

Unmet Need for Family Planning among couples in Kenya

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Master Thesis

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Abstract

Usually studies on unmet need have been women-based paying no attention to men's views yet consensus steers best reproductive decisions. This study sought to examine factors responsible for couple unmet need for family planning using couple based approach in order to unearth opportunities for practical and policy approaches to accelerate the uptake of contraceptives among couples in Kenya. The study adopted the theory of planned behaviour, the behaviour-specific contexts, to elucidate the determinants of couple unmet need for family planning among couples in Kenya. The descriptive and analytical quantitative study used couple data derived from Kenya Demographic Health survey-2009, and logit models as analysis techniques.

Results indicate that total couple unmet need for FP (13%) is inversely related to reproductive lifespan; women empowerment, education, and decision-making are significant predictors of couple unmet need. Employed women are 1.5 times less likely to have couple unmet need relative to unemployed ones, and husband dominance in decision-making is associated with 2 times high couple unmet need. Exposure to information significantly predicts couple unmet need, couples lacking exposure to information are twice as likely to have couple unmet need. Men's positive attitude on FP comes with 2.5 times lower odds of couple unmet need relative to men with negative attitudes. Thus, addressing unmet need should be couple based and policies on unmet need for FP should target couples as a unit with regard to key predictors highlighted in this study.

Key Words: Couple-unmet-need, Contraception, Family planning, Kenya

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List of Acronyms

APHRC	:	African Population and Health Research Centre
APR &D	:	Adolescent Reproductive Health and Development
FP	:	Family Planning
HH	:	Household
HIV/AIDs	:	Acquired Immune deficiency
ICPD	:	International Conference on Population and Development
KAP	:	Knowledge Attitude and Practice
KDHS	:	Kenya Demographic and Health Survey
KNBS	:	Kenya National Bureau of statistics
MDG	:	Millennium Development Goal
O.R	:	Odds Ratio
RH	:	Reproductive Health
STI	:	Sexually Transmitted Disease
TV	:	Television Network
UN	:	United Nations
UNFPA	:	United Nations Population Fund
USAID	:	United States Agency for International Development

Chapter One: Study Background

1.1 Introduction

Kenyan family planning programs traces its root from the 1960s, and implementation of various reproductive health policy programs in order to plan and curb its ever growing population now estimated at 38.6 million (KNBS, 2009). This was after the government recognized the detrimental effect of unprecedented population growth to national development (UN, 1995; APHRC, 2001). However, despite such efforts to control and plan for the population, Kenya's demographic indicators have persistently failed to decrease and have remained high by international standards. The country has witnessed high fertility levels averaging at five children per woman in the past two decades and contraceptive prevalence estimated at 46 percent (KDHS, 2009).

The need to improve demographic and health indicators in a bid to enhance societal development necessitates vigorous developmental policies and programs. The 1994 International Conference on Population and Development (ICPD) Cairo, a landmark conference, emulated this well and which saw the government of Kenya reinvigorate her commitment to improve and better the reproductive status of her population through drafting of different policy guidelines. These were reproductive health concerns emphasizing on the need to make available quality and sustainable family planning services to all who need them and to reduce the levels of unmet needs for family planning (APHRC, 2001; Ojaka, 2008; Finkle & McIntosh, 2002; Ashford, 2003).

Of pertinent interest from policy programming, is the need to reduce unmet need for family planning, that is, the need to avoid or postpone childbearing but not using any method of contraception (Casterline & Sinding, 2000). Indeed, the Knowledge, Attitude, and Practice (KAP) gap indentified after the world fertility surveys of 1960s revealed that a considerable number of women were not using contraceptives despite their desire to space and stop childbearing, which necessitated vigorous demographic policy interventions (Westoff, 1978; Casterline & Sinding, 2000).

Unmet need for family planning which refers to the condition of wanting to avoid or postpone child birth and not using any method of contraception came into use in the 1960s and since then has been a core concept for more than three decades in population circles. The desire to broaden the definition of this concept since the KAP surveys has seen many studies undertaken in this area. Westoff (1978) produced a five-country study substituting the phrase for KAP-gap with "unmet need for family planning" as part of an effort to come up with a more refined measures of the discrepancy between fertility preferences and contraceptive use. In addition, later studies by Westoff and colleagues continued refining this definition and in 1981, Westoff & Pebley came up with 12 alternative definitions, which showed that different measures produced different estimates ranging from 58% in Peru to 24% in Kenya. In their later definition, they recommend to broaden the concept of unmet to cover the desire to space births as well as to limit childbearing (Westoff & Pebley, 1981). Likewise, Norman (1982) broadened the definition of unmet need by arguing for the inclusion of pregnant, breastfeeding, and amenorrheic women since some may require contraception as soon as their infecund statuses ended (Norman 1982 in Casterline & Sinding 2000). Furthermore, it is in the DHS surveys that consolidation of these different definitions has been undertaken by redefining the infecund group of women. The KDHS, 2009 redefined the infecund women by including all women who had declared that they could not get pregnant when asked about their fertility preferences for additional children and those who were not using any method and reported that they were menopausal or had hysterectomy. Moreover, the DHS definition

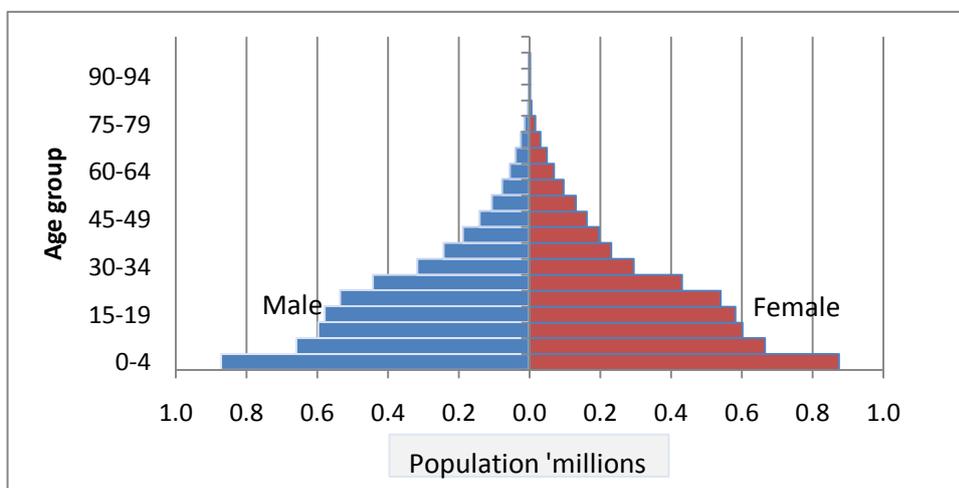
categorizes women with unmet need for FP depending on whether they have unmet need or met need to space or limit their future births. In this study the DHS definition is pursued while incorporating the men’s views on fertility

Furthermore, the condition of wanting to avoid or postpone childbearing but not using any method of contraception has been associated with poor maternal and child health indicators. Certainly, USAID (2006) indicates that up to 100, 000 maternal deaths in developing countries could be avoided if women who did not want to have any children used effective contraceptive methods. In addition, without unmet need for family planning, an estimated 51 million unwanted pregnancies and 25 percent of unwanted pregnancies due to incorrect, failure or inconsistent use of contraceptive would be averted worldwide (Prata et al, 2009; Westoff, 1978, 1988).

For the case of Kenya, notwithstanding the tremendous reproductive health and family planning programming to help couples/individuals regulate their fertility desires, the levels of unmet need for family planning has remained virtually constant at 25 percent in the past three decades among married women (KDHS, 2009). This has development and policy implications for the country due to the resultant high population growth rate (2.8%), constant and pitiable fertility levels and maternal and child indicators. It should be noted that in the past implementation of reproductive health programs have been putting women in the centre ignoring the role of men and yet, decision on fertility preferences are best achieved through mutual communication between a man and woman (Becker, 1996; Ngom, 1997; Ojaka, 2008). Furthermore, the causes of unmet need for family planning are complex and different studies from 1990s have continued to show a range of obstacles that inhibit women’s ability to act on their childbearing preferences (Ashford, 2003; Becker, 1996).

Henceforth, this study seeks to examine factors responsible for *couple unmet need* for family planning in a bid to unearth opportunities for pragmatic and policy approaches to accelerate the uptake of contraceptives among couples. Indeed, there is evidence that shifting reproductive health (RH) interventions from targeting women to a couples’ perspective can reduce the level of unmet need for family planning considerably (Bankole & Ezech, 1999; Becker, 1996). This therefore gives an insight to studying couples as an entity while examining the concept of unmet need in Kenya. Furthermore, understanding and explaining the wide regional differences in contraceptive use and unmet need for FP depicted in most DHS studies in the country.

Figure 1. Population Structure of Kenya



Source: US beauralof Census.

1.2 Study Objective

To examine factors determining couple unmet need for Family planning in order to unearth opportunities for pragmatic and policy approaches to accelerate the uptake of contraceptives among couples in Kenya.

1.3 Research Questions

1. What demographic and socioeconomic factors determine unmet need for family planning among couples in Kenya?
2. To what extent has women empowerment contributed to unmet need among couples in Kenya?
3. What is the influence of exposure to mass media on unmet need among couples in Kenya?
4. What are the attitudes of couples towards use of family planning in Kenya and to what extent does this affect the level of unmet need for family planning

1.4 Problem Statement/ Rationale

The paradigm shift for family planning to a broader concept of Reproductive Health including Sexually Transmitted Infections (STIs) and HIV/AIDS make it relevant to examine the concept of unmet need as a couple's issue (Becker, 1996;Omwango & Khasakhala,2002). Consequently, family planning programs should target couples of reproductive age singly. Indeed, Cleland et al. (2006) asserts that, the complexity of the concept of unmet need for family planning cannot be interpreted clearly, if individuals are treated in isolation. This is so because the desire for and timing of additional children and contraceptive practice are influenced by both biological and extra-individual factors, such as information, knowledge, income, accessibility, among others. More still, the International Conference on Population and Development (ICPD) Program of Action, encourages reproductive health care programs to give support and adoption of a more holistic approach to addressing men and women or couples' reproductive needs (UN, 1995).

Furthermore, most scholars have examined unmet need as a married woman's concept, due to such factors as women are more central and they are directly involved in reproduction; methods for women are more developed as opposed to those for men (Becker, 1996). However, exploring a couple-based approach to the phenomenon of unmet need for family planning will provide a more programmatic and policy approach to accelerate the uptake of contraceptive use. This approach has received wider advocacy and acknowledgement since men and women have different fertility preferences (Bankole, 1995; Ezeh, 1993; Becker, 1996). Indeed increasing the uptake of contraceptive use and more so to regions which are resource scarce would bring about a host of other benefits such as improvement in maternal and child health as well as decreasing fertility and hence help slow population growth within a human rights framework (Prata, 2009). It is against this background that this study examines factors determining couple unmet need for FP in order to unearth opportunities for programmatic and policy approaches to accelerate the uptake of contraceptives among couples in Kenya.

1.5 Structure of the Paper

The paper is composed of five (5) chapters. The first chapter, the introduction includes the background that gives a brief of unmet need for FP within the Kenyan context highlighting on the Government's efforts to control and plan for its population through family planning policies. The rationale of the problem that need policy interventions, the objective, and the research questions of the study are in this chapter.

Chapter 2 presents and discusses the various literatures that are relevant to the study as well as providing the theoretical framework, which links different concepts of the study. The third chapter presents and discusses the data and methodology used in the implementation of the research. Chapter 4 presents the results of the study, giving a brief description and explanation of the results for each objective. Finally, chapter 5 presents the discussion of the results, conclusions, and policy recommendations reflecting on the study objectives and the results found. A list of references thus concludes the paper.

Chapter Two: Literature Review, Theories and Concepts

2.1 Introduction

This chapter presents relevant literature on the topic as stipulated in the study objective, it provides different findings and theoretical arguments on factors associated with unmet need for family planning. In addition, a theoretical framework is presented to illustrate the linkage of concepts that is , how a couple's background characteristics impact on its attitude, subjective norms and perceived behavioural control as intermediaries to effect the behavioural intentions to act on their fertility preferences or desires.

2.2 Demographic and Socioeconomic and Unmet Need for Family Planning

Like utilization of other health services, a number of demographic and socioeconomic factors influence contraceptive use. Indeed, UNFPA (2007) clearly indicates a closer link between unmet need for family planning, and gender equity and socioeconomic development. That is, the socially constituted gender roles and responsibilities build a barrier between husband and wife to deliberate freely on matters of reproductive health. This elevates men over women in initiating need and healthy discussions in the family and in the society as a whole.

Furthermore, unmet need for family planning differs on the course of reproductive life span. Mothers who have just entered their reproductive life span have different fertility desires and preference as opposed to mothers in their advanced ages in the reproductive ages. This perhaps makes unmet need for family planning differ by ages of mothers; this may bring two peaks of unmet need to space and unmet need to limit births. Certainly, young mothers have been found to have unmet need to space their birth while, older mothers are challenged with the unmet need to limit births (Al Jawadi & Al Backery, 2010 ;).

The level of one's education is very important in making choices in life, and accepting changes in social life. Thus, education makes individuals open minded and therefore amenable to change. As regards making choices on reproductive health matters education is found to be an important factor in determining couple's fertility desires and preferences. Education does not only help to postpone exposure to childbearing but also helps couples to value and judge the quality of life they want to pursue. It has been found that women who have higher levels of education have positive attitude towards reproductive matters (Al Jawadi & Al Backery, 2010; Riyami et al., 2004). Consequently, women with higher education have higher rate of contraceptive use than those with low levels of education (Ikamar & Lwanga, 2000; UNFPA, 2007). Furthermore, lack of formal education for women is very detrimental to positive changes, knowledge, and use of contraceptives by women (Beekle & McCabe, 2006; Dinc et al., 2007).

Locality or one's place of residence determines one's access to services and exposure to information. It is common to find regional differences in levels of utilization or access to social services, and normally this work in disfavour of rural areas. Place or region of residence is thus central as far as contraceptive use is concerned (Omwago & Khasakhala, 2002). Indeed, a study in Turkey indicates that the level of unmet need for FP in rural areas was two times that of urban areas (Dinc et al., 2007). Similarly, Bhandar et al. (2006) in a study conducted in Nepal indicate regional variations in levels of unmet need for family planning. Moreover, people in rural areas are disadvantaged on all social services, have low education opportunities, socioeconomic status and limited access to family planning services (Beekle & McCabe, 2006; Dinc et al., 2007). Nevertheless, with diversified and improved

programming in health, health service delivery can be enhanced to meet the demands of rural poor and the illiterates (UNFPA, 2007).

Parity or the number of births a woman has had is profound in making decision on starting use of contraceptives. That is women or couples who have had a child or a number of children would want to space or limit their births respectively. Thus, the number of living children is a significant determinant of contraceptive use (Al Jawadi & Al Backery, 2010; Ikamari & Lwanga, 2000; Omwago & Khasakhala, 2002; Bhandar et al., 2006). Certainly, a study conducted in Nigeria indicates a significant association between parity (number of children that a woman has given birth to) and unmet need for family planning (Igwegbe et al., 2009).

Furthermore, marital status being a basic factor in reproductive sphere has a role to play as regards contraceptive use. Omwago & Khasakhala (2002) in their study conducted in Kenya indicates that the level of unmet need for couples is much lower as compared to that of either married women or men separately.

