FAMILY PLANNING COMMUNICATIONS AND CONTRACEPTIVE USE IN KENYA.

BY

GATHITI ZIPPORAH W.

A Thesis Submitted in Partial Fulfilment for the

Degree of Master of Arts in Population Studies,

University Of Nairobi

DEDICATION

This work is dedicated to my parents Misheck Gathiti Wahome and Monica Wambaire Gathiti, whose presence has made me be and since they are, therefore I am.

DECLARATION

This thesis is my original work and has not been presented for a degree in any other University to the best of my knowledge.

Signature....~~Gathiti~~........

GATHITI ZIPPORAH W.

This thesis has been submitted for examination with my approval as the University supervisor.

Signature....~~Rungazi~~...... 20/11/97

Dr. ZIBEON MUGANZI

Population Studies & Research Institute

University of Nairobi

P. O. Box 30197

NAIROBI

ACKNOWLEDGEMENTS

First I extend my sincere appreciation to the United Nations Fund for Population Activities(UNFPA) for having granted me a full-time scholarship which enabled me to study at the Population studies and Research Institute, University of Nairobi.

I am eternally grateful to Dr. Zibeon Muganzi for his guidance and assistance during all stages of this work. Thanks are also due to Mrs Monica Magadi and Mr. Mwaniki for their advise and support as supervisors. I am greatly indebted to other members of staff of the Population Studies and Research Institute(P.S.R.I). Also the support given to me by my fellow students and all other support staff of P.S.R.I especially in the P.S.R.I library was tremendous in keeping me going.

My heartfelt gratitude also goes to Maingi Kubai and Minju Kariuki who were very instrumental at the beginning of the entire program and saw me through the good and bad times.

Special thanks go to Mrs. Njambi Wanjohi for typing this work, Julius Majale for assisting in data analysis and Isaac Ondieki for editing the document. To my relatives, I say thanks for their valuable prayers and specifically Anne and Dorcas for their special support.

I have no words to thank Mr. Joseph Gitau, the Director, Probation and After Care Service Department together with his entire team who made my program easier to cope with. To all my friends, thanks for your moral support and I believe that God will bless you.

Finally , my thanks go to God Almighty, for his continuous sustenance that saw me through the whole course.

ABSTRACT

This study aims at examining how family planning communications are related to socio-demographic factors and how these two affect family planning adoption in Kenya which in turn affects fertility. It focuses on four specific objectives which includes; examining the reach of family planning messages through the mass media and interpersonal channels; identifying sub-groups within the population that have had relatively less exposure to family planning messages; establishing the level of exposure to family planning messages through the mass media and interpersonal channels in relation to selected socio-demographic characteristics of the population and establishing the relationship between family planning adoption in the country and fertility levels in terms of the total number of children ever born.

The data used in the study is of secondary nature from the Kenya Demographic and Health Survey, 1993. The methodology of data analysis used was cross tabulations, descriptive statistics and the Chi-square. The innovation decision process model adopted from Rogers 1983 was applied. In application of this model, family planning was looked at as a process that occurs over a period of time and consists of a series of actions. The process begins at the awareness stage through to interest, evaluation trial and finally to adoption. Graphs were used to present information in the study simply and quickly.

The findings of the study revealed that age, marital status, region, education and residence of the respondents are influencing factors on the source of family planning information. Interpersonal channels were found to be the most powerful source of family planning information to women in Kenya. Health workers were distinctly the source of most information. Mass media exposure was higher in urban as opposed to rural areas and vice versa for interpersonal channels. Women's exposure to family planning messages was found to

increase with a woman's level of education while exposure through interpersonal channels decreased with increase in educational attainment.

Family planning sources were found to be closely associated with socio-demographic factors of the population and the two influence the adoption of family planning and therefore contraceptive use in the country. The adoption of family planning was found to be closely associated with the number of children ever born which is a direct measure of fertility.

