presented in Table 6.6.

No statistically significant association between having heard of family planning and Use was noted (p=0.199). Participants who were using modern contraceptives knew, on average, more family planning methods compared with Non-Users. Participants who spontaneously knew four or more family planning methods were significantly more likely to be using a modern contraceptive method than those who spontaneously knew no or one method [OR=4.28; 95% CI: 1.48 – 12.4]. All Users knew where to obtain family planning methods. Consequently, risk estimates of the association could not be calculated. Participants who reported an ideal space between births of three or more years had significantly increased odds of using modern contraceptives compared with participants who reported an ideal space of less than three years [OR: 2.42; 95% CI 1.36 – 4.28].

6.4 Attitude Related Factors

6.4.1 Community Sample

Associations between attitude related factors and use of modern contraceptives are presented in Table 6.7. All of the measured attitude related factors demonstrated significant association with Use.

Participants who indicated that they generally approved of the use of family planning were 5.88 [95% CI: 1.35 – 25.6] times more likely to be using modern contraceptives compared with men who disapproved of family planning. Participants who reported that a couple should make the decision to use family planning were 2.32 [95% CI: 0.95 – 5.69] times more likely to be Users than those who reported that it was the woman's decision, and 1.81 [95% CI: 1.06 – 3.07] times more likely than those who reported that it was the man's decision.

Discussion between couples was significantly associated with use of modern contraceptives. Participants who discussed family planning with their wives had significantly increased odds of Using compared with those who did not discuss [OR=10.4; 95% CI: 3.66 – 29.6]. Similarly, individuals who discussed the number of desired children with their wives had significantly increased odds of Using compared with those who did not [OR=4.18; 95% CI: 2.23 – 7.83].

Individuals who had ever gone to a centre for family planning services (either alone or with his wife) were 5.46 times [95% CI: 3.11 – 9.58] more likely to be using modern contraceptives than individuals who had not visited a centre. Similarly, participants who lived less than 30 minutes from family planning services had increased odds of Using compared with individuals who lived greater than 30 minutes from services [OR= 1.78; 95% CI: 1.07 – 2.97].

6.4.2 Clinic Sample

The results of a parallel analysis of associations between attitude related factors and modern contraceptive use in the Clinic Sample are presented in Table 6.8.

All Users approved of the use of family planning. Consequently, risk estimates of the association could not be calculated. Although significant in the Community Sample, there were no significant differences in Use between participants who reported that a couple should make the decision to use family planning or that the decision should be made by the husband or wife alone. Participants who discussed family planning with their wives were 23.8 times [95% CI: 3.22 – 176] more likely to be using a modern contraceptive method compared with those individuals who did not discuss. Only one User indicated that he did not discuss family planning with his wife. Similarly, participants who had discussed the desired number of children with their wives had significantly increased odds of using modern contraceptives [OR=2.09; 95% CI: 1.08 – 4.03]. Having ever gone to a centre for family planning services and living less than

thirty minutes from a centre with family planning services were both significantly associated with Use ($p<0.001$ and $p<0.001$, respectively).

6.5 Summary of Bivariate Analysis

The results of the bivariate analysis were generally consistent with findings reported in the literature and are compatible with each of the stated hypotheses, save one; individuals in the Clinic Sample who were supporting more children were no more likely to be using modern contraceptives than those supporting fewer children.

In each sample, a slightly different set of variables was found to be significant predictors of Use. The differences may have been a reflection of the small sample sizes, particularly in the Clinic Sample. Because the Community Sample had a larger sample size, its results were deemed more accurate and reliable than the Clinic Sample. Differences may also have been a result of different recruitment and sampling techniques used to identify individuals for participation in the study.

In both samples, many variables demonstrated significant bivariate associations with Use. This suggests that numerous relationships exist between the independent variables, which may be confounding associations with the outcome variable, use of modern contraceptives. In order to examine the independent contributions of a set of explanatory variables (eg., socio-demographic, factors related to family size, composition, and preference, knowledge, and attitude) in predicting use of modern contraceptives, to control for confounding, and to account for the possibility of effect modification, multivariate regression analysis was performed on each study sample. The results of this analysis are presented in Chapter 7.

Table 6.1 – Bivariate Association of Socio-Demographic Factors with Use of Modern Contraceptives – Community Sample

Variable[ξ]	Current Use of Modern Contraceptives		OR	95% CI	p-value*
	Yes n (%)	No n (%)			
PRESENT RESIDENCE					
Mpigi Town Council (urban)	40 (34.5%)	46 (22.7%)	1.80	1.08 – 2.98	0.022
Mutuba I (rural)	76 (65.5%)	157 (77.3%)			
AGE[¥] (n=314)					
Mean (SD)	35.2 (8.4)	33.2 (9.0)	1.95	-0.07 – 3.96	0.059[¥]
TRIBE (n=317)					
Baganda	105 (90.5%)	180 (89.6%)	1.11	0.52 – 2.40	0.784
Other	11 (9.5%)	21 (10.4%)			
RELIGION (n=314)					
Muslim	13 (11.3%)	30 (15.1%)	1.00		0.644
Catholic	77 (67.0%)	127 (63.8%)	1.40	0.69 – 2.84	
Anglican	25 (21.7%)	42 (21.1%)	1.37	0.61 – 3.11	
EDUCATION					
Incomplete Primary or less	41 (35.3%)	124 (61.1%)	1.00		<0.001[‡]
Complete Primary	28 (24.1%)	30 (14.8%)	2.82	1.51 – 5.27	
Incomplete Secondary	31 (26.7%)	42 (20.7%)	2.23	1.25 – 4.00	
Complete Secondary or higher	16 (13.8%)	7 (3.4%)	6.91	2.66 – 18.0	
OCCUPATION					
Subsistence Farmer	41 (35.3%)	104 (51.2%)	1.00		0.010
Unskilled Manual Labour	12 (10.3%)	25 (12.3%)	1.22	0.56 – 2.65	
Businessman/Trader	32 (27.6%)	47 (23.2%)	1.73	0.97 – 3.07	
Skilled Manual Labour	18 (15.5%)	19 (9.4%)	2.40	1.15 – 5.03	
Professional	13 (11.2%)	8 (3.9%)	4.12	1.59 – 10.7	
TYPE OF MARRIAGE					
Polygamous (2+ wives)	18 (15.5%)	21 (10.3%)	1.59	0.81 – 3.13	0.175
Monogamous (1 wife)	98 (84.5%)	182 (89.7%)			
AGE AT 1ST MARRIAGE (n=307)					
21 years or older	64 (39.8%)	97 (60.2%)	1.39	0.87 – 2.22	0.169
20 years or younger	47 (32.2%)	99 (67.8%)			
Total (n)	116 (36.4%)	203 (63.6%)			

* p-value based on Pearson's chi-square statistic, except where otherwise indicated

¥ Continuous variable therefore 'means' are presented rather than proportions, and p-value is based on t-test statistic

‡ p-value based on chi-square for trend

ξ N for each variable is equal to 319, unless other wise indicated in brackets

Table 6.2 – Bivariate Association of Socio-Demographic Factors with Use of Modern Contraceptives – Clinic Sample

Variable[ξ]	Current Use of Modern Contraceptives		OR	95% CI	p-value*
	Yes n (%)	No n (%)			
PRESENT RESIDENCE					
Mpigi Town Council (urban)	33 (50.8%)	46 (22.7%)	3.52	1.96 – 6.33	<0.001
Mutuba I (rural)	32 (49.2%)	157 (77.3%)			
AGE[¥] (n=262)					
Mean (SD)	32.8 (8.8)	33.2 (9.0)	-0.41	-2.94 – 2.13	0.753[¥]
TRIBE (n=266)					
Baganda	53 (81.5%)	180 (89.6%)	0.52	0.24 – 1.11	0.088
Other	12 (18.5%)	21 (10.4%)			
RELIGION (n=261)					
Muslim	7 (11.3%)	30 (15.1%)	1.00		0.002
Catholic	28 (45.2%)	127 (63.8%)	0.95	0.38 – 2.36	
Anglican	27 (43.5%)	42 (21.1%)	2.76	1.06 – 7.15	
EDUCATION					
Incomplete Primary or less	16 (24.6%)	124 (61.1%)	1.00		<0.001‡
Complete Primary	11 (16.9%)	30 (14.8%)	2.84	1.20 – 6.75	
Incomplete Secondary	28 (43.1%)	42 (20.7%)	5.17	2.55 – 10.5	
Complete Secondary or higher	10 (15.4%)	7 (3.4%)	11.1	3.70 – 33.2	
OCCUPATION					
Subsistence Farmer	25 (38.5%)	104 (51.2%)	1.00		<0.001
Unskilled Manual Labour	2 (3.1%)	25 (12.3%)	0.33	0.07 – 1.50	
Businessman/Trader	13 (20.0%)	47 (23.2%)	1.15	0.54 – 2.45	
Skilled Manual Labour	15 (23.1%)	19 (9.4%)	3.28	1.47 – 7.35	
Professional	10 (15.4%)	8 (3.9%)	5.20	1.86 – 14.5	
TYPE OF MARRIAGE					
Polygamous (2+ wives)	10 (15.4%)	21 (10.3%)	1.58	0.70 – 3.55	0.269
Monogamous (1 wife)	55 (84.6%)	182 (89.7%)			
AGE AT 1ST MARRIAGE (n=260)					
21 years or older	47 (73.4%)	97 (49.5%)	2.82	1.52 – 5.25	0.001
20 years or younger	17 (26.6%)	99 (50.5%)			
Total (n)	65 (24.3%)	203 (75.7%)			

* p-value based on Pearson's chi-square statistic, except where otherwise indicated

¥ Continuous variable therefore 'means' are presented rather than proportions, and p-value is based on t-test statistic

‡ p-value based on chi-square for trend

ξ N for each variable is equal to 268, unless other wise indicated in brackets

Table 6.3 – Bivariate Association of Factors related to Family Size, Composition, and Preference with Use of Modern Contraceptives – Community Sample

Variable[ξ]	Current Use of Modern Contraceptives		OR	95% CI	p-value*
	Yes n (%)	No n (%)			
# OF LIVING CHILDREN					
0 – 1	7 (6.0%)	26 (12.8%)	1.00		0.130
2 – 4	42 (36.2%)	82 (40.4%)	1.90	0.76 – 4.74	
5 – 7	31 (26.7%)	48 (23.6%)	2.40	0.93 – 6.20	
8 – 30	36 (31.0%)	47 (23.2%)	2.85	1.11 – 7.29	
NUMBER OF SONS					
0 – 1	34 (29.3%)	83 (40.9%)	1.00		0.094
2 – 4	53 (45.7%)	83 (40.9%)	1.56	0.92 – 2.64	
5 – 10	29 (25.0%)	37 (18.2%)	1.91	1.02 – 3.59	
NUMBER OF DAUGHTERS					
0 – 1	39 (33.6%)	79 (38.9%)	1.00		0.621
2 – 4	54 (46.6%)	89 (43.8%)	1.56	0.74 – 2.05	
5 – 21	23 (19.8%)	35 (17.2%)	1.91	0.69 – 2.55	
SUPPORT OTHER CHILDREN					
Yes	66 (56.9%)	93 (45.8%)	1.56	0.99 – 2.47	0.057
No	50 (43.1%)	110 (54.2%)			
# OF CHILDREN BEING SUPPORTED					
0 – 1	3 (2.6%)	24 (11.8%)	1.00		0.032
2 – 4	39 (33.6%)	70 (34.5%)	4.45	1.26 – 15.7	
5 – 7	37 (31.9%)	56 (27.6%)	5.27	1.48 – 18.8	
8 – 24	37 (31.9%)	53 (26.1%)	5.57	1.56 – 19.8	
DESIRE MORE CHILDREN					
No/DK	58 (50.0%)	64 (31.5%)	2.17	1.36 – 3.47	0.001
Yes	58 (50.0%)	139 (68.5%)			
DESIRE MORE IN 2 YEARS					
No/DK	81 (69.8%)	96 (47.3%)	2.58	1.59 – 4.18	<0.001
Yes	35 (30.2%)	107 (52.7%)			
IDEAL # OF CHILDREN[¥] (n=277)					
Mean (SD)	5.6 (2.2)	6.6 (5.3)	-1.03	-2.09 – 0.03	0.056[¥]
ACTUAL vs. IDEAL # OF CHILDREN					
Actual < Ideal	54 (46.6%)	119 (58.6%)	1.00		< 0.001
Actual = Ideal	14 (12.1%)	21 (10.3%)	1.47	0.70 – 3.11	
Actual > Ideal	40 (34.5%)	29 (14.3%)	3.04	1.71 – 5.41	
Non-numerical Ideal	8 (6.90%)	34 (16.7%)	0.519	0.23 – 1.20	
Total (n)	116 (36.4%)	203 (63.6%)			

* p-value based on Pearson's chi-square statistic, except where otherwise indicated

¥ p-value based on t-test statistic

ξ N for each variable is equal to 319, unless other wise indicated in brackets

Table 6.4 – Bivariate Association of Factors related to Family Size, Composition, and Preference with Use of Modern Contraceptives – Clinic Sample

Variable[ξ]	Current Use of Modern Contraceptives		OR	95% CI	p-value*
	Yes n (%)	No n (%)			
# OF LIVING CHILDREN					
0 – 1	10 (15.4%)	26 (12.8%)	1.00		0.952
2 – 4	26 (40.0%)	82 (40.4%)	0.82	0.35 – 1.93	
5 – 7	14 (21.5%)	48 (23.6%)	0.76	0.30 – 1.94	
8 – 30	15 (23.1%)	47 (23.2%)	0.83	0.33 – 2.11	
NUMBER OF SONS					
0 – 1	25 (38.5%)	83 (40.9%)	1.00		0.066
2 – 4	35 (53.8%)	83 (40.9%)	1.40	0.77 – 2.54	
5 – 10	5 (7.7%)	37 (18.2%)	0.45	0.16 – 1.24	
NUMBER OF DAUGHTERS					
0 – 1	24 (36.9%)	79 (38.9%)	1.00		0.572
2 – 4	26 (40.0%)	89 (43.8%)	0.96	0.51 – 1.81	
5 – 21	15 (23.1%)	35 (17.2%)	1.41	0.66 – 3.01	
SUPPORT OTHER CHILDREN					
Yes	26 (40.0%)	93 (45.8%)	0.79	0.45 – 1.39	0.412
No	39 (60.0%)	110 (54.2%)			
# OF CHILDREN BEING SUPPORTED					
0 – 1	9 (13.8%)	24 (11.8%)	1.00		0.848
2 – 4	25 (38.5%)	70 (34.5%)	0.95	0.39 – 2.32	
5 – 7	15 (23.1%)	56 (27.6%)	0.71	0.28 – 1.86	
8 – 24	16 (24.6%)	53 (26.1%)	0.81	0.31 – 2.08	
DESIRE MORE CHILDREN					
No	26 (40.0%)	64 (31.5%)	1.45	0.81 – 2.58	0.208
Yes	39 (60.0%)	139 (68.5%)			
DESIRE MORE in 2 YEARS					
No	45 (69.2%)	96 (47.3%)	2.51	1.38 – 4.55	0.002
Yes	20 (30.8%)	107 (52.7%)			
IDEAL # OF CHILDREN[¥] (n=222)					
Mean (SD)	4.9 (1.3)	6.6 (5.3)	-1.71	-3.16 – 0.26	0.021[¥]
ACTUAL vs. IDEAL # OF CHILDREN					
Actual < Ideal	32 (49.2%)	119 (58.6%)	1.00		0.357
Actual = Ideal	6 (9.2%)	21 (10.3%)	1.06	0.40 – 2.85	
Actual > Ideal	15 (23.1%)	29 (14.3%)	1.92	0.92 – 4.01	
Non-numerical Ideal	12 (18.5%)	34 (16.7%)	1.31	0.61 – 2.82	
Total (n)	65 (24.3%)	203 (75.7%)			

* p-value based on Pearson's chi-square statistic, except where otherwise indicated

¥ p-value based on t-test statistic

ξ N for each variable is equal to 268, unless other wise indicated in brackets

Table 6.5 – Bivariate Association of Knowledge Related Factors with Use of Modern Contraceptives – Community Sample

a) Dichotomous and Polychotomous variables

Variable[ξ]	Current Use of Modern Contraceptives		OR	95% CI	p-value*
	Yes n (%)	No n (%)			
HEARD OF 'FAMILY PLANNING'					
Yes	112 (96.6%)	190 (93.6%)	2.36	0.65 – 8.54	0.271[ψ]
No	3 (2.6%)	12 (5.9%)			
SPONT. KNOWLEDGE OF METHODS (Modern and Traditional)					
0 – 1	15 (12.9%)	46 (22.7%)	1.00		0.002
2	15 (12.9%)	51 (25.1%)	0.90	0.40 – 2.05	
3	49 (42.2%)	63 (31.0%)	2.39	1.19 – 4.77	
4+	37 (31.9%)	43 (21.2%)	2.64	1.27 – 5.48	
KNOW WHERE TO OBTAIN METHODS					
Yes	115 (99.1%)	189 (93.1%)	8.52	1.11 – 65.6	0.013[ψ]
No	1 (1.0%)	14 (6.9%)			
IDEAL SPACE BETWEEN BIRTHS(n=317)					
3+ years	72 (62.1%)	77 (38.3%)	2.64	1.65 – 4.22	<0.001
Less than 3 years	44 (37.9%)	124 (61.7%)			
Total (n)	116 (36.4%)	203 (63.6%)			

* p-value based on Pearson's chi-square statistic, except where otherwise indicated

ψ p-value based on Fisher's exact test statistic

ξ N for each variable is equal to 319, unless other wise indicated in brackets

b) Continuous variables

Variable	Users Mean (SD)	Non-Users Mean (SD)	Mean Difference	95% CI	p-value*
Spont. Knowledge of Modern Methods	2.77 (1.2)	2.33 (1.4)	0.44	0.12 – 0.75	0.006
Spont. & Probed Knowledge of Modern Methods	5.16 (1.1)	4.81 (1.4)	0.34	0.04 – 0.65	0.027
Spont. Knowledge of Traditional Methods	0.35 (0.6)	0.26 (0.6)	0.09	-0.05 – 0.22	0.199
Spont. & Probed Knowledge of Traditional Methods	2.47 (0.8)	2.11 (1.0)	0.36	0.14 – 0.58	0.001
Spont. Knowledge of All Methods	3.11 (1.3)	2.59 (1.7)	0.53	0.17 – 0.88	0.004
Spont. & Probed Knowledge of All Methods	7.62 (1.5)	6.92 (2.1)	0.70	0.26- 1.14	0.002
Total (n)	116 (36.4%)	203 (63.6%)			

* p-value based on t-test statistic

Table 6.6 – Bivariate Association of Knowledge Related Factors with Use of Modern Contraceptives – Clinic Sample

a) Dichotomous and Polychotomous variables

Variable[ξ]	Current Use of Modern Contraceptives		OR	95% CI	p-value*
	Yes n (%)	No n (%)			
HEARD OF 'FAMILY PLANNING'					
Yes	64 (98.5%)	190 (93.6%)	4.38	0.56 – 34.1	0.199[ψ]
No	1 (1.5%)	13 (6.4%)			
SPONT. KNOWLEDGE OF METHODS (Modern and Traditional)					
0 – 1	5 (7.7%)	46 (22.7%)	1.00		0.020
2	13 (20.0%)	51 (25.1%)	2.35	2.33 – 7.09	
3	27 (41.5%)	63 (31.0%)	3.94	1.41 – 1.01	
4+	20 (30.8%)	43 (21.2%)	4.28	1.48 – 12.4	
KNOW WHERE TO OBTAIN METHODS					
Yes	65 (100%)	189 (93.1%)	---[†]	---[†]	0.025[ψ]
No	0 (0%)	14 (6.90%)			
IDEAL SPACE BETWEEN BIRTHS(n=266)					
3+ years	39 (60.0%)	77 (38.3%)	2.42	1.36 – 4.28	0.002
Less than 3 years	26 (40.0%)	124 (61.7%)			
Total (n)	65 (24.3%)	203 (75.7%)			

* p-value based on Pearson's chi-square statistic, except where otherwise indicated
ψ p-value based on Fisher's exact test statistic
† No odds ratio calculated due to the presence of a zero cell
ξ N for each variable is equal to 268, unless other wise indicated in brackets

b) Continuous variables

Variable	Users Mean (SD)	Non-Users Mean (SD)	Mean Difference	95% CI	p-value*
Spont. Knowledge of Modern Methods	2.91 (1.1)	2.33 (1.4)	0.58	0.19 – 0.96	0.003
Spont. & Probed Knowledge of Modern Methods	5.14 (1.2)	4.81 (1.4)	0.33	-0.06 – 0.71	0.097
Spont. Knowledge of Traditional Methods	0.231 (0.6)	0.256 (0.6)	-0.03	-0.18 – 0.13	0.752
Spont. & Probed Knowledge of Traditional Methods	2.15 (0.9)	2.11 (1.0)	0.05	-0.23 – 0.33	0.749
Spont. Knowledge of All Methods	3.14 (1.3)	2.59 (1.7)	0.55	0.11 – 1.0	0.015
Spont. & Probed Knowledge of All Methods	7.29 (1.5)	6.92 (2.1)	0.37	-0.18 – 0.93	0.189
Total (n)	65 (24.3%)	203 (75.7%)			

* p-value based on t-test statistic

Table 6.7 – Bivariate Association of Attitude Related Factors with Use of Modern Contraceptives – Community Sample

Variable[ξ]	Current Use of Modern Contraceptives		OR	95% CI	p-value*
	Yes n (%)	No n (%)			
APPROVE OF FP					
Approve	114 (98.3%)	184 (90.6%)	5.88	1.35 – 25.6	0.008[ψ]
Disapprove	2 (1.7%)	19 (9.4%)			
DECISION TO USE FP (n=314)					
Woman's Decision	7 (6.0%)	22 (11.1%)	1.00		0.029
Man's Decision	27 (23.3%)	66 (33.2%)	1.29	0.49 – 3.36	
Couple's Decision	82 (70.7%)	111 (55.8%)	2.32	0.95 – 5.69	
DISCUSS FP WITH WIFE					
Yes	112 (96.6%)	148 (72.9%)	10.4	3.66 – 29.6	<0.001[ψ]
No	4 (3.4%)	55 (27.1%)			
DISCUSS # OF DESIRED CHILDREN WITH WIFE					
Yes	102 (87.9%)	129 (63.5%)	4.18	2.23 – 7.83	<0.001
No	14 (12.1%)	74 (36.5%)			
EVER GONE FOR FP SERVICES					
Yes	49 (42.2%)	24 (11.8%)	5.46	3.11 – 9.58	<0.001
No	67 (57.8%)	179 (88.2%)			
PERCEIVED TIME TO FP SERVICES					
< 30 minutes	40 (34.5%)	44 (21.7%)	1.00		0.010
30+ minutes	74 (63.8%)	145 (71.4%)	0.56	0.34 – 0.94	
Don't Know	2 (1.7%)	14 (6.9%)	0.16	0.03 – 0.74	
Total (n)	116 (36.4%)	203 (63.6%)			

* p-value based on Pearson's chi-square statistic, except where otherwise indicated

ψ p-value based on Fisher's exact test statistic

ξ N for each variable is equal to 319, unless other wise indicated in brackets

Table 6.8 – Bivariate Association of Attitude Related Factors with Use of Modern Contraceptives – Clinic Sample

Variable[ξ]	Current Use of Modern Contraceptives		OR	95% CI	p-value*
	Yes n (%)	No n (%)			
APPROVE OF FP					
Approve	65 (100%)	184 (90.6%)	---[†]	---[†]	0.005[ψ]
Disapprove	0 (0%)	19 (9.4%)			
DECISION TO USE FP (n=264)					
Woman's Decision	6 (9.2%)	22 (11.1%)	1.00		0.823
Man's Decision	24 (36.9%)	66 (33.2%)	1.33	0.48 – 3.68	
Couple's Decision	35 (53.8%)	111 (55.8%)	1.16	0.43 – 3.08	
DISCUSS FP WITH WIFE					
Yes	64 (98.5%)	148 (72.9%)	23.8	3.22 – 176	<0.001[ψ]
No	1 (1.5%)	55 (27.1%)			
DISCUSS # OF DESIRED CHILDREN WITH WIFE					
Yes	51 (78.5%)	129 (63.5%)	2.09	1.08 – 4.03	0.026
No	14 (21.5%)	74 (36.5%)			
EVER GONE FOR FP SERVICES					
Yes	22 (33.8%)	24 (11.8%)	3.82	1.96 – 7.44	<0.001
No	43 (66.2%)	179 (88.2%)			
PERCEIVED TIME TO FP SERVICES					
< 30 minutes	33 (50.8%)	44 (21.7%)	1.00		<0.001
30+ minutes	31 (47.7%)	145 (71.4%)	0.29	0.16 – 0.76	
Don't Know	1 (6.7%)	14 (6.9%)	0.10	0.01 – 0.76	
Total (n)	65 (24.3%)	203 (75.7%)			

* p-value based on Pearson's chi-square statistic, except where otherwise indicated

ψ p-value based on Fisher's exact test statistic

† No odds ratio calculated due to the presence of a zero cell

ξ N for each variable is equal to 268, unless other wise indicated in brackets

CHAPTER 7
RESULTS - MULTIVARIATE ANALYSIS

It is apparent from the bivariate analysis shown in Chapter 6 that a complex set of relationships exists among the various socio-demographic, family size, composition, and preference, knowledge, and attitude related factors associated with modern contraceptive use. Simple cross-tabulations of use of modern contraceptives by these measured factors can be misleading since the apparent effects of one variable may be confounded by the effects of another variable. In this chapter, multiple regression analysis was used to examine the independent effect of each of the measured variables and to identify the most significant predictors of use of modern contraceptive methods, when the effects of other predictor variables were held constant (controlled).

Selection of the appropriate multivariate technique is based on the nature of the dependent variable. The multivariate technique selected for the present study was logistic regression, owing to the dichotomous nature of the dependent variable, use or non-use of modern contraceptive methods.

As with previous chapters, the multivariate analysis was performed and is presented separately for each of the study samples (i.e., Community Sample and Clinic Sample).

7.1 Characteristics of Logistic Regression

Logistic regression involves the use of a mathematical equation to model the independent, explanatory variables to compute a probability of experiencing the outcome (i.e., use of modern contraceptive methods). The general form of the equation for the logistic model is as follows:

$$\text{logit } [P/(1-P)] = B_0 + B_1X_1 + B_2X_2 + \ldots + B_iX_i$$

In this equation, P represents the probability of the dichotomous outcome given the set of independent, explanatory variables. [P/(1-P)] represents the ratio of the probability that the outcome will occur over the probability that the outcome will not occur. In this way, [P/(1-P)] represents the odds of experiencing the outcome. X_i represents the i^{th} independent variable and the B coefficients are unknown parameters. Specifically, the term B_0 is a constant term representing the random error of the model while B_i is the coefficient for the i^{th} independent

variable, X. The natural logarithm (ln) of each *B* coefficient represents the odds ratio for the corresponding independent variable (X_i) (Kleinbaum, 1994).

For discrete variables, the resulting odds ratio is a ratio of the odds of experiencing the outcome (i.e., using modern contraceptives) for those in one category vs. the odds of experiencing the outcome in the other (baseline) category. For continuous variables, the odds ratio is an estimate of the odds of experiencing the outcome associated with one unit increase in the independent variable (Kleinbaum, 1994).

7.2 Logistic Regression – Community Sample

7.2.1 Variable Selection

A list of the 27 variables initially considered for the multivariate regression analysis is provided in Appendix 14. From this list, those variables selected for the regression analysis were chosen by examining the results of the univariate and the bivariate analyses and considering the practical significance of each variable. Those variables that demonstrated significance at the 25% level, (i.e., p-value < 0.250) in their bivariate association with use of modern contraceptives were considered for entry into the multivariate analysis. This step eliminated the following three variables: *Number of Daughters*, *Religion*, and *Tribe*.

The remaining 24 variables were subsequently tested to determine whether they satisfied the following general assumptions of logistic regression prior to proceeding to the model building stage.

In order to utilise logistic regression analysis, the following key assumptions must be satisfied:

i) **Independence of cases.** Cases must be independent of one another (i.e., the response of one case can not depend on the response of another case).

ii) **The association between a continuous variable and the dependent variable must be linear.** Continuous variables must demonstrate significant linear relationship with the dependent variable.

iii) **Independent variables cannot demonstrate multicollinearity**. A variable cannot be a linear function of another.

iv) **No complete separation of variables.** There cannot be complete separation of the distribution of variables (i.e., there must be overlap in the distribution of independent variables between the two outcome possibilities).

v) **Variables cannot have missing cases.** Logistic regression model building requires that there are no missing cases for any of the variables included in the model (Hosmer and Lemeshow, 1989).