Religious belief one holds is profound in influencing one's belief and attitudes towards contraceptive uses. Catholics have traditionally been against any means to control fertility citing any such act as ungodly. Similarly, Moslems have been pronatalist quoting the Quran ordering any married man to reproduce as much as he can. Indeed, studies have shown significant effect of religion on unmet need for family planning (Bhandar et al., 2006).

In addition, age at marriage is a strong determinant of fertility level. The earlier a woman starts on childbearing the longer her risk of exposure to pregnancy. This interrelationship of age at first marriage and fertility level directly and indirectly has something to do with unmet need for family planning. This assertion is confirmed in Bhandar et al. (2006) in a study conducted among Nepalese couples.

Partner's level of education and occupational status are important factors that influence family planning practices. A partner with higher level of education is very likely to be informed and supportive about reproductive practices. Similarly, partner's occupational status is influential as far as access and affordability of reproductive health products and contraceptive products in particular are concerned (Ikamari & Lwanga, 2000). Most important, the educational attainment and occupational status of a wife is very influential as regards spousal discussion on reproductive health (Igwegbe et al., 2009).

2.3 Women Empowerment and Unmet Need for Family Planning

There is nothing as good as being able to make decisions on ones social life with the right judgment. This has been the basis of all efforts behind gender equality through programs such as girls' education, women economic and political empowerment. Indeed, education has been recognized as a major factor in promoting women empowerment (ICPD, 1994). Women, who are educated, have potential and ability to associate themselves with modern lifestyles, participate in health promoting activities, and do away with fatalistic tendencies. Educational achievements of women have ripple effects within the family and across generations (UNFPA, 2007).

In addition, educated women are better placed to make decisions on issues that affect their health as well as that of their children or family members. Women with high level of education are empowered to make informed decisions about their reproductive life, control of

their fertility desires and preferences. Moreover, educated women are in a position to get into paid employment, which makes them have greater decision-making power for both their reproductive health, mobility and enhance their livelihood (Riyami et al., 2004).

Lack of women empowerment is entrenched in the gendered roles and responsibilities inculcated by cultural settings. These gendered roles and responsibilities gave men an exonerated position over women, a trend which has been in existent for centuries. As a result a woman has been overlooked as a responsible person regarding decision making and choices. These cultural institutionalized gender roles had blocked communication initiative for a woman's needs and right. Certainly, studies have indicated that poor communication among couples is detrimental on reproductive health needs and unmet need for family planning for that matter (Wolf et al, 2000). It should be noted that, husband-wife discussion on family planning is vital for the approval of family planning and eventual practice of a method. Thus, when women are empowered to communicate with their husband, a fertile ground is laid for implementation of their fertility desires and contraceptive needs (Omwago & Khasakhala, 2002).

2.4 Exposure to Mass Media and Unmet Need for Family Planning

Human behaviour follows reasonably and often spontaneously from the information possessed from their social environment. Information sources such as Television, Radio, and Newspapers are crucial in influencing the way people interpret issues and make decisions. Indeed, it is important for couples to have accurate and correct information about contraception from mass media because the use of any method of FP is inherently related to correct knowledge and information of the method. There has been enormous publicity of reproductive health such as "Family planning is safe and works" or "Family planning is safe" and this could boost couple's use of FP (Prata, 2009).

Furthermore, exposure to family planning programs and media had a significant impact on the level of unmet need for FP (Al Jawadi & Al Backery, 2009). Information and knowledge are a powerful factor in influencing attitudes and behaviours among people. Having right information or knowledge on health issues such as benefits and side effects on modern contraceptives could boost their utilization. Moreover, misinformation about contraception among couples is a leading barrier to FP. Fear of side effects is a major factor for nonuse of contraceptives due to widespread misinformation and belief that contraception has negative health impacts (Campbell & Bedford, 2009; Kotb et al., 2011).

It is argued that, the actual decline in fertility levels has been as a result of the gradual development and adoption to new value that is, small family sizes (Freedman & Coombs, 1974; Bongaarts, 1991). This reflects changes and the perceived cost and benefit of raising children, which has been a result of different information relating to family size, gender values and contraceptive technology. Hence, most of the actions which are depicted by couples in relation to unmet need are actually influenced by the information availed to them (Freedman & Coombs, 1974, in Casterline & Sinding 2000). In addition, Westoff & Bankole (1995) in Casterline & Sinding (2000) depict the importance of availing the right information to couples as regards access, cost, and proper use of family planning methods.

2.5 Attitudes of Couples and Unmet Need for Family Planning

People hold certain beliefs acquired from their social settings, which they might experience once they perform certain behaviours. Fishbein & Ajzen (2010), argue that these beliefs determine people's attitudes, which consequently determine their intentions to behaviour. Acquisition of any outside or new information such as from mass media is central to the formation of beliefs and attitudes that influence intentions to behaviour in question (Fishbein & Ajzen, 2010). Therefore, couple's intention to use contraception resulting from the attitudes already acquired from any sources affects the level of unmet need for family planning.

People's attitudes are socially and culturally constructed through norms, values and beliefs pertinent to that society. Subsequently, these socially constructed values and beliefs are translated into people's way of life and practices. For example, socio-cultural norms that institute husbands' dominance in family affairs are a disadvantage to reproductive health (Mason & Smith, 2000). The attitude here is that, a woman will always sit back for her husband to lead any initiative or discussion and decision-making. This kind of attitude has been found to influence women's contraceptive knowledge and practice (Beekle & McCabe, 2006).

Furthermore, socially constructed norms and belief inculcate low social status for women which is a barrier to spousal communication. Men tend to dominate communication in the family and in most cases oppose contraceptive use (Ngom, 1997). Men have been found to play an important role and often a dominant one when it comes to adoption of contraception. Couple's discussion has been found to be a strong determinant of contraceptives and other reproductive health issues (Casterline & Sinding, 2000). Moreover, spousal communication has been associated with current contraceptive practice (Igwegbe et al., 2009).

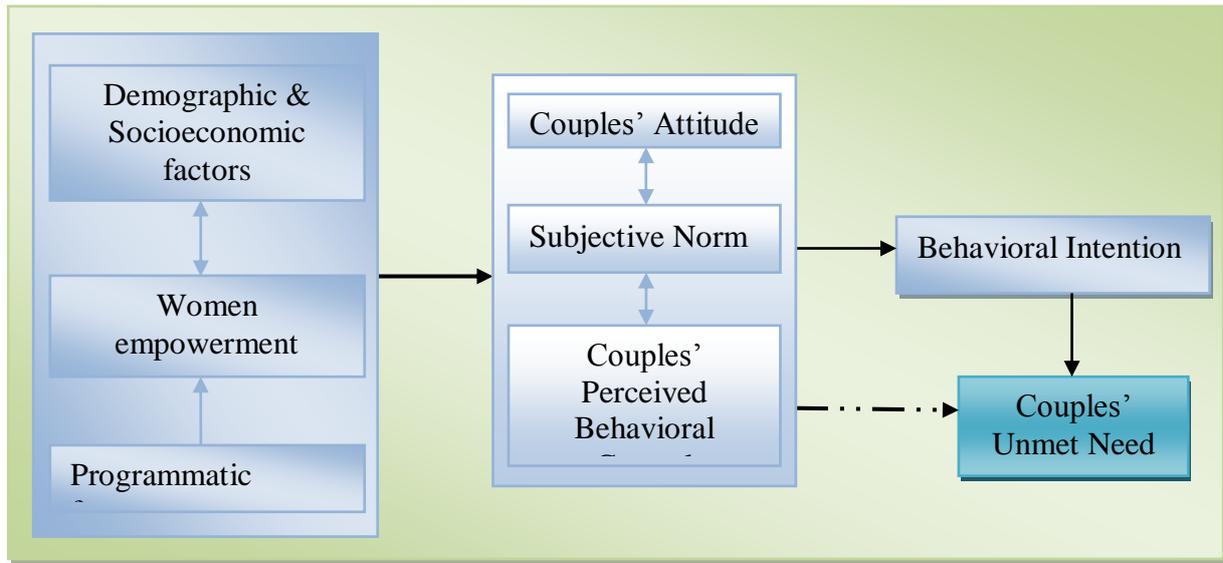
Henceforth, it is in view of these documentations that this study aims to address the issue of unmet need for family planning from a couples' perspective. The various demographic and socioeconomic as well as women empowerment and programmatic factors are integrated into a conceptual model adopted from Ajzen & Fishbein (1975, 1980, 1991, and 2010). This is detailed in Figure 2 below, which illustrate that individual behaviours are determined by intentions to behaviour, which individuals hold from their perceived norms, behavioural control and attitudes.

2.6 Theoretical Framework

"Theories are systematic sets of interrelated statements indented to explain some aspects of social life. They flesh out and specify paradigms which are general frame-works or viewpoints from which to view life" and offer a way of looking at reality (Babbie, 2010 p45). The main theory used in this study is that of Planned Behaviour an extension of the theory of reasoned action (Ajzen & Fishbein, 1975, 1980, 1991 and 2010). In this Theory, specific contexts of attitudes, subjective norms, and perceived behavioural control predicts behaviour. The theory, states that, for an individual to perform certain behaviour there must be an intention to perform that behaviour. The theory further states that the intention to perform the behaviour, if the individual has the necessary skills and abilities required to perform the behaviour and there are no environmental constraints preventing that behaviour performance, then the probability that the behaviour will be performed is close to one. According to this theory then, attitudes towards the behaviour, subjective norms and perceived behavioural control are key determinants of intention to perform the presumed behaviour. These proximate determinants of behaviour are therefore, influenced by a number

of background factors, which are the central part of this study. The behaviour, which leads to the overall goal, “unmet need for family planning,” is because of either to use or not use contraceptive. Intentions are assumed to capture the motivational factors that influence behaviour which in this case are the background factors such as Demographic factors, socio-economic factors, women empowerment and programmatic factors. This in turn determine to what extend couples’ attitudes, couples’ subjective norms and couples’ perceived behavioural control would affect the intention to contraceptive behaviour and thus lead to unmet need.

Figure 2. Conceptual Model



2.7 Definition and Operationalization of Concepts

This subsection gives operational definition to the key concepts that emerged through the theories and review of literatures in-line with the conceptual model above.

Unmet Need for family planning generally refers to the number of fecund women of reproductive age who do not want to have a child soon or ever but are not using any contraceptive (Measure DHS, 2009). A woman has unmet need for contraceptive if she is sexually active, not using any contraceptive method, and does not want a child for at least two years (spacers) or wants no more children (limiters). Furthermore, Men unmet need for family planning will refers to all Men of ages 15-54 who do not want to have a child soon or ever but are not using any contraceptive method. Men will have unmet need if they are sexually active, not using any method and do not want a child for at least 2 years (spacers) or wants no more (limiters)

Unmet Need to space: Refers to all women who are fecund and are neither pregnant nor postpartum amenorrhic and are not using any method of family planning and express that they want to wait for two or more years for their next birth. Men will have unmet need to apace if they desire children two or more years later and are not using any method of contraceptives.

Unmet to Limit: Relates to all women whose current pregnancy was unwanted, postpartum amenorrhic women whose last birth was unwanted and fecund women who are neither pregnant nor postpartum amenorrhic and all men (exposed) who indicated that they wanted no more children and were not using any method of contraceptives.

Met need for spacing: All women who are using any method for FP and express that they want to have another child or are undecided about the timing or whether to have another child. For men unmet for spacing includes all men who were using contraceptives and indicated a desire to have children

Met need for limiting: All women and men who were using any method of FP and want no more children.

Couple Unmet Need: Refers to couples who are within the reproductive ages, are sexually active and not currently using a method of family planning and want to stop or postpone child bearing. In this study couple unmet need will comprise couples where both partners wishes to space and limit child birth and are not using any method of family planning.

Behavioural Intention is both a function of attitudes and subjective norms towards behaviour on the actual behaviour. Moreover, the attitudes plus subjective norms influences behaviour (Fishbein & Ajzen, 1980). In this study couples' intention to limit or postpone births, use or not to use family planning methods influences the level of use of family planning and hence affects unmet need for family planning.

Attitudes determine the latent dispositions or tendencies to respond with some degree of favourableness or unfavourableness to a psychological object including behaviour. They are the Positive or Negative expectation whether real or imagined (Fishbein & Ajzen, 2010). Attitudes portray the degree, to which the performance of the behaviour, is positively or negatively valued. Likewise, a person's life experience due to direct observations or due to inference, processes institute attitudes (Fishbein & Ajzen, 1975).

Subjective Norm: Refers to the interpersonal influence in their own social environment, on their behavioural intentions and their beliefs weighted by the importance they attribute to each of their opinions (Fishbein & Ajzen, 1980). Generally, subjective norms refer to what is acceptable or permissible behaviour in a society placing limits to such behaviours in order to serve not only the individuals interests but also the community's interests (Fishbein & Ajzen, 2010).

Perceived behavioural control: the extent to which an individual believes that is capable of performing certain behaviours, or the perceived ease or difficulty of performing the particular behaviour (Fishbein & Ajzen, 2010). Therefore, perceived behavioural control is dependent on the total set of accessible control beliefs.

Demographic factors: Relate to personal characteristics such as Gender, age of couple, number of children, ethnicity, and total number of children ever born, Couples' wealth, couples' education, and religion.

Socio economic factors: these are shared or societal financially viable experiences and realities that help mood ones personality, attitudes and lifestyle (Chase, 2007). In this study, type of residence, (Rural/urban), Couples' wealth, couples' education, and religion are considered.

Women Empowerment: this refers to the women's sense of self worth concerning their rights to have and determine choices, opportunities and resources as well as controlling their lives, both within and outside the home (UNFPA, 1997).

Programmatic factors: or mass media consist of the various means by which information reaches large numbers of people such as television, radio, Newspapers, and the internet.

2.8 Operationalization of concepts

In this section the operational definitions of concepts are given. A lot of borrowing of definitions of terms has been done from the DHS as the study purely uses secondary data. Furthermore, for women unmet need the standard computation of unmet need, which is given as a ratio (equation 1) has been borrowed.

Women Unmet need for Family planning

The standard computation of unmet need, which is given as a ratio measured women unmet need for family planning directly from the DHS (Unmet need definition 2 of DHS). From this computation, 24.9 % women out of 1431 had unmet need for family planning, 14.2% and 10.7 % to space and limit respectively (see Figure 3). In addition equation 1 below shows the standard formula used in the DHS computation of unmet need.