The study recommends that policy makers should address the population on matters pertaining to family planning at different levels since their needs are different where certain sub-groups (socio-demographic) are more advantaged than others. Once the individual needs are addressed at the respective levels, then fertility would become manageable for the entire nation. It also recommends that; interpersonal channels should be enhanced being the most powerful source of family planning information; a market research should be carried out on times most women listen to radio and television and use such times to broadcast family planning; and further research with multi-variate analysis should be addressed.

Table Of Contents

List Of Tables

List Of Graphs

CHAPTER ONE

GENERAL INTRODUCTION

1.0.0. INTRODUCTION

Kenya has an estimated population of 23 million with an annual growth rate estimated to be slightly over 3 percent by the 1989 census, a growth rate which is among the highest in the world. Kenya has long been concerned with development implications of its rapid population increase. The Kenya Government's view towards fertility is that it is unsatisfactory because it is too high and therefore its policy is to lower it.

The concern of the Government of Kenya as regards the high population growth rate goes back to 1962 when the census revealed a population size of 8.6 million persons and an inter-censal growth rate of slightly over 3 percent per year. Official efforts began with the formation of the Family Planning Association of Kenya (FPAK) which was meant to help those Kenyans who needed the Family Planning Service.

The National Family Planning Programme was officially begun in 1967 and integrated with Maternal Child Health. The Ministry of Health was given the responsibility of implementing the programme. The program made significant progress in that Family Planning Services were extended to almost all provinces of the country. Despite the effort however, the 1969 census results confirmed earlier findings about high fertility. On the basis of the information, the Government launched a five year (1975-1979) programme which was to serve as the basis for the expansion and integration of services and to provide operational target against which to measure achievement. The Family Planning component had limited success and instead of a decline in the population growth rate, a significant increase occurred raising the rate to about 3.8 percent in 1979.

The five year programme had its own serious short falls and the government realised the need to improve on the same. Not much had been achieved as revealed by the

1979 census and the Government of Kenya approved the establishment of the National Council for population and Development in 1982. The council co-ordinates the population activities of the Government Ministries and Non-Government Organizations. Besides, it formulates population policies.

In 1984, the Country through the National Council for Population and Development issued the Sessional Paper No. 4 of 1984 on Population Policy Guidelines to guide the implementation of the population programme. In issuing the policy guidelines, the Government had recognised that the country's population was the most valuable resource. The implementation of the policy guidelines made substantial achievements as evidenced from the 1989 census where the population growth rate declined from an all time high of 3.8 percent in 1979 to 3.3 percent per annum in 1989. Knowledge of Family Planning methods also increased. Despite the achievements however, certain challenges are still emerging among them the unmet demand for family planning and the quality of family planning services.

The Government has now issued the Sessional Paper No. 1 of 1997 on National Population Policy for Sustainable Development. The policy re-asserts the tenets of its predecessor and its formulation and approach is based on past experience, and demographic and socio-economic information and data collected during the implementation of the predecessor policy guidelines. It also integrates the International Conference on Population and Development (ICPD) Programme of Action and is a manifestation of Kenya's advocacy of global population and development concerns.

Family planning programs ultimately depend on reaching and influencing entire populations. Family planning largely depends on individual actions taken in private with little or no supervision. People need good information and reinforcement to encourage them to practice family planning regularly, consistently and effectively.

People obtain information about Family Planning both from the Mass Media and through interpersonal communications. Radio and television reach millions of people even in remote areas and have powerful influence on opinions, attitudes and behaviors. People also hear about family planning in schools, social programs and communities, Church and Celler (1989).

Interpersonal communication, whether among family members and friends or between service providers and clients plays an important role in people's decisions about family planning by helping people decide whether, when, which method and how to use family planning. After exposure to mass media coverage of family planning, people typically discuss family planning issues with friends or relatives or they make contact with a provider promoted in the Mass Media such as a clinic or a counselor.