7.2.1.1 Independence of Cases

The cases were independent since they were randomly sampled and each participant had only one opportunity to participate in the study. There were, however, two specific variables that did not demonstrate independence because one was a subset of the other. *Desire more Children in 2 years* was a subset of *Desire more Children* since those who desired no more children overall comprised a portion of those who desired no more children in two years. The bivariate analysis demonstrated that *Desire more Children in 2 years* was a stronger predictor of Use and thus may have been the preferred variable to include in the model. *Desire more Children*, however, was also a strong predictor of Use and is more commonly reported in the literature, which was considered important for comparative purposes. Thus, because both variables were important and relevant, two separate models were run. *Desire more Children* was considered in the primary model and therefore all model-building steps are described and all subsequent discussion will be based on this model. A second regression was run using *Desire more Children in 2 years* and simply the final main effects model is presented and discussed briefly in comparison to the model utilising *Desire more Children.*

7.2.1.2 Assessment of Linearity of Continuous Variables

A key assumption of logistic regression is that a continuous independent variable must be linearly associated with the logit of the dependent variable (Kleinbaum, 1994). Continuous variables were tested to determine whether they satisfied this linear assumption. Those variables that did not were either categorised or appropriately transformed and subsequently utilised throughout the quantitative analysis. Those variables that did were entered into the model in their continuous form.

Linearity of continuous variables was tested using logit plots. Variables were divided into categories based on quartiles. A logistic regression was run with the independent variable in its

quartile form and the dependent variable, use of modern contraceptives. The resulting *B* values were then plotted against the midpoint of each quartile for the independent variable. By examining this plot, an assessment was made as to whether a non-linear relationship existed between the independent variable and use of modern contraceptives. Logit plots were examined for all continuous variables including: *Age, Age at First Marriage, Number of Living Children, Number of Sons, Number of Daughters, Number of Children being Supported, Ideal Number of Children, Spontaneous Knowledge of Family Planning Methods,* and *Perceived Time to Family Planning Services.* Only *Age* and *Ideal Number of Children* satisfied the linear assumption and thus were considered throughout the analysis and entered into the model in their continuous form. The remaining variables were categorised based on categories used in the literature as well as on natural breaks observed in the data.

7.2.1.3 Multicollinearity

Problems arise in a logistic regression model when highly correlated risk variables are used in the regression analysis. High correlation means that two variables have essentially indistinguishable associations with the outcome variable. This phenomenon is called multicollinearity. The presence of multicollinearity may produce unreliable estimates of the regression coefficients associated with each variable and inflated standard errors. (Selvin, 1996).

Multicollinearity is most often discussed in relation to continuous variables. Of all variables considered for the regression, only *Age* and *Ideal Number of Children* were continuous. The observed correlation coefficient of 18% indicated that *Age* and *Ideal Number of Children* were not highly correlated with one another.

The degree of association between categorical independent variables can be estimated by examining a cross-tabular odds ratio. Two specific dichotomous variables were highly associated (OR=14.4) namely, *Discuss Family Planning with Wife* and *Discuss Number of Desired Children with Wife.* As observed in the bivariate analysis, both of these variables were strong predictors of use of modern contraceptives. Since they are highly associated with one another and are both strong predictors of use, either could have been included in the model. It was decided to include only *Discuss Family Planning with Wife* in the model since this variable is commonly reported in the literature and comprised one of the study hypotheses.

7.2.1.4 Assessment of Complete Separation

As observed in the bivariate analysis, upon cross-tabulation with use of modern contraceptives, a number of variables displayed 'too small' or zero cell counts, thereby demonstrating complete (or near-complete) separation. The presence of complete separation may produce unreliable estimates and inflated standard errors (Selvin, 1996).

Variables were screened and those that demonstrated complete separation were excluded from the multivariate analysis on the basis of a lack of discriminatory power across categories. For example, 95% of the respondents had heard of the term 'family planning'. Thus, this variable demonstrated little discriminatory power to evaluate whether having heard of family planning was a significant predictor of use of modern contraceptives. The three variables excluded on this basis included: *Heard of Family Planning*, *Know Where to Obtain Methods*, and *Approve of Family Planning*.

7.2.1.5 Missing Cases

Logistic regression model building requires that there be no missing cases for any of the variables included in the model. In other words, if a case is missing data for any of the variables entered into the model, that case will be excluded from the analysis.

The continuous variable *Ideal Number of Children* was classified as a problem variable because there were 42 'non-numerical responses' that were coded as 'Missing' in the bivariate analysis. Running a multivariate analysis and including this variable would have resulted in the elimination of at least 42 cases from the analysis, drastically reducing the power to detect differences between groups. Rather than including this variable (*Ideal Number of Children*), it was decided to include the categorical variable *Actual vs. Ideal Number of Children* in the model and include a category for 'non-numerical responses' for ideal number of children.

The remaining 18 variables that were included in the first block of the regression analysis are presented in Table 7.1. Twenty-one cases were missing data on one of the 18 variables considered for the logistic model. All 21 of these cases were thus excluded resulting in 298 cases (n=298) available for the logistic regression model building.

Table 7.1 Bivariate Significance of Variables included in the Logistic Regression Analysis – Community Sample

Variable Description	Variable Name	p-value
Education	*EDUCATNX*	<0.001
Discuss FP with Wife	*DIS_PART*	<0.001
Ever Gone for FP Services	*EVER_FPC*	<0.001
Actual vs. Ideal Number of Children	*REAL_IDL*	<0.001
Ideal Space between Births	*SPCTIMEY*	<0.001
Desire more Children	*MOREKIDX*	0.001
Spontaneous Knowledge of FP Methods	*KNWALLSZ*	0.002
Perceived Time to FP Services	*TIME_FPX*	0.010
Occupation	*OCCUPATX*	0.011
Present Residence	*URB_RUR*	0.022
Decision to use FP	*DECISION*	0.029
Number of Children being Supported	*TOTLSUPX*	0.032
Supporting Other Children	*OTHCHILD*	0.057
Age	*AGE*	0.059
Number of Sons	*SONS_CAT*	0.094
Number of Living Children	*NUCHILDZ*	0.130
Age at First Marriage	*AGEMARRX*	0.169
Type of Marriage	*MONO_POL*	0.175

7.2.2 Model Building

To obtain the most parsimonious model (i.e., one containing a minimal number of variables that explain a maximum degree of variance), two methods, a manual, forward stepwise selection and a computer automated backward stepwise elimination, were used to build the logistic regression model. The automated regression was run to check and validate the findings of the manual process.

The manual forward stepwise selection was based on the Likelihood Ratio. At each successive step of the model building process, the variable demonstrating the greatest significance in its ability to predict use of modern contraceptives (based on its Wald p-value) was entered into the model and a log likelihood statistic for this reduced model was then computed. The change or difference in the log likelihood statistic from the full to the reduced model was monitored to detect whether the addition of the variable resulted in a significant change (i.e., $p<0.05$).

The difference in the log likelihood statistic is observed using the Likelihood Ratio, defined as minus twice the difference between the log likelihood statistics of the full and reduced models being compared. The Likelihood Ratio has a chi-square distribution with degrees of freedom

determined by subtracting the total degrees of freedom from the reduced model from the total degrees of freedom of the full model. The Likelihood Ratio (-2LL) is evaluated under the null hypothesis that the selected variable is not a statistically significant predictor of the outcome (Kleinbaum, 1994).

Thus, in building the model, the decision to include a particular variable was based on an assessment of the variables and the change in –2LL between models as well as statistics associated with individual variables including Wald statistics and p-values, odds ratios, and corresponding 95% Confidence Intervals (95% C.I.). The practical and social significance of the variables was also considered.

The model building steps are presented in Appendix 14. The results of the final main effects model are shown in Table 7.2.

Table 7.2 Final Main Effects Logistic Regression Model – Community Sample

Variable Description	Variable Name	B	S.E	OR	95% C.I.	Wald p-value
Ever Gone for FP Services	*EVER_FPC*	1.313	0.331	3.72	[1.95 – 7.11]	<0.001
Discuss FP with Wife	*DIS_PART*	1.389	0.562	4.01	[1.33 – 12.1]	0.013
Ideal Space between Births	*SPCTIMEY*	0.695	0.281	2.00	[1.15 – 3.48]	0.014
Education						
Incomplete Primary or less	*EDUCATNX*					0.013
Complete Primary	*EDUCATNX(1)*	0.668	0.375	1.95	[0.94 – 4.07]	0.075
Incomplete Secondary	*EDUCATNX(2)*	0.547	0.340	1.73	[0.89 – 3.37]	0.108
Complete Secondary or more	*EDUCATNX(3)*	1.759	0.588	5.81	[1.83 – 18.4]	0.003
Actual vs. Ideal # of Children						
Actual < Ideal	*REAL_IDL*					0.021
Actual = Ideal	*REAL_IDL(1)*	0.253	0.430	1.29	[0.55 – 2.99]	0.557
Actual > Ideal	*REAL_IDL(2)*	1.016	0.339	2.76	[1.42 – 5.37]	0.003
Non-numerical Ideal	*REAL_IDL(3)*	-0.069	0.497	0.93	[0.35 – 2.47]	0.889

Model: logit[CURR_MOD] = β_0 + β_1EVER_FPC + β_2DIS_PART + β_3SPCTIMEY + β_4EDUCATNX(1) + β_5EDUCATNX(2) + β_6EDUCATNX(3) + β_7REAL_IDL(1) + β_8REAL_IDL(2) + β_9REAL_IDL(3)
Number of observations = 298
Likelihood Ratio = 393.517 – 311.015 = 82.502
Df = 9, p-value < 0.001

After building the main effects model, excluded variables that were considered potentially important confounders were tested for confounding of the main effects variables. Testing

confounding was done by monitoring the change in regression coefficients (*B*) of model variables upon inclusion of the potential confounder. If, upon inclusion of the potential confounder, any of the *B*s in the reduced model changed by 20% or more (ΔB >20%), the variable was considered a confounder. The analysis revealed that none of the excluded variables confounded the relationships between the main effects variables and the outcome, use of modern contraceptives.

With these five variables in the model (*EVER_FPC*, *DIS_PART*, *SPCTIMEY*, *EDUCATNX*, and *REAL_IDL*) none of the remaining variables demonstrated statistical significance with use of modern contraceptives, at the 5% significance level. A check was run to determine which of the remaining variables would have been entered into the model as the sixth variable. The main effects model was entered into Block 1 of the regression and each of the remaining variables were entered separately into Block 2, as the sixth variable in the model. As shown in Table 7.3, upon inclusion of the five main predictor variables, no other variables were significant predictors of Use at a 10% significance level. The variable demonstrating the greatest significance as the sixth variable in the model was *Perceived Time to Family Planning Services* (p=0.142).

Table 7.3 Significance of Variables Entered as the Sixth Variable in the Main Effects Model – Community Sample

Variable Description	Variable Name	p-value
Perceived time to FP services	*TIME_FPX*	0.142
Type of marriage	*MONO_POL*	0.211
Supporting other children	*OTHCHILD*	0.218
Number of Living Children	*NUCHILDZ*	0.253
Number of children being supported	*TOTLSUPX*	0.376
Occupation	*OCCUPATX*	0.416
Spontaneous knowledge of FP methods	*KNWALLSZ*	0.428
Present Residence	*URB_RUR*	0.449
Age at 1st marriage	*AGEMARRX*	0.601
Number of Sons	*SONS_CAT*	0.644
Age	*AGE*	0.679
Responsibility for decision to use FP	*DECISION*	0.728
Desire more children	*MOREKIDX*	0.816

The results of the manual forward stepwise selection regression were compared with the results of the automated backward stepwise elimination regression. The results (not shown here) obtained using each method were identical; the same five predictors were present in both

models. Therefore, the set of variables that predicted use of modern contraceptive methods included: *Ever Gone for Family Planning Services, Discussion of Family Planning with Wife, Ideal Space between Births, Education,* and *Actual vs. Ideal number of Children.*

7.2.3 Interactions

Testing to determine the significance of a particular interaction term is, in effect, testing to determine whether a variable is an effect modifier. Variables are considered effect modifiers if they are confounders and if the magnitude of association between the outcome and a predictor varies with the level of the potential effect modifier (Hennekens and Buring, 1987).

Interactions between the variables in the main effects model were tested by entering each interaction term into the model, one at a time. As shown in Table 7.4, none of the interaction terms demonstrated statistical significance at the 5% level. Therefore, no interactions were included or considered in the final model. The final model was thus the same as that presented in Table 7.2.

Table 7.4 Significance of Interaction Terms entered into the Main Effects Model – Community Sample

Interaction Term	Wald p-value
*EVER_FPC * DIS_PART*	0.762
*EVER_FPC * SPCTIMEY*	0.427
*EVER_FPC * EDUCATNX*	0.948
*EVER_FPC * REAL_IDL*	0.683
*DIS_PART * SPCTIMEY*	0.966
*DIS_PART * EDUCATNX*	0.853
*DIS_PART * REAL_IDL*	0.983
*SPCTIMEY * EDUCATNX*	0.352
*SPCTIMEY * REAL_IDL*	0.837
*EDUCATNX * REAL_IDL*	0.997

7.2.4 Confounding Variables

Variables are considered confounders if they contribute to the underestimation or overestimation of the relationship between the outcome and the identified predictor (Kleinbaum,1994).

The variables that were excluded from the multivariate analysis on the basis of an observed non-significant bivariate association with use were tested to determine whether they were

confounders of any of the relationships in the main effects model. The variables that were excluded from the multivariate analysis included *Tribe, Religion,* and *Number of Daughters.* Each of these variables was tested as the sixth variable in the main effects model to determine whether it demonstrated significant association with Use as well as to evaluate whether it modified any of the relationships between the main predictors and Use.

As shown in Table 7.5, none of the variables that were initially excluded from the multivariate analysis were significant predictors of use of modern contraceptives when entered as the sixth variable in the main effects model. Therefore, none of these variables were considered confounders. Furthermore, neither *Tribe* nor *Religion* modified any of the relationships between the main predictors and Use. The variable *Number of Daughters,* however, modified the relationship between the main effects variable *REAL_IDL* and use of modern contraceptives, and converted *REAL_IDL* to a non-significant predictor (p=0.057). This observation is likely explained by the fact that having more daughters means having more children and therefore *Number of Daughters* was associated with the actual number of children component of *REAL_IDL.* Given that *Number of Daughters* was not statistically associated with use of modern contraceptives, it was dropped from the model and *REAL_IDL* was retained.

Table 7.5 Testing Confounding by Variables Excluded from the Multivariate Analysis

Variable Description	Variable Name	Likelihood Ratio p-value
Tribe	*TRIBEX*	0.911
Religion	*RELIGION*	0.783
Number of Daughters	*GIRL_CAT*	0.973

7.2.5 Goodness-of-Fit of the Logistic Regression Model

Having fit the final regression model, a Hosmer-Lemeshow goodness-of-fit test was done to determine whether the model did, in fact, fit the data well.

The results of the Hosmer-Lemeshow test conducted on the final regression model yielded a chi-square value of 4.242 with 8 degrees of freedom, and a corresponding p-value of 0.835. Because the p-value was non-significant, this indicated that the observed number of users and non-users were similar to the expected number, based on the logistic regression model. It was therefore concluded that the final logistic regression model (as shown in Table 7.2) fit the data well.

7.2.6 Logistic Regression Model using *Desire more Children in 2 years*

As described in section 7.2.1.1, the same model building steps were conducted to build a model using *Desire more Children in 2 years*, rather than *Desire more Children.* The results showed that the final main effects model yielded using *Desire more Children in 2 years* did not differ from that obtained using *Desire more Children.* Thus, using either variable resulted in the final main effects model presented in Table 7.2.

7.3 Logistic Regression—Clinic Sample

7.3.1 Variable Selection

A list of the 27 variables initially considered for the multivariate regression analysis is provided in Appendix 14. Each variable was selected upon consideration of its statistical and practical significance, using the same criteria reported for the Community Sample. The following four variables were non-significant at the 25% level and were thus excluded from the multivariate analysis: *Type of Marriage, Number of Daughters, Supporting Other Children,* and *Decision to use Family Planning.*

Variables that were known confounders of contraceptive use (i.e., *Age* and *Number of Living Children*) or comprised one the main hypotheses of this study (i.e., *Number of Children being Supported*) were kept in the multivariate model even though they demonstrated non-significant p-values in the bivariate analysis. The variable *Actual vs. Ideal Number of Children* also did not demonstrate statistical significance at the 25% level, however, was kept in the model to account for the variable *Ideal Number of Children.* This is further discussed in Section 7.3.2.5.

Prior to proceeding to the model building stage, the remaining 23 variables were tested to determine whether they satisfied the general assumptions of logistic regression. Tests and results were similar to those reported for the Community Sample and are thus only briefly presented here.

7.3.1.1 Independence of Cases

As was the case in the Community Sample, *Desire more Children* and *Desire more Children in 2 years* did not demonstrate independence because one was a subset of the other. Again, because both variables were important and relevant, two separate models were run with *Desire more Children* considered in the primary model.

7.3.1.2 Assessment of Linearity of Continuous Variables

To assess the linearity of continuous variables, the same methodology was used as described in the Community Sample (Section 7.2.1.2). Again, only *Age* and *Ideal Number of Children* satisfied the linear assumption and were thus considered throughout the analysis and entered into the model in their continuous form. The remaining variables were categorised on the basis of categories used in the literature and the observed natural breaks in the data.

7.3.1.3 Multicollinearity

The observed correlation coefficient of 22% indicated that *Age* and *Ideal Number of Children* were not highly correlated with one another.

The dichotomous variables *Discuss Family Planning with Wife* and *Discuss Number of Desired Children with Wife* were highly associated (OR=12.3). Since they were highly associated with one another and were both strong predictors of use, either could have been included in the model. It was decided to include *Discuss Number of Desired Children with Wife* for reasons related to near complete separation observed for *Discuss Family Planning with Wife.* This is discussed further in the following section (Section 7.3.1.4).

7.3.1.4 Assessment of Complete Separation

The following four variables were excluded from the model on the basis of complete (or near complete) separation: *Heard of Family Planning, Know Where to Obtain Methods, Approve of Family Planning,* and *Discuss Family Planning with Wife.* As observed in the bivariate analysis, the variable *Discuss Family Planning with Wife* demonstrated near complete separation in that 99% of Users indicated that they discussed family planning with their wives. This variable was excluded in favour of its related counterpart: *Discuss Number of Desired Children with Wife.*

7.3.1.5 Missing Cases

The continuous variable *Ideal Number of Children* was classified as a problem variable because there were 46 'non-numerical responses' which were coded as 'Missing' for the purposes of the bivariate analysis. As reported for the Community Sample, *Ideal Number of Children* was excluded from the model in favour of the categorical variable *Actual vs. Ideal Number of Children,* which included a category for 'non-numerical responses' for ideal number of children.

The remaining 17 variables included in the first block of the regression analysis are presented in Table 7.6. For this analysis, 22 cases were missing data on one of the 17 variables considered for the logistic model. All 22 of these cases were thus excluded resulting in 246 cases (n=246) available for the logistic regression model building.

Table 7.6 Bivariate Significance of Variables included in Logistic Regression Analysis – Clinic Sample

Variable Description	Variable Name	p-value
Present Residence	*URB_RUR*	<0.001
Education	*EDUCATNX*	<0.001
Occupation	*OCCUPATX*	<0.001
Ever Gone for FP Services	*EVER_FPC*	<0.001
Perceived Time to FP Services	*TIME_FPX*	<0.001
Age at First Marriage	*AGEMARRX*	0.001
Religion	*RELIGION*	0.002
Ideal Space between Births	*SPCTIMEY*	0.002
Spontaneous Knowledge of FP Methods	*KNWALLSZ*	0.020
Discuss Number of Desired Children with Wife	*WIFE_KID*	0.026
Number of Sons	*SONS_CAT*	0.066
Tribe	*TRIBEX*	0.088
Desire more Children	*MOREKIDX*	0.208
Actual vs. Ideal Number of Children	*REAL_IDL*	0.357
Age	*AGE*	0.753
Number of Children being Supported	*TOTLSUPX*	0.848
Number of Living Children	*NUCHILDZ*	0.952

7.3.2 Model Building

Again, two methods were used to build the logistic regression model; a manual forward stepwise selection regression and a computer automated backward stepwise elimination regression. The same model building technique was used as described for the Community Sample.

The model building steps are presented in Appendix 14. The results of the final main effects model are shown in Table 7.7.

Table 7.7 Final Main Effects Logistic Regression Model – Clinic Sample

Variable Description	Variable Name	B	S.E	OR	95% C.I.	Wald p-value
Ever Gone for FP Services	*EVER_FPC*	1.698	0.425	5.47	[2.38 – 12.6]	<0.001
Perceived Time to FP Services						
< 30 minutes	*TIME_FPX*					<0.001
30+ minutes	*TIME_FPX(1)*	-1.528	0.380	0.22	[0.10 – 0.46]	<0.001
Don't Know	*TIME_FPX(2)*	-1.804	1.094	0.17	[0.02 – 1.41]	0.099
Education						
Incomplete Primary or less	*EDUCATNX*					0.002
Complete Primary	*EDUCATNX(1)*	1.470	0.504	4.35	[1.62 – 11. 7]	0.004
Incomplete Secondary	*EDUCATNX(2)*	1.215	0.420	3.37	[1.48 – 7.68]	0.004
Complete Secondary or more	*EDUCATNX(3)*	2.009	0.703	7.46	[1.88 – 29.6]	0.004
Tribe	*TRIBEX*	1.223	0.501	3.40	[1.27 – 9.08]	0.015

Model: logit[CURR_MOD] = β_0 + β_1EVER_FPC + β_2TIME_FPX(1) + β_3TIME_FPX(2) + β_4 EDUCATNX(1) + β_5EDUCATNX(2) + β_6EDUCATNX(3) + β_7TRIBEX
Number of observations = 246
Likelihood Ratio = 274.324 – 211.022 = 62.302
Df = 7. p-value < 0.001

After building the main effects model, excluded variables were tested for confounding of the main effects variables using the $\Delta B > 20\%$ guideline. None of the excluded variables were found to be confounders.

A check was run to determine which of the excluded variables would have been entered into this model as the fifth variable. As shown in Table 7.8, with the four main effects variables in the model (*EVER_FPC*, *TIME_FPX*, *EDUCATNX*, and *TRIBEX*) no other variables were significant predictors of Use at a 5% significance level. The variable demonstrating the greatest significance as the fifth variable in the model was *Age at First Marriage* (p=0.056).

Table 7.8 Significance of Variables Entered as the Fifth Variable in the Main Effects Model – Clinic Sample

Variable Description	Variable Name	Wald p-value
Age at First Marriage	*AGEMARRX*	0.056
Ideal Space between Births	*SPCTIMEY*	0.071
Religion	*RELIGION*	0.078
Actual vs. Ideal Number of Children	*REAL_IDL*	0.082
Desire more Children	*MOREKIDX*	0.186
Occupation	*OCCUPATX*	0.209
Present Residence	*URB_RUR*	0.224
Number of Sons	*SONS_CAT*	0.420
Number of Children being Supported	*TOTLSUPX*	0.480
Spontaneous Knowledge of FP Methods	*KNWALLSZ*	0.517
Discuss Number of Desired Children with Wife	*WIFE_KID*	0.549
Number of Living Children	*NUCHILDZ*	0.603
Age	*AGE*	0.808

The results of the manual forward stepwise selection regression were compared with the results of an automated backward stepwise elimination regression. The results (not shown here) obtained using each method were the identical; the same four predictors were present in both models. Therefore, in the Clinic Sample, the set of variables that predicted use of modern contraceptive methods included: *Ever Gone for Family Planning Services, Perceived Time to Family Planning Services, Education,* and *Tribe.*

7.3.3 Interactions

As shown in Table 7.9, none of the interaction terms demonstrated statistical significance at the 5% level. Therefore, no interactions were included or considered in the final model. The final model was thus the same as that presented in Table 7.7.

Table 7.9 Significance of Interaction Terms entered into the Main Effects Model – Clinic Sample

Interaction Term	Wald p-value
*EVER_FPC * TIME_FPX*	0.490
*EVER_FPC * EDUCATNX*	0.889
*EVER_FPC * TRIBEX*	0.443
*TIME_FPX * EDUCATNX*	0.882
*TIME_FPX * TRIBEX*	0.944
*EDUCATNX * TRIBEX*	0.960

7.3.4 Confounding Variables

As shown in Table 7.10, none of the variables that were initially excluded from the multivariate analysis (i.e., *Type of Marriage, Supporting Other Children, Number of Daughters,* and *Decision to Use Family Planning)* were significant predictors of use of modern contraceptives when entered as the fifth variable in the main effects model. Furthermore, none of the variables modified any of the relationships between the main predictors and Use. Therefore, none of these variables were considered confounders.

Table 7.10 Testing Confounding by Variables Excluded from the Multivariate Analysis – Clinic Sample

Variable Description	Variable Name	Likelihood Ratio p-value
Type of Marriage	*MONO_POL*	0.737
Supporting Other Children	*OTHCHILD*	0.062
Number of Daughters	*GIRL_CAT*	0.256
Decision to Use FP	*DECISION*	0.731

7.3.5 Goodness-of-Fit of the Logistic Regression Model

The Hosmer-Lemeshow goodness-of-fit test yielded a chi-square value of 1.470 with 7 degrees of freedom, and a corresponding p-value of 0.983. Since the p-value was non-significant, it was concluded that the final logistic regression model fit the data well.

7.3.6 Logistic Regression Model using *Desire More Children in 2 years*

As described in Section 7.3.1.1, the same model building steps were conducted to build a model using *Desire more children in 2 years*, rather than *Desire more children.* The results showed that the final main effects model yielded using *Desire more children in 2 years* did not differ from that obtained using *Desire more children.* Thus, using either variable resulted in the final main effects model presented in Table 7.7.

7.4 Summary of Multivariate Results

A comparison of the multivariate results of the two study samples (i.e., the Community Sample and the Clinic Sample) reveals that the final logistic regression models contained a different set of explanatory variables to predict use of modern contraceptives.

In the Community Sample, the set of five variables that predicted use of modern contraceptive methods included: *Ever Gone for Family Planning Services, Discussion of Family Planning*

with Wife, Ideal Space between Births, Education, and *Actual vs. Ideal number of Children.* While in the Clinic Sample, the set of four variables that predicted use of modern contraceptive methods included: *Ever Gone for Family Planning Services, Perceived Time to Family Planning Clinic, Education,* and *Tribe.* Both models included *Education* and *Ever Gone for Family Planning Services* and in both cases, *Ever Gone for Family Planning Services* was the strongest predictor of Use.

Observed differences between the samples may be the result of small sample sizes, particularly in the Clinic Sample. Differences may also be a result of selection biases encountered in identifying individuals for participation in the Clinic Sample.

The results of the multivariate analysis were mostly consistent with those observed in the bivariate analysis (Chapter 6). Of those variables selected and considered for the multivariate analysis in the Community Sample, the corresponding bivariate analyses revealed highly significant associations ($p<0.001$) between the following six independent variables and use of modern contraceptives: *Ever Gone for Family Planning Services, Discussion of Family Planning with Wife, Ideal Space between Births, Education, Actual vs. Ideal number of Children* and *Desire more Children in 2 years.* With the exception of *Desire more Children in 2 years*, the multivariate analysis identified these same variables as the best predictors of use of modern contraceptives.

For the Clinic Sample, the bivariate analysis revealed highly significant associations ($p<0.001$) between the following five independent variables and use of modern contraceptives: *Ever Gone for Family Planning Services, Perceived Time to Family Planning Services, Education, Present Residence,* and *Occupation.* With the exception of *Present Residence* and *Occupation*, the multivariate analysis identified these same variables as the best predictors of use of modern contraceptives, in addition to *Tribe.*

CHAPTER 8
RESULTS – QUALITATIVE

The purpose of this chapter is to provide the results of the qualitative data collected from the key informant interviews and the FGD sessions, as described in Chapter 4. This chapter will address the fourth objective of this study: to identify barriers that may inhibit or prevent men from using family planning and means by which male involvement and participation in family planning can be encouraged. In addition, the qualitative results were used to supplement the quantitative findings, explore and elucidate men's actual or perceived role in family planning matters, and to provide context (both cultural and otherwise) to the findings.

8.1 Description of the Participants

The composition of the key informant interviews and the FGD sessions are presented in Table 8.1 and Table 8.2, respectively. In the interest of protecting confidentiality, each key informant was classified into one of three categories: Family Planning Administrator, Family Planning Provider, or Government Administrator. Subsequently, each key informant and each FGD session was given a unique identification code which was used throughout the analysis to identify quotes from the same session. It should be noted that although the two interview sessions with the research assistants took place as a FGD, these individuals were considered and are referred to as key informants throughout the text. Thus, unless otherwise specified, use of the term 'FGD' refers only to individuals in FGD-1 and FGD-2.