Women Unmet need for Family planning..... (i)

$$\text{Unmet need for } \frac{\text{[Women (married or in a union) who are not using contraception, fecund, and desire to either stop childbearing or postpone their next birth for at least two years] + [pregnant women whose current pregnancy was unwanted or mistimed] + [women in post-partum amenorrhea who are not using contraception and, at the time they became pregnant, had wanted to delay or prevent the pregnancy].}{\text{Total number of women of reproductive age (15-49) who are married or in a union}} \times 100$$

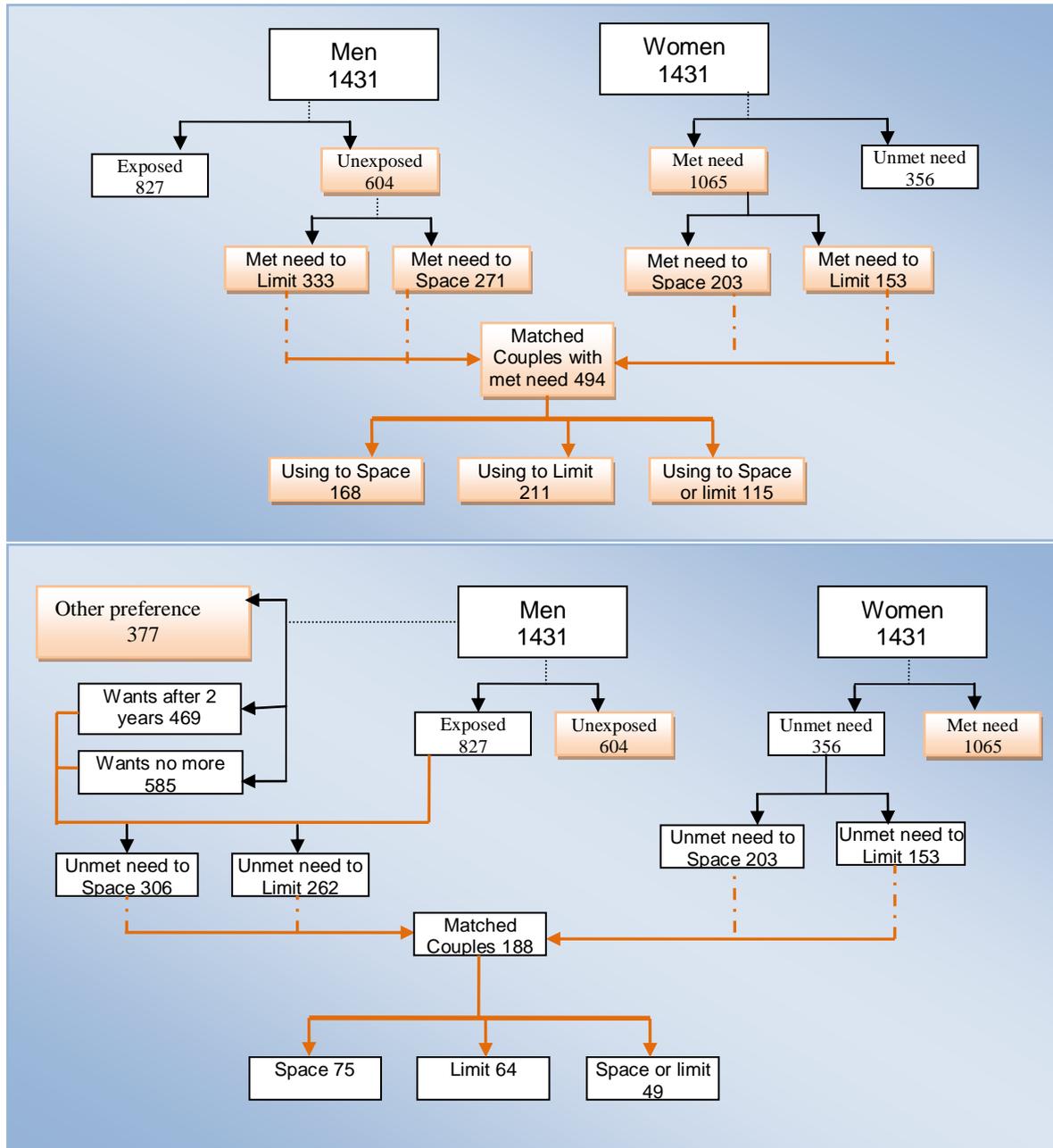
Men Unmet Need

In the 2009, KDHS did directly measure men unmet need for family planning (FP). Therefore, measuring men unmet need required some background data processing. Men exposed to unmet were identified from the variable of current contraceptive use that is all men who were not using any method of contraceptive were regarded as exposed.

Hence, more than half 58% out of 1431 men were found not to be using any method of contraceptive (variable MV 312). In addition, 73.7% men were found to have unmet need for family planning, 32.8 percent and 40.9 percent for spacing and limiting respectively. This was obtained from men's responses on desire for more children Variable (MV605).

Moreover, from the exposed men and men's desire variable, 39% were found to have unmet need for FP, 21.4 % and 18.3 % to space and limit respectively. Thus, a new variable of *men unmet need* was computed from the exposed men and desire for children variables (see Figure 3).

Figure 3. Construction of Couple Unmet Need for Family Planning



Couple unmet need for family planning

Couple unmet need likewise is not a straightforward variable in the DHS data collection. Computation of the variable is derived after several merging or matching of women and men with unmet need for FP (variables women and men unmet). The basic assumption is that, when both partners were found to have either unmet need to space or unmet need to limit, the couple is said to have unmet need for family planning. That is both partners' wishes to space and limit births and are not using any method of FP. Indeed couple unmet need for FP will only exist in a mutually understanding couple. Consequently, from the two variables of men and women unmet need for family planning, a new variable couple unmet need (total) for FP was computed. This, computation yielded to a third operational category of couple unmet need for FP, where each of the couples had conflicting unmet need, either to space or limit. (Becker, 1999) earlier noted this discrepancy. Hence, from the whole sample the definitive couple unmet need for FP constituted 13.1% (see Figure 3).

Attitudes are acquired generally from the beliefs that people have. Measuring attitudes therefore requires taking into consideration a person's responses to a set of belief statements. In the DHS, couple's responses to questions regarding views about their contraceptive use and fertility preference are obtained and rated to gauge attitudes from their husbands/partners' responses. Male respondents were asked questions such as: (1) Contraceptive is woman's business, man should not worry, (2) women who use contraceptives become promiscuous (3) child bearing is woman's concern and (4) responsibility for contraception. The first three questions' responses from men were, 0=disagree, 1=agree and 8=do not know, gave the degree to men's views which were positively or negatively rated to these questions. The fourth question which was rated as 1=mainly respondent, 2=mainly partner, 3=joint decision and 6=others indicated how husbands/ partners took the issue of contraception and hence their attitudes. Respondents who indicated joint decision had positive spousal communication and therefore were in mutual decision making and more so in marital and in family life. Both female and male respondents were asked on partner's views on contraception by families using and the responses which were rated as 1=approves, 2=disapproves and 3= does not know gave indication of attitude and acceptability of contraception

Subjective Norm was measured by such variables related to husband/partner's views on family planning and rated same as attitude, 0=disagree, 1=agree, and 3=don't know.

Behavioural Intention was measured through couple's intention to limit or postpone births. questions such as; 1=wants within two years, 2=wants after +two years, 3=wants unsure timings, 4=undecided, 5=wants no more, 6=sterilised, 7=declared in fecund and 8=never has sex, are therefore inferred to give couples' perceived ease or difficulty towards the behaviour which is either limiting or spacing births. For ease of analysis recoding to four categories has been done. 1=Wants after 2+ years, 2=Wants unsure timing, 3=Undecided and 4=Wants no more.

Demographic factors and socioeconomic factors, relate to personal characteristics and financially viable experiences included factors such as: type of place of residence (1=urban, 2=rural) age in five year groups which indicated completed years of respondents at the time of interview. (15-49 for women and 15-54 for men), highest educational level which had four categories: 0=no education. 1=primary, 2=secondary and 3=higher, religion, wealth index grouped into five categories, 1=poorest, 2=poorer, 3=middle, 4=richer and 5=richest, and number of children ever born. All the variables were directly taken from the DHS with minor adjustments in recoding some categories like education into no education=0, primary=1 and secondary and above= 2.

Women Empowerment is operationalized from the decision-making variables as well as from who has final say on household chores and RH activities. Questions asked in the DHS included such questions as who usually makes decisions about; (1) Contraception, with responses such as 1=mainly respondent, 2=mainly respondent/partner 3=joint decision, 6=other. (2) Who decides how to spend money 1=respondent alone, 2=respondent/partner, 3=respondent and other person, 4=husband/ partner alone, 5= someone else and 6=other. Likewise questions on who has final say on: (1) own Health, (2) making large Household(HH) purchases, (3) making purchases for daily HH needs, (4) Visits to family or relatives?, (5) for food to be cooked every day (6) Who usually deciding how the money husband earns will be used? In addition, (7) who usually decides on how many children to

have? Responses which are directly obtained from the DHS include 1="respondent alone" 2="respondent and husband/partner", 3="respondent and other person", 4="husband/ partner alone", 5= "someone else" and 6="other"

Programmatic factors:

Programmatic factors or mass media have been rated depending on whether one heard FP on Radio, Television or Newspaper last months and the frequency of reading newspapers or magazines, listening to the radio or watching the television. Questions on frequency, 0="Not at all", 1="less than once a week", 2="at least once a week" and 3="almost every day" while Questions for hearing FP included (1) heard FP on radio last months, (2) heard FP on TV last months and (3) heard FP on newspapers last months and two responses, 0=Yes and 1=No. All these variables and responses obtained from the DHS directly.

Table 1. A summary of Independent Variables

Variables	Definition	Category: Values
Type of place of residence	The place where respondents were interviewed	1=urban 2=rural
Age	Current age in 5-year age groups of the respondents (couples)	1=15-19 2=20-24 3=25-29 4=30-34 5=35-39 6=40-44 7=45-49 8=50-54*
Educational level	Highest educational level attended	0=No education 1=Primary 2=Secondary 3=Highest
Religion	Religion	1=Catholic 2=Protestant /other Christians 3=Muslims 4=Others
Wealth	Wealth index or economic status	1=Poorest 2=Poorer 3=Middle 4=Richer 5=Richest
Heard FP information on Radio, Television and Newspapers	Heard FP on Radio, Television and Newspapers last months	0=No 1=Yes
Frequency of reading, listening and watching FP information	Frequency of reading, listening and watching FP information on newspapers, radio and television	0=Not at all 1=less than once a weak 2=At least once a weak 3=Almost every day
Decision maker for using contraceptive	Decision maker for using contraceptive	1=Mainly respondent 2=Mainly husband, partner 3=Joint decision 6=Other
Decision on how to spend money	Who decides how to spend money	1=Mainly respondent 2=Mainly husband, partner 3=Joint decision 6=Other
Final say on Health, HH purchases, visits to family and relatives, and food to be cooked.	Final say on Health, HH purchases, visits to family and relatives, and food to be cooked.	1=Respondent alone 2=Respondent and husband/partner 3=Respondent and other person 4=Husband/partner alone 5=someone else
Contraceptive is woman's business	Husbands attitude on use of contraceptives	0=Disagree 1=Agree 8=Don't know
Women who use contraceptive	Husbands attitudes on use of	0=Disagree

become promiscuous	contraceptives	1=Agree 8=Don't know
Child bearing is woman's concern	Husbands attitudes on use of contraceptive	0=Disagree 1=Agree 8=Don't know
Responsibility for using contraceptive	Husbands attitudes on use of contraceptive	1=Mainly respondent 2=Mainly partner 3=Joint decision 6=Others
Desire for more children	Desire for more children and when to have them	1=Wants after two years 2=Wants unsure timing 3=Undecided 4=Wants no more

Chapter Three: Methodology

3.1 Introduction

This chapter presents and describes the methodology used in this study, outlining the research design, the study area, the sample design and data analysis, as well as the ethical issues considered and possible limitations of the study.

3.2 Research Design:

This is a quantitative study based on a positivism paradigm to explore social reality through observation and reason as means of understanding human behaviour (Babie, 2010. P34). The study uses cross sectional data from the 2009 Kenya Demographic Health Survey (KDHS), a nationally representative population based survey, implemented by the Kenya National Bureau of Statistics (KNBS) with technical assistance from MEASURE DHS program of ICF Macro International. The survey constituted three forms of questionnaires; a male, women and a household questionnaire. The household questionnaire collected basic data on each person listed, including age, sex, education, and relationship to the head of the household. The main purpose of the Household Questionnaire was to identify women age 15-49 and men age 15-54 who were eligible for the individual interviews. The Women's Questionnaire was used to capture information from all women aged 15-49 years and covered topics of reproductive health, women empowerment, domestic violence, among other things. The Men's Questionnaire collected information similar to that collected in the Women's Questionnaire, but it was shorter as it missed topics on reproductive history, maternal and child health, nutrition, maternal mortality, and domestic violence. The quantitative design will enable the identification of factors and the quantification of their effect on unmet need for family planning and enable drawing of plausible conclusions thereof.

3.3 Study Area

Results from the just concluded population and housing census, show that Kenya has a population of 38.6 million people adding more than a million every year (CBS, 2009), the country is divided into 8 provinces and 158 districts. The current population growth rate is estimated to be 2.8 percent; this has been attained from the efforts of the National Population Policy for Sustainable Development (National Council for Population and Development, 2000) and the resultant decline in fertility rates from 8.1 births per woman in the late 1970s to the current level of 4.6 births per woman. Thus, a youthful population characterizes Kenya where, about 43 percent of the population is younger than 15 years (CBS, 2006). To counteract this population situation, Kenyan Government developed the Adolescent Reproductive Health and Development policy (ARH&D) to address the adolescent reproductive health issues among others (Fig 1).

3.4 Sample Design

The KNBS maintains master sampling frames for household-based surveys based on a two-stage sample design platform. A representative sample of 10,000 households was drawn for the 2009 KDHS; it was constructed to allow for separate estimates for key indicators for each of the eight provinces in Kenya, as well as rural and urban areas separately. This sample was selected from 400 sample points (clusters) composed of 133 urban and 267 rural throughout Kenya. The sample frame is built on the 1999 population and housing census as a follow-up to previous DHS surveys of 1989, 1993, 1998 and 2003 key indicators. The survey administered interviews to all women age 15-49 years found (residents or visitors) in the sampled household on the night before the survey as well as men aged 15-54 years in every second household selected for the survey. As a result, the 2009 KDHS yielded a nationally

representative sample survey of 8,444 women (aged 15- 49) and 3,465 men (aged 15-54) of reproductive age. In addition, the survey was administered among 1,431 couples.

3.5 Data Analysis

The study will use descriptive statistics to describe the extent of unmet need among couples in Kenya. In addition, bivariate analysis will be carried out to measure associations between the Dependent and independent variables. Associations between couple unmet need (yes=1 and no=0) and socio-demographic and other intermediate variables such as women's autonomy, would be determined by use of several logistic models. Furthermore, frequency distribution and cross tabulations of variables are used to summarize the data, chi square is used to test the associations between the independent variables and the dependent variable which has both dichotomous and polytomous outcomes. Logistic regression models and in particular binary and multinomial will be applied to identify predictors of total couple unmet need for family planning among couples.

Logistic regression models (binary) will be used to measure the effect of Independent variables on the dependent variable, which has a binary outcome such as unmet need and met need (yes and no unmet need).

Multinomial logistic regression will be applied to measure the type/ category of unmet need that is felt by the couples such as unmet need to space, unmet need to limit and unmet need to space or limit.

The equation for the Logistic model is as follows

$$\text{Log (P)} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_i X_i$$

Where:

Log (P) = probability unmet need/probability met need

β = Intercept

β_1 to β_i = Regression coefficient of variables 1 to i.

X_1 to X_i = Independent variables

The model is the same for estimating unmet need to space, limit and unmet need to space or limit. The set of independent variables are the same

3.6 Limitation of the study

The KDH sample contained differing sample proportions as there was an attempt made to oversample urban areas as compared to rural areas. Therefore, the sample was not weighted at national level. However, this has not affected the results of the study, as the standard error of the estimates was statistically negligible

3.7 Ethical Considerations

To obtain DHS data from Measure DHS-ICF Macro, it requires that their approval be granted due to ethical issues entailing to safety of subjects. Therefore, registering with the MEASURE DHS and detailing the purpose of the study, giving assurance that data handling would be professional, was done. Likewise, data sets of institutional data, should not be shared to ensure confidentiality and consequently results obtained will be reported in aggregate as is required.