Kenya is on record as being among the first countries in Africa to develop a favourable policy towards family planning. However, success in recruiting acceptors and retaining them has not been forthcoming despite the apparent demand for family planning services. It is the intention of this study to examine whether family planning communication and socio-demographic factors (region, marital status, age, residence, and education) influence contraceptive use.

1.0.1. STATEMENT OF THE PROBLEM

Non use of contraceptives in highly prevalent not only in Kenya but in many other developing countries as well. This is one of the contributing factors to the persistent high fertility levels prevailing in Kenya. The problem exists despite the Kenya government's efforts geared towards increasing the number of family planning centres; training more personnel to manage the programme and integrating free contraceptive distribution and free family planning services in the family planning programme.

Family planning communication through the mass media and interpersonal channels is a natural extension of the basic idea that the media can both inform and motivate

people even about such complex subjects as their reproductive means and goals. Communication activities give people the choices about using and continuing to use contraception and other aspects of reproductive health. In Kenya, it is assumed that messages on family planning through the mass media and interpersonal communication reach all women uniformly regardless of their age, marital status, residence, location and education.

Mass media interventions and interpersonal discussions can play a major role in promoting family planning use in given situations. Large increases in the number of family planning clients at clinics follow different patterns of communication campaigns. Fertility has remained high as Kenyans are not exposed to the use of contraceptives fully. Family planning messages hardly reaches those residing in the rural areas and is insentive to regions, age, sex, education and marital status.

Very little has been done on family planning communications and contraceptive use in Kenya and even elsewhere in developing countries. There is therefore a big gap in existing knowledge. No study in Kenya has indeed looked at family planning as a process and emphasis on the subject has been on "family planning - the instantaneous act" where people are implied to make decisions on family planning without going through the mental process.

1.0.2 OBJECTIVES

GENERAL OBJECTIVE

To examine how family planning communication is related to socio-demographic factors and how the two affect family planning in the country which in turn affect fertility.

SPECIFIC OBJECTIVES

1. To examine the reach of the family planning messages through the mass media and interpersonal channels.

2. To identify sub-groups within the population that have had relatively less exposure to family planning messages through such channels as mass media and interpersonal channels.

3. To establish the level of exposure of family planning messages through the mass media and interpersonal channels in relation to socio-demograhpic characteristics of the population (age, region, marital status, education and residence).

4. To establish the relationship between family planning adoption in the country and fertility levels in terms of the total number of children ever born.

1.0.3. JUSTIFICATION OF THE STUDY

The rationale for investigating family planning communications and contraceptive use in Kenya is predicted upon the fact that communicators would ideally like to know whether their efforts influence people to change attitudes and modify behavior. In short, they would like to determine whether a cause and effect relationship exists between family planning communication efforts and contraceptive use.

It is the working assumption that the more extensive the communication effort, the greater the number of contraceptive users and subsequently, the lower the fertility. Accurate information will be appropriate for use by programme managers and policy makers to evaluate and improve family planning as well as demographers seeking to understand the determinants of fertility.

The study will be able to provide empirical evidence for the importance of family planning communication in relation to contraceptive use and subsequent fertility change and suggest the utility of the Kenya Demographic and Health Survey in

obtaining a feedback on family planning communications in influencing contraceptive use.

1.0.4. SCOPE AND LIMITATIONS

The study is based on a national representative sample of men and women drawn from the entire population and interviewed in the Kenya Demographic and Health Survey (KDHS), 1993. The survey was designed to provide information on levels and trends of fertility, infant and child mortality, family planning knowledge and use, maternal and child health and knowledge of AIDS.

Out of this rich source of data, this study utilises information on the background characteristics of women respondents, contraception and family planning communications. The study therefore basically relies on the data collected from those Districts covered by the KDHS.

The study attempts to establish the source of most family planning information among the women respondents. It also attempts to establish whether there exists any relationship between exposure to family planning information and current contraceptive use among others.