Table 8.1 Composition of Key Informant Interviews

Code	Classification of Key Informant	Gender
KI-1	Family Planning Administrator	Female
KI-2	Family Planning Administrator and Provider	Male
KI-3	Family Planning Provider	Female
KI-4	Government Administrator	Male
KI-5	Family Planning Administrator	Female
KI-6	Family Planning Provider	Male
KI-7	Family Planning Administrator	Male

Table 8.2 Composition of Focus Group Discussions (FGDs)

Code	Description of FGD	# of Participants	Gender
FGD-1	Family Planning Users from the Community	8	Male
FGD-2	Family Planning Non-Users from the Community	7	Male
FGD-3	Male Research Assistants	6	Male
FGD-4	Female Research Assistants	3	Female

8.2 Percent Agreement of Coding

To test for reliability of coding, 15 responses from each of the 11 transcripts for the qualitative data (total of 165 responses) were randomly chosen and given to two other individuals. These individuals were asked to assign a code (from a provided list) to each of the responses given. Both individuals were familiar with qualitative research methods and the study topic. The average percent agreement of coding between the independent coders and the principal investigator was 80.4%. This indicates a high degree of inter-rater reliability and suggests that the coding was performed rigorously and reliably.

8.3 Barriers to Using Family Planning

The content analysis revealed six major themes describing barriers that inhibit or prevent men from using family planning. The themes are presented and described in order of most commonly mentioned to least commonly mentioned.

8.3.1 Misinformation and a Lack of Information about Family Planning

Misinformation and a general lack of information were demonstrated by the FGD participants and were mentioned by the key informants as one of the greatest barriers inhibiting men from participating in and practising family planning.

Lack of information

The FGD participants provided definitions of family planning that indicated a general understanding of its purpose. Most individuals provided broad definitions with a particular emphasis on family planning as a means of having the number of children one can economically support and of spacing children. These definitions were consistent with those stated by the key informant family planning providers themselves.

Some FGD participants, however, particularly from the non-users FGD, provided definitions that were literal interpretations of the term "family planning" making it difficult to gain a real sense of his understanding of family planning. For example, one participant stated:

> *"Family planning, that's how a man plans for his family."* (FGD-2, male).

In both of the FGD sessions, participants were collectively able to name all of the family planning methods commonly available in Uganda, however, most could explain only the basic notion of the methods, and much of the information that they had was inaccurate. A lack of information was particularly evident concerning how each of the various methods (both modern and traditional) worked. Information about how to use periodic abstinence was particularly lacking and, in both FGD sessions, a substantial amount of time was spent debating what constituted "safe days". One participant incorrectly reasoned that:

> *"... she tells you that on such days I'll be having my periods and you can count about 3-4 days backwards and about 3 days after her periods and that is when you can abstain* [from sex] *and that could also be a good method of family planning."* (FGD-1, *male).*

Although all participants demonstrated gaps in knowledge about how the various methods worked, the participants in the FGD with the family planning users appeared to have more knowledge and were also more curious about how the methods worked than the non-users. Non-users provided very brief descriptions of the methods or did not provide descriptions at all. For example, one participant from the non-users FGD gave the following information about tubal ligation:

Participant:	*"There's another way of operation where they cut one of her tubes, and within 5 minutes she goes back home."*
Facilitator:	*"Now where do they cut her? Can you explain to us?"*
Participant:	*"I don't know... just that they cut tubes."* (FGD-2, male).

Interestingly, although most of the FGD participants displayed a basic knowledge about family planning and family planning methods, many stated that 'other' men in their communities completely lacked knowledge about it. Nearly all of the key informants supported this claim. One of the RAs emphasised that:

"... if you just try to go in deep, they know nothing about family planning. They are quite ignorant about that." (FGD-3, male).

The key informants provided a variety of examples of situations where men (and often women) in their communities demonstrated a lack of information or misinformation about family planning methods. One key informant provided the following anecdote to describe a situation where a lack of information about oral contraceptives was particularly harmful:

> *"If there is a shortage (of) money, supplies, what, sometimes the husbands advise the wives to share pills. The wife says 'hey mama so-and-so, can you give me a pill?'. Then you'll find that two women are sharing one packet of pills. It comes back to a lack of awareness and knowledge. Even if one thinks he is using, and the wife is sharing a package of pills, at the end of the day, none of it will be effective, maybe sometimes it can even be dangerous."* (KI-2, male).

Misinformation

Nearly all of the participants (including the key informants) discussed the problem of misinformation and cited numerous rumours and misconceptions associated with using contraceptive methods, modern methods in particular. Most of the examples given involved rumoured side effects including a high risk of producing abnormal[1] children, developing cancer, permanent infertility, reducing a man's sexual power (even if a woman was the one using the method), and spreading AIDS through the use of modern contraceptive methods. The majority of rumoured consequences of using contraceptives were stated with reference to the oral contraceptive pill.

> *"There are rumours concerning family planning. That some people may say to you that I swallowed pills yet I became pregnant yet other people may say that so-and-so's wife swallowed pills and now she's permanently infertile. And others may say that so-and-so used family planning and now she has got cancer. Now all that talk causes some people not to use family planning."* (FGD-1, male).

Stories and rumours about the consequences of using modern methods were often sketchy and vague but strongly held to. They regularly traced back to discussions in the community after a mother gives birth to a disabled child or exhibits "unexplainable" signs of sickness or disease.

[1] "Abnormal" children were described with reference to either physical or mental abnormalities. Examples of physical abnormalities included producing a child with missing body parts (eg., head, arms, legs) or, in the case of IUDs, with the mother's contraceptive method embedded in the child's body. Descriptions of mental abnormalities included producing a child that was slow to develop, "stupid", and/or mentally retarded.

When forced to provide reasons for these unfortunate events, the mother or her family commonly explain them to be a result of having used modern contraceptive methods. Several key informants explained that as the couple discusses their misfortune with other members of the community, the rumour is spread, and clear information or clarification is rarely sought. As described by two of the RAs,

> Participant 1: "*But people have seen women who have produced five children normally but when they started that family planning, number six was abnormal.*" (FGD-3, male).
>
> Participant 2: "*And then this one goes and he spreads the rumour that using family planning causes abnormal children. He gives them the example!*" (FGD-3, male).

Although there were fewer rumoured consequences associated with using traditional methods, a few participants gave examples about the potential for some of the traditional herbal methods to be cursed or otherwise dangerous. One participant expressed concern about using herbal methods because

> "*these methods can be used to bewitch us men, taking away our* [sexual] *power and strength.*" (FGD-2, male).

Rumours and general misinformation about family planning was more commonly mentioned by non-users compared with users. Compared with non-users, users were more likely to state the rumours that they knew with more caution and doubt.

The key informants also discussed the problem of wide-spread misinformation and tended to provide similar examples (to those of the FGD participants) of rumours associated with the use of modern methods. They emphasised that the rumours were particularly harmful in putting people against family planning, and made it difficult for them to counteract with positive messages about family planning. One key informant stated:

> "*People always keep these* [rumours] *in their minds. They always try to bring it up so that until the day they see a trusted authority coming to talk about the subject, they won't believe it. This makes passing information and educating very difficult.*" (KI-5, female).

The key informants explained men's misinformation and/or lack of information about family planning to be a result of the fact that most men do not receive family planning information

from health workers, but from the radio, and radio messages about family planning tended to provide only basic information. This was supported by evidence from the FGD sessions during which non-users were more likely than users to state that they received their information about family planning from the radio.

8.3.2 Side Effects Associated with Using Family Planning Methods

Although attitudes toward family planning were, in general, positive among men who participated in the focus groups, many men expressed fears about the safety and inconvenience of using family planning methods. The FGD participants' concerns about side-effects were echoed by the key informants (particularly by the family planning providers) as important barriers inhibiting men from practising family planning.

Participants tended to be mainly concerned with the potential health effects of using modern contraceptive methods, particularly oral contraceptive pills and Depo-Provera injections. Common side effects stated included general sickness, headaches, and menstrual disturbances, including heavy and continuous bleeding. Less serious side effects included weight gain and loss, nausea, and general pain and weakness. A man who was currently using condoms with his wife expressed his concerns about oral contraceptives:

> *"What I don't support is (for) women to take pills because of the side effects. There are no assurances! Maybe what they can improve on is to put enough evidence that there is no side effect - no continuous bleeding or cramping and no nausea."* (FGD-1, male).

Concerns about the side effects were particularly pronounced among individuals with limited physical and/or monetary access to health care facilities for the purposes of treatment of these side effects. As one participant expressed:

> *"Madame, for those who are very poor and they start getting these problems like becoming very fat or very thin, she's always in her periods and always falling sick, what about that? What should we do then?"* (FGD-2, male).

In some cases, side effects were not described in terms of health effects, but as inconveniences and difficulties associated with using the methods. This was particularly true of condoms, whose use was considered burdensome and resulted in a number of reported undesirable consequences, most commonly that sex was not enjoyable.

"Men say they cannot like condoms because if they use it, they do not enjoy to play sex." (FGD-4, female).

Moreover, other FGD participants noted that the problem with using condoms was that they were made in a number of different sizes and shapes, making the fit either very uncomfortable or too loose. In addition to their own aversion to condoms, participants asserted that women also did not like to use condoms due to the fear that they can "get stuck inside her" (FGD-2, male). As one participant explained:

> *"Another problem on condoms is how they are made. Because you see some of them from Italy, others from America, China. Because some of them are long, others are short, they are small and others are big that they were made according to their sizes, not we. Because you can put on one and it stops halfway and the others are very loose. That is why women fear them and they are difficult to use."* (FGD-1, male).

Participants also discussed inconveniences associated with using the pill. Several felt that it was very difficult for a woman to remember to take her pills everyday, yet the health consequences of forgetting were feared to be quite serious. A key informant explained:

> *"Some of these men they fear that their wives will not take the pills everyday, as it is too difficult to remember or because she will leave town for some days and will forget these pills at home. He fears that if she misuses taking the pills and then she becomes pregnant, that child will be abnormal."* (KI-1, female).

Side effects were also mentioned in association with use of traditional methods, albeit less often than were mentioned for modern methods. Side effects associated with using periodic abstinence and withdrawal were rarely related to health consequences, but to difficulties and inconveniences of using them. Mentioned problems included that it was very difficult for a man to control himself and stick with these methods, particularly when he was drunk. Additional negative side effects associated with withdrawal were that it was considered unhygienic and not very reliable.

8.3.3 Unavailability/Inaccessibility of Family Planning Services and Supplies

Participants in all of the interview and FGD sessions (save FGD-3) stated that the unavailability and inaccessibility of family planning services and supplies served as an important barrier inhibiting men from participating in and practising family planning.

Unavailability of services and supplies

The FGD participants stated that there were problems with the availability of family planning services, including the availability of a high quality, reliable, and consistent contraceptive supply. For example, although condoms are widely promoted in Uganda (particularly to men) and their use is strongly encouraged, FGD participants mentioned that local family planning centres too often did not have an adequate supply of condoms. As one FGD participant explained:

> *" For me why I don't use condoms is because they are never available when you need them."* (FGD-2, male).

Although mentioned by all groups, participants in the non-users FGD were less likely to mention and stress lack of availability of services and supplies in comparison to users. This was partially explained by one of the key informants who suggested that availability only becomes an issue:

> *"if an individual already has the information and intent of using family planning."* (KI-1, female).

Several key informants reiterated that availability was an important barrier since it countered the intentions of an individual to practice family planning. Furthermore, the family planning providers expressed specific concern about an unreliable supply of contraceptives on the basis of the importance of their clients' continuing and consistent use of methods, in order to effectively prevent pregnancy.

Key informants working with the government clinics reported a regular shortage of supplies, particularly of pills and condoms, two of the most commonly used methods. The clinics were said to have had a year-long shortage of condoms, requiring potential clients to go elsewhere to buy condoms, or not use them at all. Similarly, with respect to pills, it was explained that when faced with a shortage of pills a client was often likely to discontinue use, rather than pay for the pills at a private family planning clinic. During this time, the providers stressed, there was a high risk of pregnancy if no other family planning method was practised.

> *"If he comes here for condoms or even pills and we do not have, then some of them they stop using. When we have them again, maybe they will start but maybe some can decide 'Ah! This family planning. I cannot mind* [bother] *about it'. Then I think we have failed the whole purpose of family planning."* (FGD-4, female).

Although they emphasised the importance of maintaining an available and consistent supply of contraceptives, several key informants acknowledged the difficulty of doing so.

> *"All of the methods should be available because you cannot go to the community and tell them that you have all the methods and when they come to you and they don't find the methods. But sometimes this is very difficult and maybe even impossible."* (KI-3, female).

On a larger scale of availability, the distinct lack of male contraceptive methods was mentioned as a barrier to family planning practice. Several participants noted that family planning methods for men consisted of withdrawal, which was not very effective, vasectomy, which was permanent and otherwise "dreaded", and condoms, which were the only effective, temporary male family planning method, although were often associated with HIV/AIDS protection rather than for the purposes of family planning. It was suggested that the lack of male methods was partially responsible for the disinterest by some men with regards to family planning.

> Participant 1: *"Maybe they should make tablets or pills for males..."*
>
> Participant 2: *"I think that will help us very much with men. Then maybe more men will have the interest."* (FGD-1, male)

Inaccessibility of services and supplies

Evidence was provided to suggest that even of those family planning services that were available, most were inaccessible by the majority of men in the community.

Included in the issue of accessibility was the cost of the methods. As mentioned earlier, government clinics provide family planning methods free of charge, however, participants expressed that because these centres often ran out of supplies, interested individuals had to turn to private sources to purchase methods. Participants lamented that the cost of contraceptives at these centres was often not regulated and methods such as condoms could be sold for many times their real cost, thus making them unaffordable for many individuals. As one participant explained:

> *"The problem with condoms is that when you go to buy condoms like Protector, on it, they should be 100 shillings yet they sell them for about 400, which the people cannot afford."* (FGD-2, male).

Key informants reiterated the importance of making family planning services and supplies affordable such that the methods could be accessible to all individuals. Some individuals stated,

however, that even when the supplies and services were free at the government clinics, there were other costs involved in using contraceptives, such as transport to get to and from the clinic and the cost associated with time lost from labour responsibilities.

> *"You know some people don't come because of the distance. When she calculates, even if the service is free, but when she calculates, she has to use a boda-boda* [a motorcycle taxi]*... its 400 shillings or 1000 and so she comes and the time you might find the health worker very busy. You have to sit there for 1 hour. Who is doing the work at home?"* (KI-2, male).

There was evidence to suggest that accessibility of family planning services and supplies differed between the genders and by community. With respect to gender differences, the FGD participants considered their access to family planning supplies and services to be poorer than that of women.

> *"For us men, we really like to bring those services nearer to us because the women come here* [to the health centre] *for antenatal clinics and when they bring children to be immunised they are taught about family planning. Yet we, who don't bring children to be immunised, don't get that information or the methods. Even for us we don't get sick!"* (FGD-1, male).

The key informants provided additional evidence to support this claim and expressed great difficulty in accessing men for the purposes of even basic health services.

> *"In our society, in the majority of our society, women don't work, it is the men who work. So when you begin inviting him to go to the clinic that means you are going to interfere with his work schedule. You know? And then he feels he has nothing gaining when he comes to the clinic."* (KI-2, male).

Some of the key informants noted that since the government health centres began experiencing condom shortages, the problem of access to men had worsened. Previously, men would at least visit the government clinics to get condoms, however, the year-long shortage resulted in men visiting the centres far less often than in the past. This situation is described in the following interchange with family planning providers from a government health centre:

> Facilitator: *"Do you see a lot of men coming into the clinic? For counselling, for services, for supplies?"*
>
> Participant 1: *"Not at all."*
>
> Participant 2: *"I haven't met one, except when you are in casual discussion. As you can find the man is there and he can ask you this and that. But actually here in the family planning clinic, very rare."*

Participant 3: *"They used to come for condoms, but not anymore."*

Participant 2: *"And there are very few who come with their wives."*

Facilitator: *"Okay, so few come alone and even fewer come with their wives? Or how is it?"*

Participant 2: *"No. Now fewer come alone and a few come with their wives."* (FGD-4, female).

Finally, key informants stated that, even through their community outreach programs, they were often unable to reach individuals in all areas, meaning that some communities received family planning services while others did not. Individuals explained that the greatest difficulty was had in reaching the very same communities who had difficult accessing available family planning services. This translated to a situation whereby individuals living in outlying rural communities were even less likely to be provided family planning services since, not only could they not access health care services, health care workers could not access them.

> *"But the problem here is that we don't have the chance to go to most of the far parts of the community due to a lack of transport and funds. So we go to selected ones, selected communities... Some people call me from very far and I can't even go see them because I have no fuel in my vehicle. Yet these are the ones who need me."* (KI-3, female).

8.3.4 Lack of Trust and Quality of Medical and Family Planning Personnel

Participants also listed a lack of trust and quality of medical and family planning personnel and programs as one the barriers inhibiting men from practising family planning.

Included under this theme was a fear and suspicion of 'modern' medicine, practice, and practitioners. Both family planning users and non-users expressed wariness and scepticism toward the intentions of family planning personnel and programs, questioning their motivations for encouraging individuals to use family planning methods. The distrust of providers was often described as a belief that the providers were more concerned with their own financial and/or other personal gains than the needs of the community. There were also concerns that the health workers held ulterior motives with regard to promoting family planning, and would hide important information about the associated health risks from community members. Although both users and non-users expressed these concerns, non-users tended to express this sentiment more often and more emphatically. For example the following participants questioned:

> *"For us we hear that the whites with these modern doctors of ours want to reduce Africans. That's why they have brought family planning so that they* [Africans] *can get cancer. So why should we support family planning?"* (FGD-2, male).

> *"I wonder why these people advertise things which seem to have no benefits to us. Who is benefiting that people should talk so much about family planning?"* (FGD-2, male).

Fear, suspicion, and a reluctance to go to centres for family planning services were reinforced when the quality of services was inadequate or when individuals received poor service from family planning personnel. A few participants in FGD-1 reported buying expired contraceptives from health centres and others mentioned receiving little or no education about the method and how to use it. One of the participants explained that although his wife was using pills he was upset that the health care workers at the clinic had not given her a health check-up to determine whether she was healthy enough to take the pills. He was additionally upset because she did not receive any education about the pills, what to do if she missed one, or what could be considered normal side effects.

> *"Even the instructions that came with the pills were in English, not Luganda!"* (FGD-1, male).

Key informants, in particular the family planning providers, all conceded that their service and attitudes may be negatively influencing the use of family planning. FGD participants and key informants alike mentioned problems associated with long waiting times followed by very brief consultation periods, limited counselling, and no time to discuss the concerns of the client. Issues of time constraints were mentioned particularly with respect to personnel at the government clinics, and were explained (by the key informants) to be mostly related to staff shortages.

Moreover, participants expressed that the providers were sometimes rude, dismissed or disregarded their clients' fears and concerns about side effects associated with using contraceptives, and seldom countered misinformation to dispel their clients' fears. The providers agreed that sometimes their negative attitudes and unfriendliness toward clients served to lower the morale of an individual interested in using family planning and may prevent him or her from doing so at all. One key informant summed it up by explaining that:

> *"Our health workers, some of them have a negative attitude toward their clients... The reason some community members do not practice family planning is not that they are against the methods but that they do not like the service and personnel at family planning centres."* (KI-2, male).

Those FGD participants with no experience with family planning personnel stated that they would not be comfortable going to a family planning clinic since this was "a place for women" (FGD-2, male). Several FGD participants explained that men did not feel welcome in family planning centres, and held many reservations about attending because they feared discussing such sensitive and private information with the provider, who was almost always a woman.

> *"Some health workers, she may even ask, 'how did you play sex?' That's why they* [men] *fear to come back, it makes it hard."* (FGD-1, male).

Although key informants from both government and private family planning clinics discussed poor service quality issues, providers from the government clinics were more likely to emphasise this problem. Indicated problems with the quality of family planning services and personnel at government clinics were further supported upon examination of the FGD participants' reported use of private clinics. Even though supplies and services at government health centres in Uganda are free, many individuals still preferred to use the supplies and services at the private clinics, where they had to pay. Some participants listed the service at the private clinics to be of higher quality, and that individuals were willing to pay for it, rather than be faced with shortages of methods, long waiting times, and short consultative visits at government clinics. Those key informants who were private family planning providers expressed that many of their clients came to them after being dissatisfied with the services at government health centres.

> *"... some people when they are working in the government, they are sometimes harsh, but for us* [private providers] *we have to be very kind... Because sometimes they* [government providers] *don't have time to explain to clients, clients come to me saying they don't get counselling there, they can't get methods, they need some help with side effects, you know."* (KI-3, female).

Although the distrust of providers was targeted mostly toward modern health care practitioners, traditional healers were not always viewed as trustworthy or reliable. A few of the FGD participants and two of the key informants expressed concerns that recently, even the (usually younger) traditional healers provided false herbs and family planning methods that didn't work, for their own financial gain.

> *"Now even we must be careful of some of our traditional healers. The new ones, maybe they give us herbs and what that don't work, just so they can get some money."* (KI-4, male).

8.3.5 Lack of Couple Communication, Trust, and Counselling

FGD participants as well as key informants expressed a lack of couple communication, trust, and counselling as a barrier to using family planning. Included under this theme was the general reluctance to discuss sexual matters and fertility openly, a phenomenon reticent between spouses as well as with health care providers.

There was evidence to suggest that information about male contraceptive methods was often not given to women while information about female methods was not given to men. This lack of couple counselling fostered an imbalance of knowledge and understanding between a couple, with the potential to develop into distrust and scepticism of the methods and the intentions of an individual wanting to use them. As one participant explained:

> *"Those condoms, those people who teach about how to use them only teach men as such the women don't know how to use them. So the women look at condoms as if they are depriving them of their rights. She doesn't get the real taste which she would get if they weren't using the condom. How can a couple practice family planning like this?"* (FGD-1, male).

The problem of a lack of communication between a husband and wife about family planning was partially facilitated by the fact that contraceptive use was commonly associated with promiscuity and infidelity. Several of the FGD participants provided evidence to suggest that suspicion and distrust of their wives was further intensified when contraceptives were used, since the men felt that a woman would then have no reason not to have an affair, as she would no longer have the fear of becoming pregnant. Several key informants stated that these claims of jealousy and suspicion between couples were partly a result of limited communication. The family planning providers reiterated some of the sentiments expressed by the FGD participants and explained that many women who are interested in controlling their fertility are reluctant to visit a family planning clinic and actually use contraceptives on the basis of fears of being the target of unwarranted suspicion by their husbands. One key informant explained that:

> *"Some ladies, they can tell you that if she would talk to her husband about using these pills, he could think she is a prostitute... a woman who cannot be trusted to be faithful."* (KI-1, female).

Moreover, some of the FGD participants stated that since it was their responsibility to decide whether and when to use family planning, they would be very angry and suspicious if their wives made the decision without consulting with them. The consequences of a husband finding

out that his wife is using contraceptives without his consent can be severe. One woman explained:

> *"...she can be very worried because they can even divorce! He can even chase away the wife if he learns that she is using family planning. The marriage can even break."* (FGD-4, female).

The opposite of this situation was also mentioned, albeit less commonly, as men expressed that it was their wives who became jealous and angry when they caught their husbands with condoms.

> *"For me I fear quarrelling with my wife should she see a condom in my pocket it will be real quarrelling, telling me that I'm a prostitute, getting women. So I can't dare use condoms."* (FGD-2, male).

Additional evidence of a lack of communication, trust, and counselling between husbands and wives was provided by the family planning providers in discussing the number of female clients at family planning clinics who were using injections because they are a discreet contraceptive method.

8.3.6 Cultural and Religious Factors

A final theme of barriers inhibiting male participation and practice of family planning were grouped broadly under the heading of cultural and religious factors.

Cultural factors

Numerous cultural barriers were mentioned by the participants, including a traditional desire for large families, preference for sons over daughters, the importance of enlarging the clan size, and responsibilities acquired upon taking a second or third wife.

Discussions about ideal family sizes revealed that the reasons some men desired large families were multi-factorial and (particularly on this level of analysis) complex. Some FGD participants felt that having many children was a sign of prestige and necessary for labour. Furthermore, participants explained that the common preference for sons over daughters was, at least partially, because boys become members of and continue on the father's clan name, thereby increasing the power, status, and longevity of that clan. Daughters, on the other hand, become

members of (and add numbers to) their husbands' clan. One family planning non-user explained:

> *"The reason why I don't use* [family planning] *is that I want to give birth to many children. Now like I may have given birth to girl children only therefore I have to continue to look for a boy who'll be my successor. And another reason is that children always assist in doing work. Where you have many children, work becomes easy. And also you get the prestige when you have very many women giving birth to very many children."* (FGD-2, male).

Having many children was also thought to increase one's chances of having "some smart and successful" children who would be able to take care of their parents in their old age.
Given the expressed importance of children, and the desire for numerous children (particularly sons) necessary to continue the clan lineage, great concerns about child survival were expressed across all interview sessions. Some of the participants emphasised the importance of having many children owing to a high possibility that some children would die. They reasoned that if an individual had many children and two or three died, the parent would still be left with some. If however, an individual had only two or three children, there were concerns that all of these children could die, leaving the parents with no children, and no successors. This concern was often strongly expressed with respect to the present AIDS epidemic which is killing many young individuals in Uganda, leaving parents to out-live their children. One key informant summarised the role and impact of chance associated with having children:

> *"... in Africa people produce children and think that some of them will die and some of them will grow and lots of these ones who grow, some of them will be stupid and others will be bright. So they think now if a person has more children some of them, at least some, will die, others will grow and be bright and good, others will be stupid."* (KI-7, male).

Another important cultural practice mentioned with respect to using family planning was polygamy. Participants explained that the competition between wives for a husband's love was often played out with the number of children, or more importantly sons, borne by each woman. If a second wife gave birth to more sons than the first, the first wife would feel pressure to equal the lesser wife's status. As explained by one of the female RAs:

> *"...I think women, we think the more* [children] *that we produce. the more the husband will love you...And then she'll tell you, 'you know my co-wife she is still young and is still producing'. It is a competition. So they continue competing. competing, competing. My co-wife has produced so now I also must produce. So you'll find that if somebody*

has 11 [children] *and their co-wife has 12, she will continue producing because of the competition.*" (FGD-4, female).

Many of the FGD participants as well as the key informants discussed cultural views pertaining to the relevance of a man's economic situation to his opinion and practice of family planning. While, on the one hand, it was expressed that men of higher economic status understood the importance of having few children that would be well cared for, on the other, some men who were economically successful felt that they should be free to have as many children as they wanted, so long as they could financially support them. Moreover, the male RAs explained that because having numerous children was often held as culturally desirable, it was commonly accepted that if an individual could support many children, then not only should he be free to do so, he should be *encouraged* to do so. As described by one of the RAs,

> "*I spoke to many men who said 'well, we know about this family planning but why? I have 8 children, and I have funds for more. There is no reason why I should practice this family planning'. He thinks that just because he has money and can support them he should be having many children.*" (FGD-3, male).

The importance and relevance of a man's economic situation to his family planning status was further emphasised as several men expressed that because they were the ones to financially provide for their families, they should be the ones to make any decisions surrounding family planning.

Religious factors

Many of the key informants identified religion and specific religious messages as a key inhibitor of family planning practice. In the FGD sessions it was generally concluded that there were no religions (common in Uganda, i.e., Catholic, Anglican, and Islam) that expressly allowed the use of modern methods to prevent pregnancy, thus the extent of religion as a barrier mostly depended on the degree of religiosity and traditionalism of an individual.

> "*... I think one of the reasons for resistance is religion, especially for the Catholics and Muslims. The ones who are very serious feel they are committing a sin when they use family planning.*" (KI-2, male).

Overall, the participants reported that Anglicans tended to be the most accepting of family planning, particularly of modern methods, while Catholics and Muslims were less permissive. It was explained, however, that although Catholicism did not allow prevention of pregnancy

through the use of modern methods, it did support the use of traditional methods, principally periodic abstinence. This "loophole", as described by one of the key informants, was thought to be the reason why individuals were, on the whole, more supportive of the use of traditional methods than modern methods.

In addition to specific religious messages presented from Catholicism, Anglican, and Muslim faiths, general messages about belief systems were mentioned. For example, one participant explained that:

> *"We men have a saying that when I was being created God may have put there about 10 eggs to produce 10 children therefore if I give birth to 5 children that means I'm killing the other 5 and yet God said you should not kill. Therefore I have to give birth to all the children God told me to give birth to."* (FGD-2, male).

8.4 Motivators/Means to Encourage Male Involvement in Family Planning

The qualitative analysis also revealed four main themes describing motivators and/or means by which male involvement in and practice of family planning can be encouraged.

8.4.1 Increase and Improve Information about Family Planning for Men

The most commonly mentioned strategy for promoting male involvement and practice of family planning was to improve and increase family planning information and messages in general, but also specifically directed at men. While most FGD participants agreed that they had received some family planning information, most commonly from radio programs or posters, many indicated that this information was not enough—more detailed information, education, and overall sensitisation was required. One FGD participant explained:

> *"A man can only play his role if he has been sensitised about family planning. What I have seen is that most men don't like family planning methods because they are ignorant about family planning and because they don't know the benefits. If the men are sensitised they will know their responsibilities and they will even educate their fellow men to use family planning methods."* (FGD-1 participant).