Chapter Four: Results of the Study

4.1 Introduction

The objective of this chapter was to provide and present the research findings and results using tabular formats. Frequency tables and percent distribution are presented. The chapter begins by describing the state of unmet need in the country in a systematic manner, followed by cross tabulation with chi-squares of all selected predictor variables against the dependent variable, which is both dichotomous, and polytomous. Next logistic models both binary and multinomial and the subsequent results are discussed and interpreted.

4.2 Descriptive Statistics

Descriptive statistics were carried out in two steps to measure the associations between unmet need and all the selected predictor variables. The first step measured associations between met need (no unmet need) and unmet need while the second step looked at associations between the types of unmet need (unmet need to space, to limit and unmet need to space or limit). Frequency distribution and cross tabulation were used to summarise the data.

4.2.1 Status of Unmet Need for Family Planning in Kenya

In Kenya 58% of women are exposed to the risk of pregnancy and the level of female unmet need is 25% while that of men is 40%. Couple unmet need is however 13% with unmet need to space being higher than the other categories.

Table 1. Women Contraceptive Use and Attitude

Variables		Frequency	Percent
Contraceptive use & intention	Using modern method	537	37.5
	Using traditional method	81	5.7
	Non-user intend to	415	29.0
	Does not intend to	398	27.8
	Total	1431	100.0
Pattern of use	Currently using	618	43.2
	Used since last birth	168	11.7
	Used before last birth	187	13.1
	Never used	458	32.0
	Total	1431	100.0
Partner's views on FP by families using it	Approves	527	85.6
	Disapproves	74	12.0
	Does not know	15	2.4
	Total	616	100.0
How often the partners talked about FP in the past year	Never	112	18.2
	Once or twice	221	35.9
	More often	283	45.9
	Total	616	100.0
Intention to use	Use later	415	51.2
	Unsure about use	42	5.2
	Does not intend	354	43.6
	Total	811	100.0

From the Table above, in Kenya 43% of women are using a method of contraceptive. The vast majority (86%) of partners approves of families' using contraceptive, and 46% of the

couples talked about family planning more than twice in the past year. Furthermore, over a half of the women who were not using contraceptives mentioned that they would use in the future.

Table 2. Women Exposure to the Risk of Pregnancy and Unmet need to FP

Definitions		Frequency	Valid Percent
Exposure (definition 2)	Fecund	832	58.1
	Pregnant	165	11.5
	Amenorrhoeic	272	19.0
	Infecund, menopausal	162	11.3
	Total	1431	100.0
Unmet need (definition 2)	Unmet need to space	203	14.2
	Unmet need to limit	153	10.7
	Using to space	268	18.7
	Using to limit	350	24.5
	Desire birth < 2 yrs	353	24.7
	Infecund, menopausal	104	7.3
	Total	1431	100.0

Results from Table 2 indicate that over half (58%) of the women were exposed to the risk of pregnancy. The level of women unmet need for family planning was 25%, with unmet need to space being higher than that of unmet need to limit

Table 3. Men's Contraceptives Knowledge Attitude and Practice (KAP)

Knowledge Attitude and Practice (Men)		Frequency	Percent
Current contraceptive method	Not users	827	57.8
	Users	604	42.2
	Total	1431	100.0
Current use by method type	Traditional method	148	24.5
	Modern method	456	74.5
	Total	604	100.0
Heard FP on radio last months	No	385	26.9
	Yes	1046	73.1
	Total	1431	100.0
Heard FP on TV last months	No	849	59.3
	Yes	582	40.7
	Total	1431	100.0
Heard FP newspaper last months	No	866	60.6
	Yes	564	39.4
	Total	1430	100.0
Contraception is woman's business, man should not worry	Disagree	1159	81.0
	Agree	220	15.4
	DK	52	3.6
	Total	1431	100.0
Women who use contraception become promiscuous	Disagree	869	60.7
	Agree	423	29.6
	DK	139	9.7
	Total	1431	100.0

Men contraceptive use is not independent of female contraceptive use because most contraceptive methods are designed for women. Therefore, most men who are reporting

contraceptive use are ideally reporting consensual contraceptive use with their women. Table 3 Results show that slightly over a half of men were not using contraceptive (58%). Consequently, the majority (75%) of men who reported contraceptive use were using modern methods. Likewise, the majority of men had heard about FP messages from the radio (73%) in the month before the interview. Radio was the main source of information about FP for majority of men. Furthermore, a great majority of men had a positive attitude towards use of contraceptives of their partners.

Figure 2 is a diagrammatic representation of couples who were using contraceptives to space or limit childbirth and those who had unmet need for FP, as derived from both men and women's fertility preferences and their contraceptive use. A good number of couples 35 % (494/1431) are using contraceptives either to space or limit births while 13% (188/1431) are said to have unmet need for FP. Furthermore, 34% (168/494) are using to space, 43 % (211/494) are using to limit and a further 23% (115/494) are using either to space or limit. Likewise, 40% (75/188) have unmet need to space, 34% (64/188) unmet need to limit and 26% (49/188) have unmet need to space or limit.

Table 4. Couple Unmet Need (A combination of Women and Men).

		Frequency	Percent
Men exposure	Exposed to unmet need	827	57.8
	Non exposed	604	42.2
	Total	1431	100.0
Men fertility preference	After 2+ years (spacers)	469	32.8
	No more children(limiters)	585	40.9
	Other preferences	377	26.3
	Total	1431	100.0
Men Unmet Need	Need to Space	306	53.9
	Need to limit	262	46.1
	Total	568	100.0
Women unmet need	Need to space	203	57.0
	Need to limit	153	43.0
	Total	356	100.0
Total couple unmet need	Need to space	75	39.9
	Need to limit	64	34.0
	Either 1or2	49	26.1
	Total	188	100.0

Table 4 shows that 58% of men were not using any contraceptive method (exposed) and a greater majority expressed a desire to have no more children. The total unmet need for family planning for men was 40 % (568/1431), who were exposed and want to space or limit), with more than half of those men having unmet need to space. Women unmet need for FP was 25% (356/1431 directly obtained from DHS) with a vast majority of women having unmet need to space just like their male counterparts. A combination of female and male unmet need for FP yields 13% couples with unmet need (Figure. 3). This new variable, couple unmet need was constructed from the variables of men's desire for children after two years and wanting no more against men who were not using any method of FP, and that of women as derived from the DHS. A greater majority of the couples had unmet need to space 40% (see figure 3).

4.2.2 Couple Unmet Need by Selected Background Characteristics

Table 5. Demographic and Socio-economic Factors

Women		Couple unmet need (%)			χ^2
		No	Yes	N	p-value
Age 5-year groups	15-19	64	36	25	0.482
	20-24	69.5	30.5	141	
	25-29	73.3	26.7	161	
	30-34	75.7	24.3	136	
	35-39	73.7	26.3	95	
	40-44	77.8	22.2	72	
	45-49	63.5	36.5	52	
Type of place of residence	Urban	75.5	24.5	188	0.154
	Rural	71.3	28.7	494	
Highest educational level	No education	47.3	52.7	55	0.000
	Primary	69.3	30.7	401	
	Secondary	84.9	15.1	226	
Religion	Roman Catholic	65	35	140	0.000
	Protestant/ other Christian	77.5	22.5	462	
	Muslim	51.5	48.5	80	
Wealth index	Poorest	44.1	55.9	111	0.000
	Poorer	76.7	23.3	120	
	Middle	80	20	125	
	Richer	76.1	23.9	138	
	Richest	78.7	21.3	188	
Region	Nairobi	77.6	22.4	58	0.000
	Central	89.2	10.8	93	
	Coast	73.6	26.4	91	
	Eastern	78.3	21.7	92	
	Nyanza	69	31	116	
	Rift valley	67.8	32.2	115	
	Western	64.4	35.6	101	
	North eastern	25	75	16	
Ethnicity	Embu	100	0	24	0.000
	Kalenjin	65.2	34.8	69	
	Kamba	68.8	31.3	48	
	Kikuyu	89.9	10.1	139	
	Kisii	73.5	26.5	49	
	Luyha	67.9	32.1	106	
	Luo	66.7	33.3	84	
	Masai	60	40	5	
	Meru	85.3	14.7	34	
	Mijikenda/swahili	70.8	29.2	48	
	Somali	15.8	84.2	19	
	Taita Taveta	70.6	29.4	17	
	Other	53.8	46.2	39	

Men					
Age 5-year groups	15-19	100	0	1	.0916
	20-24	68.3	31.7	41	
	25-29	69.4	30.6	98	
	30-34	76.3	23.7	152	
	35-39	73.9	26.1	115	
	40-44	71.3	28.7	101	
	45-49	71.2	28.8	104	
	50-54	71.4	28.6	70	
Religion	Roman Catholic	70.5	29.5	166	0.000
	Protestant/other Christian	77	23	427	
	Muslim	51.5	48.5	89	
Highest educational level	No education	31	69	29	0.000
	Primary	72.2	27.8	352	
	Secondary	76.1	23.9	301	
Total		494	188	682	

Table 5 shows a comparative picture of couple's unmet need for Family Planning. Results show that unmet need is highest among young ages then falls gradually and picks up towards the end of the reproductive ages 45-49. The trend among couples who have met need is spread evenly but highest (78%) at ages 40-44. However, the difference between age groups is not significant from both women and men. The rural-urban divide clearly depicts that couples in the rural areas have higher levels of unmet need for FP than those in urban areas although majority are using contraceptives. Furthermore, couples with no education have the highest unmet need and the trend of met need increases with levels of education. Majority of couples with met need for FP were from Protestant/other Christians and those with highest unmet need were Muslims followed by the Catholics. The trend of couple unmet need decreased with increase in wealth index and majority of couples with unmet need were the poorest at 56%. Furthermore, within the regions, the levels of unmet need are more or less similar and central province depicts the lowest levels of 10%. Northeastern, Western, Rift valley, and Nyanza have the highest levels of unmet need for FP. Likewise; the Somalis have high-unmet need while the Embus have a 100% met need. Therefore, educational level, wealth index, religion, region and ethnic group where couples come from are key determinants of unmet need ($p=0.000$).

Table 6. Women Empowerment

Women	Couple unmet need (%)		N	χ^2 p-value	
	No	Yes			
<i>Discussed FP with health worker</i>	No	71.1	28.9	557	0.044
	Yes	79.0	21.0	124	
		494	187	681	
Who decides how to spend money	Respondent alone	80.0	20.0	130	0.109
	Respondent & partner	81.8	18.2	187	
	Partner alone	65.6	34.4	32	
		278	71	349	
<i>Final say on own health care</i>	Respondent alone	78.9	21.1	166	0.053
	Respondent & partner	72.5	27.5	349	

	Partner alone	65.7	34.3	166	
		494	188	682	
<i>Final say on making large household purchases</i>	Respondent alone	83.1	16.9	71	0.004
	Respondent & partner	75.5	24.5	387	
	Partner alone	63.5	36.5	222	
		494	188	682	
<i>Respondent currently working</i>	No	63.0	37.0	227	0.000
	Yes	77.4	22.6	452	
		493	186	679	
<i>Final say on deciding what to do with money husband earns</i>	Respondent alone	78.7	21.3	47	0.026
	Respondent & partner	76.4	23.6	370	
	Partner alone	65.2	34.8	256	
		488	186	674	
Men					
<i>Who decides how to spend money</i>	Husband alone	68.0	32.0	203	0.007
	Respondent & partner	77.7	22.3	336	
	Wife/Partner alone	52.9	47.1	17	
		408	148	556	
<i>Final say on making household purchases for daily needs</i>	Husband alone	68.9	31.1	90	0.040
	Both equally	71.4	28.6	206	
	Wife/partner alone	73.4	26.6	380	
		494	188	682	
<i>Final say on visits to family or relatives</i>	Husband alone	73.5	26.5	238	0.696
	Both equally	73.0	27.0	381	
	Wife/partner alone	66.1	33.9	62	
		494	187	681	
<i>Final say on making large household purchases</i>	Husband alone	67.5	32.5	252	0.040
	Both equally	76.5	23.5	371	
	Wife/partner alone	67.8	32.2	59	
		494	188	682	
<i>Final say on deciding how many children to have</i>	Husband	62.0	38.0	121	0.018
	Both equally	74.9	25.1	542	
	Wife/partner alone	58.3	41.7	19	
		494	188	682	

Results from Table 7 show statistical significant between couple unmet need and discussion of FP with a health worker. A greater majority of couples who had discussed FP with a health worker did not have unmet need. Couples, who had joint decisions on how to spend money from both women's and men's perspective, had highest levels of no unmet need. Where the husband/partner had final say on wife's health and making large household purchases alone, couple unmet need was high. Furthermore, where the husband decided alone what to do with the money he earns unmet need was also high. In addition, where the wife had final say on making purchases for daily needs lowest levels of unmet need are depicted. Likewise, deciding together on the number of children to have has statistical significant and a greater majority of couples who had joint decision on the number of children to have had lowest (25%) couple unmet need.

Table 7. Exposure to Mass Media

Women		Couple unmet need (%)		N	χ^2 p-value
		No	Yes		
<i>Heard FP on radio last months</i>	No	56.4	43.6	156	0.000
	Yes	77.2	22.8	526	
		494	188	682	
<i>Heard FP on TV last months</i>	No	66.1	33.9	404	0.000
	Yes	81.7	18.3	278	
		494	188	1682	
<i>Heard FP newspaper last months</i>	No	68.1	31.9	454	0.000
	Yes	81.1	18.9	228	
		494	188	682	
<i>Frequency of reading newspaper or magazine</i>	Not at all	66.5	33.5	403	0.000
	Less than once a week	79.3	20.7	145	
	At least once a week	82.8	17.2	93	
	Almost every day	82.9	17.1	41	
		494	188	682	
<i>Frequency of listening to radio</i>	Not at all	57.1	42.9	91	0.002
	Less than once a week	65.3	34.7	49	
	At least once a week	72.5	25.5	91	
	Almost every day	76.3	23.7	451	
		494	188	682	
<i>Frequency of watching television</i>	Not at all	65.2	34.8	371	0.000
	Less than once a week	75.9	24.1	79	
	At least once a week	84.9	15.1	53	
	Almost every day	82.1	17.9	179	
		494	188	682	
Men					
<i>Heard FP on radio last months</i>	No	62.9	37.1	159	0.002
	Yes	75.3	24.7	523	
		494	188	682	
<i>Heard FP on TV last months</i>	No	68.5	31.5	384	0.005
	Yes	77.5	22.5	298	
		494	188	682	
<i>Heard FP newspaper last months</i>	No	67.3	32.7	382	0.000
	Yes	79.3	20.7	299	
		494	187	681	
<i>Frequency of reading newspaper or magazine</i>	Not at all	64.5	35.5	200	0.000
	Less than once a week	67.9	32.1	168	
	At least once a week	77.3	22.7	198	
	Almost every day	84.5	15.5	116	
		494	188	682	
<i>Frequency of listening to radio</i>	Not at all	63.2	36.8	19	0.226
	Less than once a week	59.4	40.6	32	
	At least once a week	69.4	30.6	62	
	Almost every day	73.8	26.2	568	
		493	188	681	
<i>Frequency of watching television</i>	Not at all	62.6	37.4	198	0.000
	Less than once a week	68.8	31.3	144	
	At least once a week	78.6	21.4	112	
	Almost every day	80.3	19.7	228	
		494	188	682	

Table 7 depicts the levels of couple unmet need by exposure to different types of mass media. Majority of the couples who had met need, have heard FP messages from the radio the last months preceding the survey. Unmet need is highest among couples who have not heard any FP information from radio, TV, and newspapers. Moreover, the trend of unmet need levels is seen to decrease with increase of the frequency of exposure on mass media for both men and women. In addition, couples who do not have exposure at all have the highest levels of unmet need while those who have exposure more frequently have lower levels.