The study is limited in that it will utilise secondary data collected with different objectives and not those specifically intended for this current study. Thus, not all analyses focusing on family planning communications and contraceptive use in Kenya maybe possible from the same. The study is thus constrained by the limited information available. Besides, limited resources and time restrict the researcher from conducting an actual field research to collect similar information which would otherwise be more comprehensive.

CHAPTER TWO

LITERATURE REVIEW

2.0.0 MASS MEDIA

Mass media includes radio, television, newspapers, posters and certain forms of popular entertainment. Co-ordinated development communication is especially crucial in promoting family planning. Evidence is accumulating that well planned mass media approaches can influence attitudes and change behaviour. In Latin America for example, Miguel Sabido's "telenovelas (television serials or soap operas) on family planning coincided with substantial increases in family planning acceptance (Sabido, 1990).

In Jamaica, 1986, radio was found to be a primary medium in two family planning communication projects; one conducted by the government's National Family Planning Board and the other by the Jamaica Family Planning Association. In the government project developed by the Jamaica Office of the International Advertising Agency, songs, radio, television, newspaper and cinema advertisements were used to promote family planning (Gillerly and Moore, 1986).

Wabwoba(1987) in a case study set out to establish the level of exposure to the media by an urban poor community of Kibera in Nairobi. It became evident that the urban poor are less exposed to the mass media messages than it is often assumed. The only mass medium that they are well exposed to is the radio. The print media and the television had less relevance to these people. The medium that was found to have a positive role in communicating messages was interpersonal communication.

More recently,the hit songs that Tatiana and Jonny Sang to promote sexual responsibility among Latin Youths attracted thousands of calls and letters to counselling centres for young people still remembered the messages and parts of the

songs. Use of entertainment or the "enter-educated approach" is a key factor in strengthening the behavioral impact of mass media (Coleman, 1988).

In Nigeria, three projects undertaken in the capital cities of three different states of the country (Ilorin in Kware State, Enugu in Amambra State and Ibadan in Oyo State) indicate a measurable increase in clinic attendance at existing family planning clinics as media activities increased. The Nigerian study demonstrates not only the feasibility of mass media in family planning promotion but also its affordability and potential for replication in launching family planning campaigns in new settings (Piotrow et al, 1990).

A study carried out in Gambia by Valente (1991) to determine the effects of a radio drama about family planning issues showed that program exposure was associated with an increase in knowledge, positive attitudes and contraceptive users. In Gambia, the radio was found to be an extremely efficient means of reaching large numbers of people and can persuade people to visit to family planning clinics.

Among the uneducated individuals in the Gambian sample, program exposure was associated with the significant increase in knowledge. Exposure was also associated with an increase in attitude score and the increase in the proportion of contraceptive users. In contrast, among educated individuals the increase in scores was less dramatic and none was statistically significant.

Among radio non owners, exposure to the program only affected knowledge whereas among radio owners, exposure affected knowledge, attitudes and (to a lesser extent) practices. Radio ownership seems to have been a prerequisite to program impact. This therefore accelerates changes in cultural norms regarding family planning if programming that promotes family planning is available.

The mass media can promote both development in general and family planning campaigns in particular. Development and population planning are both interrelated in

their effects on the people. In this respect, population control has been seen as being part and parcel of the total development strategy particularly for a country such as Kenya.

Westoff and Rodriguez (1993) in their study on mass media and family planning in Kenya found that exposure to media messages increases with age upto age 22 and then declines in what is probably a generational effect. Similarly, they found that exposure increases with the number of living children upto six but then declines in an inverted U-shaped relationship. They found that the type of residence has a modest effect in the expected direction, with urban residents more likely to have heard messages from more sources.

Basically, Westoff and Rodriguez found that exposure to media messages about family planning is affected very much as expected by the usual roster of demographic socio-economic and cultural characteristics of the respondents. They found out that knowledge of family planning methods, intentions to use contraception and the history of contraceptive practice are all related to media exposure in the expected directions.