Several participants suggested that the information would be best provided through the use of community based seminars for men conducted by a trusted and well respected local individual and/or organisation. The FGD participants requested that the seminars be based in small groups providing individuals the comfort and

> *"...space to ask specific questions relevant to* [their] *needs."* (FGD-2, male).

In addition to the seminars, participants suggested that family planning information be available in locations where men are. Suggestions included work places, schools, official meeting areas of the Local Councils, bars, or other community areas where men tend to congregate.
All of the key informants advised that the radio continue to be used as a media to transmit male-directed family planning messages. One key informant emphasised that because most men get almost all of their family planning information from the radio, the information should be more specific, detailed, and accurate. Furthermore, the radio messages should be strategically aired during

> "*...radio during programs that men like to listen to, such as football matches.*" (KI-6, male).

Since,

> "*at these times you may be sure of getting about 70-80% of men's attention.*" (FGD-1, male).

Additionally, two key informants and several FGD participants suggested that family planning educational material geared toward males should be available in the form of pamphlets and videos, that could be shared and, in the case of videos, be presented during a community event.

> "*Materials have to be printed in the local languages so those who can read can read it. And they should be distributed at household level... Also videos, the videos can be used to go to the community and show people a film. They can see these things and know that they will be safe. And these people they like films.*" (KI-2, male).
>
> "*Another thing is that since women mostly come to the clinics they should be given pamphlets to take to their men so that they can also read and get the information about family planning.*" (FGD-1, male)

Not only did the men request more information for themselves, they requested more information for their wives as well. They suggested that women be given more information about taking pills and using condoms.

Further evidence supporting the importance and timeliness of increased information about family planning was provided during the FGD sessions with the RAs (FGD-3 and FGD-4). All of the RAs (males and females alike) remarked about the levels of enthusiasm they met in the community from individuals interested to know more about family planning. As one RA commented:

"The interest in family planning by the men in our communities surprised even us! They want us to come back to them with more information." (FGD-3, male).

A request for more information and community-based seminars for men about family planning was also specifically mentioned by 27% of the 384 survey respondents, as reported in the comments section at the end of the questionnaire.

8.4.2 Increase Availability and Accessibility of Family Planning Services for Men

Again, all groups and individuals highlighted the importance of bringing quality family planning services nearer to men. Several participants proposed that providing family planning services to men from a community-based perspective would serve two important purposes. Firstly, if the services were provided by an individual who was well known, respected, and trusted by the community, participants felt that men may be more comfortable asking questions and seeking family planning counselling and thus using the services. At the same time, community based services would bring family planning services closer to the men, thereby minimising the barriers associated with the availability and accessibility of services.

"... they have to bring the services to where we stay. In most cases we work so much so that if the services are not near us, we may not get interested in them." (FGD-1, male).

"...we can bring the services just to the person, then its very near so that somebody doesn't have to use a lot of money or time to move, to go to the clinics in Mpigi [Town Council]." (KI-2, male).

Participants also suggested that some of the community-based services be delivered by male providers since, male community members would be more comfortable discussing family planning with a man, rather than a woman. This point was emphasised by one particular key informant who stated:

"If some community-based providers are men and then they go and talk to fellow men about family planning, I think somehow they will respond. Because now if a woman goes and talks to a man about family planning, he can feel threatened and not respond. But if a man goes and talks to a fellow man, maybe tells him problems with having many children, I think these men, they will listen and understand." (KI-7, male).

In mentioned efforts to improve accessibility of services, numerous individuals emphasised the importance of providing and promoting a variety of family planning methods. Each of the FGD participants demonstrated a preference for a different type of method, and individuals stated the

importance of services being able to provide a variety of contraceptive choices. As one participant summed it up:

> *"Whatever a person wants is what he uses. If the method he wants can't be there, he might not use."* (FGD-2, male).

Although the importance of improving the availability and accessibility of family planning services for men was stated throughout the sessions as an important means to motivate male involvement in and practice of family planning, this suggestion also met with some hesitation. The hesitation and concerns were expressed by family planning providers and administrators alike, and were related to fears that the currently available funds and resources for family planning services were already too little, and that the design and implementation of services for men would take away much needed resources from the women's program. As one woman and family planning provider expressed:

> *"Okay, I can say that I can see the importance of making these services for them (men) but there is already no money to provide good services for the women!"* (FGD-4, female).

8.4.3 Encourage Communication between Husbands and Wives

Participants expressed that encouraging communication between husbands and wives, and between providers and couples, would serve as an important motivator to encourage male involvement in and practice of family planning. Numerous key informants, particularly the family planning providers, stated that without encouraging communication and the co-operation of both members of a couple, the commencement and continuation of use of family planning would be negatively affected.

> *"For these women which we meet, they try to explain to their husbands about this family planning, but sometimes the husbands won't listen. They ask us 'please, you speak with him and then we shall use* [family planning]." (KI-1, female).

The FGD participants, for the most part, supported this belief and expressed that if medical and family planning providers were to counsel couples together, this may alleviate some of the distrust associated with a woman approaching her husband to begin practising family planning and vice versa.

> *"These things for family planning, they should explain to both sides, the woman and the husband. So that the women don't complain that they fear being looked at like malayas* [prostitutes] *and can't be trusted."* (FGD-1, male).

While many participants felt that the responsibility to actually use or take the family planning method was that of the wife, several stated that, in addition to deciding to use family planning, men could perform some important and helpful roles. The participants felt that, with more couple-oriented information, knowledge, and counselling, a husband could be particularly helpful to his wife if she was using family planning methods by reminding her to take her pills everyday or when to go for another injection, monitoring her for any signs of side effects that the woman may not mention herself, and providing her with the necessary funds and/or transport necessary to go to the clinic and obtain the methods.

> "*... family planning should be decided upon by two people because if they are aiming at achieving the same goal, each one will be responsible, and will look after one another.*" (FGD-1, male).

A few FGD participants maintained, however, that it was only their responsibility to *decide* to use family planning, any ensuing action and thus counselling should be given to their wives. Although evidence and support were provided to suggest that involving both members of a couple in family planning counselling and education couples would serve to promote family planning practice, some key informants did emphasise the difficulties of doing so. One specific difficulty mentioned included accessing both the husband and wife, together. It was suggested, however, that at least some of the difficulties could be handled through the use of a community based system of family planning delivery. As one key informant explained:

> "*Because if it is community based that means we can come to your home, we can get you there, both of you, maybe on a Sunday or a Saturday when most people don't go out to work, and somebody can talk to both of them, together. Like we were saying about the respondents coming to the clinic together, that one is not feasible. They can't, they won't come, because they work.*" (KI-2, male).

Although important and useful, key informants emphasised, however, that counselling a couple should not be required to the detriment of an individual's need to use family planning methods. One individual explained that some women were in desperate need of using family planning due to health concerns, yet their husbands were strongly opposed to family planning. In these cases women were advised to use a method and to inform her provider that her husband did not know that she was using family planning. In such situations, encouraging couple communication

> "*should be considered secondary to ensuring that a woman's (or man's)* [family planning] *needs are met.*" (KI-7, male).

Some key informants, particularly providers at the private clinics, mentioned that they had already begun to emphasise couple-counselling about family planning, primarily with adolescents and the young adults, with some success.

> *"The young girls come for advice about family planning. We tell them that their boyfriends should also be involved. Some of them are starting to come."* (KI-3, female).

8.4.4 Socio-economic Development Motivators

As a final motivator, the key informants discussed the relevance of broad-level socio-economic changes to encouraging family planning practice.

Information from the FGD sessions suggested that some participants did want to limit their number of children through the use of family planning. One of the primary motivations for doing so was commonly expressed in terms of economic constraints and an inability to support his family. Having numerous children was perceived as particularly difficult in present times when many individuals strongly value the importance of educating their children. One of the key informants explained that:

> "*Because now there is this pressure, as I told you* [from the economy],*school fees, cost of maintenance of the family. This is making people change very quickly. They will have to accept family planning.*" (KI-6, male).

Two key informants in particular, felt that social change including a switch from agricultural to cash based economy, increased urbanisation and industrialisation, decreases in the availability of land, general population increases, and better education and survival of children would serve to promote and encourage the use of family planning, perhaps moreso than directed family planning programs. As one key informant stressed:

> *"I feel that the government should support the mechanisation of agriculture and infrastructure... then the husband and the wife can do a lot of work and then become rich. Then they will have to realise that really family planning is essential. But unless they do this program, I think people* [family planning providers and administrators] *will waste their time somehow."* (KI-4, male)

8.5 Summary of Qualitative Results

The qualitative analysis (as conducted using information collected from four FGD sessions and seven key informant interviews) revealed six themes identifying barriers that inhibited or prevented men from participating in and using family planning. The themes included: (1)

misinformation and a lack of information about family planning; (2) side effects associated with using family planning methods; (3) unavailability/inaccessibility of family planning services and supplies; (4) lack of trust and quality of medical and family planning personnel; (5) lack of couple communication, trust, and counselling; and (6) cultural and religious factors. The analysis also revealed four main means by which male involvement and participation in family planning can be encouraged. The motivator themes included: (1) increase and improve information about family planning for men; (2) increase availability and accessibility of family planning services for men; (3) encourage communication between husbands and wives; and (4) socio-economic development motivators.

CHAPTER 9
DISCUSSION, CONCLUSIONS, and RECOMMENDATIONS

In this chapter, results are summarised and compared with the initial hypotheses. A discussion of the agreement of the study findings with other male KAP studies, possible explanations for observed differences, and the study's strengths and limitations are provided. A set of recommendations regarding the inclusion of men in family planning programs is also presented.

9.1 Summary and Triangulation of Results

9.1.1 Descriptive Results

Socio-Demographic Characteristics

One of the primary purposes for conducting a descriptive analysis of the socio-demographic composition of the study population was to determine whether or not the sample resembled that reported in other sources, and accordingly to assess the generalisability of findings. With the exception of religion and education, the distribution of socio-demographic characteristics of both the Community and Clinic Samples resembled that reported in the 1995 UDHS and the 1991 Mpigi District Population and Household Census (MoFEP, 1996; MoFEP, 1992).

The distribution of religion in both samples differed somewhat from the distribution in Uganda, as reported in the literature. In the Community Sample, the majority of participants were Catholic (64%), followed by Anglican (21%), and Muslim (14%). In the Clinic Sample, the proportion of Catholic and Anglican participants was similar (43% and 42%, respectively) and followed by Muslim (11%). Ofcansky (1996) reported that 2/3 of the Ugandan population are Christian (with equal proportions of Catholic and Anglican faith), 16% Muslim, and 18% traditional religions or atheist. Neither study sample included participants of traditional religions nor atheists. The under-representation of individuals reporting traditional beliefs and atheism in our samples may be due to the level of urbanisation of the sampling area compared with the rest of Uganda. The high proportion of Catholics in the Community Sample, may have been expected given the large population of Catholics in central Districts of Uganda (MoFEP,1996).

In the Community Sample, 30% of participants had some Secondary School education or higher, which was comparable to the 24% reported in the 1995 UDHS (MoFEP, 1996). Individuals in the Clinic Sample, however, were more highly educated; 58% of participants had

some Secondary School education or higher. Individuals from the Clinic Sample may have differed from the general population with respect to education because they comprised a very distinct group of individuals whose education demonstrated systematic association with the outcome variable, use of modern contraceptives. In other words, because education is associated with modern contraceptive use and all participants in the Clinic Sample were using modern contraceptives, they were likely to be highly educated.

Family size, composition, and preference

The 1995 UDHS reported a Total Fertility Rate (TFR) for the Central Region of Uganda equal to 6.3 children (MoFEP, 1996). Although the average number of children reported by the study participants was lower than the TFR (Community Sample 5.6; Clinic Sample 4.9), these measures are not directly comparable; the TFR measures the number of children born by the end of a woman's reproductive life, while the observed estimates of number of children may have been to mothers who had yet to reach the end of their reproductive life. Nonetheless, study participants (particularly from the Community Sample) reported high average numbers of children. Moreover, in both samples, individuals were supporting, on average, a greater number of children than those they had fathered (Community Sample 5.9; Clinic Sample 5.2). In fact, 50% of those in the Community and 40% of those in the Clinic were supporting 'other' children.

Individuals in both samples demonstrated strong desires for more children—approximately 60% of participants in each sample desired more children. There were differences, however, in terms of the timing of the desired children. 45% of those in the Community Sample desired more children in the next two years compared with 33% in the Clinic Sample. From a different perspective, however, this indicates that a significant proportion of participants wanted to either stop or delay child bearing in the next two years (Community Sample: 53%; Clinic Sample: 67%). These individuals comprise a sizeable target group for family planning programs and services.

Results from the bivariate analysis in the Community Sample demonstrated that of all individuals who wanted to stop or delay child birth over the next two years, 54% were not using

any modern contraceptive method[1]. These findings demonstrate high unmet need for family planning in this population. If all individuals who reported that they desired no more children in the next two years were to use modern contraceptive methods (in addition to those already reporting contraceptive use), the contraceptive prevalence of this population would be 66%; substantially higher than the current estimated prevalence of 36%.

The differences between individuals who desired no more children and those who desired no more children in the next two years present different considerations for family planning program managers and providers. Individuals who desired no more children in the next two years represent potential clients motivated to use family planning for the purposes of spacing births. This group requires that family planning programs promote, encourage, and supply temporary/reversible contraceptive methods. Individuals who desired for no more children at all represent potential clients motivated to use family planning to stop births and therefore may be in need of permanent methods (i.e., male and/or female sterilisation).

The strong desire for children and large families was supported and described by the qualitative results within the theme of cultural and religious factors that functioned as barriers to promoting family planning. The data suggested that, for numerous reasons, large families were culturally important to men in this community. Some of these reasons included prestige, increased labour, continuing lineage, gender preference, care in old age, to enlarge the size of the clan, and concerns about child survival.

Knowledge of family planning

In both samples, knowledge of family planning, family planning methods, and places to obtain family planning methods was very high.

Evident from both the quantitative and qualitative findings was that, most commonly, the definition of family planning was less related to health of the mother and/or child and more related to an individual's ability to support/afford children. Furthermore, the definition of family planning was seldom related simply to the practice of "birth control" and was much broader in its scope, and literal in its meaning (i.e., general planning for one's family).

[1] It may be argued that some of these individuals were using traditional methods, however, reported use of traditional methods in this sample was only 6%.

Although knowledge of specific family planning methods appeared high from the survey results, there was evidence to suggest that knowledge was primarily superficial and may have been more akin to 'recognition'. Evidence of this was observed in the discrepancy between spontaneous and probed knowledge of some of the family planning methods. For example, after probing, 94% of participants in the Community Sample 'knew' of injections as a family planning method, however, only 59% could name injections prior to probing. This discrepancy suggests that family planning knowledge, although fairly widespread, consists partially of passive recognition in addition to any "respondent courtesy" bias (which occurs when respondents say they 'know' or recognise the methods named by the interviewer, even it they do not) (McGinn et al 1989a).

Another reason for cautiously regarding reported knowledge as an indication of potential use is that the employed measure of 'knowledge' primarily indicated whether the participant had heard of the method, not that he necessarily understood the specific features of the method, how to use it, how it worked, or even what it looked like. The qualitative data highlighted this inconsistency. The FGD participants demonstrated gaps in knowledge and mentioned numerous misconceptions about family planning methods and family planning in general. For example, participants who reported that "pills accumulate in a woman's stomach and then she must undergo an operation to remove them" were included among those who reported that they 'know' about the pill.

The literature reports that rumours and misconceptions about family planning and specific contraceptive methods can hamper acceptance and use of these methods (MoFEP, 1996). The survey and FGD participants listed many problems associated with each of the family planning methods and illustrated a high prevalence of misconceptions about modern contraceptive methods. Many of the misconceptions involved rumoured side effects of the methods including a high risk of producing abnormal children, permanent infertility, and developing cancer. This was strongly supported by evidence from the qualitative results suggesting that misconceptions and rumours about side effects associated with using family planning and modern methods in particular, were an important barrier inhibiting the use of family planning.

The lack of information and the prevalence of misconceptions about family planning may be partially explained by the high proportion of participants who received most of their family

planning information from the radio. Qualitative findings suggest that this might have been expected since men were significantly less likely to access health care services (and thus speak to health care workers) than women.

Another problem associated with the survey measure of knowledge relates to the fact that individuals may know about a particular method used to control births, however, but may not associate that method with 'family planning'. This was particularly the case for condoms and some of the traditional methods. For example, other studies have shown that condoms are used by individuals for STD and HIV protection and may not be directly or indirectly associated with family planning (Khalifa, 1988).

These issues of 'superficial' knowledge and misconceptions may explain the finding that differences in knowledge between users and non-users (from the survey) were not always as different as anticipated.

With all of this in mind, however, it must be stated that the participants' knowledge of family planning was high, especially when one considers the virtual lack of family planning information directed toward men, and the lack of family planning services and/or programs available for men.

Attitudes toward family planning

The literature reports that widespread disapproval of contraception acts as a barrier to adoption of methods (MoFEP, 1996). In the study population, as seen from the questionnaire results, attitudes toward family planning were generally very positive. Over 90% of participants from the Community and Clinic Samples stated that they generally approved of the use of family planning, particularly for the purposes of having the number of children an individual can support. This finding is consistent with previous reports that men commonly approve of and accept family planning for financial reasons, and not necessarily for medical ones (Chipfakacha 1993).

Qualitative evidence supported this finding, however, suggested that reported positive attitudes were not without serious reservations and fears concerning the side effects of the methods, long

term impacts on health and relationships, concerns about breaking cultural and religious taboos, and fears of using the health care system.

In addition to positive attitudes, the results also suggest that men were generally interested in family planning, with approximately 90% reporting that men should be involved in the decision to use family planning, either independently or as part of a couple. This was supported by information from the FGD sessions during which numerous participants emphasised men's role in making the decision to use family planning, providing funds for the methods, and being responsible for financially supporting the children. This finding is particularly important as it exemplifies the need to include men in family planning and the importance of involving men in family planning programs.

From the quantitative findings, discussion of family planning and number of desired children with wives was surprisingly common (over 80% of participants reported that they discussed family planning with their wives). The qualitative results suggested that discussion was not as wide-spread as indicated from the questionnaire, however, the importance of couple communication about family planning was clearly emphasised. The importance of couple communication in promoting uptake of family planning and continuation of use has also been reported in the literature (Agyei and Migadde, 1995; Chipfakacha, 1993; McGinn et al, 1989; Khalifa, 1988).

Additional evidence supporting the claim that men were interested in family planning was observed in the high proportion of participants who discussed family planning with other men (Community Sample: 63%; Clinic Sample: 80%). This suggests that the assumption of family planning as solely a woman's concern is untrue, and that men are also interested in family planning matters.

The results also suggest that although men were interested in family planning, they were not the ones to actually use the family planning method or go to the clinic to get it. Over 3/4 of modern contraceptive users were using a female contraceptive method. Furthermore, men's attendance at a centre with family planning services was relatively uncommon. Less than 1/4 of participants from the Community and 1/3 of participants from the Clinic had ever attended a family planning clinic, either alone or with their partner. These findings were supported by the

qualitative data where the key informants reported that men were seldom seen or serviced at family planning clinics.

Practice of family planning

The contraceptive prevalence (CP) in this population was higher than expected, however, was low relative to the high levels of knowledge and positive attitudes.

In the Community Sample, 42% of participants were practising family planning. The prevalence of modern contraceptive use was 36%, with another 6% using traditional methods. The most commonly used methods in both samples were the pill, injections, and condoms. According to UDHS (1995) findings, the CP for modern methods was 19% for the Central Region of Uganda (which encompasses, but is not limited to, Mpigi District) and 32% for urban regions of Uganda (i.e., Kampala) (MoFEP, 1996). Thus, the CP observed in this study was substantially higher than the CP reported for the Central Region of Uganda, and was very similar to those reported for the CP in urban regions. A possible explanation for this finding is that the relatively high degree of urbanisation of the study population compared with the general population of the Central Region of Uganda served to increase the CP such that it was closer in value to that reported for urban regions of Uganda. Another explanation for the observed high CP includes the possibility of exaggeration of family planning practice by participants. On the other hand, it is possible that some of the participants who reported that they were not using contraceptive methods may actually have been users if their wives were using contraceptives without their knowledge. In this way, the observed CP may actually have been underestimated. This issue will be discussed further in the section on study limitations.

The relative lack of reported use of traditional methods compared with use of modern contraceptive methods warrants further exploration. Others have suggested that periodic abstinence may have different meanings for men and women, and thus may explain the low reported use of this method. In their study with men in Burkina Faso, McGinn et al (1989) reported that, in general, periodic abstinence is practised by women, and men "take care of themselves elsewhere." Other possible explanations include that individuals may associate 'family planning' with modern methods only, and although they know and use traditional methods to control child birth, they may not consider them 'family planning' methods.

Users' satisfaction with family planning services was measured directly by asking the participants and was also measured indirectly by observing the average length of time the participants had used their methods, without interruption. The average length of time of use (Community Sample: 33 months; Clinic Sample: 28 months) was consistent with the reported high levels of satisfaction with family planning services (96%). However, information from the FGD sessions and interviews presented a different picture of participants' perceptions of the quality of family planning services. Evidence was provided to suggest that providers' negative attitudes toward clients and poor quality family planning services were an important barrier inhibiting the family planning practice and involvement by men.

9.1.2 Bivariate and Multivariate Predictors

The bivariate analysis identified numerous variables that demonstrated statistical association with the outcome variable, use of modern contraceptives. The number of significant associations demonstrated the complex web of inter-relationships between the variables explaining contraceptive use, and emphasised the need to conduct a multivariate analysis.

In the Community Sample, three variables (i.e., age, religion, and number of living children) that are commonly reported to be associated with Use demonstrated non-significant relationships. Although Users were, on average, older than Non-Users, and individuals with more children were more likely to be using modern contraceptives, the associations were not statistically significant. Surprisingly, although Anglicans were more likely to be using contraceptives than Muslims, they were just as likely to be using as Catholics. The inability to statistically detect these associations may have been due to a lack power owing to the relatively small sample size.

In the Clinic Sample, age and number of living children did not demonstrate a statistically significant association with use. The average age of Users and Non-Users did not appear to differ and individuals with more children appeared just as likely to be using contraceptives as individuals with fewer children. It is unclear as to why no association was observed between these variables and Use in this sample.

For the purposes of clarity, the results of the logistic regression in the Community Sample are presented separately from the results of the Clinic Sample. Possible explanations for differences between the final models are discussed in the following Section 9.2.

Community Sample

From the results of the bivariate analysis, 18 variables were considered possible predictors of use of modern contraceptives. Of the original 18 variables entered into the logistic regression, five were identified as the main significant variables. The five predictors included: *Ever Gone for Family Planning Services, Discussion of Family Planning with Wife, Ideal Space between Births (3 years or more), Education,* and *Actual vs. Ideal number of Children.*

The most significant predictor of use was *Ever Gone for Family Planning Services.* This variable may be a proxy for factors relating to attitudes about male roles in family planning or the availability and accessibility of quality family planning services, and quality family planning services for men —a lack of which were mentioned in the qualitative results as important barriers inhibiting involvement and practice of family planning. Having ever gone for family planning services increased odds of use by a factor of 3.72.

The second most significant predictor of use was *Discussion of Family Planning with Wife.* This finding is supported in the literature in that individuals who discuss family planning with their wives are more likely to be using modern contraceptives (Agyei and Migadde, 1995; Chipfakacha, 1993; McGinn et al, 1989; Khalifa, 1988). Furthermore, this finding is supported by the qualitative results where it was suggested that couple communication, education, and counselling about family planning was important to promote the uptake of family planning and continuation of use. Having discussed family planning with his wife increased odds of use by a factor of 4.01.

The third most significant predictor of use was *Ideal Space between Births.* This variable was used as a proxy measure of knowledge and information about family planning. Family planning messages often advise couples to leave at least three years between births therefore those individuals who stated ideal space between births of three or more years were considered to be knowledgeable about family planning spacing concerns. Qualitative findings emphasised the importance of spacing children, however, little discussion was given as to the ideal space

between births. Reporting three years or more as an ideal space between births increased odds of use by a factor of 2.00.

The fourth most significant predictor of use was *Education.* Higher levels of education were associated with increased use of modern contraceptives. The association between education and use of modern contraceptives is widely reported in the literature (Agyei and Migadde, 1995; Monteith et al, 1988; Khalifa, 1982). In women, education is often the most important predictor of use, and although for men this was not the case, education was still an important predictor. Numerous social theories have described the importance of education to ideals and practice of fertility regulation (see Chapter 3). Having completed secondary school or higher increased odds of use by a factor of 5.81 over having incomplete primary school education or less.

The fifth and final most significant predictor of use was *Actual vs. Ideal number of Children.* This variable includes information about many different factors including number of living children, family size ideals, and desires for more children. It allows for the comparison of individuals who have differing family size ideals, with respect to their current number of children. Having more children than considered ideal increased odds of use by a factor of 2.76 over having fewer children than considered ideal.

Upon comparison of the odds ratios (OR) for each of these five main predictor variables to their OR in the bivariate analysis, it is evident that these five variables are associated with each other, as well as to use. The observed decrease of the OR for each variable in the multivariate model indicates that there were relationships between them. Nonetheless, each of the five variables were still independent predictors of Use since all remained in the final logistic model.

Clinic Sample

From the results of the bivariate analysis, 17 variables were considered possible predictors of use of modern contraceptives. Of the original 17 variables entered into the logistic regression, four were identified as the main significant variables. The four predictors included: *Ever Gone for Family Planning Services, Perceived Time to Family Planning Services, Education,* and *Tribe.*

As was the case in the Community Sample, the most significant predictor of use was *Ever Gone for Family Planning Services.* Having ever gone for family planning services increased odds of use by a factor of 5.47.

The second most significant predictor of use was *Perceived Time to Family Planning Services.* This variable was likely a proxy for other factors related to the quality, availability, and accessibility of family planning services. Living 30 minutes or further from family planning services decreased odds of use by a factor of 2.63.

The third most significant predictor of use was *Education.* Having completed secondary school or higher increased odds of use by a factor of 7.46 over having incomplete primary school education or less.

The fourth and final most significant predictor of use was *Tribe.* Being from an 'Other' tribe increased odds of use by a factor of 3.40 over being of Baganda tribe.

Overall, the Clinic Sample comprised a more homogenous group of individuals than Community Sample. Levels of knowledge and attitudes in this sample were consistently high and thus very similar. This may have accounted for the emergence of two socio-demographic variables in the final logistic model.

9.1.3 Qualitative Findings

As discussed throughout this chapter, overall, the qualitative data supported the survey findings, and delved deeper to discover some underlying barriers inhibiting men from participating in and practising family planning. The qualitative analysis identified six main barriers inhibiting use of family planning by men.

<u>Misinformation and a lack of information about family planning</u>

This theme captured the relevance of knowledge in its association with use of family planning.

Misinformation and a lack of information were identified as one of the greatest barriers inhibiting men from participating in and practising family planning. The lack of information was particularly evident in the description of the family planning methods and how they

worked. The problem of misinformation and misconceptions about family planning and contraceptive methods was widespread. Many of the misconceptions stemmed from stories of rumoured side effects including high risk of producing abnormal children, ill effects on a woman's health permanent infertility, reducing a man's sexual power, and the spread of AIDS through the use of modern contraceptive methods. The participants reported that the rumours and misconceptions about family planning were particularly harmful in putting people against family planning, and were responsible for some of the difficulties encountered in promoting the use of contraceptives.

Side effects associated with using family planning methods

This theme captured the importance of knowledge in its association with use of family planning and additionally revealed that although attitudes were positive, they were not without fears and reservations about side effects associated with the use of contraceptive methods.

Many men expressed fears about the safety and inconvenience of using family planning methods. Participants tended to be mainly concerned with potential side effects on the health of their wives (including menstrual disturbances, general sickness, headaches, and nausea). However, side effects were also mentioned in relation to inconveniences or difficulties associated with using methods. Participants reported that they didn't like to use methods such as the pill because they were burdensome. Concerns about side effects were particularly pronounced with respect to individuals with limited physical and/or monetary access to health care facilities for treatment of these side effects.

Unavailability/inaccessibility of family planning services and supplies

This theme captured the importance of administrative factors that may encourage or inhibit contraceptive use. It was revealed that even when knowledge and attitudes toward family planning are high, actual practice depends heavily on the availability and accessibility of services and supplies. As mentioned earlier, it is likely that the variable *Ever gone for family planning services* was partially functioning under the framework of this theme: individuals to whom family planning services and supplies were available and accessible may have been more inclined to go to a centre with family planning services for the purposes of practising family planning. The practical significance of availability and accessibility of family planning services

was highlighted by the fact that this was the most important significant predictor of use in both multivariate models (Clinic Sample and Community Sample).