Table 8. Couples' Attitudes towards Use of Family Planning

Men		Couple unmet need (%)		N	χ^2 p-Value
		No	Yes		
Contraception is woman's business	Disagree	73.6	26.4	579	0.118
	Agree	67.3	32.7	103	
		494	188	682	
Women who use contraception become promiscuous	Disagree	75.1	24.9	437	0.041
	Agree	69.6	30.4	207	
	Don't know	57.9	42.1	38	
		494	188	682	
Childbearing is a woman's concern	Disagree	73.8	26.2	637	0.007
	Agree	52.3	47.7	44	
	Don't Know	100.0	.0	1	
		494	188	682	
Responsibility for using contraception	Mainly respondent	84.4	15.6	32	0.176
	Mainly partner	94.5	5.5	55	
	Joint decision	94.2	5.8	414	
		469	32	501	

Table 8 shows levels of couple unmet need for FP as per men's attitudes in regard to use of contraceptives by their partners. Men who disagree to the notion that contraceptive is woman's business and women who use contraceptive become promiscuous have a positive attitude towards their partner's use of contraceptive. Results show that where men agree with such notions the level of couple unmet need for FP is highest. Likewise, where responsibility for using contraceptive is taken as joint adventure unmet need levels are lowest (6%). In addition, where responsibility for using contraceptive is taken as mainly the husband's, unmet need for FP is highest (16%).

4.2.3 Couple unmet need to space and Limit by selected background characteristics

Table 9. Demographic and Socioeconomic Factors

Women		Total couple unmet need (%)			N	χ^2 p-value
		Need to space	Need to limit	Need to space or Limit		
Age 5-year groups	15-19	77.8	0.0	22.2	9	.000
	20-24	65.1	2.3	32.6	43	
	25-29	51.2	18.6	30.2	43	
	30-34	33.3	30.3	36.4	33	
	35-39	20.0	64.0	16.0	25	
	40-44	6.3	75.0	18.8	16	
	45-49	5.3	89.5	5.3	19	
Type of place of residence	Urban	47.8	32.6	19.6	46	.371
	Rural	37.3	34.5	28.2	142	
Highest educational level	No education	75.9	20.7	3.4	29	.000
	Primary	33.3	31.7	35.0	123	
	Secondary	34.6	50.0	15.4	26	
	Higher	30.0	60.0	10.0	10	
Religion	Roman Catholic	36.7	38.8	24.5	49	.002
	Pentecostals	29.8	40.4	29.8	104	
	Muslim	71.9	9.4	18.8	35	
Wealth index	Poorest	46.8	33.9	19.4	62	.209
	Poorer	39.3	21.4	39.3	28	
	Middle	40.0	40.0	20.0	25	
	Richer	33.3	27.3	39.4	33	
	Richest	35.0	45.0	20.0	40	
Men						
Age 5-year groups	20-24	61.5	0.0	38.5	13	.000
	25-29	53.3	6.7	40.0	30	

	30-34	69.4	11.1	19.4	36	
	35-39	26.7	26.7	46.7	30	
	40-44	31.0	48.3	20.7	29	
	45-49	23.3	63.3	13.3	30	
	50-54	10.0	85.0	5.0	20	
<i>Religion</i>	Roman Catholic	36.7	34.7	28.6	49	.002
	Pentecostals	28.6	42.9	28.6	98	
	Muslim	72.7	9.1	18.2	41	
<i>Highest educational level</i>	No education	80.0	10.0	10.0	20	.001
	Primary	37.8	30.6	31.6	98	
	Secondary	38.0	42.0	20.0	50	
	Higher	15.0	55.0	30.0	20	
Total		75	64	49	188	

Table 9 shows the percentages of total couple unmet need for family planning by selected background characteristics. Total couple unmet need is categorized into three, unmet need to space, to limit and unmet need to space or limit where couples have divergent unmet needs. Results show that there is a marked difference between unmet need in all the three categories within women and men's age groups. Unmet need for spacing falls gradually within the age groups until the end of reproductive ages for both women and men. However, for men unmet need for spacing is highest (69%) at ages 30-34. Likewise, couples who had greatest need for spacing were those aged below 25 years, from North eastern (100%), who had no education (75%), those affiliated to Muslim religion (48%), and those who were poorest (47%).

Unmet need for limiting childbirth increased steadily until the end of the reproductive ages and was highest at ages 44-49 (90%) and 50-54 (85%) for both women and men respectively. Furthermore, unmet need for limiting was highest among couples from central province (70%), from rural areas (35%), among those who had higher educational levels (60%) for women and 54% for men and among the richest.

Divergent unmet need among the couples is highest in the rural areas and among couples with primary education for women and among couples with secondary education for men. Similarly, divergent Couples unmet need is high among couples affiliated to Protestants/ other religions and the association between wealth status and divergent unmet need is not statistically significant. Generally, within the age groups there is no clear pattern for divergent couple unmet need. For men uncoordinated couple unmet need is higher among men in young ages than those aged 40 and more. Moreover, the association between couples' age groups for both men and women for the three categories of couple unmet need for FP is statistically significant ($p=0.000$).

Table 10. Women Empowerment and Unmet Need

Women	Total couple unmet need (%)			N	χ^2 p-value	
	To space	To limit	To space or Limit			
Discussed FP with health worker	No	39.8	34.8	25.5	161	0.837
	Yes	38.5	30.8	30.8	26	
		74	64	49	188	
Who decides how to spend money	Respondent alone	23.1	30.8	46.2	26	0.086
	Respondent & partner	35.3	50.0	14.7	34	
	Partner alone	27.3	54.5	18.2	11	
		21	31	19	71	
Final say on own health care	Respondent alone	20.0	48.6	31.4	35	0.062
	Respondent & partner	42.7	34.4	22.9	96	
	Partner alone	47.4	24.6	28.1	57	
		75	64	49	188	
Final say on making	Respondent alone	16.7	41.7	41.7	12	0.344

large household purchases	Respondent & partner	37.9	36.8	25.3	95	
	Partner alone	45.7	29.6	24.7	81	
		75	64	49	188	
Respondent currently working	No	50.0	25.0	25.0	84	0.023
	Yes	32.0	42.2	25.5	102	
		75	64	47	186	
Final say on deciding what to do with money husband earns	Respondent alone	20.0	50.0	30.0	10	0.519
	Respondent & partner	45.9	32.9	21.2	87	
	Partner alone	38.2	32.6	29.2	89	
		75	63	48	186	
Men						
Who decides how to spend money	Respondent alone	40.0	35.4	24.6	65	0.636
	Respondent & partner	37.3	37.3	25.3	75	
	Wife alone	25.0	25.0	50.0	8	
		56	53	39	148	
Final say on making household purchases for daily needs	Husband	35.7	42.9	21.4	28	0.388
	Both equally	33.9	40.7	25.4	59	
	Wife alone	44.6	27.7	27.7	101	
		75	64	49	188	
Final say on visits to family or relatives	Husband	36.5	34.9	28.6	63	0.393
	Both equally	37.6	35.6	26.7	103	
	Wife alone	61.9	23.8	14.3	21	
		74	64	49	187	
Final say on making large household purchases	Husband	43.9	36.6	19.5	82	0.087
	Both equally	37.6	27.1	35.3	87	
	Wife alone	36.8	52.6	10.5	19	
		75	64	49	188	
Final say on deciding how many children to have	Husband	39.1	34.8	26.1	46	0.873
	Both equally	40.4	33.8	25.7	136	
	Wife alone	20.0	40.0	40.0	6	
		75	64	49	188	

Table 10 shows that discussing FP with health worker had no statistical significant to total couple unmet need and unmet need for spacing was more or less the same whether discussions took place or not. Couple unmet need for spacing was highest where both husbands and wives decided together on how to spend money (35%), where husband/partner had final say on wife's health (47%), and where husband/partner had final say on making large household purchases (46%). Likewise unmet need for spacing was high where the wife was not currently working and where final say on husband's/partner's earnings rested on the husbands (50% and 38%) respectively. Moreover, where husbands solely decided how to spend money couple unmet need for spacing was high. In addition where wives had final say on purchases for daily use, final say on visits to family/ relatives, and where husbands had final say on making large house hold purchases, couple unmet need for spacing was high. Where decisions on the number of children were made jointly or husband made solely, couple unmet need to space was more or less the same.

Couple unmet need for limiting births was highest where couples had not discussed FP with a health worker. In addition, where husband/ partner had a sole decision on how to spend money, wife had final say own health care, final say on making large household purchases and final say on deciding what do with husband's earnings, unmet need for limiting was highest. From the men's perspective, couple unmet need to limit was highest where there was joint decision on how to spend money (37%), where husbands had final say on making household purchases for daily needs and where wife alone had final say on deciding the number of children (40%).

Couple divergent unmet need for FP is highest where a woman has a sole decision on how to spend money, (46%), where wives have final say on making large household purchases and where she had final say on deciding what to do with husband's earnings.

Furthermore, on the men's perspective, divergent unmet need is highest where wife decides alone what to do with husband's earnings and likewise where wife alone decides on the number of children.

The association between husbands earnings and couple unmet need for FP was not statistically significant ($p=0.496$) and likewise, there is a significant correlation between couple unmet need for family planning and decision making on making household purchases from the men's point of view. In general, where men report equal decision-making couple unmet need is high for the three categories.

Table 11. Exposure to Mass Media and Couple Unmet Need (n=188)

Women		Total couple unmet need (%)			N	□ 2 p-value
		To space	To limit	To space or Limit		
Heard FP on radio last months	No	52.9	26.5	20.6	68	0.023
	Yes	32.5	38.3	29.2	120	
Heard FP on TV last months	No	43.8	29.9	26.3	137	0.108
	Yes	29.4	45.1	25.5	51	
Heard FP newspaper last months	No	40	31	29	145	0.155
	Yes	39.5	44.2	16.3	43	
Frequency of reading newspaper or magazine	Not at all	42.2	30.4	27.4	135	0.312
	Less than once a week	33.3	36.7	30	30	
	At least once a week	37.5	43.8	18.8	16	
	Almost every day	28.6	71.4	0	7	
Frequency of listening to radio	Not at all	51.3	23.1	25.6	39	0.287
	Less than once a week	41.2	17.6	41.2	17	
	At least once a week	40	36	24	25	
	Almost every day	35.5	40.2	24.3	107	
Frequency of watching television	Not at all	44.2	29.5	26.4	129	0.011
	Less than once a week	42.1	26.3	31.6	19	
	At least once a week	62.5	12.5	25.5	8	
	Almost every day	15.6	62.5	21.9	32	
Men						
Heard FP on radio last months	No	42.4	33.9	23.7	59	0.855
	Yes	38.8	34.1	27.1	129	
Heard FP on TV last months	No	45.5	28.1	26.4	121	0.046
	Yes	29.9	44.8	25.4	67	
Heard FP newspaper last months	No	44.8	31.2	24	125	0.177
	Yes	30.6	38.7	30.6	62	
Frequency of reading newspaper or magazine	Not at all	43.7	29.6	26.8	71	0.017
	Less than once a week	48.1	29.6	22.2	54	
	At least once a week	40	33.3	26.7	45	
	Almost every day	0	66.7	33.3	180	
Frequency of listening to radio	Not at all	57.1	14.3	28.6	7	0.287
	Less than once a week	23.1	46.2	30.8	13	

	At least once a week	57.9	15.5	26.3	19	
	Almost every day	38.3	36.2	25.5	149	
Frequency of watching television	Not at all	48.6	24.3	27	74	0.052
	Less than once a week	44.4	31.1	24.4	45	
	At least once a week	37.5	33.3	29.2	24	
	Almost every day	22.2	53.3	24.4	45	

Table 11 shows that couple unmet need for spacing was at its highest where exposure to mass media was lacking. Couples who had not heard any FP messages from the media had the highest unmet need to space. In addition unmet need to space decreased with the frequency of exposure while for men highest levels of unmet need to space were observed with minimum exposure of less than once.

Couple unmet need to limit was however highest among couples who had heard FP messages on mass media. Couples, who had heard at least once a week and almost every day, had highest unmet need for limiting. On the men's perspectives, similar observations were noted. Furthermore, couples' divergent unmet need for FP was highest where frequency of exposure is less than once a week for all the types of mass media for both men and women respectively. It is interesting to note that uncoordinated or divergent couple unmet need was highest (30%) where women reported not to have heard FP from news papers last months preceding the survey while for men highest divergent couple unmet need is highest among those who have heard.

Table 12. Couples' Attitudes towards Use of Family Planning

Men		Total couple unmet need (%)			N	χ^2 p-Value
		To space	To limit	To space or Limit		
Contraception is woman's business	Disagree	39.9	34.6	25.5	153	0.909
	Agree	40	31.4	28.6	35	
Women who use contraception become promiscuous	Disagree	40.4	33.9	25.7	109	0.965
	Agree	41.3	33.3	25.4	63	
	Don't know	31.3	37.5	31.3	16	
Childbearing is a woman's concern	Disagree	39.5	34.7	25.7	167	0.853
	Agree	42.9	28.6	28.6	21	
Responsibility for using contraception	Mainly respondent	60	0	40	5	0.121
	Mainly partner	0	66.7	33.3	3	
	Joint decision	16.7	54.2	29.2	25	

From Table 12 above, couple unmet need to space is highest where men agree to the notion that contraception is woman's business, women who use contraceptives become promiscuous and childbearing is a woman's concern. Where using contraceptives is mainly the husband's responsibility, the level of unmet need to space is highest (60%). The association is however not statistically significant. Unmet need for limiting is highest where men disagree with these notions. Divergent unmet need is more or less similar within all the indexes. Highest levels of divergent unmet need are highest where husband alone has the responsibility of using contraceptives.

4.3 Research Question One

In this study research question, one sought to establish demographic and socioeconomic factors that determine couple unmet need. In the following section, binary logistic analysis is carried out starting with univariate analysis for each of the selected variables and then a final model where all significant variables are put together.

4.3.1 Binary Logistic (Univariate) analysis

In the binary logistic regression analysis, the association between the dependent variable and the independent variables was determined. The dependent variable, unmet need is a dichotomous variable with values, 0=no (reference) and 1=yes. Estimated regression coefficients are in the form of exponential coefficients or odds ratio (O.R). The odds ratio of the predictor variable depicts the relative amount by which the odds ratio of the outcome variable increase relative to the reference, (O.R greater than 1) or decrease (odds ratio less than 1), when the predictor variable is increased by 1unit. The reference category always has an O.R of 1 and all the other groups are compared based on the reference category. An O.R of less than one implies that the predictor variable has a lower probability than that of the reference category in predicting the dependent variable. Likewise, an O.R of greater than 1 implies a higher probability than that for the reference category. The Log of Likelihood function measures the fit between the model and the data and the smaller the value of -2LL the better the fit.

Models were run first for each predictor variable (univariate) and finally a model for all the independent variables using backward elimination selection strategy because the variables were not very many. Variables retained in the final model are key determinants of couple unmet need. This was done sequentially starting with socio-demographic variables against the dependent variable all through the four research objectives.