In summary, a strong statistical association was demonstrated between reports of having heard or seen messages about family planning on radio, in newspapers, magazines, posters or on television and various measures of reproductive behaviour in general in the use of contraception and reproductive preferences. These associations are seen to persist even when a variety of life cycle, residential and socio-economic controls are imposed.

Analysis of family planning efforts in 35 countries shows a close relationship between communication efforts and the percentage of couples using modern contraception (Saba, 1994). Separate analysis of DHS data from Ghana, Nigeria and Kenya show that among women with otherwise similar socio-economic characteristics, more exposure of family planning messages in the mass media is linked significantly to more contraceptive use (Population Reports, 1994).

Unlike previous generations which did not have direct and instant access through the mass media to the rest of the world, most couples today are exposed constantly to new ideas. These "ideational factors" as well as economic and social changes have led a growing number of couples to want smaller families and use modern contraception to achieve that goal (Cleland and Wilson, 1987).

In Brazil, the first vasectomy promotion ever on television helped increase vasectomies at the advertised clinics by nearly 80 percent. In Turkey, a multi-media campaign involving numerous sports, dramas, motivational and documentary programs on television appears to have encouraged an estimated 240,000 women to start or to switch to modern contraceptives. In Ibadan, Nigeria, nearly one-quarter of new clients at family planning clinics cited as their source of referral, television shows that broadcast clinic addresses.

Ross et al (1989) argues that planning IEC is also associated with fertility declines. The use of mass media for IEC was one of the six variables that closely predicted fertility declines in developing countries from 1965 to 1980. An analysis of Lapham and Mauldins data revealed a close relationship between IEC effort and the percentage of couples using modern contraceptive method across 35 developing countries. He continues to argue that IEC messages are more effective if they are continuously present in the environment. Furthermore, campaigns reach more people if various types of media such as radio, television, posters, pamphlets and newspapers are used. Radio messages are often particularly effective since radio reaches a wide audience in many developing countries.

Awuondo (1991) in a paper published in the African Research Studies in Population IEC found in his study of family planning posters that posters were effective only in the sense of raising awareness but were ineffective in motivating either follow ups or more informed decision making. The posters were awareness positive and decision making negative.

Odallo and Gikonyo (1991) in their feedback study on content analysis of letters from listeners of "Mwenda Pole Hajikwai Family Planning Radio Magazine Programme in Kenya" found of most significance that radio possesses what is for them a hitherto unrecognised capacity of asset. Evidence suggests that given sound programme design, radio can provide that information which is able to influence family planning decision making and thus assist those "intending" along the road to family planning acceptance and practice.

In less than a decade, the Egyptian Government's Information Education and Communication (IEC) program achieved remarkable results in establishing virtually universal awareness of family planning and related issues. The program implemented two national television public advertisement campaigns and the dissemination of the messages helped contribute to the increased awareness of and demand for family planning in Egypt and to the concurrent fertility decline (Population Reference Bureau, 1993 Support Systems).

The Gambia Family Planning Association (GFPA) launched a two year Information Education and Communication (IEC) project in 1989 with the aim of increasing awareness of family planning and sexually transmitted diseases and increasing the use of services at GFPA's clinics. Among the project's IEC activities were radio, drama series and spot announcements about family planning aimed on Radio Gambia in late 1990 and early 1991. These radio communications were successful in reaching and informing a large audience, motivating the audience to discuss family planning with others, dispelling negative rumours about contraception and encouraging listeners to visit clinics and begin using family planning.

The IEC project in the Gambia demonstrated that combining mass media and popular entertainment can be an extremely powerful way to covey family planning and reproductive health messages. Radio programs can have great reach, especially in rural areas and spark discussion among friends and family members about various

topics covered. The project's radio communication activities increased awareness and use of family planning, enhanced knowledge about modern contraception and the availability of service dispelled rumours and misunderstandings and changed listeners' (both men's and women's) attitudes towards family planning. (Population Reference Bureau, 1993 Support Systems).