Under this theme, the participants discussed problems associated with the unavailability of family planning services, including the unavailability of a high quality, reliable, and consistent contraceptive supply. Furthermore, the cost associated with using family planning methods (even when the actual method and service were free) was considered prohibitively high. Men reported that their access to family planning services and supplies was considerably poorer than women's.

Lack of trust and quality of medical and family planning personnel.

This theme also captured the importance of administrative factors that may encourage or inhibit contraceptive use. In addition to issues of availability and accessibility of services, it was revealed that a lack of trust and quality of health care providers was an important a barrier inhibiting use of family planning. Participants expressed a fear and suspicion of 'modern' medicine, practice, and practitioners. They expressed a wariness and scepticism toward the intentions of family planning personnel and programs, and questioned their motivations for encouraging individuals to use family planning methods. Fear, suspicion, and a reluctance to go to centres with family planning services were reinforced when the quality of services was inadequate or when participants received poor service from family planning personnel. Key informants reported that sometimes their negative and/or rude attitudes toward men and poor quality of service was an important deterrent inhibiting men from practising family planning. The participants also reported being reluctant to go for family planning services because they feared discussing such sensitive issues with the provider.

Again, the multivariate predictor variable *Ever gone for family planning services* was likely partially functioning under the framework of this theme; individuals who trusted health personnel may be more inclined to go to a centre with family planning services.

Lack of couple communication, trust, and counselling

Participants expressed a lack of couple communication, trust, and counselling as an important barrier to using family planning. The lack of couple communication was problematic between the couple themselves as well as with family planning providers.

The lack of communication was identified as partly responsible for yet partly a result of the common association between contraceptive use and promiscuity and infidelity.
The details and specifics of this theme helped explain the demonstrated importance of the variable *'Discuss family planning with wife'* in predicting contraceptive use in the multivariate model.

Cultural and religious factors

This theme discussed the cultural and traditional importance of children and reasons for desiring numerous children. This theme captured the importance of the *Actual vs. ideal number of children* as the fifth predictor of use of modern contraceptives. It also broadly captured the importance and relevance of the multivariate predictors *Education* and *Tribe*.

The qualitative analysis also revealed four main themes defining means by which male involvement in and practice of family planning could be encouraged. The themes included (1) increase and improve information about family planning for men; (2) increase availability and accessibility of family planning services for men; (3) encourage communication between husbands and wives; and (4) general socio-economic development motivators.

9.2 Consistency with Initial Hypotheses

The study findings confirmed some of the initial hypotheses. It was expected and confirmed that although many variables were associated with use of modern contraceptives in the bivariate analysis, few demonstrated statistical association with Use in the multivariate analysis. Of the 18 variables considered in the logistic regression on the Community Sample, only five emerged as significant predictors of use of modern contraceptives. This hypothesis was similarly confirmed in the Clinic Sample.

It was expected that use of modern contraceptives would depend on the level of formal education achieved by an individual. Compatible with this hypothesis, results from both the Community and Clinic Samples confirmed that individuals with more education were more likely to be modern contraceptive users. Similarly, it was expected that use of modern contraceptives would depend on whether or not an individual discussed family planning with his wife; results from the Community Sample confirmed this hypothesis. The anticipated positive effect between supporting more children and use of modern contraceptives was not

confirmed. Bivariate results from the Community Sample suggested that supporting more children was important, however, was not identified as a significant predictor of use in the multivariate analysis. The relationship between supporting more children and Use may have been confounded in the multivariate analysis by the variable comparing Actual vs. ideal number of children.

From the quantitative analysis, it proved difficult to test the hypothesis relating to the positive relationship between knowledge and positive attitudes toward family planning and use of modern contraceptives. Participants reported widespread knowledge and positive attitudes toward family planning and consequently, the multivariate analysis was not able to discriminate users from non-users on the basis of these general factors. thus, the hypothesis could not be confirmed or disputed. The qualitative analysis, however, supported this hypothesis and revealed the importance and relevance of knowledge and positive attitudes in predicting use of contraceptives.

9.3 Possible Explanations for Differences in Results between the Community and Clinic Samples

Individuals from both samples were given the same questionnaire, administered under similar circumstances (i.e., in the participant's home), by interviewers with equal training. In addition, participants were recruited within a similar time frame. However, it is possible that observed differences in results between the two samples may be due to the use of male interviewers in the Community Sample and female interviewers in the Clinic Sample.

A more likely explanation, however, is that the observed differences were a reflection of dissimilar sampling and recruitment techniques employed in each sample. Individuals recruited for participation in the Community Sample were selected cross-sectionally, using a stratified cluster sampling technique. This sample was thought to be more representative of married men in the larger community of interest. Participants from the Clinic Sample, however, were recruited using prospective sampling. This sampling technique may have biased the selection of study participants since individuals who participated in the study may have been systematically different from those who did not, in a way that was related to use of modern contraceptives. Moreover, the selection of participants from the clinic may have been biased since wives at the clinic had to give their consent for the study team to contact their husbands for participation in

the study. In this way, the wives may have functioned as a selection filter, and the distribution of characteristics observed in husbands in the Clinic Sample may actually have been a reflection of characteristics of their wives.

Present residence is an example of an observed characteristic of participants that may have differed between the samples owing to dissimilar sampling techniques. The higher proportion of Clinic Users who resided in Mpigi Town Council may have been expected since the MHC family planning clinic (the sampling site for Clinic users) is located in the centre of Mpigi Town Council. Thus, individuals from other communities may find it difficult to frequent the clinic. Moreover, individuals who lived very far may not visit the clinic often enough to be captured for participation during the two month recruitment stage of the study.

Similarly, the variable *Perceived Time to Family Planning Clinic* may also have represented biases in the selection of participants for the Clinic Sample, rather than an actual predictor of use. The higher proportion of Clinic Users who lived less than 30 minutes from a centre with family planning services may have been expected since they were recruited from the MHC family planning clinic. Individuals who lived farther than 30 minutes from the MHC may be accessing their family planning services at another service location, may not visit the MHC often enough to be captured for participation in the study, or may not have been captured because the research team did not have the transportation and/or time necessary to go out to their residences to interview them.

Discussion of Family Planning with Wife was a third variable that likely differed between the samples owing to dissimilar sampling techniques. The finding of nearly universal discussion (99%) between husband and wife in the Clinic Sample may be due to a selection bias since, for a husband to be approached for participation in this study sample, informed consent was required from his wife. Women whose husbands did not know that they were using a contraceptive method or with whom they had not discussed family planning, may have been less likely to give consent for the research assistant to contact their husband.

Finally, the variable *Ever Gone for Family Planning Services* may have represented biases in the selection of participants for the Clinic Sample rather than an actual predictor of use. Specifically, having ever gone for family planning services may have been a necessary pre-

cursor to using modern contraceptives thus individuals who had ever been for services may have been systematically selected for participation in this sample on this basis.

Owing to concerns about possible selection bias related to the variables *Present Residence, Perceived Time to Family Planning Clinic, Discussion of Family Planning with Wife,* and *Ever Gone for Family Planning Services*, the logistic regression model for the Clinic Sample was rerun, excluding these four variables. Upon their exclusion, the variables *Religion, Education, Age at First Marriage,* and *Ideal Space between Births,* became statistically significant. Specifically, Anglicans were more likely to be users, as were individuals with more education, those who married at or after age 21, and those who reported ideal spacing of three or more years. This suggests that when variables that function as proxies for administrative factors are removed from the Clinic Sample, the resulting model primarily includes demographic variables noted to be significant predictors of contraceptive use in women (Agyei and Migadde, 1995).

9.4 Strengths and Limitations

This study has both notable strengths and limitations that are necessary to consider in interpreting the findings.

9.4.1 Limitations of Study

9.4.1.1 Cultural and Gender Differences

Many of the potential biases and limitations of this study are a function of the cultural and gender differences between the participants and the researcher, amplified by the sensitivity of the research topic. Although every attempt was made to remove biases from the research, it is understood that every researcher (and by extension, research) carries personal biases and values based on past experience and education, all of which may have had an impact on the quality of the presented data.

9.4.1.2 Self-reported Information

Likely the most important potential limitation of this study was the fact that information was self-reported. Although numerous measures were taken to maximise the reliability and validity of the data, it is not known with certainty whether the information provided by the participants was true or accurate. This limitation is particularly relevant to the assessment of self-reported family planning practice. No independent measure of the information provided by participants

was done to ensure that an individual who stated that he was using a method actually was, or that an individual who stated that he wasn't using, actually wasn't. Possible reasons why a participant may have deliberately reported false information included that he was shy, reluctant, and unwilling to share personal information with the interviewer, he was unable to recall information or misunderstood the question, or that he was deliberately trying to mislead the interviewer and undermine the study results.

It may also have been the case that participants reported false information non-deliberately and unknowingly. It is possible that individuals who reported that they were not using modern contraceptives were, in fact, since their wives were using the method but had not informed their husbands. The reverse of this situation is also possible. The reliance on self-reported information on family planning practice was a limitation particular to the Community Sample since all participants in the Clinic Sample were explicitly known to be using modern contraceptives.

The issue of biases associated with self-reported information is a problem inherent in family planning practice studies. This problem is particularly pronounced in studies with men since they are often not the ones actually using the method, thus their status as a contraceptive user or non-user is confounded by their wives' status. This illustrates one of the primary difficulties involved in measuring contraceptive use among men and using men's reports of contraceptive use to ascertain use status (McGinn et al, 1989).

Despite the possibility of individuals reporting false information, there was no reason to believe that this was a systematic problem that significantly biased the results.

9.4.1.3 Interviewer Bias

The results of this study may have been subject to interviewer bias. Nine different interviewers were used to administer the questionnaires, and although equally trained in standardised data collection techniques, may have differed in their data collection, thus leading to biased questionnaire data.

Additionally, both male and female interviewers were used to administer the questionnaire, but in different samples (males in the Community Sample and females in the Clinic Sample). There

is a dearth of literature describing the effects of having women interview men about family planning, therefore it is difficult to estimate in which direction the results may be biased. As described in Chapter 4, the decision to use female interviewers in the Clinic Sample was done for the reasons of participant trust and cultural acceptability, rather than epidemiologic consistency.

9.4.1.4 Hawthorne Effect

The Hawthorne effect refers to a phenomenon that occurs when individuals respond differently simply because they are aware of the study's objectives (Last, 1995). In this way, participants may have felt pressured to provide the 'right' responses, or the responses that they felt the researcher wanted to hear. The fact that the study was led by a foreigner may have increased the influence of the Hawthorne effect on the study findings. Others have suggested, however, that precisely because the study was led by a foreigner who was unknown by the community, participants may have felt that they could be more candid in their responses, thus minimising the presence of the Hawthorne effect (Devereux and Hoddinott, 1993).

9.4.1.5 Generalisability

The fact that the study included only married men and assessed their contraceptive practice within their marriages, the generalisability of the study may be limited. It is uncertain as to whether the results are generalisable to unmarried men. Studies have shown that never-married men have much lower levels of contraceptive use (ever and current) than currently married men (MoFEP, 1996; Khalifa, 1988). Furthermore, in Uganda, it is not uncommon for individuals to have sexual relationships outside of marriage. However, no attempt was made to assess use of family planning within these relationships. It may have been the case that although some men did not practice family planning with their wives, they may have practised it in their extra-marital relationships. Finally, since no attempt was made to represent the more rural areas of Mpigi District, the results of the survey may not be generalisable to the District as a whole.

9.4.1.6 Selection Bias

As described in Section 9.4, the selection of individuals from the Clinic Sample may have been biased since individuals who participated in the study may have been systematically different from those who did not, in a way that was related to use of modern contraceptives.

9.4.1.7 Cross-sectional Study

The static view of the cross-sectional study is an important limitation to this study. As with all cross-sectional studies, it is impossible to separate cause and effect because they were both measured at the same point in time. For example, it is difficult to ascertain whether having many children led an individual to start practising family planning or whether practising family planning resulted in an individual having fewer children.

9.4.1.8 Sample Size

Owing to the small sample size, particularly in the Clinic Sample, there may not have been enough power to statistically detect associations between variables. Additionally, the low prevalence of certain participant characteristics resulted in small cell numbers and thus a limited degree of precision was achievable (wide confidence intervals).

9.4.1.9 Uncertain Saturation Point of the Qualitative Data

The literature advises qualitative researchers to conduct as many interviews or FGD sessions necessary such that the data reach a "saturation point" (Cresswell, 1998). The data are considered "saturated" once additional interview sessions no longer provide or add new information. In this study, a limited number of interviews (n=7) and FGD sessions (n=4) were conducted. Although the extracted themes were common across all or most sessions, with such a small number of interview sessions and such a short period of data collection, it is unlikely that a saturation point of the data was, in fact, reached.

With the benefit of hindsight, better information, and more experience, limitations of the study would have been minimised by changing a few components of the study design. Most importantly, in an attempt to minimise problems associated with self-reported information, data would have been sought from the wives of the participants. In this way, a participant's classification as a contraceptive user or non-user could be done with more certainty and would also provide the opportunity to conduct a comparison of husbands' and wives' responses. Furthermore, to minimise problems associated with selection bias particularly in identifying participants from the Clinic Sample, this sample would not have been used. Rather, participants identified from the Community Sample (in addition to data from their wives) would have served as a sufficiently representative and reliable sample to assess male KAP toward contraceptives.

Additionally, more FGD sessions would have been conducted to ensure saturation of the qualitative data.

9.4.2 Strengths of Study

Although there are numerous strengths of this study, there are four particularly worth highlighting.

9.4.2.1 Use of Multivariate Analysis

Of the few studies that have examined male KAP toward family planning, few have conducted a bivariate analysis, and even fewer have attempted a multivariate analysis. An important strength of this study was that the use of a multivariate analysis allowed the identification of those variables that predict use of modern contraceptives while controlling for the effects of other variables. Given the complexity and observed inter-relatedness of associations between the independent variables and use of modern contraceptives, the multivariate design was essential to identify the most significant and true predictors of use.

9.4.2.2 Integration of Quantitative and Qualitative Methods

Owing to the nature of the research setting and topic, it was considered imperative that quantitative and qualitative research methods be integrated to address the research objectives. By sampling a relatively large number of individuals, quantitative methods allowed the assessment of male KAP toward family planning and those factors that accurately predicted use of modern contraceptives. By conducting in-depth interviews with a few individuals, qualitative methods allowed the collection of contextually and culturally relevant and detailed information about family planning. The integration of these two approaches through the use of triangulation served to maximise the validity and reliability of the findings.

9.4.2.3 Involvement of a Local Research Team

The success of this study was largely due to the involvement of a highly-qualified, enthusiastic, and knowledgeable local research team. Collaboration with local researchers allowed the study to be framed within the logistic constraints and cultural context of the research setting. It enabled the consideration of socially important norms and taboos in the study design and the data collection instruments. Moreover, it served to minimise the effect of the previously

mentioned gender and cultural differences, increase the credibility of the study, and contextualise the research findings.

The local research team helped the study gain acceptance and approval by each of the community gatekeepers, enabling a mostly wide-spread approval of the study, which transferred to the community members and actual participants. The impact and importance of this collaboration is particularly evident from the study's high participation rates (80% in the Community Sample; 71% in the Clinic Sample).

9.4.2.4 Interviewer-administered Questionnaires

The fact that the interviewers went out into the community to meet and interview men in their homes, was an important strength of this study. As highlighted in the qualitative results, men in Uganda are a group of individuals with relatively little contact with the health care system and subsequently very limited contact with health care workers. By having the interviewers go out into the community, the participants were given the chance to ask questions about family planning, reproductive health, and health issues in general. As each of the interviewers had at least basic training as health providers, they were able to answer many of the questions that the participants had, or at least advise them as to another individual or centre that participant could contact. Many participants expressed that they were pleased with the opportunity to discuss and ask questions about family planning with a knowledgeable individual in the privacy of their own homes.

Similarly, having the interviewer administer the questionnaires meant that men who could not read or write were still able to participate in the study and complete the questionnaire, drastically improving the generalisability of the study findings.

9.5 Conclusions and Recommendations

9.5.1 Conclusions

The findings of this study suggest that: (1) men play an important role in the decision to use and actual use of family planning; (2) men are generally knowledgeable about and approve of family planning; (3) men are interested in family planning and want to be involved; and (4) to practice and/or become more involved, men require increased family planning information, resources, and services.

On the basis of evidence provided from the quantitative and qualitative results, the author concludes that male involvement in family planning is important and necessary and that the inclusion of men in family planning programs will likely serve to increase contraceptive use, for both men and women, in Mpigi District.

9.5.2 Recommendations

Policy makers and family planning program managers are invariably interested in guidelines concerning measures the government can take to achieve goals of reducing overall fertility within a population. Although it is acknowledged that changes in the broader social and economic conditions in Uganda (e.g., increased urbanisation and industrialisation) will serve to impact the fertility levels of the population, the findings of this study suggest that an increase in contraceptive prevalence and other intermediate variables (e.g., desires for smaller families, knowledge, and positive attitudes toward family planning) could be achieved without waiting for shifts in the socio-economic climate to take place (WFS, 1984).

Warwick (1988) and others have cautioned against grand conclusions based on single studies and have advised that the involvement of husbands in local family planning programs be "linked to local realities and responsiveness to the expressed desires of communities" (Terefen and Larson, 1993). While considering the importance of this advice, the following four recommendations are offered.

(1) Improve and increase family planning information and messages specifically directed at men

Likely the most important strategy for promoting male involvement in and practice of family planning is to improve and increase family planning information and messages in general, but also specifically directed at men. The observed levels of mistrust of medical and family planning personnel suggest that family planning information may be best provided through the use of community based seminars for men conducted by a trusted and well respected local individual and/or organisation. The seminars can be an effective way of dispelling current rumours and misconceptions and providing individuals with correct information about family planning. Seminars should be based in small groups giving individuals the comfort and space to ask specific questions relevant to their needs.

Family planning educational material geared toward males should be encouraged and male-directed family planning messages should be displayed at the Local Councils, schools, workplaces, and other community areas where men tend to congregate. Although information about family planning is currently available at the health clinics, men are less likely than women to access health care services and therefore do not receive the information. The radio and other media should be considered effective means of disseminating information, some of which is currently being done. However, because the radio is currently the source where most men get all of their information about family planning, there is a strong and urgent need to improve the quality of the information on the radio and to ensure that it is more specific, detailed, and accurate. Some family planning messages should be tailored to the male audience to provide information that will encourage men to actively support family planning. Furthermore, the radio messages can also be used to promote discussion of general fertility issues, which will likely serve to reduce sensitivity and taboos associated with discussion of sexuality.

Because men tended to view family planning primarily in terms of economic capability of supporting their children, this role should be encouraged and examples provided as to how a husband can best care for children that are few in number and are well spaced.

(2) Improve and increase the availability and accessibility of family planning services for men

In order to promote increased family planning practice, family planning managers and policymakers must improve and increase the availability and accessibility of services for men.

Since men do not access the health services as currently available, these services must access men. One means of doing so is through the promotion of community-based services. Although these services already exist in some capacity (eg. CBDAs and CHWs), it was evident that men in the community were not aware of these services and had not been using them. This suggests that an evaluation of the CBDA program is necessary to determine whether the CBDAs are effectively meeting the needs of community members and what can be done to strengthen this program and improve community based delivery of family planning services.

Other researchers have emphasised that without a strong community based component of family planning programs, services will miss the majority of their target population (Terefen and Larson, 1993).

(3) Improve the quality of family planning services

To promote increased family planning practice requires the co-ordination of increased family planning information and education, improved access and availability of services, and higher quality of family planning services.

To improve the quality of family planning services providers should be encouraged to be more sensitive to the family planning service and information needs of men. Staff attitudes toward men's participation in family planning will also need to be addressed such that the quality of service delivery is not compromised. This includes training to reduce the barriers associated with mistrust and to foster a positive interaction between the provider and the client including respect for privacy, confidentiality, and sensitivity. Furthermore, providers should be encouraged to support and respect clients' needs for attention and counseling. The recruitment of male providers may be particularly useful in promoting family planning since these men would serve as role models and may also increase men's comfort in going for family planning services.

In addition to broadening the training of the providers, family planning program managers need to ensure the availability of a regular, consistent, and reliable supply of family planning methods. Furthermore, family planning centers should offer a range of different family planning methods, since some methods are better suited for the needs of one individual over another.

Efforts should be made to train local health and field workers in areas of contraceptive prescription, administration, monitoring of clients for side-effects, and making referrals. Field workers selected from their communities could play a leading role especially in reassuring their communities and households about the safety of contraceptives; other than relying on rumours of side effects. In addition, field workers, unlike medical personnel, are less costly in terms of training and salaries, and most important of all, they are more acceptable to their communities (Agyei and Migadde, 1995).

It is recommended that family planning administrators and providers do not dwell on negative attitudes and opposition to family planning by men. Evidence provided in this study suggests that attitudes were largely positive, certainly moreso than often assumed. As emphasised by

McGinn et al (1989): "working under the assumption that men are hostile to family planning may be the greatest problem of all."

(4) Encourage husband-wife communication, education, and counseling with regards to family planning

If couples receive education and counselling about family planning that involves information about their partner's needs, this will likely increase communication and thus increase use of contraceptives.

Promoting communication between partners and from providers to a couple may help alter the perception that use of modern contraceptives foster promiscuity. The topic of sexual jealousy is a complex one in this and other cultures and it is difficult to know how the issue may be best addressed in family planning/reproductive health programs. Employing strategies to encourage couple communication, however, will likely serve to reduce assumptions concerning partners' intentions with using family planning.

While couple education, communication, and counselling can function to reduce harmful aspects of family planning (ie., mistrust), it can also function to increase and improve helpful aspects. For example a husband who has been involved in family planning counselling, for example, can monitor his wife for health side effects, can remind her to take use her contraceptive method, and can participate and share in discussions of issues relating to the overall well-being of the family.

There was evidence to suggest that men's roles with respect to family planning were often not seriously considered by family planning personnel and programs. Without considering this role in their counselling, some key informants suggested that providers may be failing to acknowledge the influence a husband can have over his partner's ability to use family planning.

9.6 Summary

These recommendations are offered with an important cautionary note. Interventions (including educational seminars and improved family planning services) involving men will require increased funds and resources, both of which are already limited. The introduction of any

interventions must be weighed against potential financial, resource, and personnel threats posed to the already existing female-focused family planning service delivery program.

In conclusion, the findings of this study and associated recommendations suggest a potential for increased family planning practice and modern contraceptive use. The actual future contraceptive prevalence, however, will depend largely on the extent to which this potential becomes action and the degree to which family planning programs are able to provide quality family planning services that are available and accessible to all those who want them.

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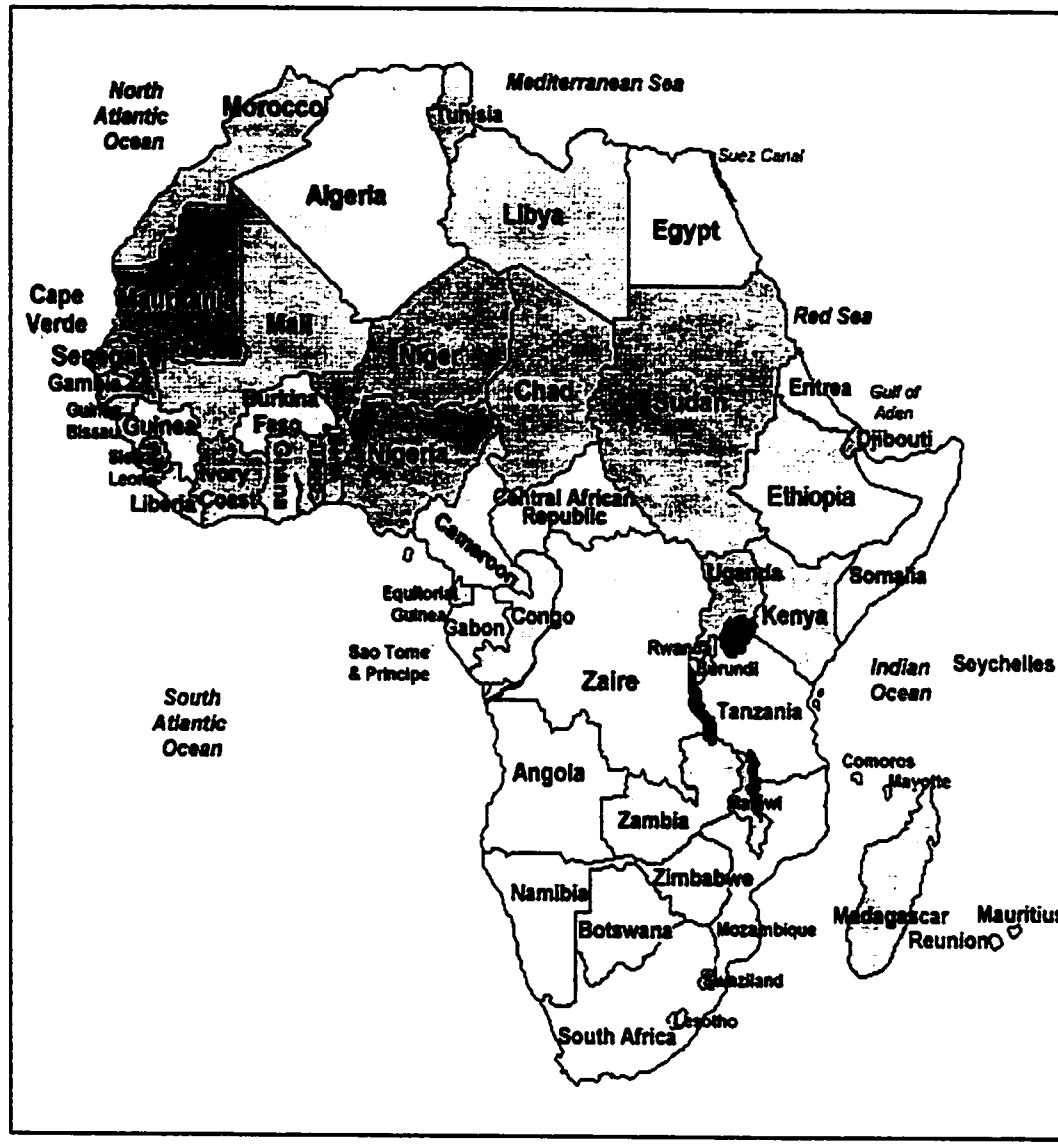
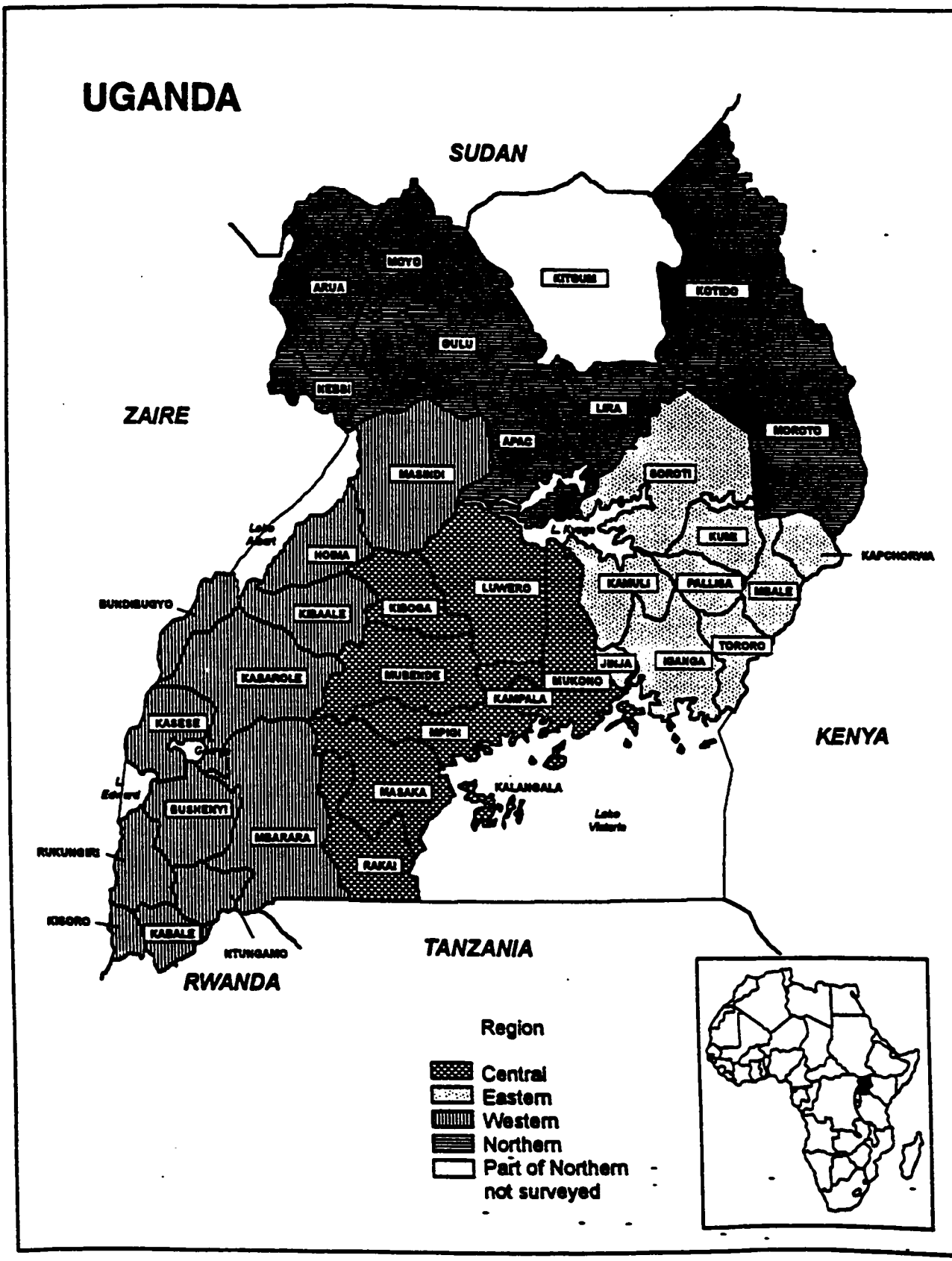
Appendix 1:

Map of Africa


North Atlantic Ocean
Morocco
Mediterranean Sea
Tunisia
Suez Canal
Algeria
Libya
Egypt
Cape Verde
Mauritania
Mali
Niger
Red Sea
Senegal
Gambia
Chad
Sudan
Eritrea
Gulf of Aden
Guinea Bissau
Burkina Faso
Guinea
Djibouti
Sierra Leone
Ivory Coast
Nigeria
Liberia
Central African Republic
Ethiopia
Cameroon
Uganda
Somalia
Equitorial Guinea
Gabon
Congo
Kenya
Sao Tome & Principe
Rwanda
Burundi
Indian Ocean
Seychelles
Zaire
South Atlantic Ocean
Tanzania
Angola
Comoros
Mayotte
Malawi
Zambia
Zimbabwe
Namibia
Madagascar
Mauritius
Botswana
Mozambique
Reunion
Swaziland
Lesotho
South Africa

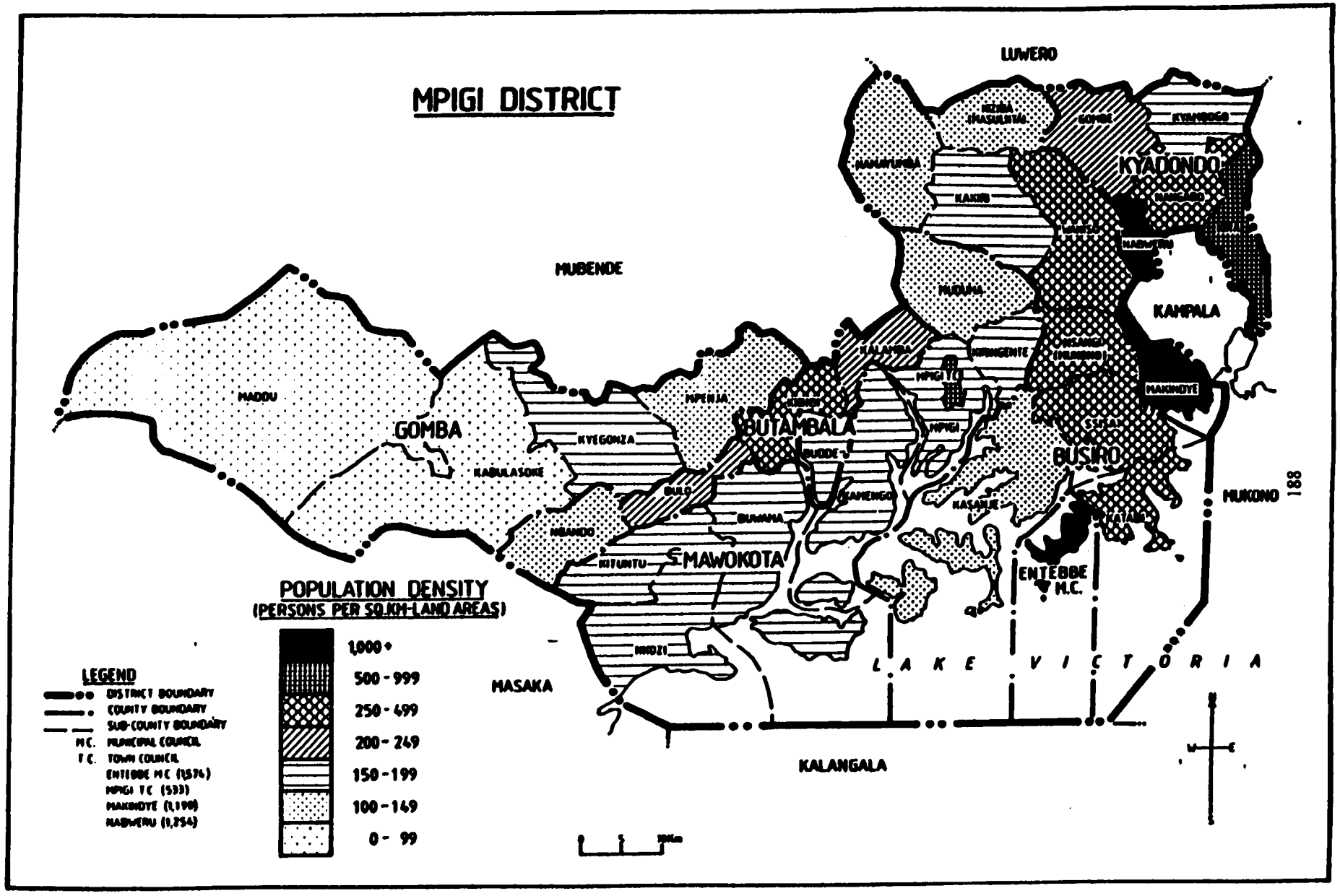
Appendix 2:

Map of Uganda


UGANDA
SUDAN
ZAIRE
KENYA
TANZANIA
RWANDA
MOYO
ARUA
GULU
KITGUM
KOTIDO
NEBBI
LIRA
APAC
MOROTO
MASINDI
SOROTI
HOIMA
KUMI
KAPCHORWA
LUWERO
KAMULI
PALLISA
MBALE
KIBAALE
KIBOGA
TORORO
JINJA
IGANGA
KASARGLE
MUBENDE
MUKONO
KAMPALA
KASESE
MPIGI
MASAKA
KALANGALA
BUSHENYI
MBARARA
RAKAI
KISORO
KABALE
KITUGUMO
Region
Central
Eastern
Western
Northern
Part of Northern not surveyed

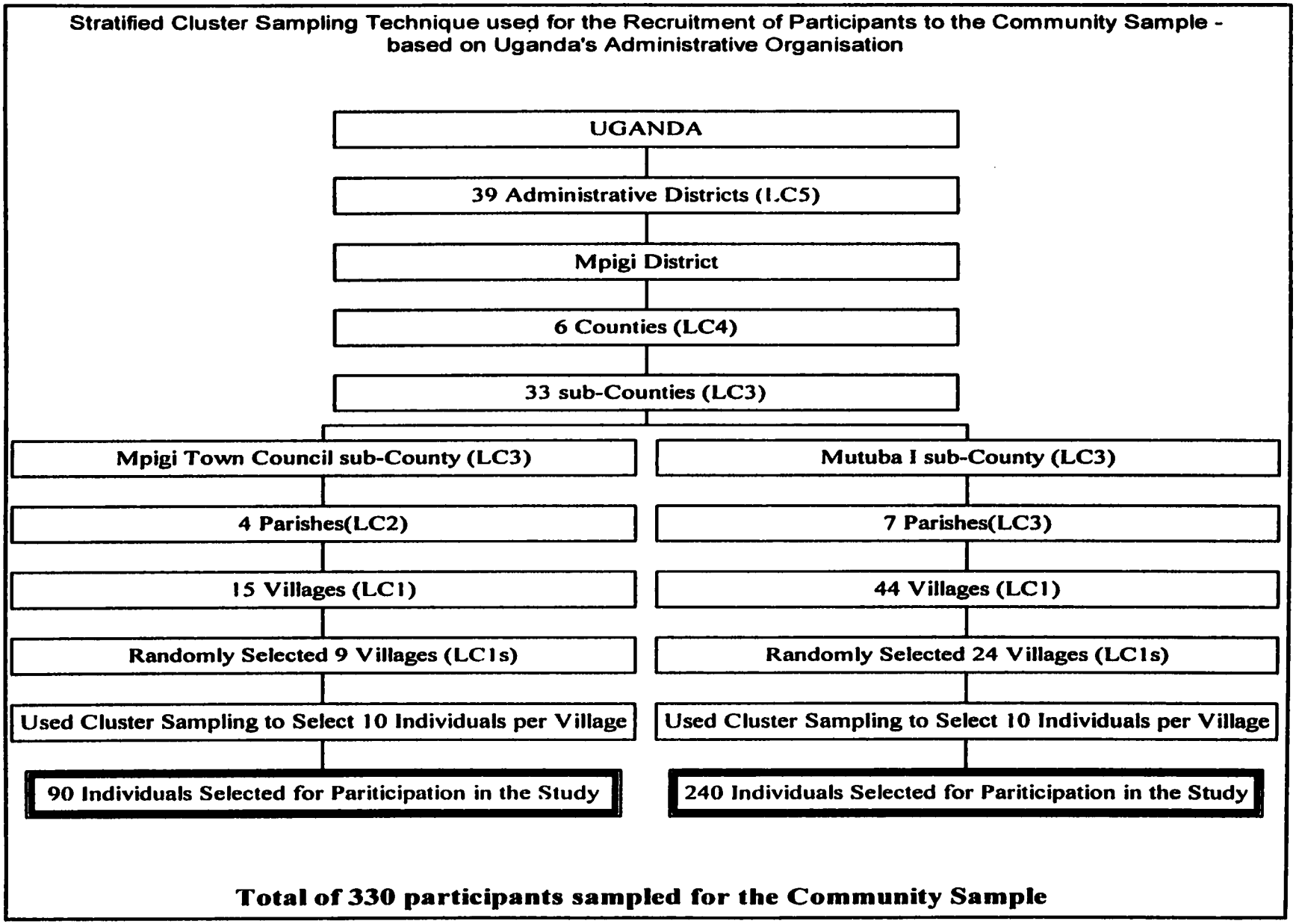
Appendix 3:

Map of Mpigi District


MPIGI DISTRICT
LUWERO
KYADONDO
KAMPALA
MUBENDE
MAKINDYE
MADDU
GOMBA
KYEGONZA
MPENJA
BUTAMBALA
KABULASOKE
BUDDE
BUSIRO
MUKONO
KAMENGO
KASANJE
BUMAYA
MBANDO
KITUNTU
MAWOKOTA
ENTEBBE M.C.
MIDDI
MASAKA
KALANGALA
L A K E V I C T O R I A
POPULATION DENSITY
(PERSONS PER SQ.KM-LAND AREAS)
1,000+
500 - 999
250 - 499
200 - 249
150 - 199
100 - 149
0 - 99
LEGEND
DISTRICT BOUNDARY
COUNTY BOUNDARY
SUB-COUNTY BOUNDARY
M.C. MUNICIPAL COUNCIL
T.C. TOWN COUNCIL
ENTEBBE M.C (1,574)
MPIGI T.C (533)
MAKINDYE (1,190)
NABWERU (1,754)

Appendix 4:

Flow Chart of Stratified Cluster Sampling Technique used for the Recruitment of Participants to the Community Sample


Stratified Cluster Sampling Technique used for the Recruitment of Participants to the Community Sample - based on Uganda's Administrative Organisation
UGANDA
39 Administrative Districts (LC5)
Mpigi District
6 Counties (LC4)
33 sub-Counties (LC3)
Mpigi Town Council sub-County (LC3)
Mutuba I sub-County (LC3)
4 Parishes(LC2)
7 Parishes(LC3)
15 Villages (LC1)
44 Villages (LC1)
Randomly Selected 9 Villages (LC1s)
Randomly Selected 24 Villages (LC1s)
Used Cluster Sampling to Select 10 Individuals per Village
Used Cluster Sampling to Select 10 Individuals per Village
90 Individuals Selected for Pariticipation in the Study
240 Individuals Selected for Pariticipation in the Study
Total of 330 participants sampled for the Community Sample

Appendix 5:

Letter of Introduction to the LC1 Chairmen (in English)

Mpigi Health Centre
P.O. Box 111
Mpigi

August 23, 1999

Mr./Ms. Chairperson

LC1 _____

Re: A meeting at Mpigi Health Centre about a study being conducted in your area

Dear Sir or Madam:

Greetings. I would like to invite you to a meeting taking place at Mpigi Health Centre. The purpose of the meeting is to describe a family planning study that is being conducted in our community. During the meeting we will ask for your consent for your area to participate in the study. You will also have a chance to get more information and ask questions about the study. The meeting will be held:

Where – Mpigi Health Centre
Time – 10:00 AM
Date – Tuesday, August 31st, 1999

I look forward to meeting you on this day.

Thank you very much.

Dr. Mukisa E.
Medical Director
Mpigi

cc: Chairman LC3 Town Council and Mutuba I Mpigi.

Appendix 6:

Questionnaire (English Version)

(Reformatted for Thesis binding)

HOUSEHOLD SCHEDULE FOR QUESTIONNAIRE SESSIONS

IDENTIFICATION OF HOUSEHOLD

Interviewer's Number and Initials: _____			
Name of Sub-County (LC3):	❒ Mpigi Town Council	❒ Mutuba I	❒ Other _____ (Specify)
Name of Parish (LC2):	❒ Zone A ❒ Zone B ❒ Zone C ❒ Zone D	❒ Konkoma ❒ Kafumu ❒ Kakoola ❒ Maziba ❒ Bumoozi ❒ Lwanga ❒ Kyaali	❒ Other _____ (Specify)
Name of LC1: _____			
Household/Paricipant Number: _____			

INTERVIEWER VISITS

	Visit 1	Visit 2	Visit 3
Date **Start Time** **End Time**			
Result (*see codes below)	☐☐	☐☐	☐☐
Date and Time of Next Visit			

***RESULT CODES:**

01 Completed Questionnaire
02 Household Head Male not Home
03 No Household Members Present
04 Postponed Interview
05 Refused
06 OTHER (Specify): _____

Family Planning Questionnaire

Section I: Questions relating to Demographic and Socio-Cultural Variables

First, I would like to begin by asking questions about you and about your family.

1.	For most of the time until you were 12 years old, did you live in a city, in a town, or in the countryside?	CITY .....1 TOWN.....2 COUNTRYSIDE.....3
2.	How long have you lived in *[name of current LC1 of residence]*?	MONTHS ☐☐ YEARS ☐☐
3.	How old are you?	YEARS ☐☐
4.	What is your tribe?	MUGANDA .....1 MUNYANKOLE .....2 MULUNDI .....3 OTHER .....4 ..... (Specify)
5.	What religion do you practice?	CATHOLIC.....1 ANGLICAN.....2 MUSLIM.....3 SEVENTH DAY ADVENTIST.....4 TRADITIONAL.....5 NONE.....6 OTHER .....7 ..... (Specify)
6.	How many years of schooling did you complete?	NONE.....1 INCOMPLETE PRIMARY, (P1 to P7) 2 COMPLETE PRIMARY .....3 INCOMPLETE SECONDARY, (S1 to S6) .....4 COMPLETE SECONDARY .....5 INCOMPLETE POST-SECONDARY (University, College, etc.) .....6 COMPLETE POST-SECONDARY 7
7.	How do you make money for your family?	_____ _____

Now I would like to ask you some questions about your marital status and whether or not you have any children. The definition of marriage here means: "A man or woman living together in the same household and regarding themselves as married, whether or not there has been any traditional, religious, or civil acknowledgement or ceremony."

8	a) Are you currently married? *[If "No," politely thank the respondent for his time and end the interview.]*	YES .....1 NO .....2 DIVORCED .....3 SEPARATED .....4 OTHER .....5 _____ (Specify)
	b) How many wives do you have?	NUMBER OF WIVES ☐☐
9	How old were you when you were first married?	YEARS ☐☐
10	Do you have any living children? *[If "Yes" continue to question 11; If "No" skip to question 15.]*	NO .....1 YES 2
11	How many living children do you have?	NUMBER LIVING CHILDREN ☐☐
12	a) How many living sons do you have?	NUMBER OF SONS ☐☐
	b) How many living daughters do you have?	NUMBER OF DAUGHTERS ☐☐
13	a) How many of your sons are living with you or are you supporting?	NUMBER OF SONS ☐☐
	b) How many of your daughters are living with you or are you supporting?	NUMBER OF DAUGHTERS ☐☐
*[**INTERVIEWER: read over 'Total numbers of living children', 'Number of living sons and daughters', and 'Number of sons & daughters being supported by respondent' to ensure accuracy. Correct any errors.**]*		
14	a) In what year was your first child born? *[If "DK," probe for age and subtract from 1999 to determine year.]*	YEAR 19 ☐☐ DK .....❐
	b) In what year was your last child born? *[If "DK," probe for age and subtract from 1999 to determine year.]*	YEAR 19 ☐☐ DK .....❐
15	a) Are there any other children (eg, grandchildren, nephews or nieces, etc) who are living with you or you are supporting? *[If "Yes" ask 15b. If "No" skip to question 16]*	NO .....1 YES 2
	b) How many other children are living with you or are you supporting?	NUMBER ☐☐

16.	a) Do you want to have any (more) children? *[If "DK" or "Other" skip to question 18. If "Yes" skip to question 16c.]*	NO.....1 YES.....2 DK.....3 OTHER.....4 _____ (Specify)
	b) If "No," why don't you want anymore children? *[Skip to question 18.]*	_____ _____
	c) If "Yes", why do you want more children ?	_____ _____
	d) If "Yes," how many more children do you want?	NUMBER ☐☐ OTHER.....99 _____ (Specify)
17.	Do you want to have any more children in the next 2 years?	NO.....1 YES.....2 DK.....3 OTHER.....4 _____ (Specify)

Section II: Knowledge About Family Planning

Now I would like to ask you some questions about family planning.

18.	Have you heard about family planning? *[If "No" or "DK" skip to question 20.]*	NO.....1 YES.....2 DK.....3
19.	What do you understand by the term "family planning?	_____ _____
20.	a) I would like to talk about family planning as a way for a couple to avoid or delay pregnancy. There are many methods that a couple can use to delay or avoid pregnancy. Can you tell me the ways or methods that you have heard about? *[**INTERVIEWER: In the table on the next page, check the 'Spont.' (=Spontaneous) box for each method mentioned spontaneously. Then proceed down the column, and probe by reading the name and description of each method not mentioned spontaneously. Check the 'Probed' box if the method is recognized, and the 'Unrec.' (=Unrecognized) box if the method is unrecognized.* *For each method with 'Spont.' or 'Probed' checked, ask question 20c before proceeding to the next method. For each method with "Unrec." do not ask question 20c.**]*	

METHOD	20a) Spont	20b) Have you ever heard of [method]? Probed	Unrec	20c) In your opinion, what is the main problem (if any) with using [method]?
Pill. Women can take a pill every day to avoid becoming pregnant.				
IUD/Coil. Women can have a loop or coil put inside their womb by a doctor or a nurse.				
Injections. Women can have an injection by a doctor or nurse to stop them from becoming pregnant for a few months.				
Diaphragm/Foam/Jelly. Women can place jelly, cream, tablets, or a diaphragm around the neck of the womb before sex..				
Condom. Men can wear a rubber sheath on their penis during sex.				
Female Sterilisation. Women can have an operation where her "tubes are tied" to avoid having any more children.				
Male Sterilisation. Men can have an operation to avoid having any more children.				
Periodic Abstinence. Couples can avoid having sex on certain days of the month when the woman is more likely to become pregnant.				
Withdrawal. Men can be careful to pull out before climax.				
Natural Methods. Women use certain herbs or a vaginal wash to avoid becoming pregnant.				
Any Other Methods? Have you heard of other ways or methods that women or men can use to avoid pregnancy?				

21.	Can you tell me any places that a person could go if he or she wanted to obtain these methods to delay or avoid pregnancy? *[Can give more than one response.]*	GOVERNMENT HOSPITAL. .....1 GOVERNMENT HEALTH CENTRE .2 FAMILY PLANNING ASSOCIATION UGANDA (FPAU) CLINIC .....3 PRIVATE CLINIC.....4 PRIVATE DOCTOR .....5 COMMUNITY HEALTH WORKER ..6 TRADITIONAL BIRTH ATTENDANT .....7 PHARMACY/SHOP.....8 FRIENDS/RELATIVES .....9 TRADITIONAL HEALER.....10 DON'T KNOW.....11 OTHER .....12 _____ (Specify)
22.	If you had questions about family planning, whom would you talk to?	_____ _____
23.	Where do you get information about family planning? *[Can give more than one response.]*	FAMILY PLANNING PROVIDERS...1 DOCTORS OR NURSES .....2 COMMUNITY HEALTH WORKERS 3 WIFE.....4 RADIO.....5 NEWSPAPERS/BOOKS .....6 LC1 CHAIRPERSON.....7 OTHER .....8 _____ (Specify)
24.	Would you like (more) information about family planning?	NO.....1 YES .....2 DK.....3

Section III. Attitudes Toward Family Planning

Now I would like to ask you a few questions about your opinions about family planning.

25.	Do you approve of the use of family planning methods:	
	a) To stop having children after a couple has the number they can support?	❒ NO ❒ YES
	b) To stop having children after a couple has the number they want?	❒ NO ❒ YES
	c) To space children?	❒ NO ❒ YES
	d) If a couple is poor or lacks economic resources?	❒ NO ❒ YES
	e) If the wife has health problems?	❒ NO ❒ YES
	f) If the couple is having misunderstandings?	❒ NO ❒ YES
	g) For any other reasons?	❒ NO ❒ YES _____ (Specify)
26.	a) In general, do you approve or disapprove of family planning?	APPROVE.....1 DISAPPROVE.....2 DON'T KNOW.....3
	b) If you "Disapprove," why do you disapprove of family planning?	_____ _____
27.	In your opinion, what is the most important reason why anyone would wish to avoid having more children?	_____ _____
28.	In your opinion, who should make the decision to use family planning?	WOMAN'S DECISION.....1 MAN'S DECISION.....2 COUPLE'S DECISION.....3 OTHER.....4 _____ (Specify)
29.	a) Do you think that married couples should have access to family planning methods?	❒ NO ❒ YES
	b) Do you think that unmarried adults should have access to family planning methods?	❒ NO ❒ YES
	c) Do you think that adolescents should have access to family planning methods?	❒ NO ❒ YES

30.	Do you discuss family planning with:	
	a) Your current partner(s)?	❒ NO ❒ YES
	b) Other men?	❒ NO ❒ YES
	c) Other women?	❒ NO ❒ YES
	d) Family members?	❒ NO ❒ YES
	e) Doctors or nurses?	❒ NO ❒ YES
	f) Traditional healers?	❒ NO ❒ YES
	g) Community workers?	❒ NO ❒ YES
	h) TBAs?	❒ NO ❒ YES
	i) Community-Based Distribution Agents?	❒ NO ❒ YES
	j) Do you discuss family planning with anyone else?	❒ NO ❒ YES _____ (Specify)
31.	a) In your opinion, what do you think is the ideal number of children? *[If no number given skip to question 32.]*	NUMBER ☐☐ HOWEVER MANY YOU GET .....96 DON'T KNOW .....97 OTHER .....98 _____ (Specify)
	b) Why not more?	_____ _____
	c) Why not less?	_____ _____
32.	a) Have you and your wife ever discussed the number of children you would like to have?	NO .....1 YES .....2 DK 3
	b) Do you think she wants the **same** number, **more** children, or **fewer** children than you want?	SAME NUMBER OF CHILDREN .....1 MORE CHILDREN .....2 FEWER CHILDREN .....3 DK .....4 OTHER .....5 _____ (Specify)
33.	a) Should there be time between the birth of one child and the birth of the next child? *[If "Yes" ask question 33b. If "no" skip to question 34.]*	NO .....1 YES .....2 DK 3

	b) In your opinion, what is the best number of months or years between the birth of one child and the birth of the next child?	MONTHS ☐☐ YEARS ☐☐ DK ☐
34.	I would like to ask you a question about the number of people living in Uganda. In your opinion, do you think there are: Too many people? Just about the right number of people? Not enough people? Don't know	TOO MANY PEOPLE ..... 1 JUST ABOUT THE RIGHT NUMBER OF PEOPLE ..... 2 NOT ENOUGH PEOPLE ..... 3 DON'T KNOW 4

Section IV: Use of Family Planning Methods

Now I would like to ask you questions about your past and current use of methods a couple can use to delay or avoid pregnancy.

35.	a) Have you or your partner ever used *[method]*?			
	Pill	☐ NO	☐ YES	☐ DK
	IUD/Coil	☐ NO	☐ YES	☐ DK
	Injections	☐ NO	☐ YES	☐ DK
	Diaphragm/Foam/Jelly	☐ NO	☐ YES	☐ DK
	Condom	☐ NO	☐ YES	☐ DK
	Periodic Abstinence	☐ NO	☐ YES	☐ DK
	Withdrawal	☐ NO	☐ YES	☐ DK
	Natural Methods	☐ NO	☐ YES	☐ DK
	Any other methods?	☐ NO	☐ YES	☐ DK
	_____ (Specify)			
	b) Has your partner ever had an operation to avoid having any more children? *[Only refer to 1st and 2nd wives.]*			
		First wife		**Second wife**
	Female Sterilisation	☐ NO ☐ YES ☐ DK		☐ NO ☐ YES ☐ DK
	c) Have you ever had an operation to avoid having any more children?			
	Male Sterilisation	☐ NO	☐ YES	☐ DK
	[If the respondent answered "Yes" for any part of question 35, skip to question 38, otherwise continue to 36.]			
36.	What are your reasons for not using any method?	_____ _____		
37.	Do you plan to use family planning methods in the future? *[Skip to question 45.]*	NO ..... 1 YES ..... 2 DK 3		

38.	Do you or your partner **currently** use *[method]*? *[Only refer to 1st and 2nd wives.]* **First wife** / **Second wife** Pill ☐ NO ☐ YES ☐ DK / ☐ NO ☐ YES ☐ DK IUD/Coil ☐ NO ☐ YES ☐ DK / ☐ NO ☐ YES ☐ DK Injections ☐ NO ☐ YES ☐ DK / ☐ NO ☐ YES ☐ DK Diaphragm/Foam/Jelly ☐ NO ☐ YES ☐ DK / ☐ NO ☐ YES ☐ DK Condom ☐ NO ☐ YES ☐ DK / ☐ NO ☐ YES ☐ DK Periodic Abstinence ☐ NO ☐ YES ☐ DK / ☐ NO ☐ YES ☐ DK Withdrawal ☐ NO ☐ YES ☐ DK / ☐ NO ☐ YES ☐ DK Natural Methods ☐ NO ☐ YES ☐ DK / ☐ NO ☐ YES ☐ DK Any other methods? ☐ NO ☐ YES ☐ DK / ☐ NO ☐ YES ☐ DK _____ (Specify) *[If the respondent answered "Yes" for any part of question 38, skip to question 42, otherwise continue to question 39.]*
39.	What were your reasons for stopping use of this method?	_____ _____
40.	Do you plan to use a method to delay or avoid pregnancy again in the future?	NO ..... 1 YES ..... 2 DK 3
41.	How many children did you have when you first started using contraceptive methods? *[Skip to question 45.]*	NUMBER ☐☐
42.	For how long have you been using this method(s) (without interruption)?	_____ _____
43.	a) Where do you go to get this method?	_____ _____
	b) Are you satisfied with the services at this location?	NO ..... 1 YES ..... 2 DK 3
	c) If "No," why aren't you satisfied with the services at this location?	_____ _____
44.	How many children did you have when you first started using contraceptive methods?	NUMBER ☐☐

45.	If you chose to use a method to delay or avoid pregnancy, which method would you prefer to use? *[Read out all methods:]*	PILL ..... 1 IUD ..... 2 INJECTIONS ..... 3 DIAPHRAGM/FOAM/JELLY ..... 4 CONDOM ..... 5 FEMALE STERILIZATION ..... 6 MALE STERILIZATION ..... 7 PERIODIC ABSTINENCE ..... 8 WITHDRAWAL ..... 9 NATURAL METHODS ..... 10 OTHER METHODS ..... 11 _____ (Specify) NONE 12
46.	Why would you choose this method?	_____ _____
47.	a) Have you ever gone alone or with your partner to a family planning clinic?	NO ..... 1 YES 2
	b) If "NO," do you think you would go with your partner if she asked?	NO ..... 1 YES ..... 2 DK 3
48.	How long does it take you to get to the nearest place with family planning services?	MONTHS ☐☐ YEARS ☐☐ DK ..... ☐

Thank you for taking the time to answer these questions. Do you have any questions or concerns about the questionnaire or about family planning?