Table.13 Logistic Regression Models with Socio-demographic Factors

Variable	B	P-value	O.R	95% C.I	
				Lower	Upper
Women's Age (20-24)		0.489			
15-19	0.248	0.585	1.282	0.525	3.128
25-29	-0.186	0.467	0.831	0.504	1.370
30-34	-0.314	0.246	0.730	0.429	1.242
35-39	-0.206	0.487	0.814	0.455	1.455
40-44	-0.429	0.204	0.651	0.336	1.261
45-49	0.272	0.426	1.312	0.672	2.561
Men Age (20-24)		0.944			
15-19	-20.436	1.000	0.000	0.000	.
25-29	-0.051	0.899	0.950	0.433	2.085
30-34	-0.403	0.297	0.668	0.314	1.425
35-39	-0.274	0.490	0.760	0.349	1.656
40-44	-0.142	0.723	0.868	0.395	1.905
45-49	-0.136	0.734	0.873	0.399	1.910
50-54	-0.149	0.727	0.862	0.373	1.991
Region (Central)		0.000			
Nairobi	0.875	0.057	2.398	0.974	5.902
Coast	1.090	0.008	2.973	1.329	6.649
Eastern	0.835	0.046	2.306	1.013	5.246
Nyanza	1.318	0.001	3.735	1.738	8.026
R.valley	1.370	0.000	3.937	1.834	8.451
Western	1.525	0.000	4.597	2.124	9.950
Northeastern	3.215	0.000	24.900	6.732	92.101
Urban	-0.219	0.265	0.803	0.546	1.181
Women's Education (No Education)		0.000			

Primary	-0.925	0.001	0.397	0.224	0.702
Secondary	-0.848	0.000	0.170	0.090	0.322
Men Education (No education)		0.000			
Primary	-1.751	0.000	0.174	0.076	0.394
Secondary	-0.242	0.182	0.136	0.059	0.313
Women's Religion (Protestants)		0.000			
Catholic	0.617	0.003	1.854	1.230	2.794
Muslim	0.985	0.000	2.677	1.636	4.392
Men's Religion (Protestants)		0.001			
Catholic	0.341	0.097	1.406	0.940	2.103
Muslim	1.053	0.000	2.868	1.785	4.606
Ethnicity (Kikuyu)		0.000			
Embu	-19.014	0.998	0.000	0.000	.
Kalenjin	1.561	0.000	4.762	2.267	10.001
Kamba	1.401	0.001	4.058	1.782	9.244
Kisii	1.171	0.006	3.224	1.390	7.476
Luyha	1.439	0.000	4.216	2.122	8.378
Luo	1.496	0.000	4.464	2.184	9.124
Masai	1.784	0.062	5.952	0.915	38.718
Meru	0.431	0.441	1.539	0.513	4.616
Mijikenda	1.302	0.002	3.676	1.600	8.450
Somali	3.863	0.000	47.619	12.330	183.905
Taita taveta	1.314	0.029	3.720	1.143	12.113
Other	2.035	0.000	7.653	3.312	17.684
Wealth (Poorest)		0.000			
Poorer	-1.425	0.000	0.241	0.137	0.423
Middle	-1.622	0.000	0.198	0.111	0.352
Richer	-1.393	0.000	0.248	0.145	0.427
Richest	-1.544	0.000	0.214	0.128	0.356

Table 13 shows the results of univariate logistic analysis of demographic and socioeconomic factors. Results show that partner's age was not significantly associated to couple unmet need. However, women in middle ages have a lower likelihood to couple unmet need. In addition women in age groups 15-19 and 45-49 had higher odds ratio relative to the reference age category 20-24 and therefore were more likely to have couple unmet need. Moreover, among the men, couple unmet need is likely to be lower in all the age groups and much lower between the youngest ages 15-19 years. Couples' unmet need within the regions showed an interesting pattern, which was similar to that portrayed by the ethnic tribes within Kenya. North Eastern province had the highest likelihood for Couple unmet need relative to central province, the O.R for North eastern is 25 times that of the reference category (Central). Likewise the Somalis had a high likelihood (48 greater) to couple unmet need relative to the Kikuyu which was the reference category.

All the ethnic tribes other than the Embu had O.R greater than one and therefore were more likely to have couple unmet need than those of Kikuyu (reference category). Furthermore, region of residence was highly significant to couple unmet need and the odds ratio of couple unmet need is 25 times higher in North eastern region and 5 times in Western region implying higher likelihood of unmet need in these regions. Couples in urban areas were less likely to have couple unmet need in comparison to their rural counterparts (the O.R for couples in urban is 0.8 (20% lower) that of rural which is the reference category). Concerning education, which had significant effect on couple unmet, need, women with primary education and above were less likely to experience couple unmet need when compared to their counterparts with no education and same was true for male partners. Therefore, both women and husbands educational level mattered. Wealth index among couples was

significantly associated to couple unmet need. However, the likelihood of experiencing couple unmet need was high among the poorest (reference category).

Table 14. Multivariate Logistic Regression with Socio-demographic factors

		B	Sig.	Exp(B)	95% C.I. for EXP(B)	
					Lower	Upper
Step 10a	Women's Education (no education)		.003			
	Primary	.076	.847	1.079	.498	2.336
	Secondary	-.773	.086	.461	.191	1.116
	Religion (Protestant)		.012			
	Roman Catholic	.669	.005	1.953	1.230	3.100
	Muslim	-.160	.707	.852	.371	1.959
	Ethnicity (Kikuyu)		.016			
	(Embu	-19.350	.998	.000	.000	.
	Kalenjin	1.235	.002	3.438	1.553	7.612
	Kamba	1.200	.006	3.320	1.418	7.773
	Kisii	1.254	.006	3.503	1.435	8.554
	Luyha	1.293	.001	3.645	1.757	7.563
	Luo	1.265	.001	3.541	1.682	7.455
	Masai	.770	.455	2.160	.286	16.294
	Meru	.248	.666	1.281	.416	3.949
	Mijikenda	1.028	.056	2.794	.976	7.999
	Taita taveta	1.114	.079	3.046	.880	10.540
	Others	1.873	.000	6.506	2.557	16.550
	Wealth index (poorest)		.000			
	Poorer	-1.365	.000	.255	.136	.480
	Middle	-1.230	.000	.292	.153	.560
	Richer	-.864	.006	.421	.226	.784
	Richest	-.985	.002	.374	.198	.705
	Constant	-1.104	.029	.331		

The aim of running a multivariate logistic regression model was to determine what demographic and socioeconomic variables remained significant when all previously identified significant variables from preceding models are together. This model uses stepwise backward variable selection strategy. Results shows that when all variables which were significant were entered into the model, variables that remained significant to couple unmet need were educational level for both Wife and Husband, Religion, Ethnicity and Wealth index (not shown). However, when religion and ethnicity, education and region were interacted, the final model changed and only women's education, religion, ethnicity and wealth index remained in the model indicating that they were main determinants of couple unmet need (Table 14)). Interestingly, the odds of couple unmet need for women of primary education was greater than one implying a higher probability/likelihood for women with primary education to have higher couple unmet need than those of no education (reference). The likelihood of couple unmet for women with secondary education was 2 times lower relative to those with no education. This highlights the value of female education and more so above secondary level. Women who are more educated know better about family Planning opportunities, and know where to acquire them. Moreover the -2LL improved from

597.579 to 647.351 with the removal of each variable, and Nagelkerke R² improved from 38% to 29 indicating an improvement of the fit of the model.

4.3.2 Women Empowerment Contribution to Couple Unmet Need

The second research question focused on establishing the contribution of women empowerment to couple unmet need. Hypothesizing that women who are highly empowered are better placed to make informed choices and therefore less likely to have unmet need. Univariate logistic models are run for each of the decision- making variables in order to establish the relationship between unmet need and these variables.

Table.15 Effect of Women Empowerment on Couple Unmet Need (N=682)

		B	p-value	O.R	95% C.I. for EXP(B)	
					Lower	Upper
<i>Final say on making large HH purchases</i>	V743B Respondent and Husband	0.470	0.165	1.600	0.825	3.102
	Husband alone	1.024	0.003	2.785	1.414	5.486
<i>Final say on own health</i>	V743A Respondent and husband	0.351	0.119	1.42	0.914	2.207
	Husband alone	0.662	0.008	1.939	1.187	3.17
Decides how to spend money	V739 Respondent and husband	-0.118	0.684	0.889	0.504	1.569
	Husband alone	0.74	0.087	2.095	0.899	4.886
<i>Respondent currently working</i>	Yes	-0.701	0.000	0.496	0.35	0.703
<i>Final say on what to do with money husband earns</i>	V743F Respondent and partner	0.129	0.733	1.137	0.543	2.381
	Husband alone	0.673	0.076	1.96	0.931	4.126
Men Discussed FP with health work	Yes	0.427	0.075	1.532	0.958	2.451
<i>Who decides how to spend money</i>	MV739 Husband and Wife	-0.494	0.013	0.61	0.413	0.902
	Wife alone	0.635	0.212	1.887	0.696	5.114
<i>Final say on large HH purchases</i>	MV743B Husband and Wife	-0.454	0.013	0.635	0.445	0.907
	Wife alone	-0.015	0.96	0.985	0.537	1.806
Final say on visits	MV743D Husband and Wife	0.029	0.878	1.029	0.714	1.484
	Wife alone	0.353	0.249	1.423	0.781	2.591
Final say for daily HH purchases	MV743C Husband and wife	-0.118	0.668	0.889	0.518	1.523
	Wife alone	-0.221	0.387	0.802	0.486	1.323
	Depends	-20.408	0.999	0	0	.
<i>Final say on number of children</i>	MV743G Husband and wife	-0.605	0.004	0.546	0.361	0.827
	Wife alone	-0.284	0.59	0.753	0.267	2.118

Results from Table 14 above indicate decision-making variables that empowered women and hence had a significant effect on couple unmet need. Women's decision making on own health and on making large household purchases had a significant effect on couple unmet need. However, the likelihood of having couple unmet need was higher when the husband made decisions alone relative to when decisions were made by the wife alone (the reference category). Furthermore, where the wife was working couple unmet need was 1.5 times less likely than when she was not working. Making decisions on what to do with the money husband earns also had a significant effect to couple unmet need. Where the husband had an upper hand on his earnings the likelihood of experiencing couple unmet was two times higher than when the wife/partner had a final say. In addition Discussing FP with a health worker

had no significant to couple unmet need, and as regards men's decisions on final say on house hold purchases and how to spend money, the likelihood of couple unmet need is less likely than when decisions are jointly done relative to when they are made by husband alone (reference category). Moreover, making decisions on the number of children had a significant effect on couple unmet need. The odds of couple unmet need is 0.5 when decisions on the number of children are made jointly almost 2 times lower than when decisions are made by husband alone (reference).

Table 16. Effect of Women Empowerment on Couple Unmet Need

	B	p-value	O.R	95% C.I.for EXP(B)	
				Lower	Upper
Final say on deciding what to do with husbands earnings		.058			
Respondent and husband	.725	.125	2.064	.817	5.215
Husband alone	1.032	.030	2.807	1.105	7.126
<i>Respondent currently working (yes)</i>	-.763	.000	.466	.311	.699
Final say on making large HH purchases		.055			
Husband and partner	-.426	.056	.653	.422	1.011
Wife alone	.253	.468	1.288	.651	2.549
<i>Final say on deciding how many children to have</i>		.046			
Both Husband and wife	-.633	.013	.531	.322	.875
Wife alone	-.417	.484	.659	.205	2.117

Table 16 shows results of a multivariate logistic regression model on women empowerment variables. The final model was derived using backward elimination strategy method and variables that remained in the model had significant change in R^2 . When the respondent (wife) was currently working, it was significant to couple unmet need and final decisions on the number of children to have (0.046). The model fitting improved significantly with the removal of each variable. The -2LL improved from 630.006 to 593.338 and the Nagelkerke R^2 from 13% to 9% making the final model even better. Therefore, all the variables in the final model had significant effect on couple unmet need. However, the odds of couple unmet need with joint or husband-decisions on husband's earnings were high 2.06 and 2.80 respectively. Therefore, couple unmet need was 2 to 3 times lower when such decisions were made by the wife alone relative to when made jointly or by husband alone. In addition employed women were less likely to have couple unmet need for FP relative to unemployed women. Unemployed women were 2 times more likely to have couple unmet need relative to working women. Therefore, empowering women through decision-making and employment has a major impact on couple unmet need.

4.3.3 Exposure to Mass Media and Couple Unmet Need

The influence of exposure to mass media on Couple unmet need for family planning is assed with research question three. Therefore, determining the effect of exposure to mass media to couple unmet need examined variables such as exposure to FP messages from radio, TV and newspapers/ magazines and the frequency of access to the information.

Results from Table 17 show that access to FP information from the three mass media sources had a very strong relationship to couple unmet need (radio, TV and newspapers p-value = 0.000). All men and women exposed to mass media showed less likelihood to couple unmet need relative to those who had not been exposed (reference category). Moreover, the frequency of acquiring the information had a strong relationship. The higher the frequency of

exposure, the lower the likelihood, to couple unmet need relative to those who never got any FP information at all (reference).

Table.17 Effect of Exposure to Mass Media and Couple Unmet Need (N=682)

Variables		B	p-value	O.R	95% C.I. for EXP(B)	
					Lower	Upper
Heard FP on Radio	Yes	-0.961	0.000	0.382	0.263	0.557
Heard FP on TV	Yes	-0.826	0.000	0.438	0.303	0.632
Heard FP on Newspapers/ magazines	Yes	-0.703	0.000	0.495	0.337	0.729
Frequency of reading newspaper			0.001			
	Less than once	-0.658	0.004	0.518	0.33	0.814
	At least once	-0.886	0.003	0.413	0.232	0.734
	Almost every day	-0.895	0.037	0.409	0.177	0.946
Frequency of listening to radio			0.002			
	Less than once	-0.345	0.348	0.708	0.345	1.455
	At least once)	-0.683	0.031	0.505	0.272	0.939
	Almost every day	-0.880	0.000	0.415	0.26	0.663
Frequency of watching TV			0.000			
	Less than once	-0.521	0.068	0.594	0.34	1.038
	At least once	-1.098	0.006	0.334	0.153	0.729
	Almost every day	-0.896	0.000	0.408	0.264	0.633
Men						
Frequency of reading newspapers	Less than once	-0.150	0.498	0.861	0.557	1.329
	At least once	-0.627	0.005	0.534	0.344	0.83
	Almost every day	-1.097	0.000	0.334	0.187	0.596
Frequency of listening to radio			0.235			
	Less than once	0.160	0.789	1.173	0.364	3.775
	At least once	-0.278	0.613	0.757	0.258	2.224
	Almost every day	-0.495	0.308	0.61	0.236	1.577
Frequency of watching TV			0.000			
	Less than once	-0.272	0.241	0.762	0.483	1.201
	At least once	-0.783	0.004	0.457	0.268	0.781
	Almost every day	-0.887	0.000	0.412	0.267	0.637
Heard FP on TV	Yes	-0.461	0.009	0.63	0.446	0.892
Heard FP on Radio	Yes	-0.589	0.002	0.555	0.38	0.81
Heard FP on Newspapers	Yes	-0.620	0.001	0.538	0.378	0.765

Table 18 depicts results of a multivariate logistic regression model on exposure to mass media. Results show that both wife's and Husband's exposure to FP on radio remained significant to couple unmet need depicting the important role that mass media plays and more so the radio. The odds for those who had heard FP from the radio was 0.531, implying that the likelihood of couple unmet need for those who had not heard FP from radio was 2 times higher than those who had heard. This could be because radio is affordable and available to almost every couple in Kenya. Likewise, frequency of watching the TV remained significant to couple unmet need for the husbands. Men have more opportunities of watching the TV than their wives since even when a TV set is missing at home they can always access the

information at social joints. Moreover, the model fitting improved significantly from -2LL of 747.261 to 752.852 and Nagelkerke R2 improved from 11% to 9%

Table 18. Multivariate Logistic Regression Model on Exposure to Mass Media

		B	p-value	O.R	95% C.I. for EXP(B)	
					Lower	Upper
Heard FP on Radio	Yes	-0.632	0.004	0.531	0.347	0.814
Heard FP on TV		-0.397	0.079	0.672	0.431	1.048
Men						
Frequency of watching TV			0.044			
Less than once		-0.098	0.685	0.907	0.566	1.453
At least once		-0.56	0.048	0.571	0.328	0.994
Almost every day		-0.599	0.016	0.549	0.338	0.893
Heard FP on Radio		-0.47	0.023	0.625	0.417	0.938

4.3.4 Couples Attitudes and Effect to Couple Unmet Need

Research question 4 aimed at determining the extent to which couples' attitudes influence couple unmet need for FP. Table 16 shows the results of logistic regression in relation to selected variables. Husbands/ partners who agree to statements such as contraception is woman's business, women who use contraceptives become promiscuous and that child bearing is a woman's concern, are said to have a negative attitude while those who disagree have a positive attitude. Therefore, taking those who disagree as the reference category results show that where men have negative attitude (agree) couple unmet need is likely to be high. The odds of couple unmet need for men who have negative attitudes on their partner's contraceptive use greater than one (1.433). However, where responsibility for using contraceptives was taken as a joint adventure or mainly partner's adventure, the likelihood for couple unmet need is more or less the same in relation to the respondent's responsibility (reference).