2.0.1 INTERPERSONAL CHANNELS

Information, education and communication activities bring people and family planning programs together. Communication activities give people the information they need to make informed choices about using and continuing to use contraception and about other aspects of reproductive health. In family planning as many other development activities including health and agriculture, communication campaigns create awareness, increase knowledge and build public approval of new ideas and practices (Rogers and Storey, 1987).

Spousal communication which facilitates decision making between husband and wife plays an important role in determining fertility hence family sizes. In a study of husband - wife communication and interaction, PSRI, 1992, found that matters pertaining to sex, contraception and family size are the least discussed between partners as compared to economic survival. The respondents in most cases were mutually involved in sorting out disputes/disagreements between them. Husbands were found however, to have more say in such matters. The most educated respondents and/or those from more affluent districts (such as Nyeri and Meru covered in the survey) share more of their social life with partners than those with less education and/or from less developed districts.

A study carried out in Kenya by the Centre for African Family Studies (CAFS) to appraise the relative effectiveness of each channel of communication to determine commonly perceived sources of family planning information and messages showed

that slightly half of all Kenyans have at some time talked to friends about family planning which indicates that there is information transfer taking place.

2.0.2 MASS MEDIA AND INTERPERSONAL CHANNELS

Bulatao and Lee (1982) and Cleland and Wilson (1987) recognise that once considered a support service, communication is now recognised as a key factor in the rapid increase in contraceptive use during the past two decades.

Bertland (1982) in studies carried out in Guatemala, El Salvador and Panama show that the majority of respondents had seen or heard of family planning messages through mass media or interpersonal channels. The findings support a fundamental hypothesis among communicators that mass media are useful in creating awareness of an issue.

Exposure to family planning messages was shown to affect contraceptive use in urban and rural areas of all three countries, even when controlling for education and other well known correlates of contraceptive use. The finding was consistent for three countries that differ markedly in socio-cultural characteristics, intensity of Information Education and Counselling (IEC) programs, and prevalence of contraceptive use. Bertland et al therefore demonstrated that exposure to family planning communications played a role in the use of contraceptives.

Television, videotape and film can bring family planning messages to life. These "visual electronic media" engage their audiences and the engaged audience is an audience ready to learn. Evidence is beginning to emerge that they can influence family planning behaviour. They work particularly well when they combine family planning themes and messages with entertainment in a high quality well-targeted production that promotes specific family planning methods, services or types of providers Church (1989).

The potential for fertility decline in developing countries has been underestimated because many studies have neglected the impact of the rapid diffusion of ideas. Interest in smaller families and in family limitation does not necessarily appear suddenly as an unambiguous rational decision of large masses of people, Renald Freedman and Deborah Freedman have observed in 1992. Rather, interest in family planning spreads from one socio-economic group to the next and from the cities to the rural areas throughout a country depending on available communication channels. These patterns suggest the importance of mass media and communication campaigns in speeding the diffusion of new attitudes about reproduction and thus in speeding the adoption of contraception. Freedman and Freedman (1992).

Increased discussion about family planning and any subsequent impact on family planning knowledge, attitudes and behaviour is an indirect effect of the media campaign. Numerous studies have shown that discussion about family planning between sexual partners is strongly associated with contraceptive use.

Foreit (1989) tested the effect of magazine advertising on vasectomy acceptance in Sao Paulo, Brazil where four advertisements ran for ten weeks in eight magazines and clinic performance doubled during the campaign and stabilized at 54 percent higher than baseline. The advertisements selectively attracted the target audience without bringing in large numbers of ineligible candidates, completely avoided negative reaction and recruited men previously unexposed to vasectomy. The results suggest that while interpersonal communications can maintain performance in voluntary sterilization programs, mass media promotion may be necessary for program growth. The results clearly demonstrate that mass media advertising was an effective and cost effective vehicle for increasing the demand for vasectomy services in Sao Paulo, Brazil.