INTERVIEWER'S OBSERVATIONS

[To be filled out after completing the interview]

Comments about respondent: _____

Comments on specific questions: _____

Any other comments: _____

Appendix 7

Letter of Introduction to the Key Informants

Angela Kaida
Institute of Public Health
Makerere University
PO Box 7072
Kampala, Uganda

October 4, 1999

Dear «Key Informant Addressee»:

Greetings!

As you know, we have been conducting a study titled: Knowledge, Attitude, and Practice of Married Men toward Family Planning in Mpigi District, Central Uganda. The research project has been underway for the past two months. In this time we have completed a family planning survey of 330 married men from two sub-counties (Mpigi Town Council and Mutuba I). In addition to this survey we are conducting focus group sessions and key-informant interviews.

The purpose of this letter is to request a personal interview session with you. During the interview I would like to discuss the preliminary findings from the survey as well as to talk to you about family planning in general and specifically related to male involvement. I am anticipating that the interview will be about 1 hour in length. I hope that we can meet during the week of October 11 – 15, 1999. Please advise me as to whether you are able to meet during this week so that we may set up a time that is convenient.

I thank you for your consideration of this request. I look forward to meeting with you.

Sincerely,

Angela Kaida
Principal Investigator

Appendix 8:

Interview Guide for the Key Informant Interviews

Interview Guide for Semi-Structured Interview Sessions with Key Informants

Introductions and ice-breaker discussion about current events, my experience in Uganda, etc.

Discussion and description of the study and work completed to date.

Interview Guide

1. What is your role with respect to family planning in Mpigi District?

   (probe for previous work and research experience; probe for particulars of position)

2. In your experience, what is the general sentiment of the community toward family planning? Do opinions about family planning differ on the basis of modern compared with traditional family planning methods?

3. In your experience, are men in the community interested, involved, and/or participating in family planning?

   (probe for recent trends and trends over time; probe for degree/level of involvement)

4. The results of our survey of men suggested that overall, men are quite knowledgeable about family planning and family planning methods. In your experience, have you found this to be the case?

5. The results of our survey also suggested that overall, men have positive attitudes toward family planning. In your experience, have you found this to be the case?

6. We found that the prevalence of modern contraceptive use in the community was approximately 35%. Do you think this is an accurate reflection of the actual contraceptive prevalence in the community? Why or why not?

7. How do you think men would define their role in family planning? How can this role be supported and encouraged?

8. What are some of the factors that inhibit or prevent men from participating in family planning?

   (probe for specific cultural practices).

9. What can be done to minimise any factors that may be inhibiting men from participating in family planning?

10. A common phenomenon reported in the literature is the "KAP gap". The KAP gap occurs when levels of knowledge about family planning are high, attitudes toward family planning are positive, yet actual practice remains relatively low. In your opinion, what might be some of the factors contributing to the KAP gap?

11. What are some of the factors that function as barriers to family planning programs in providing family planning information and services to the community?

Appendix 9:

Interview Guide for the Focus Group Discussion (FGD) sessions with Community Members

(English Version)

Interview Guide for Focus Group Discussions with Community Members

Ice-breaker exercise and introductions.

Description of project.

1. What do you understand by the term 'family planning'?

2. Do you know of any methods that can be used to prevent or delay pregnancy?

3. Are there any problems associated with using these methods?

   (probe for different types of problems associated with different types of methods e.g., inconvenience, health related problems, problems associated with cost, unreliability and ineffectiveness of methods).

4. Who should have access to family planning methods? Why or why not?

   (probe for married men, married women, unmarried men, unmarried women, adolescents)

5. Who should make the decision to use family planning? Why?

6. In your opinion, do men have a role in family planning? If yes, what is men's role?

7. What do you think are some of the reasons why some people choose to use family planning, but some people do not?

   (probe for issues related to family size, composition, and preferences, and cultural and/or religious reasons)

   (probe for barriers preventing men from participating and/or using family planning methods such as inaccessibility, high cost, lack of information, fear)

**** BREAK ****

8. Where do you get your information about family planning?

9. If you or your partner wanted to use a family planning method, where would you go to get the supplies? Why?

10. For those of you who are using or who have used family planning, how did you find out about and choose to use your method?

11. What do you think of the attitudes of health workers to family planning users?

12. How can family planning programs and services be improved upon to make it easier for men to participate in and/or use family planning?

Appendix 10:

Interview Guide for the Focus Group Discussion (FGD) sessions with the Research Assistants

Interview Guide for Focus Group with Male Research Assistants

Ice-breaker discussion.

Discussion of work completed to date.

Section A: I would like to begin by asking some questions related to the previous weeks' data collection.

1. What do you think was the general attitude of married men toward family planning?
2. Many men said that the decision to use family planning should be that of the man or that of the couple. This indicates that men think that they should be involved in the decision to use family planning. What do you think the men see their role as? How can this role be encouraged?
3. In terms of who should have access to family planning, many men said that both married people and adolescents should have access, however, unmarried men should not. What are some of the reasons for this?
4. A common answer to "Why do you want more children" was "to enlarge my clan or enlarge my family". Culturally, is this an important concern?
5. What do you think are some of the reasons why some people choose to use family planning but some people do not? In other words, what are some of the factors (personal and otherwise) that affect use of family planning?
6. Is there any specific information that you feel should be provided to men about family planning?
7. What are some of the ways to provide males in the community with family planning information?
8. What are some of the reasons why an individual would go to a private versus a government family planning clinic?
9. Do you think that the AIDS epidemic has had an affect on attitudes towards use of family planning? If yes, what effect has it had?

** BREAK **

Section B: Now I would like to ask you some general questions about family planning.

1. What are some of the advantages and disadvantages of having more than 5 children?
2. What are some of the advantages and disadvantages of having a smaller family, say no more than 2-3 children?
3. Do you think there is a general preference for one gender over the other? Why?
4. If a man has children with more than one woman (either because of a divorce, or having more wives, etc) is there any competition in terms of number or gender of the children?
5. Income often seems to be related to family planning. Do you think it is the case that if one has a high income he should have as many children as that income will support?

6. Often in family planning programs and surveys we see what we call a "KAP gap" which is high levels of knowledge and positive attitudes toward family planning, however, still a low level of actual use. What do you think might be some of the reasons for this gap?
7. What do you think are some of the main barriers preventing men from participating in and/or using family planning?
8. What is men's role in family planning? How can this role in family planning be encouraged?

Interview Guide for Focus Group with Female Research Assistants

Ice-breaker discussion.

Discussion of work completed to date.

Section A: I would like to begin by asking some questions related to your work and experiences as family planning providers here at Mpigi Health Centre.

1. In the family planning clinic, when people come for counselling and/or services, what is your message to them about family planning?
2. At this clinic, are family planning methods free, or does as client have to pay for them?

   (probe for other potential costs involved in using the method).
3. In your experience, what are the most commonly used family planning methods? Why?
4. Do you see many men coming to the clinic? For counselling, for services, for supplies?

   (probe for recent trends and trends over time)

BREAK

Section B: Now I would like to ask some questions related to the previous weeks' data collection.

5. Many men said that the decision to use family planning should be that of the man or that of the couple. This indicates that men think that they should be involved in the decision to use family planning. What do you think the men see their role as? How can this role be encouraged? In your opinion, what do you think men think their role in family planning is?
6. What are some of the perceived advantages and disadvantages to having many children?

   (probe for issues relating to clan size and gender preferences)
7. What do you think are some of the reasons why some people choose to use family planning but some people do not? In other words, what are some of the factors (personal and otherwise) that affect use of family planning?
8. What are some of the barriers facing family planning programs in general and specifically in encouraging men to participate and/or use family planning?
9. What are some of the ways by which men can be reached, contacted such that they can be given information about family planning?
10. What do you think the message or strategy should be to encourage men to participate and be involved in family planning?
11. What do you think was the general attitude of married men toward family planning?
12. Is there any specific information about family planning that you feel should be provided to men?
13. What are some of the ways to provide males in the community with family planning information?

14. Often in family planning programs and surveys we see what we call a "KAP gap" which is high levels of knowledge and positive attitudes toward family planning, however, still a low level of actual use. What do you think might be some of the reasons for this?

15. What do you think are some of the main barriers preventing men from participating in and/or using family planning?

16. What are some of roles that men play in family planning? How can men's role in family planning be encouraged?

Appendix 11:

Information Sheet for Research Team Training Session

Responsibility of Interviewers and Procedures for Conducting the Interviews

You, as the interviewer, play a very important role in this research project. You are responsible for collecting **true and accurate** information from the respondent. The value of this research project depends on the quality of the data collected. The quality of the data depends entirely on the interviewer.

1. **Meeting the LC1 Chair**
   - Introduce yourself properly to the LC1 Chairperson.
   - Determine who will be your guide (LC1 Chairperson or someone else).
   - Inform the guide that he (or she) will be given USH 2000/= for his (or her) assistance.

2. **Sampling**
   - Ask the LC1 Chairperson to provide you with a list of households/individuals living in the LC1.
   - Using the Table of Random numbers, randomly choose a number that corresponds to a person/household on the list. If there is a respondent at this location who fits the eligibility criteria for the study, this will be your starting point. If not, randomly choose another number until an eligible participant is found.

     Eligibility criteria:
     Married male aged 18 – 54 years.

   - Ask the guide to direct you to this starting point.
   - From here, you will proceed to sample using the "closest door" cluster sampling method.
   - You will do one house and your partner will do the next closest house at the same time.

3. **Starting the interview**
   - Introduce yourself properly to the male respondent in the selected household.
   - Give him a copy of the Information Letter and after he has read it, ask him if he has any questions.
   - Ask him to read and sign the consent form.
   - Exert all efforts so as to gain co-operation of each respondent.
   - Select a place for the interview that ensures privacy for the respondent.

4. **Conducting the interview**
   - Ask the questions as they are written on the questionnaire.
   - Follow appropriate filters and skips.
   - Write neatly and clearly!
   - Ensure that all questions are answered completely and accurately (for example: if the respondent says he has 2 wives make sure that question # 37 is answered for each wife).
   - Give the respondent sufficient time to answer the question before probing.

5. **Completing the interview**
   - Review the questionnaire for errors before ending the interview session.
   - Remember to thank the respondent after the interview and offer him a soda.
   - Keep in close contact with the supervisors and refer all questions that you can't answer to your supervisor.

Remember, you have your fellow researchers and study team to draw on for more information and assistance. Ask as many questions as you have and share your experiences and thoughts!

Appendix 12:

Information Letters for Study Participants

(including male survey participants, wives approached at the Mpigi Health Centre (MHC) family planning clinic, key informants, and FGD participants)

(English Versions)

Information Letter (for male participants)

Project Title: Knowledge, Attitude, and Practice of Married Men toward Family Planning in Mpigi District, Central Uganda

INVESTIGATORS:

Dr. J.K. Konde-Lule	**Institute of Public Health, Makerere University,Uganda**
Ms. Sarah Kabuye	**District Administration, Mpigi, Uganda**
Ms. Beatrice Nakayiza	**Mpigi Health Centre, Mpigi District, Uganda**
Ms. Angela K. Kaida	**Institute of Public Health, Makerere University, Uganda and the Department of Public Health Sciences, University of Alberta, Canada**

August 31, 1999

Dear Sir:

You are being asked to participate in a study looking at the level of knowledge, attitude, and practice of married men toward family planning. The study is being done by:

- Mpigi Health Centre (Mpigi, Uganda)
- Mpigi District Administration (Mpigi, Uganda)
- Institute of Public Health at Makerere University
- University of Alberta (Alberta, Canada).

Purpose of the Study

The purpose of this study is to find out how demographic factors, knowledge, and attitude influence use of family planning in married men. Local governments and family planning clinics will use this information to improve and develop family planning services that involve men.

The information is also being collected as part of a graduate student's thesis project.

Background

Most research about family planning is focussed on women. Many family planning programs also target only women. There is very little information about men in relation to family planning. In this study, we wish to speak with married men in Mpigi about their Knowledge, Attitudes, and Practice (KAP) toward family planning.

Mpigi Health Centre provides health services (including family planning) for Mpigi Town Council and Mutuba I. Four hundred married men from these two sub-counties will be asked to participate in the study.

What will you be asked to do?

A trained interviewer will ask you questions from a questionnaire. The interviewer will ask you questions about you and your household, your knowledge, your opinions, and your use of family planning. The questionnaire will be given in Luganda or English. Your answers will be written down. Answering the questionnaire will take about 45 minutes.

The interviewer can meet with you at your home, at Mpigi Health Centre, or at another location depending on what is most convenient for you.

Possible benefits to you and others

At the end of the questionnaire, the interviewer will ask you if you have any questions about the study or family planning. If you have any questions that the interviewer cannot answer he will refer you to one of the study investigators. This person will be able to answer your questions.

The Mpigi Health Management Team and the Mpigi Health Centre will use the information collected in the study to develop family planning services that can better meet the needs of men in Mpigi district.

Possible harms

There are no expected risks to taking part in the study.

Confidentiality and voluntary participation

Any information that you give will be kept confidential. All records will be kept private. Your name will not be written on your questionnaire. Instead, you will be given a number and this number will be recorded on your questionnaire. The questionnaires and the consent forms will be kept in a secure area for at least the next 7 years. Only study investigators will have access to this information.

No names or information that can identify you will be used in any publications or presentations of the study results. You are free to withdraw from this study at any time, without any penalty. You do not have to give a reason. You also have the right to refuse to answer any of the questions, at any time.

For more information on the study

If you have any concerns about this study or would like more information, please contact Ms. Beatrice Nakayiza at Mpigi Health Centre, Mpigi.

Your consent

Your signature on the next page indicates that you understand the information in this letter and also that you agree to participate in this study.

Please keep these pages for future reference.

Information Letter (for wives approached at MHC)

Project Title: Knowledge, Attitude, and Practice of Married Men toward Family Planning in Mpigi District, Central Uganda

INVESTIGATORS:

Dr. J.K. Konde-Lule	**Institute of Public Health, Makerere University,Uganda**
Ms. Sarah Kabuye	**District Administration, Mpigi, Uganda**
Ms. Beatrice Nakayiza	**Mpigi Health Centre, Mpigi District, Uganda**
Ms. Angela K. Kaida	**Institute of Public Health, Makerere University, Uganda and the Department of Public Health Sciences, University of Alberta, Canada**

August 31, 1999

Dear Madame:

You are being asked to give consent for the above study investigators to contact your husband to ask if he is willing to participate in a study. The study will look at the level of knowledge, attitude, and practice of married men toward family planning. The study is being done by:

- Mpigi Health Centre (Mpigi, Uganda)
- Mpigi District Administration (Mpigi, Uganda)
- Institute of Public Health at Makerere University
- University of Alberta (Alberta, Canada).

Purpose of the Study

The purpose of this study is to find out how demographic factors, knowledge, and attitude influence use of family planning in married men. Local governments and family planning clinics will use this information to improve and develop family planning services that involve men.The information is also being collected as part of a graduate student's thesis project.

Background

Most research about family planning is focussed on women. Many family planning programs also target only women. There is very little information about men in relation to family planning. In this study, we wish to speak with married men in Mpigi about their Knowledge, Attitudes, and Practice (KAP) toward family planning.

Mpigi Health Centre provides health services (including family planning) for Mpigi Town Council and Mutuba I. Four hundred married men from these two sub-counties will be asked to participate in the study.

What will your husband be asked to do?

A trained, male interviewer will ask your husband questions from a questionnaire. The interviewer will ask him questions about your household, his knowledge, his opinions, and his

use of family planning. The questionnaire will be given in Luganda or English. His answers will be written down. Answering the questionnaire will take about 45 minutes. The interviewer can meet with him at your home, at Mpigi Health Centre, or at another location depending on what is most convenient.

Possible benefits to you and others

At the end of the questionnaire, the interviewer will ask your husband if he has any questions about the study or family planning. If he has any questions that the interviewer cannot answer he will refer your husband to one of the study investigators. This person will be able to answer his questions.

The Mpigi Health Management Team and the Mpigi Health Centre will use the information collected in the study to develop family planning services that can better meet the needs of men (and their partners) in Mpigi district.

Possible harms

There are no expected risks to taking part in the study.

Confidentiality and voluntary participation

Any information that is given will be kept confidential. All records will be kept private. Your husband's name will not be written on the questionnaire. Instead, he will be given a number and this number will be recorded on the questionnaire. The questionnaires and the consent forms will be kept in a secure area for at least the next 7 years. Only study investigators will have access to this information.

No names or information that can identify you or your husband will be used in any publications or presentations of the study results.

You are not required to give consent for the study investigators to contact your husband. You are free to withdraw from this study at any time, without any penalty. You do not have to give a reason. You also have the right to refuse to answer any of the questions, at any time.

Your husband is also not required to participate in this study. He will be given a similar information letter and asked to give his consent to participate. He will be free to withdraw from the study at any time, without any penalty. He will also have the right to refuse to answer any of the questions.

For more information on the study

If you have any concerns about this study or would like more information, please contact Ms. Beatrice Nakayiza at the Mpigi Health Centre, Mpigi.

Your consent

Your signature on the next page indicates that you understand the information in this letter and also that you agree to participate in this study.

Please keep these pages for future reference.

Information Letter (for FGD participants)

Project Title: Knowledge, Attitude, and Practice of Married Men toward Family Planning in Mpigi District, Central Uganda

INVESTIGATORS:

Dr. J.K. Konde-Lule	**Institute of Public Health, Makerere University,Uganda**
Ms. Sarah Kabuye	**District Administration, Mpigi, Uganda**
Ms. Beatrice Nakayiza	**Mpigi Health Centre, Mpigi District, Uganda**
Ms. Angela K. Kaida	**Institute of Public Health, Makerere University, Uganda and the Department of Public Health Sciences, University of Alberta, Canada**

October 17th, 1999

Dear Sir:

You are being asked to participate in a study looking at the level of knowledge, attitude, and practice of married men toward family planning. The study is being done by:

- Mpigi Health Centre (Mpigi, Uganda)
- Mpigi District Administration (Mpigi, Uganda)
- Institute of Public Health at Makerere University
- University of Alberta (Alberta, Canada).

Purpose of the Study

The purpose of this study is to find out how demographic factors, knowledge, and attitude influence use of family planning in married men. Local governments and family planning clinics will use this information to improve and develop family planning services that involve men.

The information is also being collected as part of a graduate student's thesis project.

Background

Most research about family planning is focussed on women. Many family planning programs also target only women. There is very little information about men in relation to family planning. In this study, we wish to speak with married men in Mpigi about their Knowledge, Attitudes, and Practice (KAP) toward family planning.

Mpigi Health Centre provides health services (including family planning) for Mpigi Town Council and Mutuba I. Four hundred married men from these two sub-counties will be asked to participate in the study.

What will you be asked to do?

You and 7 other married men will meet together with a trained interviewer. Together the group will discuss surprising and interesting findings from an earlier questionnaire about family planning. The questionnaire asked married men questions about personal and lifestyle factors, knowledge, attitudes, and practice toward family planning. This group interview will take about one hour. It will be done in Luganda. The interviewer will ask you if she can tape interview so that the interview can be listened to and analysed later. The group interviews be held at BHS or at another location that best suits all participants.

Possible benefits to you and others

At the end of the group discussion, the interviewer will ask you if you have any questions about the study or family planning. If you have any questions that the interviewer cannot answer she will refer you to one of the study investigators. This person will be able to answer your questions.

The Mpigi Health Management Team and the Mpigi Health Centre will use the information collected in the study to develop family planning services that can better meet the needs of men in Mpigi district.

Possible harms

There are no expected risks to taking part in the study.

Confidentiality and voluntary participation

Any information that you give will be kept confidential. All records will be kept private. Your name will not be written down or recorded on the tape. Instead, you will be given a number and this number will be recorded. The interview information and the consent forms will be kept in a secure area for at least the next 7 years. Only study investigators will have access to this information.

No names or information that can identify you will be used in any publications or presentations of the study results. You are free to withdraw from this study at any time, without any penalty. You do not have to give a reason. You also have the right to refuse to answer any of the questions, at any time.

For more information on the study

If you have any concerns about this study or would like more information, please contact Ms. Beatrice Nakayiza at Mpigi Health Centre, Mpigi.

Your consent

Your signature on the next page indicates that you understand the information in this letter and also that you agree to participate in this study.

Please keep these pages for future reference.

Information Letter (for Key Informants)

Project Title: Knowledge, Attitude, and Practice of Married Men toward Family Planning in Mpigi District, Central Uganda

INVESTIGATORS:

Dr. J.K. Konde-Lule	**Institute of Public Health, Makerere University,Uganda**
Ms. Sarah Kabuye	**District Administration, Mpigi, Uganda**
Ms. Beatrice Nakayiza	**Mpigi Health Centre, Mpigi District, Uganda**
Ms. Angela K. Kaida	**Institute of Public Health, Makerere University, Uganda and the Department of Public Health Sciences, University of Alberta, Canada**

August 31, 1999

Dear Sir or Madam:

You are being asked to participate in a study looking at the level of knowledge, attitude, and practice of married men toward family planning. The study is being done by:

- Mpigi Health Centre (Mpigi, Uganda)
- Mpigi District Administration (Mpigi, Uganda)
- Institute of Public Health at Makerere University
- University of Alberta (Alberta, Canada).

Purpose of the Study

The purpose of this study is to find out how demographic factors, knowledge, and attitude influence use of family planning in married men. Local governments and family planning clinics will use this information to improve and develop family planning services that involve men.

The information is also being collected as part of a graduate student's thesis project.

Background

Most research about family planning is focussed on women. Many family planning programs also target only women. There is very little information about men in relation to family planning. In this study, we wish to speak with married men in Mpigi about their Knowledge, Attitudes, and Practice (KAP) toward family planning.

Mpigi Health Centre provides health services (including family planning) for Mpigi Town Council and Mutuba I. Four hundred married men from these two sub-counties will be asked to participate in the study.

What will you be asked to do?

One of the study investigators (namely, Angela Kaida) will interview you and ask you questions about family planning and issues related to family planning in Mpigi District. Some of the questions will be specifically related to male involvement in family planning. The interview will be held in English and will take about one hour. The interviewer will ask you if she can tape the interview so that it can be listened to and analysed later. The interviews can be held at Mpigi Health Centre or at another location that is more convenient for you.

Possible benefits to you and others

At the end of the questionnaire, the interviewer will ask you if you have any questions about the study or family planning. If you have any questions that the interviewer cannot answer he will refer you to one of the study investigators. This person will be able to answer your questions.

The Mpigi Health Management Team and the Mpigi Health Centre will use the information collected in the study to develop family planning services that can better meet the needs of men in Mpigi district.

Possible harms

There are no expected risks to taking part in the study.

Confidentiality and voluntary participation

Any information that you give will be kept confidential. All records will be kept private. Your name will not be written down or recorded on the tape. Instead, you will be given a number and this number will be recorded. The interview information and the consent forms will be kept in a secure area for at least the next 7 years. Only study investigators will have access to this information.

No names or information that can identify you will be used in any publications or presentations of the study results. You are free to withdraw from this study at any time, without any penalty. You do not have to give a reason. You also have the right to refuse to answer any of the questions, at any time.

For more information on the study

If you have any concerns about this study or would like more information, please contact Ms. Beatrice Nakayiza at Mpigi Health Centre, Mpigi.

Your consent

Your signature on the next page indicates that you understand the information in this letter and also that you agree to participate in this study.

Please keep these pages for future reference.

Appendix 13:

Consent Forms for Study Participants (standard consent form for all study participants and a consent form for wives approached at the MHC family planning clinic)

(English Versions)

Consent Form

Project Title: Knowledge, Attitude, and Practice of Married Men toward Family Planning in Mpigi District, Central Uganda

INVESTIGATORS:

Dr. J.K. Konde-Lule	**Institute of Public Health, Makerere University,Uganda**
Ms. Sarah Kabuye	**District Administration, Mpigi, Uganda**
Ms. Beatrice Nakayiza	**Mpigi Health Centre, Mpigi District, Uganda**
Ms. Angela K. Kaida	**Institute of Public Health, Makerere University, Uganda and the Department of Public Health Sciences, University of Alberta, Canada**

Do you understand that you have been asked to participate in a research study?	Yes	No
Have you read and received a copy of the attached Information Sheet?	Yes	No
Do you understand the benefits and risks involved in taking part in this research study?	Yes	No
Have you had an opportunity to ask questions and discuss this study?	Yes	No
Do you understand that you are free to refuse to participate or withdraw from the study at any time? You do not have to give a reason.	Yes	No
Has the issue of confidentiality been explained to you? Do you understand who will have access to your records?	Yes	No

I agree to take part in this study.

....
Signature of Research Participant *Date* *Witness*

....
Printed Name *Printed Name*

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

....
Signature of Investigator or Designee *Date*

Consent Form (wives of male participants)

Project Title: Knowledge, Attitude, and Practice of Married Men toward Family Planning in Mpigi District, Central Uganda

INVESTIGATORS:

Dr. J.K. Konde-Lule	**Institute of Public Health, Makerere University,Uganda**
Ms. Sarah Kabuye	**District Administration, Mpigi, Uganda**
Ms. Beatrice Nakayiza	**Mpigi Health Centre, Mpigi District, Uganda**
Ms. Angela K. Kaida	**Institute of Public Health, Makerere University, Uganda and the Department of Public Health Sciences, University of Alberta, Canada**

Do you agree to let the above named study investigators contact your husband for the purposes of the study described in the information letter?

- ☐ Yes, I agree.
- ☐ No, I do not agree.