Table.19 Logistic Regression of couples attitudes and effect to couple unmet need (n=682)

		B	p-value	O.R	95% C.I. for EXP(B)	
					Lower	Upper
Contraceptive is woman's business	Agree	0.360	0.115	1.433	0.916	2.242
Women who use contraceptive become promiscuous			0.044			
	Agree	0.275	0.142	1.317	0.912	1.900
	Depends	0.783	0.024	2.188	1.109	4.317
Child bearing is woman concern			0.011			
	Agree	0.944	0.003	2.570	1.386	4.764
	Depends	-20.168	1.000	0.000	0.000	.
Responsibility for using contraceptives			0.217			
	Mainly partner	-1.166	0.129	0.312	0.069	1.403
	Joint decision	-1.099	0.038	0.333	0.118	0.942
	Other	-19.516	1.000	0.000	0.000	.

Results from Table 19 above show that husband's attitude on their wife's marital and family life is crucial. The O.R for husbands who agree to the notions that Contraceptive is woman's business, Women who use contraceptive become promiscuous and Child bearing is a woman's concern, is high depicting a high likelihood of couple unmet need relative to those

who don't agree. Likewise, where the responsibility for using contraceptive is mainly the husbands, unmet need is likely to be higher. Unmet need decreases when responsibility is taken jointly or is taken to be the wife's.

Table 20. Multivariate Logistic Model on couples' attitudes and effect on couple unmet need

	B	p-value	O.R	95% C.I. for EXP(B)	
				Lower	Upper
Child bearing is a woman's concern		0.019			
Disagree					
Agree	0.903	0.005	2.468	1.317	4.622
Don't know	-20.260	1.000	0.000	0.000	.
Women who use contraceptive become promiscuous		0.067			
Disagree					
Agree	0.201	0.294	1.222	0.840	1.779
Don't know	0.777	0.026	2.175	1.099	4.305

The results show that only attitudes on the notion that child bearing is a woman's concern remained significant to couple unmet need. The odds of couple unmet need for those who agree that child bearing is a woman's concern are 2.5 times greater than those who disagree. The -2LL was 788.647 with Nagelkerke R² being 3%.

4.4 Multinomial Logistic Regression

Multinomial models are necessary when the outcome has three or more categories. The last part in this study examines total couple unmet need for family planning as polytomous variable with three outcome categories, (unmet need to space -reference, unmet need to limit and unmet need to space or limit. Therefore, it is important in order to determine what factors predict what type/category of couple unmet need for FP is felt among couples. Unmet need to space is the reference category because in Kenya unmet need to space is higher than any other category. Unmet need level to space was found to be 40% as compared to 34% and 26% to limit and space or limit respectably (Figure.3). Moreover using unmet need to space as reference category makes the standard errors smaller and the confidence interval somewhat smaller and hence gives a more precise estimate of the other types of unmet need felt among the couples.

Variables used for the multinomial models are same as those used prior for the binary logistic regression for each objective but limited to three, the most significant ones. Therefore, this discusses education, couples' wealth, and religion of both wife and Husband. The model fitting information for each model tells whether the inclusion of the explanatory variables into the final model is a significant improvement of the fit relative to using only the intercept. All three explanatory variables, Education, Religion and couples wealth improve the model (p=000), implying that at least one of the regression coefficients in the model is not zero (the p-value is set at 0.05). In addition, the likelihood ratio tests of each model tests whether all predictors' regression coefficients in the model are simultaneously zero. They show the degree to which each explanatory variable contributes to improving it, relative to the intercept alone. Women education contributes the most followed by couple wealth, -2LLof reduced model of 221.548 at p=0.016 and -2LL of 216.024 at p=0.580 respectively.

Table 21. Odds Ratios for Total Couple Unmet Need by Predictor Variables

		B	p-value	O.R	95% CI for Exp(B)	
					Lower	Upper
Need to limit	Intercept(Women)	-1.134	0.13			
	No Education]	-0.281	0.708	0.755	0.174	3.286
	Primary	-0.045	0.931	0.956	0.346	2.644
	Secondary+	0.000				
	Catholic	1.375	0.251	3.955	0.377	41.477
	Protestant	1.212	0.313	3.361	0.319	35.445
	Muslim	0.000				
	Men					
	No Education	-1.731	0.076	0.177	0.026	1.197
	Primary	-0.644	0.161	0.525	0.214	1.292
	Secondary+	0.000				
	Catholic	0.698	0.519	2.011	0.241	16.796
	Protestant	1.105	0.295	3.018	0.383	23.813
	Muslim	0.000				
	Poorest	-0.089	0.883	0.915	0.279	2.995
	Poorer	-0.767	0.287	0.464	0.113	1.906
	Middle	-0.480	0.471	0.619	0.167	2.285
	Richer	-0.730	0.261	0.482	0.135	1.721
	Richest	0.000				
Either space or limit	Intercept(Women)	-1.428	0.058			
	No Education	-1.658	0.185	0.190	0.016	2.214
	Primary	0.968	0.133	2.633	0.746	9.295
	Secondary +	0.000				
	Catholic	-0.394	0.768	0.674	0.049	9.242
	Protestant	-0.179	0.892	0.836	0.063	11.096
	Muslim	0.000				
	Men					
	No Education	-0.532	0.598	0.587	0.081	4.258
	Primary	-0.184	0.702	0.832	0.324	2.136
	Secondary+	0.000				
	Catholic	1.156	0.369	3.176	0.255	39.531
	Protestant	1.006	0.424	2.734	0.232	32.188
	Muslim	0.000				
	Poorest	-0.172	0.797	0.842	0.226	3.131
	Poorer	0.260	0.711	1.297	0.328	5.124
	Middle	-0.422	0.591	0.656	0.141	3.054
	Richer	0.270	0.681	1.310	0.361	4.753
	Richest	0.000				

NB Reference category is unmet need to space

Results from table 21 show that the odds of couple unmet need to limit for women with secondary education and above, over unmet need to space (reference) is 1.3 times (1/0.755) as large as for women with no education. On the other hand, the odds for unmet need to limit for men with secondary education and above, over that of spacing is 1.6 times as large for men with no education. Furthermore, the odds of couple unmet need to limit over unmet need to space is 4.0 and 3.0 times respectively more for catholic and protestant women compared to Muslim women. Likewise, as regards couple's wealth, the odds of couple unmet need to limit for the richest couples in Kenya over unmet need to space is higher 1.1 times higher as for the poorest women. For the divergent unmet need among the couples, the results are similar with odds of couple divergent unmet need for men and women with higher education over unmet need to space (reference) being larger/higher relative to the odds of those with no education. The odds for divergent couple unmet need for the Muslims over unmet need to space are also lower relative to other Christians. Therefore, couples' wealth, religious affiliation, and level of education affect what type of couple unmet need felt, with

odds for women education having the largest odds over unmet need to space and wealth for divergent couple unmet need relative to unmet need to space.

Table 22. Odds Ratios for Total Couple Unmet Need by Women Empowerment Variables

		B	p-value	O.R	95% CI for Exp(B)	
					Lower	Upper
Need to limit	Intercept	1.462	.353			
	Wife currently working=No	-1.188	.003	.305	.138	.674
	Wife currently working =Yes	0	.	.	.	.
	Final say on Deciding How many Children= Husband	-.852	.520	.427	.032	5.715
	Final say on Deciding How many Children =Both Equally	-1.049	.420	.350	.027	4.480
	Final say on Deciding How many Children =Wife alone	0	.	.	.	.
	Who decides how to spend money =Husband	-.128	.904	.880	.108	7.135
	Who decides how to spend money =Both Equally	.113	.916	1.119	.138	9.059
	Who decides how to spend money =Wife alone	0	.	.	.	.
Either space or limit	Intercept	1.947	.189			
	Wife currently working =No	-.518	.233	.596	.254	1.396
	Wife currently working =Yes	0	.	.	.	.
	Final say on Deciding How many Children= Husband	-1.065	.423	.345	.025	4.670
	Final say on Deciding How many Children =Both Equally	-1.102	.396	.332	.026	4.221
	Final say on Deciding How many Children =Wife alone	0	.	.	.	.
	Who decides how to spend money =Husband	-1.184	.209	.306	.048	1.938
	Who decides how to spend money =Both Equally	-1.014	.281	.363	.057	2.294
	Who decides how to spend money =Wife alone	0	.	.	.	.

NB unmet need to space is reference category

Results from the Table 22 show that the coefficient for wife currently working remained significant. The odds of having unmet need to limit over unmet need to space is 3.3 times more for working women relative to non working women. In addition the odds of couple unmet need to limit over unmet need to space are lower when decision are made jointly on the number of children to have and on how to spend money relative to when they are made by the wife alone (0.35 and 1.1 times lower respectfully). Likewise, the odds for divergent couple unmet need over unmet need to space are highest when the wife works relative to when she does not at 1.6 larger. Furthermore, when decisions about the number of children to have are made by the husband alone, and when decisions about how to spend money are jointly made, the odds of divergent couple unmet need over unmet need to space are lowest (0.345 and 0.363 times) respectively relative to when made by wife alone. Therefore, divergent couple unmet need and unmet need to limit is highest when the wife works and makes decision on marital and reproductive life alone over unmet need to space.

Table 23. Odds Ratios for Total Couple Unmet Need and Exposure to Mass Media

		B	p-value	O.R	95% CI for Exp(B)	
					Lower	Upper
Need to limit	Intercept (Woman)	1.689	.002			
	Heard FP on Radio =No	-.729	.067	.482	.221	1.051
	Heard FP on Radio =Yes	0	.	.	.	.
	Frequency of watching TV = Not at all	-1.208	.087	.299	.075	1.193
	Frequency of watching TV = Less than once	-1.383	.127	.251	.042	1.482
	Frequency of watching TV =At least once	-2.495	.044	.083	.007	.940
	Frequency of watching TV =Almost every day	0	.	.	.	.
	Men					
	Heard FP on Radio =No	.080	.848	1.083	.478	2.455
	Heard FP on Radio =Yes	0	.	.	.	.
	Frequency of watching TV =Not at all	-.820	.198	.441	.126	1.535
	Frequency of watching TV =Less than once	-.567	.395	.567	.154	2.094
	Frequency of watching TV =at least once	-.504	.480	.604	.149	2.445
	Frequency of watching TV =Almost everyday	0	.	.	.	.
Either Space or limit	Intercept (Women)	.669	.291			
	Heard FP on Radio =No	-.790	.057	.454	.201	1.024
	Heard FP on Radio =Yes	0	.	.	.	.
	Frequency of watching TV = Not at all	-.466	.554	.628	.134	2.934
	Frequency of watching TV =Less than once	-.357	.707	.700	.109	4.495
	Frequency of watching TV =At least once	-.813	.451	.444	.054	3.672
	Frequency of watching TV =Almost everyday	0	.	.	.	.
	Men					
	Heard FP on Radio =No	-.043	.921	.958	.410	2.240
	Heard FP on Radio =Yes	0	.	.	.	.
	Frequency of watching TV =Not at all	-.397	.548	.672	.184	2.456
	Frequency of watching TV =Less than once	-.562	.427	.570	.142	2.283
	Frequency of watching TV =At least once	-.302	.690	.740	.168	3.259
	Frequency of watching TV =Almost everyday	0	.	.	.	.

The results in Table 23 show that the odds of unmet need to limit over unmet need to space is 2 times more for women who have heard FP from the radio relative to those who have not heard. Conversely, the odds of couple unmet need to limit for men over unmet need to space for those who have heard FP relative to those who have not is nearly the same (1.08 times) as large or as small. In addition, the odds of unmet need to limit over unmet need to space for both women and men who watch the TV almost every day are greater relative to those who do not watch at all.

The odds for divergent couple unmet need for FP over unmet need to space, similarly were 2.2 as large for women who had FP on radio relative to those who had not hear while the odds for men were 1.0 times as large for those who had heard relative to men who had not

heard. The odds increased with the frequency of watching TV for divergent couple unmet need over unmet need to space. Therefore exposure to FP programmes on radio and frequency of listening to radio impacted on the odds ratio of the type of unmet need felt.

Table 24. Odds ratios for Total Couple Unmet Need and Couples' Attitudes

		B	P-value.	O.R	95% CI for Exp(B)	
					Lower	Upper
Need to limit	Intercept	-0.383	0.478			
	Child bearing is woman concern =Disagree	0.295	0.602	1.343	0.443	4.069
	Child bearing is woman concern =Agree]	0	.	.	.	.
	Women who use contraceptive become promiscuous = Disagree	-0.067	0.848	0.935	0.47	1.859
	[MV3B25B Women who use contraceptive become promiscuous =Agree	0	.	.	.	.
Either Space or Limit	Intercept	-0.385	0.478			
	Child bearing is woman concern =Disagree	-0.006	0.992	0.994	0.324	3.051
	Child bearing is woman concern =Agree	0	.	.	.	.
	Women who use contraceptive become promiscuous =Disagree	-0.062	0.87	0.94	0.448	1.973
	Women who use contraceptive become promiscuous =Agree	0	.	.	.	.

Table 24 shows the odds of couple unmet need to limit and unmet need to limit or space over unmet need to space, which is the reference category by couple's attitudes. The odds of couple unmet need to limit for men who disagree with the saying that Child bearing is a woman's concern relative to those who agree with the notion over unmet need to space is 1.34. Furthermore, the odds of divergent unmet need for men who agree with such notions are twice as large over unmet need to space relative to those who disagree.

Chapter Five: Discussion, Conclusion and Recommendations

5.1 Introduction

This section provides a short summary of the main findings from the study objectives in a discussion format. In addition, the study shortcomings are highlighted and thereafter the conclusion and recommendations for policy implementers.