The Family Planning Association of Kenya (FPAK) embarked upon the provider and Client Information Education and Communication (IEC) project in conjunction with a

consortium of Kenyan family planning agencies in 1991. For IEC materials reaching prospective family planning clients, the baseline situation analysis found that the clients were informed about family planning from a number of sources before they came for services. They received information through radio and television and from friends, family and community members. Among new clients, spouses' partners were talking to each other about family planning. Seventy four percent of new clients said they had discussed family planning with their new partners. A large proportion of new clients were influenced to seek family planning services by their spouses.

A sizeable proportion of new clients indicated that health workers were the most influential sources of family planning information. Almost twenty percent of new clients were strongly influenced to obtain family planning services from information they had received through " the media". However, as the baseline situation analysis revealed some mass communication channel's reach more clients than others. Radio influenced more clients to seek family planning services than any other source. Fifty one percent of new clients said the radio programs were a source of referral for their first family planning visit compared to 17 percent who had received information from television and 12 percent from newspapers.

More clients had seen family planning posters than television programs. However, only 2 percent of new clients said that posters were their most important source of family planning information. Clients indicated that written sources of information were very informative. Eighty nine percent of clients who had read a family planning leaflet were influenced by it. However, family planning providers rarely distribute leaflets. Consequently, not enough potential clients see leaflets for this source of IEC to have an impact. As many clients were informed about family planning through drama and folk songs as from reading a booklet.

Women reported that clinics (family planning and government clinics) were the most important source of information for their friends. Radio was also perceived to be a major source of family planning information in their communities.

About 85 percent of women reported print materials as a perceived primary source of family planning information. This suggests that print material is an acceptable and effective way of communicating family planning issues, and that there is a potential for an expanded role for family planning specific print materials in Kenya.

The role of community elders and religious centres was found not to be significant. This was not a surprising finding given the socio-cultural attitudes to family planning in many communities in Kenya. Print materials especially newspapers and magazines were found to play minor roles in promotion of family planning despite their being perceived as a possible major source of information. This maybe explained by the fact that IEC programmes in Kenya have not been able to effectively harness mass print media for promotion of family planning.

2.0.3 THEORETICAL FRAMEWORK

Population growth and fertility have been researched, subjected to theoretical speculation and targeted by various kinds of social and economic policy over the last few decades. Despite all this attention, there exists relatively little consensus on the underlying determinants of fertility behaviour or the policy measures that may affect population growth.

A number of theoretical formulations have been proposed to show how various background socio-cultural, socio-economic and demographic variables may relate to contraceptive use and therefore influence fertility. Davis and Blake (1956) developed a theoretical model by which fertility levels and differentials can be predicted. Their model identified eleven intermediate variables namely; age at first sexual intercourse, permanent celibacy, broken unions by divorce, separation or desertion and unions broken by death, voluntary abstinence, involuntary abstinence (from impotence, illness

unavoidable but temporary separation) fecundity or infecundity as affected by involuntary causes, use and non-use of contraceptive methods, foetal mortality from involuntary causes and foetal mortality from voluntary causes.

Bongaarts (1982) modified the version into only seven important intermediate variables namely: proportion married among females, contraception, induced abortion, duration of postpartum infecundity, spontaneous intrauterine mortality, fecundability (frequency of intercourse) and prevalence of sterility. The intermediate variables are assumed to determine the degree of risk of exposure throughout the different stages of biological reproductive cycle designated as intercourse, conception and gestation. The intermediate variables are the only factors through which social, economic and cultural conditions can affect fertility.

Contraceptive use and non-use in any society is affected either directly or indirectly or in both ways by demographic, socio-economic and socio-cultural factors through the level of exposure to family planning communications, that is mass media and interpersonal channels.