.....	.....	.....
Signature of Research Participant	*Date*	*Witness*

.....	.....
Printed Name	*Printed Name*

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

.....	.....
Signature of Investigator or Designee	*Date*

Appendix 14:

Logistic Regression Variables and Model Building Steps

(Community and Clinic Samples)

Table 14.1 Codes of Variables Used in Logistic Regression Analyses

Variable Description	Variable Name	Coding Scheme
Dependent Variable (outcome):		
Current Use of Modern Contraceptives	CURR_MOD	0 – Not currently using 1 – Currently using
Independent Variables (covariates):		
Present Residence	URB_RUR	0 – Mutuba I 1 – Mpigi Town Council
Age	AGE	(Continuous)
Tribe	TRIBEX	0 – Baganda 1 – Other
Religion	RELIGION	0 – Catholic 1 – Anglican 2 – Muslim
Education	EDUCATNX	0 – Incomplete Primary or less 1 – Complete Primary 2 – Incomplete Secondary 3 – Complete Secondary or higher
Occupation	OCCUPATX	0 – Subsistence Farmer 1 – Unskilled manual labour 2 – Businessman / Trader 3 – Skilled manual labour 4 – Professional
Type of Marriage	MONO_POL	0 – Monogamous 1 – Polygamous
Age at First Marriage	AGEMARRX	0 – <21 years 1 – 21+ years
Number of Living Children	NUCHILDZ	0 – 0-1 child 1 – 2-4 children 2 – 5-7 children 3 – 8+ children
Number of Sons	SONS_CAT	0 – 0-1 son 1 – 2-4 sons 2 – 5+ sons

Table 14.1 Continued

Variable Description	Variable Name	Coding Scheme
Number of Daughters	GIRL_CAT	0 – 0-1 daughter 1 – 2-4 daughters 2 – 5+ daughters
Supporting Other Children	OTHCHILD	0 – No 1 – Yes
Number of Children being Supported	TOTLSUPX	0 – 0-1 child 1 – 2-4 children 2 – 5-7 children 3 – 8+ children
Desire more Children	MOREKIDX	0 – No/Don't Know 1 – Yes
Desire more Children in 2 years	MORE2ALX	0 – No/Don't Know 1 – Yes
Ideal Number of Children	IDEALNUM	(Continuous)
Actual vs. Ideal Number of Children	REAL_IDL	0 – Actual < Ideal 1 – Actual = Ideal 2 – Actual > Ideal 3 – Non-numerical Ideal
Heard of Family Planning	KNOW_FP	0 – No 1 – Yes
Spontaneous Knowledge of Family Planning Methods	KNWALLSZ	0 – 0-1 method 1 – 2 methods 2 – 3 methods 3 – 4+ methods
Know Where to Obtain Methods	KNOW_OBT	0 – No 1 – Yes
Ideal Space between Births	SPCTIMEY	0 – Less than 3 years 1 – 3+ years
Approve of Family Planning	APPROVEX	0 – Disapprove/DK 1 – Approve
Decision to use Family Planning	*DECISION*	0 – Woman's Decision 1 – Man's Decision 2 – Couple's Decision

Table 14.1 Continued

Variable Description	Variable Name	Coding Scheme
Discuss Family Planning with Wife	*DIS_PART*	0 – No 1 – Yes
Discuss Number of Desired Children with Wife	*WIFE_KID*	0 – No 1 – Yes
Ever gone for Family Planning Services	*EVER_FPC*	0 – No 1 – Yes
Perceived Time to Family Planning Services	*TIME_FPX*	0 – <30 minutes 1 – 30+ minutes 2 – Don't Know

Logistic Regression of Community Sample Dataset: Model Building Steps

Method: Forward Stepwise (LR)

Step One:
Total number of cases: 319
Number of cases included in analysis: 298

Initial –2 Log Likelihood: 393.518

----------Variables in the Equation----------

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B) Lower	Upper
Constant	-0.522	0.120	18.948	1	0.000	N/A	N/A	N/A

----------Variables not in the Equation----------

Residual Chi Square (df 34): 88.945 Sig. <0.001

Variables	Score	df	Sig.
URB_RUR(1)	5.383	1	.020
AGE	4.157	1	.041
EDUCATNX	26.402	3	.000
EDUCATNX(1)	3.547	1	.060
EDUCATNX(2)	1.098	1	.295
EDUCATNX(3)	14.657	1	.000
OCCUPATX	13.893	4	.008
OCCUPATX(1)	1.008	1	.315
OCCUPATX(2)	1.513	1	.219
OCCUPATX(3)	2.670	1	.102
OCCUPATX(4)	5.876	1	.015
MONO_POL(1)	2.349	1	.125
AGEMARRX(1)	1.755	1	.185
NUCHILDZ	7.334	3	.062
NUCHILDZ(1)	.583	1	.445
NUCHILDZ(2)	.281	1	.596
NUCHILDZ(3)	3.383	1	.066
SONS_CAT	5.090	2	.078
SONS_CAT(1)	.102	1	.749
SONS_CAT(2)	3.476	1	.062
OTHCHILD(1)	4.148	1	.042
TOTLSUPX	10.601	3	.014
TOTLSUPX(1)	.100	1	.751
TOTLSUPX(2)	.418	1	.518

TOTLSUPX(3)	2.313	1	.128
MOREKIDX(1)	9.287	1	.002
KNWALLSZ	11.843	3	.008
KNWALLSZ(1)	5.709	1	.017
KNWALLSZ(2)	2.849	1	.091
KNWALLSZ(3)	3.803	1	.051
DECISION	6.485	2	.039
DECISION(1)	3.554	1	.059
DECISION(2)	6.380	1	.012
DIS_PART(1)	21.986	1	.000
REAL_IDL	19.703	3	.000
REAL_IDL(1)	.128	1	.720
REAL_IDL(2)	17.303	1	.000
REAL_IDL(3)	3.955	1	.047
SPCTIMEY(1)	14.483	1	.000
EVER_FPC(1)	38.187	1	.000
TIME_FPX	7.820	2	.020
TIME_FPX(1)	2.522	1	.112
TIME_FPX(2)	2.780	1	.095

Step Two:
Variable Entered on Step Number Two: EVER_FPC
LR = 393.517 – 356.176 = 37.341
Df= 1, Significance: <0.001

----------Variables in the Equation----------

							95% CI for Exp(B)	
Variable	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
EVER_FPC	1.777	0.305	33.895	1	0.000	5.909	3.249	10.747
Constant	-0.944	0.146	41.660	1	0.000	N/A	N/A	N/A

----------Variables not in the Equation----------

Residual Chi Square (df 33): 58.256 Sig. =0.004

Variables	Score	df	Sig.
URB_RUR(1)	2.618	1	.106
AGE	3.385	1	.066
EDUCATNX	16.233	3	.001
EDUCATNX(1)	1.938	1	.164
EDUCATNX(2)	.560	1	.454
EDUCATNX(3)	9.060	1	.003
OCCUPATX	10.361	4	.035

OCCUPATX(1)	.671	1	.413
OCCUPATX(2)	2.611	1	.106
OCCUPATX(3)	2.257	1	.133
OCCUPATX(4)	2.226	1	.136
MONO_POL(1)	1.819	1	.177
AGEMARRX(1)	1.658	1	.198
NUCHILDZ	8.224	3	.042
NUCHILDZ(1)	.070	1	.792
NUCHILDZ(2)	.017	1	.897
NUCHILDZ(3)	4.296	1	.038
SONS_CAT	5.421	2	.067
SONS_CAT(1)	.003	1	.955
SONS_CAT(2)	4.264	1	.039
OTHCHILD(1)	5.238	1	.022
TOTLSUPX	10.518	3	.015
TOTLSUPX(1)	.190	1	.663
TOTLSUPX(2)	.010	1	.919
TOTLSUPX(3)	4.256	1	.039
MOREKIDX(1)	7.373	1	.007
KNWALLSZ	6.194	3	.103
KNWALLSZ(1)	3.790	1	.052
KNWALLSZ(2)	2.487	1	.115
KNWALLSZ(3)	.892	1	.345
DECISION	5.498	2	.064
DECISION(1)	3.903	1	.048
DECISION(2)	5.490	1	.019
DIS_PART(1)	13.581	1	.000
REAL_IDL	14.074	3	.003
REAL_IDL(1)	.117	1	.732
REAL_IDL(2)	12.497	1	.000
REAL_IDL(3)	2.216	1	.137
SPCTIMEY(1)	10.542	1	.001
TIME_FPX	7.943	2	.019
TIME_FPX(1)	3.814	1	.051
TIME_FPX(2)	1.694	1	.193

Step Three:
Variable Entered on Step Number Three: DIS_PART
LR = 356.178 – 339.904 = 16.274
Df= 1, Significance: <0.001

----------Variables in the Equation----------

Variable	B	S.E.	Wald	Df	Sig.	Exp(B)	95% CI for Exp(B) Lower	Upper
EVER_FPC	1.550	0.311	24.898	1	0.000	4.711	2.563	8.659
DIS_PART	1.813	0.545	11.069	1	0.001	6.126	2.106	17.819
Constant	-2.499	0.524	22.702	1	0.000	N/A	N/A	N/A

----------Variables not in the Equation----------

Residual Chi Square (df 32): 46.985 Sig. =0.043

Variables	Score	df	Sig.
URB_RUR(1)	1.416	1	.234
AGE	3.544	1	.060
EDUCATNX	12.078	3	.007
EDUCATNX(1)	1.613	1	.204
EDUCATNX(2)	.163	1	.687
EDUCATNX(3)	6.857	1	.009
OCCUPATX	8.240	4	.083
OCCUPATX(1)	.717	1	.397
OCCUPATX(2)	1.657	1	.198
OCCUPATX(3)	1.847	1	.174
OCCUPATX(4)	2.058	1	.151
MONO_POL(1)	2.267	1	.132
AGEMARRX(1)	1.327	1	.249
NUCHILDZ	6.630	3	.085
NUCHILDZ(1)	.079	1	.779
NUCHILDZ(2)	.030	1	.862
NUCHILDZ(3)	3.488	1	.062
SONS_CAT	3.427	2	.180
SONS_CAT(1)	.028	1	.868
SONS_CAT(2)	2.921	1	.087
OTHCHILD(1)	5.532	1	.019
TOTLSUPX	8.036	3	.045
TOTLSUPX(1)	.189	1	.664
TOTLSUPX(2)	.040	1	.841
TOTLSUPX(3)	2.704	1	.100
MOREKIDX(1)	5.220	1	.022
KNWALLSZ	4.212	3	.239
KNWALLSZ(1)	2.977	1	.084
KNWALLSZ(2)	1.960	1	.162
KNWALLSZ(3)	.279	1	.597
DECISION	3.060	2	.217
DECISION(1)	2.167	1	.141
DECISION(2)	3.057	1	.080
REAL_IDL	9.911	3	.019

REAL_IDL(1)	.004	1	.953
REAL_IDL(2)	9.409	1	.002
REAL_IDL(3)	.890	1	.345
SPCTIMEY(1)	7.973	1	.005
TIME_FPX	6.444	2	.040
TIME_FPX(1)	3.740	1	.053
TIME_FPX(2)	1.008	1	.315

Step Four:
Variable Entered on Step Number Four: SPCTIMEY
LR = 324.022 – 331.963 = 7.941
Df= 1, Significance: 0.005

----------Variables in the Equation----------

							95% CI for Exp(B)	
Variable	B	S.E.	Wald	Df	Sig.	Exp(B)	Lower	Upper
EVER_FPC	1.508	0.316	22.798	1	0.000	4.517	2.432	8.387
DIS_PART	1.702	0.547	9.664	1	0.002	5.485	1.876	16.039
SPCTIMEY	0.749	0.267	7.843	1	0.005	2.114	1.252	3.569
Constant	-2.764	0.538	26.413	1	0.000	N/A	N/A	N/A

----------Variables not in the Equation----------

Residual Chi Square (df 31): 39.909 Sig. =0.131

Variables	Score	df	Sig.
URB_RUR(1)	1.519	1	.218
AGE	2.912	1	.088
EDUCATNX	10.988	3	.012
EDUCATNX(1)	.794	1	.373
EDUCATNX(2)	.411	1	.521
EDUCATNX(3)	6.637	1	.010
OCCUPATX	8.996	4	.061
OCCUPATX(1)	.641	1	.423
OCCUPATX(2)	1.954	1	.162
OCCUPATX(3)	1.840	1	.175
OCCUPATX(4)	2.245	1	.134
MONO_POL(1)	1.868	1	.172
AGEMARRX(1)	1.120	1	.290
NUCHILDZ	6.213	3	.102
NUCHILDZ(1)	.008	1	.928
NUCHILDZ(2)	.088	1	.767

NUCHILDZ(3)	2.635	1	.105
SONS_CAT	2.857	2	.240
SONS_CAT(1)	.106	1	.745
SONS_CAT(2)	2.612	1	.106
OTHCHILD(1)	3.936	1	.047
TOTLSUPX	6.525	3	.089
TOTLSUPX(1)	.066	1	.798
TOTLSUPX(2)	.172	1	.679
TOTLSUPX(3)	1.396	1	.237
MOREKIDX(1)	3.839	1	.050
KNWALLSZ	3.486	3	.323
KNWALLSZ(1)	2.827	1	.093
KNWALLSZ(2)	1.273	1	.259
KNWALLSZ(3)	.334	1	.563
DECISION	1.972	2	.373
DECISION(1)	1.395	1	.238
DECISION(2)	1.970	1	.160
REAL_IDL	9.369	3	.025
REAL_IDL(1)	.020	1	.888
REAL_IDL(2)	8.864	1	.003
REAL_IDL(3)	1.170	1	.279
TIME_FPX	4.931	2	.085
TIME_FPX(1)	2.878	1	.090
TIME_FPX(2)	.749	1	.387

Step Five:
Variable Entered on Step Number Five: EDUCATNX
LR = 331.963 – 320.880 = 11.083
Df= 3, Significance: 0.011

----------Variables in the Equation----------

							95% CI for Exp(B)	
Variable	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
EVER_FPC	1.372	0.324	17.940	1	0.000	3.945	2.090	7.444
DIS_PART	1.519	0.553	7.550	1	0.006	4.568	1.546	13.498
SPCTIMEY	0.721	0.276	6.824	1	0.009	2.056	1.197	3.530
EDUCATNX			10.269	3	0.016			
EDUCATNX(1)	0.634	0.362	3.064	1	0.080	1.885	0.927	3.834
EDUCATNX(2)	0.538	0.334	2.593	1	0.107	1.712	0.890	3.294
EDUCATNX(3)	1.669	0.577	8.359	1	0.004	5.309	1.712	16.464
Constant	-2.932	0.549	28.538	1	0.000	N/A	N/A	N/A

----------Variables not in the Equation----------

Residual Chi Square (df 28): 30.116 Sig. =0.358

Variables	Score	df	Sig.
URB_RUR(1)	.276	1	.599
AGE	3.330	1	.068
OCCUPATX	4.715	4	.318
OCCUPATX(1)	.043	1	.836
OCCUPATX(2)	2.029	1	.154
OCCUPATX(3)	.895	1	.344
OCCUPATX(4)	.137	1	.711
MONO_POL(1)	2.962	1	.085
AGEMARRX(1)	.642	1	.423
NUCHILDZ	8.246	3	.041
NUCHILDZ(1)	.066	1	.798
NUCHILDZ(2)	.186	1	.666
NUCHILDZ(3)	4.774	1	.029
SONS_CAT	4.655	2	.098
SONS_CAT(1)	.088	1	.766
SONS_CAT(2)	4.099	1	.043
OTHCHILD(1)	2.400	1	.121
TOTLSUPX	5.970	3	.113
TOTLSUPX(1)	.173	1	.677
TOTLSUPX(2)	.120	1	.729
TOTLSUPX(3)	1.716	1	.190
MOREKIDX(1)	3.846	1	.050
KNWALLSZ	2.867	3	.413
KNWALLSZ(1)	2.351	1	.125
KNWALLSZ(2)	1.482	1	.223
KNWALLSZ(3)	.021	1	.884
DECISION	.970	2	.616
DECISION(1)	.600	1	.439
DECISION(2)	.965	1	.326
REAL_IDL	10.027	3	.018
REAL_IDL(1)	.009	1	.926
REAL_IDL(2)	9.628	1	.002
REAL_IDL(3)	.654	1	.419
TIME_FPX	4.074	2	.130
TIME_FPX(1)	2.580	1	.108
TIME_FPX(2)	.467	1	.495

Step Six:
Variable Entered on Step Number Six: REAL_IDL
LR = 320.88 – 311.015 = 9.865
Df= 3, Significance: 0.020

----------Variables in the Equation----------

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B) Lower	Upper
EVER_FPC	1.313	0.331	15.783	1	0.000	3.719	1.945	7.110
DIS_PART	1.389	0.562	6.113	1	0.013	4.012	1.334	12.067
SPCTIMEY	0.695	0.281	6.092	1	0.014	2.003	1.154	3.477
EDUCATNX			10.788	3	0.013			
EDUCATNX(1)	0.668	0.375	3.167	1	0.075	1.950	0.935	4.067
EDUCATNX(2)	0.547	0.340	2.590	1	0.108	1.728	0.888	3.365
EDUCATNX(3)	1.759	0.588	8.945	1	0.003	5.807	1.834	18.388
REAL_IDL			9.713	3	0.021			
REAL_IDL(1)	0.253	0.430	0.346	1	0.557	1.288	0.554	2.991
REAL_IDL(2)	1.016	0.339	8.977	1	0.003	2.763	1.421	5.373
REAL_IDL(3)	-0.069	0.497	0.019	1	0.889	0.933	0.352	2.471
Constant	-3.077	0.575	28.682	1	0.000	N/A	N/A	N/A

----------Variables not in the Equation----------

Residual Chi Square (df 25): 20.727 Sig. =0.708

Variables	Score	df	Sig.
URB_RUR(1)	.574	1	.449
AGE	.172	1	.679
OCCUPATX	3.973	4	.410
OCCUPATX(1)	.011	1	.915
OCCUPATX(2)	1.571	1	.210
OCCUPATX(3)	.371	1	.542
OCCUPATX(4)	.533	1	.465
MONO_POL(1)	1.581	1	.209
AGEMARRX(1)	.273	1	.601
NUCHILDZ	4.199	3	.241
NUCHILDZ(1)	2.079	1	.149
NUCHILDZ(2)	.725	1	.395
NUCHILDZ(3)	.465	1	.495
SONS_CAT	.883	2	.643
SONS_CAT(1)	.126	1	.723
SONS_CAT(2)	.846	1	.358
OTHCHILD(1)	1.522	1	.217
TOTLSUPX	3.449	3	.327
TOTLSUPX(1)	.760	1	.383
TOTLSUPX(2)	.025	1	.874

TOTLSUPX(3)	.001	1	.973
MOREKIDX(1)	.054	1	.816
KNWALLSZ	2.805	3	.423
KNWALLSZ(1)	1.875	1	.171
KNWALLSZ(2)	1.972	1	.160
KNWALLSZ(3)	.091	1	.763
DECISION	.636	2	.728
DECISION(1)	.523	1	.470
DECISION(2)	.620	1	.431
TIME_FPX	3.961	2	.138
TIME_FPX(1)	2.410	1	.121
TIME_FPX(2)	.547	1	.460

Logistic Regression of Clinic Sample Dataset: Model Building Steps

Method: Forward Stepwise (LR)

Step One:
Total number of cases: 268
Number of cases included in analysis: 246

Initial –2 Log Likelihood: 273.324

----------Variables in the Equation----------

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B) Lower	Upper
Constant	-1.131	0.148	58.071	1	0.000	0.323	N/A	N/A

----------Variables not in the Equation----------

Residual Chi Square (df 33): 93.619 Sig. <0.001

Variables	Score	df	Sig.
URB_RUR(1)	13.238	1	.000
AGE	.011	1	.918
EDUCATNX	27.798	3	.000
EDUCATNX(1)	.366	1	.545
EDUCATNX(2)	10.098	1	.001
EDUCATNX(3)	10.271	1	.001
OCCUPATX	19.671	4	.001
OCCUPATX(1)	6.274	1	.012
OCCUPATX(2)	.054	1	.816
OCCUPATX(3)	8.298	1	.004
OCCUPATX(4)	6.086	1	.014
EVER_FPC(1)	22.854	1	.000
TIME_FPX	19.599	2	.000
TIME_FPX(1)	12.003	1	.001
TIME_FPX(2)	2.075	1	.150
AGEMARRX(1)	9.900	1	.002
RELIGION	10.457	2	.005
RELIGION(1)	10.376	1	.001
RELIGION(2)	1.162	1	.281
SPCTIMEY(1)	10.661	1	.001
KNWALLSZ	9.544	3	.023
KNWALLSZ(1)	.564	1	.453
KNWALLSZ(2)	2.204	1	.138
KNWALLSZ(3)	2.363	1	.124

WIFE_KID(1)	4.713	1	.030
SONS_CAT	3.480	2	.176
SONS_CAT(1)	1.545	1	.214
SONS_CAT(2)	3.075	1	.080
TRIBEX(1)	2.792	1	.095
MOREKIDX(1)	1.391	1	.238
REAL_IDL	3.392	3	.335
REAL_IDL(1)	.077	1	.781
REAL_IDL(2)	2.350	1	.125
REAL_IDL(3)	.480	1	.488
TOTLSUPX	1.744	3	.627
TOTLSUPX(1)	.617	1	.432
TOTLSUPX(2)	1.492	1	.222
TOTLSUPX(3)	.002	1	.967
NUCHILDZ	.711	3	.871
NUCHILDZ(1)	.002	1	.965
NUCHILDZ(2)	.448	1	.503
NUCHILDZ(3)	.044	1	.835

Step Two:
Variable Entered on Step Number Two: EVER_FPC
LR = 273.324 – 253.186 = 20.138
Df= 1, Significance: <0.001

----------Variables in the Equation----------

							95% CI for Exp(B)	
Variable	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
EVER_FPC	1.627	.361	20.301	1	.000	5.088	2.507	10.326
Constant	-1.480	.180	67.841	1	.000	N/A	N/A	N/A

----------Variables not in the Equation----------

Residual Chi Square (df 32): 78.304 Sig. <0.000

Variables	Score	df	Sig.
URB_RUR(1)	11.229	1	.001
AGE	.006	1	.940
EDUCATNX	19.037	3	.000
EDUCATNX(1)	.755	1	.385
EDUCATNX(2)	5.329	1	.021
EDUCATNX(3)	6.526	1	.011
OCCUPATX	15.469	4	.004
OCCUPATX(1)	6.009	1	.014
OCCUPATX(2)	.212	1	.645
OCCUPATX(3)	6.326	1	.012

OCCUPATX(4)	4.034	1	.045
TIME_FPX	23.143	2	.000
TIME_FPX(1)	15.817	1	.000
TIME_FPX(2)	1.592	1	.207
AGEMARRX(1)	9.020	1	.003
RELIGION	7.119	2	.028
RELIGION(1)	7.075	1	.008
RELIGION(2)	.736	1	.391
SPCTIMEY(1)	8.865	1	.003
KNWALLSZ	5.999	3	.112
KNWALLSZ(1)	.103	1	.748
KNWALLSZ(2)	1.613	1	.204
KNWALLSZ(3)	.755	1	.385
WIFE_KID(1)	3.033	1	.082
SONS_CAT	2.572	2	.276
SONS_CAT(1)	1.608	1	.205
SONS_CAT(2)	1.891	1	.169
TRIBEX(1)	3.762	1	.052
MOREKIDX(1)	1.789	1	.181
REAL_IDL	3.739	3	.291
REAL_IDL(1)	.042	1	.837
REAL_IDL(2)	2.258	1	.133
REAL_IDL(3)	.771	1	.380
TOTLSUPX	2.015	3	.569
TOTLSUPX(1)	1.038	1	.308
TOTLSUPX(2)	1.751	1	.186
TOTLSUPX(3)	.064	1	.800
NUCHILDZ	.734	3	.865
NUCHILDZ(1)	.000	1	.993
NUCHILDZ(2)	.588	1	.443
NUCHILDZ(3)	.259	1	.611

Step Three:
Variable Entered on Step Number Three: TIME_FPX
LR = 253.186 – 231.051 = 22.135
Df= 2, Significance: <0.001

----------Variables in the Equation----------

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95% CI for Exp(B) Lower	Upper
EVER_FPC	1.883	0.395	22.737	1	0.000	6.576	3.032	14.262
TIME_FPX			20.858	2	0.000			
TIME_FPX(1)	-1.534	0.350	19.249	1	0.000	0.216	0.109	0.428
TIME_FPX(2)	-2.252	1.101	4.180	1	0.041	0.105	0.012	0.911
Constant	-0.518	0.258	4.024	1	0.045	0.596		

----------Variables not in the Equation----------

Residual Chi Square (df 30): 58.729 Sig. =0.001

Variables	Score	df	Sig.
URB_RUR(1)	4.836	1	.028
AGE	.229	1	.632
EDUCATNX	14.301	3	.003
EDUCATNX(1)	2.373	1	.123
EDUCATNX(2)	2.316	1	.128
EDUCATNX(3)	4.194	1	.041
OCCUPATX	12.047	4	.017
OCCUPATX(1)	6.874	1	.009
OCCUPATX(2)	.693	1	.405
OCCUPATX(3)	3.092	1	.079
OCCUPATX(4)	2.959	1	.085
AGEMARRX(1)	7.565	1	.006
RELIGION	7.589	2	.022
RELIGION(1)	7.199	1	.007
RELIGION(2)	1.762	1	.184
SPCTIMEY(1)	5.441	1	.020
KNWALLSZ	4.983	3	.173
KNWALLSZ(1)	.028	1	.867
KNWALLSZ(2)	1.781	1	.182
KNWALLSZ(3)	.169	1	.681
WIFE_KID(1)	1.845	1	.174
SONS_CAT	2.871	2	.238
SONS_CAT(1)	2.001	1	.157
SONS_CAT(2)	1.925	1	.165
TRIBEX(1)	3.715	1	.054
MOREKIDX(1)	1.979	1	.160
REAL_IDL	4.712	3	.194
REAL_IDL(1)	.012	1	.912
REAL_IDL(2)	1.419	1	.234
REAL_IDL(3)	2.294	1	.130

TOTLSUPX	.782	3	.854
TOTLSUPX(1)	.399	1	.528
TOTLSUPX(2)	.637	1	.425
TOTLSUPX(3)	.039	1	.843
NUCHILDZ	.518	3	.915
NUCHILDZ(1)	.090	1	.764
NUCHILDZ(2)	.201	1	.654
NUCHILDZ(3)	.242	1	.622

Step Four:
Variable Entered on Step Number Four: EDUCATNX
LR =231.051 – 216.824 = 14.227
Df= 3, Significance: 0.003

----------Variables in the Equation----------

							95% CI for Exp(B)	
Variable	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
EVER_FPC	1.633	0.419	15.180	1	0.000	5.117	2.251	11.633
TIME_FPX			17.085	2	0.000			
TIME_FPX(1)	-1.492	0.374	15.910	1	0.000	0.225	0.108	0.468
TIME_FPX(2)	-1.910	1.093	3.054	1	0.081	0.148	0.017	1.261
EDUCATNX			13.327	3	0.004			
EDUCATNX(1)	1.219	0.482	6.405	1	0.011	3.384	1.316	8.697
EDUCATNX(2)	1.085	0.405	7.164	1	0.007	2.959	1.337	6.550
EDUCATNX(3)	1.900	0.677	7.866	1	0.005	6.683	1.772	25.203
Constant	-1.193	0.343	12.107	1	0.001	0.303		

----------Variables not in the Equation----------

Residual Chi Square (df 27): 48.168 Sig. =0.007

Variables	Score	Df	Sig.
URB_RUR(1)	1.497	1	.221
AGE	.022	1	.881
OCCUPATX	7.836	4	.098
OCCUPATX(1)	5.415	1	.020
OCCUPATX(2)	.653	1	.419
OCCUPATX(3)	1.903	1	.168
OCCUPATX(4)	.176	1	.675
AGEMARRX(1)	4.539	1	.033
RELIGION	5.333	2	.069
RELIGION(1)	4.671	1	.031
RELIGION(2)	1.993	1	.158

SPCTIMEY(1)	4.434	1	.035
KNWALLSZ	1.976	3	.577
KNWALLSZ(1)	.073	1	.786
KNWALLSZ(2)	.974	1	.324
KNWALLSZ(3)	.195	1	.659
WIFE_KID(1)	.412	1	.521
SONS_CAT	2.216	2	.330
SONS_CAT(1)	1.720	1	.190
SONS_CAT(2)	1.268	1	.260
TRIBEX(1)	6.303	1	.012
MOREKIDX(1)	1.368	1	.242
REAL_IDL	6.361	3	.095
REAL_IDL(1)	.100	1	.752
REAL_IDL(2)	1.453	1	.228
REAL_IDL(3)	3.825	1	.050
TOTLSUPX	2.152	3	.542
TOTLSUPX(1)	1.048	1	.306
TOTLSUPX(2)	1.927	1	.165
TOTLSUPX(3)	.015	1	.903
NUCHILDZ	1.239	3	.744
NUCHILDZ(1)	.030	1	.862
NUCHILDZ(2)	.756	1	.385
NUCHILDZ(3)	.684	1	.408

Step Five:
Variable Entered on Step Number Five: TRIBEX
LR = 216.824 – 211.022 = 5.802
Df= 1, Significance: 0.016

----------Variables in the Equation----------

							95% CI for Exp(B)	
Variable	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
EVER_FPC	1.698	0.425	16.007	1	0.000	5.466	2.378	12.560
TIME_FPX			17.108	2	0.000			
TIME_FPX(1)	-1.528	0.380	16.137	1	0.000	0.217	0.103	0.457
TIME_FPX(2)	-1.804	1.094	2.717	1	0.099	0.165	0.019	1.406
EDUCATNX			15.062	3	0.002			
EDUCATNX(1)	1.470	0.504	8.511	1	0.004	4.347	1.620	11.668
EDUCATNX(2)	1.215	0.420	8.366	1	0.004	3.372	1.480	7.684
EDUCATNX(3)	2.009	0.703	8.167	1	0.004	7.457	1.880	29.578
TRIBEX	1.223	0.501	5.944	1	0.015	3.396	1.271	9.075
Constant	-1.463	0.374	15.266	1	0.000	0.232		

----------Variables not in the Equation----------

Residual Chi Square (df 26): 42.060 Sig. =0.024

Variables	Score	Df	Sig.
URB_RUR(1)	1.486	1	.223
AGE	.059	1	.808
OCCUPATX	7.247	4	.123
OCCUPATX(1)	5.426	1	.020
OCCUPATX(2)	.367	1	.545
OCCUPATX(3)	1.887	1	.170
OCCUPATX(4)	.027	1	.871
AGEMARRX(1)	3.712	1	.054
RELIGION	5.235	2	.073
RELIGION(1)	4.939	1	.026
RELIGION(2)	1.404	1	.236
SPCTIMEY(1)	3.315	1	.069
KNWALLSZ	2.322	3	.508
KNWALLSZ(1)	.080	1	.777
KNWALLSZ(2)	1.389	1	.239
KNWALLSZ(3)	.524	1	.469
WIFE_KID(1)	.360	1	.548
SONS_CAT	1.761	2	.415
SONS_CAT(1)	1.291	1	.256
SONS_CAT(2)	1.103	1	.294
MOREKIDX(1)	1.762	1	.184
REAL_IDL	6.999	3	.072
REAL_IDL(1)	.232	1	.630
REAL_IDL(2)	1.625	1	.202
REAL_IDL(3)	4.208	1	.040
TOTLSUPX	2.514	3	.473
TOTLSUPX(1)	.644	1	.422
TOTLSUPX(2)	2.502	1	.114
TOTLSUPX(3)	.178	1	.673
NUCHILDZ	1.874	3	.599
NUCHILDZ(1)	.093	1	.760
NUCHILDZ(2)	1.017	1	.313
NUCHILDZ(3)	1.023	1	.312