5.2 Summary of Results

5.2.1 Socio-demographic Determinants of Couple Unmet Need

The first objective was to determine socio-demographic factors that determine couple unmet need. Highest level of couple unmet were found among couples in the rural areas (29%), those with no education (53%), the poorest (56%), who were affiliated to the Muslim religion (49%), and those living in North eastern (75%), Western (36%) and Nyanza provinces (31%). Furthermore, most of the socioeconomic factors were significant to couple unmet need although type of place and partner's (wife or husband) age were not. However, couple unmet need was found to differ across the course of reproductive age groups. Highest levels of couple unmet need were found among young ages (below 25 years) dropping gradually until the end of reproductive periods (O.R higher in ages 15-19 and 45-49 relative to the reference). In addition, unmet need for spacing and limiting also differed across couple reproductive life span. Unmet need to space was highest among couples below age 25 and unmet need to limit increased steadily towards the end of the reproductive life span. Education and wealth were significantly associated to couple unmet need. The final multivariate model had educational level for husband and wife, religion, ethnicity and wealth as predictors of couple unmet need. In the last step of assessing the main determinants of what type of unmet need felt, results showed that education, wealth, and religious affiliation affected what type of unmet need is felt. Secondary education and above, the richest and those affiliated to Muslim religion are more likely to have unmet need to limit. For divergent unmet need those likely to have unmet need are those with primary education, the Catholics and the Protestants.

5.2.2 Women Empowerment

Empowering women through employment and decision-making was significant to couple unmet need. Employed women are 1.5 times less likely to experience couple unmet need relative to those unemployed. Likewise, women who were able to make decisions on major household items were less likely to have couple unmet. In addition joint decisions on the number of children was significantly associated to couple unmet need and where such decisions were made jointly the likelihood of couple unmet need was low. Similarly, where the husband had an upper hand in decision-making couple unmet need was 2 times higher. Unmet need to space was high where the wife was not working and where decisions were made jointly. Likewise, unmet need to limit or space was high where the wife made sole decisions

5.2.3 Exposure to Mass Media

Exposure and frequency of exposure to FP messages was significantly associated to couple unmet need. Couples who had no exposure at all from the radio, TV and newspapers were 3 and 2 times each more likely to have couple unmet need relative to their counterparts who had been exposed. Moreover, unmet need to space on the other hand was lowest where there was exposure while unmet need to limit increased with exposure. Similarly, divergent unmet need was high where there was exposure to mass media.

5.2.4 Attitudes

Results showed majority of men had a positive attitude towards use of contraceptives by their partners and take it as a joint (couple) responsibility. The likelihood of couple unmet need was lower for men who had positive attitudes relative to those with negative attitudes. The odds for those who had a negative attitude were 2.5 times more relative to those who had positive attitudes. Likewise unmet need to space and unmet need to limit were highest were men had negative attitudes. The odds of divergent unmet need over unmet need to space are twice as large for men who have negative attitudes.

5.3 Discussion

This study set out to establish the main determinants of couple unmet need in order to unearth opportunities for pragmatic and policy approaches to accelerate the uptake of contraceptives among couples in Kenya, while adopting a couple-based-approach, that is bringing men's opinions on board. Couple unmet need has been defined to include both partners who have unmet need and even where either wife or husband have divergent unmet need. Calculation of couple unmet need used the DHS standard method while incorporating men's views. The results have shown that couple unmet need is much lower, 13% than women's or men's unmet need separately (25% and 40%) respectfully.

Moreover, factors affecting couple unmet need are categorized into socio-demographic, women empowerment, couples attitudes towards use of contraceptives and exposure to mass media. A third category of unmet need other than unmet need to space or unmet need to limit evolved, that of divergent unmet need (26%) and which necessitates consideration when addressing couple unmet need for FP, as this group of couples could be comprising those with extramarital partners in case of polygamy or those with other marital partners. This was only possible because of incorporating men into the analysis as then husbands and wife's views in certain instances are divergent.

Couples living in the rural areas have high couple unmet need. This might be because of disadvantages in many ways that befall people in rural areas relative to their urban colleagues. The finding that couple unmet need differed across the course of reproductive age groups implied that couples have different fertility preferences depending on their ages. Majority of young couples have fertility desires for spacing because they are still within the number of children that they desire while at older ages couples have already had the number of children that they had wanted to have and may therefore need no more. More still the high levels of couple unmet need among young ages (below 25 years) dropping gradually until the end of reproductive periods, could be attributed to the fact that young couples have high fertility and are at risk of pregnancy while as age advances the proportion at risk decreases due to infecundity of the women. Therefore advanced ages have unmet need to limit while the young ones have unmet need for spacing. This is in tandem with observation in Westoff & Pebley (1981), Westoff & Ochoa (1991), Al Jawadi & Al Backery (2010) where fertility was found unmet need to differ across age groups.

When wife's and husbands education is examined together, husband's education becomes less significant, suggesting that wife's level of education is more superior than husband's in steering reproductive matters. Generally, education makes individuals open-minded and enables them to pursue the quality of life that they want. Educated couples have increased employment opportunities and more so women of secondary education and above are in position to know better about FP, are more motivated to learn where to get supplies and even know the kind of lifestyles that they want for their families and for themselves. This rhythms with results reported by many studies (Westoff & Pebley, 1981; Dinc et al., 2007) that have indicated that unmet need decreased with increased levels of education.

Furthermore, couples in the poorest wealth quartile had a higher likelihood of couple unmet need relative to those in the richest quartile. Wealth enabled couples to have the purchasing power needed and with money, couples could live in localities, which are rich with resources. Indeed, couples living in rural areas are more likely to experience couple unmet need relative to couples in urban areas. This explains why couples in North-eastern region, a more rural area had highest couple unmet need for FP. These findings are in agreement to findings from a number of studies, Omwango & Khasakhala, 2002; Beekle & Maccabe, 2006; Dinc et al., 2007 that have shown region of residence, wealth status as key determinants of couple unmet need. Certainly, Westoff & Ochoa (1991) give a rich account of the effect of place of residence on unmet need for contraception in developing countries.

Catholics and Muslims were more likely to have couple unmet need for FP as compared to other Christians. These two religious communities are well known for their staunch beliefs when it comes to FP programs and Muslims in particular are very particular about their Quran. Indeed, North eastern region, which is predominantly occupied by these religious groups, had 25 times likelihood of couple unmet need. Educational level, religion, ethnicity and wealth are key predictors of couple unmet need. Furthermore, the type of unmet need felt is also envisaged by these same factors. The odds of unmet need to limit over unmet need to space for women of secondary education and above is 1.6. Catholics and protestants are more likely to have unmet need to limit than the Muslims. Divergent unmet need is however, more likely to be high among women of primary education. The odds of divergent unmet need over unmet need to space are 2.6. Therefore, in view of these discussions it is crucial to address couple unmet need while targeting those programs that aim at bridging the gap between the rich and the poorest while at the same time stepping up education levels and more so for the girl child. Likewise, programs that are region specific go a long way in addressing couple unmet need taking into considerations the peculiarity of each region.

Women engaged in gainful employment are less likely to have couple unmet need. Employment normally goes hand in hand with education attainment, thereby enabling women to have potential and ability to associate themselves with modern life styles and to do away with fatalistic tendencies, which are detrimental to reproductive health. Women have high self-esteem when they are in control of their income and are able to make final decisions as regards marital and family affairs. Indeed, decision-making on health, mobility and on household needs in general becomes simple for women when they have an income. This is suggestive of low couple unmet need where wives make decisions on household purchases and visits to family and friends relative to when decisions were made by the husband.

Discussing FP with a health-work shows no significant effect on couple unmet need though discussion with a health work assumes more demand for FP. However, this could be because of the fact that in Kenya knowledge of FP is nearly universal 95% (KDHS, 2009). Nevertheless, joint discussion on reproductive issues shows significant association to couple unmet need. Poor communication is detrimental on reproductive health needs and unmet need for that matter (Wolf et al., 2000). Where husbands and wives discuss together there is mutual understanding. The type of unmet need is nevertheless influenced by decision-making and empowerment of women through employment. Where the wife was working and where decisions are made jointly unmet need to limit is higher. Divergent unmet need is however higher, where wife has sole decisions. Normally with mutual communication, couples can decide the number of children they want.

Mass media plays an important role in influencing the way people reason, interpret issues, and make decisions. Indeed exposure to mass media and the frequency of exposure to FP messages on the mass media makes an impact in making overall decisions. Couples who had

no exposure at all from the radio, TV and newspapers were 3 and 2 times each more likely to have couple unmet need. Unmet need to space on the other hand was lowest where there was exposure while unmet need to limit and that of divergent unmet need increased with exposure. This could be due to the role that the media plays that of education and influencing of people's attitudes, motivating them to think of smaller family sizes. Furthermore, Al Jawadi & Al Backery (2009) found that exposure to family planning programs and media had a significant effect on the level of unmet need. Moreover, radio as a source of exposure remained the most significant media; perhaps due to its affordability by almost all the couples (Households) and compatibility while broadcasting FP messages. More Kenyans listen to the radio than they do TV or read newspapers and more still, most radio stations use diversified languages and in this case, messages are clear and most understood. It is therefore important to make proper use of these mass media sources to pass FP information while emphasizing that couples best achieve FP jointly.

Attitudes that people have towards certain issues may act as barriers or facilitate performance of certain behaviour. These attitudes are normally acquired from the socializing environment due to influence from the background factors. Husbands normally assume the role of household head and normally okay on most of family decisions of their wives. Men deemed to have negative attitudes on reproductive matters or household decision-making amplifies the likelihood of couple unmet need. When men or husband perceives reproductive matters as a couple responsibility, the likelihood of couple unmet need is low. These findings are similar to findings in other studies that found out that men's role was important and more often dominant in adoption of contraceptives and other reproductive health issues (Ngom, 1997). However, Korra & Antenane (2002) found that men have positive attitudes towards FP but it is the women who perceive their husbands to disapprove or disagree on FP. In this study majority of men (86%) approve their partners use of contraceptives. This echoes the need for spousal communication and constraints of cultural norms that enshrine the husband over the wife. Joint responsibility in FP matters, spousal communication for that matter, motivates the uptake of FP services, and thereby reduced couple unmet need. Family planning Programs should aim at motivating couples and more specifically men to embrace change and dialogue to implement their fertility preferences and desires together with their spouses.

5.4 Weaknesses and Strengths of the Analysis

The study was based on secondary data, which confined it within the boundaries of the questionnaires and in particular, dealing with the couple data was the most challenging part of it all. While computation for female unmet need was direct, computing and incorporating males required making assumptions. The study assumed a monogamous union and that when men reported contraceptive issues they did so in consensus with their wives. In addition, men's fertility preferences are assumed to follow those of their wives yet, in actual sense, men cannot decide to have children on their own but can only do so in conjunction with their wives. Therefore, couple unmet need assumes a situation where both husband and wife are not using any contraceptive and express fertility preferences of wanting to either limit or postpone child birth even when such expressions differ within the same household.

Moreover, the concept of unmet need is not direct from the DHS, questions asked about fertility preferences and contraceptive use are just inferred. Otherwise, if individual respondents (men and women) in the DHS could be asked direct questions and at the same time give direct answers on unmet need for FP, it would be easier for tabulation and same applies to unmet need for spacing and limiting. The researcher puts the answers to such

questions on the respondents who say that they want to limit or postpone childbirth and are not using any method of family planning to calculate unmet need.

Responses to questions in the DHS are on an individual basis not couple's responses, no wonder, a third category of unmet need evolved that of divergent unmet need. Moreover, in the multivariate analysis some variables had very large standard errors and confidence intervals like religion and ethnicity for the Somalis necessitating removal of the variable from the final model. Nevertheless, tests for co-linearity were not possible because this variable did not affect the significance of other independent variables. In addition, the interaction for religion and ethnicity, education and region to determine the effect of the associations on couple unmet need, were not significant and were dropped from the final model (Table 14). Therefore, the study observed no interaction effect on couple unmet need. Lastly, Data weighting for this analysis was not necessary since when analysis are done for couple data, neither the weights for females, nor the weights for males are appropriate. Likewise, the analysis was based on unweighted data because it was necessary to preserve the one respondent/one response relationship.

5.5 Conclusion

In light of the above discussion, it is evident that the level of unmet need is much smaller when the concept is approached from the perspective of couples (13%). Moreover, as regards determinants of couples' unmet need education, religion, ethnicity, and wealth index were some of the strong predictors of couple unmet need which remained significant in the final multivariate model. Wife's educational level is critical for couple unmet level than that of the Husband's. In addition, exposure to mass media, women empowerment, through decision-making and employment are also key Predictors. Likewise, unmet need to limit over unmet need to space was more likely among women with secondary education and above. This is because with education these couples were more able to decide what was best for themselves and their families. Divergent unmet was more likely among men with secondary education and above. These men were more likely to know better about FP and hence have desire to limit or space relative to their counterparts.

Therefore, the prevalence of unmet need in Kenya is an effect of diverse constraints imposed on both men and women in their pursuit to achieve their fertility preferences and further hindrance to use FP. The consequence of this is the high rates of unwanted fertility and population growth which is currently adding a million every year. Consequently, when addressing the issue of unmet need for FP, the couple as a unit is central and that key determinants highlighted in this study are essential if the country is to continue on the same path of reduced unmet need observed less than three decades ago. Critical to the findings is the influence of education and exposure to mass media. Programs designed to address unmet need while aiming at these factors should target both men and women for their combined influence on fertility preferences and use of family planning.

5.6 Recommendations

Based on the results we can draw some policy recommendations that could be useful while addressing the issue of Kenya's persistently unchanging unmet need for family planning. These recommendations include and not limited to:

Empowering both men and women so that they can make informed choices with regard to their sexual and reproductive lives, making them to have safe, effective, affordable and acceptable reproductive health care.

The Government of Kenya to adopt policies that motivate couples to adopt smaller family sizes, as well as making family planning services more accessible

Since religion was a key determinant to couple unmet need, then FP programmes formulation should enlist support of national and community leaders incorporating stakeholders at all the stages and more so from the mainstream churches.

Intensify awareness campaigns to address operational barriers to create sustained demand for family planning and in particular make use of mass media to counteract rumors if any that may prohibit FP uptake and pass accurate information about FP available and how they work. Target and motivate regions that have high unmet need like North eastern, western, and Nyanza through education, and other innovative strategies that will increase uptake of FP in those regions.

Continue building on education programs so as to reach all the regions in the country and more encourage education above primary level, balancing the gender gap in enrollment and more maintaining these enrollments to completion levels. Therefore the current free primary and secondary education programmes to be strengthened and maintained. In addition to promoting education policy, creation of employment opportunities be opened up in all sectors in the country to engage the school leavers. Results clearly showed that while education had significant effect on couple unmet need working women had less likelihood to couple unmet. In this regard the policy on gender balancing in employment to be encouraged.

Increase outreach to the rural areas by tailoring FP programs to address the specific needs of different groups, particularly the poor, those with no education and those affiliated to different religious groups.

Reposition FP in the national development agenda in view to addressing unmet need which would go a long way in addressing some of the challenges facing the country like attainment of some of the MDG (MDG 4 and MDG 5)

5.7 Recommendation for further Research

More research on unmet need should embrace use of qualitative method in order to understand more about the couple's perceptions, divergent unmet need and contextualize their social context.

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