A number of theoretical formulations have been proposed to show how the various background variables and family planning efforts may relate to contraceptive use at the macro level. Married couples for instance according to Easterlin (1975) choose to use contraception on the basis of their desire for more children and their potential ability to regulate fertility. Hermalin (1982) proposed a basic theoretical model which states that deliberate fertility is a function of motivation to control fertility and cost of fertility regulation.

The effects of various socio-economic and demographic variables upon contraceptive use are mediated through such intervening variables as family planning messages to determine the use of contraceptives. It is assumed that motivation is positively related to contraceptive use and this influences fertility levels. From the foregoing theoretical formulations, a conceptual model for this study may be derived as follows:

2.0.4 CONCEPTUAL MODEL

```
┌─────────────────────────┐
│ Social and Demographic  │──────────────┐
│ Factors                 │              │
└─────────────────────────┘              ▼
                              ┌──────────────────┐      ┌──────────┐
                              │ Family Planning  │─────▶│ Fertility│
                              │ Adoption         │      └──────────┘
                              └──────────────────┘
┌─────────────────────────┐              ▲
│ Family Planning         │──────────────┘
│ Communication           │
└─────────────────────────┘
```
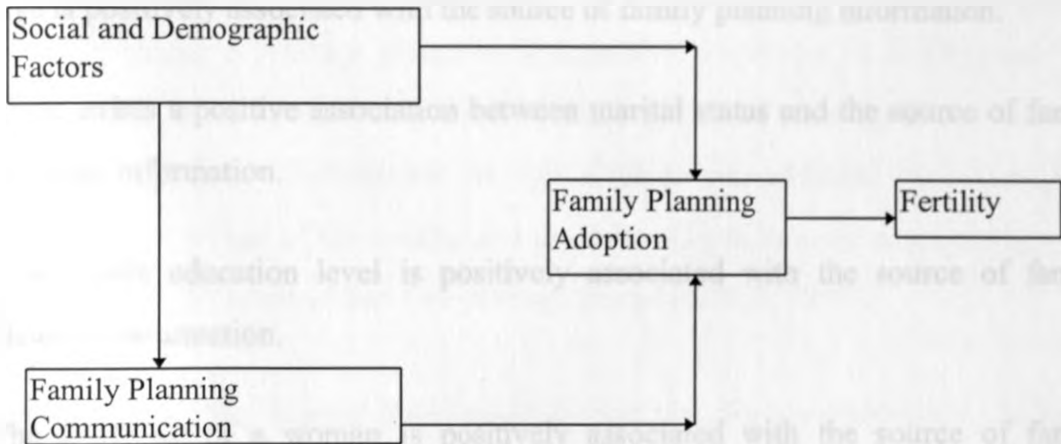
Source: adopted and revised from Boongarts model of fertility, 1978.

2.0.5 CONCEPTUAL HYPOTHESIS

An interplay of socio-demographic factors and family planning communications affect the adoption of family planning which in turn influences the levels of fertility.

2.0.6 OPERATIONAL MODEL

From the preceding conceptual model, the operational socio-demographic variables, family planning communication modes and the family planning adoption process are operationalised in the following model;

```
┌──────────────────────────────┐
│ Socio-Demographic Factors    │──────────────┐
│ • Residence                  │              │
│ • Region                     │              ▼
│ • Education                  │    ┌──────────────────────────┐
│ • Marital Status             │──┐ │ Family Planning Adoption │          ┌──────────────┐
└──────────────────────────────┘  │ │ • Not begun process      │         │ Fertility    │
                                   │ │ • Favourable attitude    │────────▶│ • CEB        │
                                   │ │ • Decision to adopt      │         └──────────────┘
                                   │ │ • Confirmation of decision│
                                   │ └──────────────────────────┘
┌──────────────────────────────┐  │            ▲
│ Family Planning communications│─┘            │
│ • Mass media                 │──────────────┘
│ • Interpersonal channels     │
└──────────────────────────────┘
```
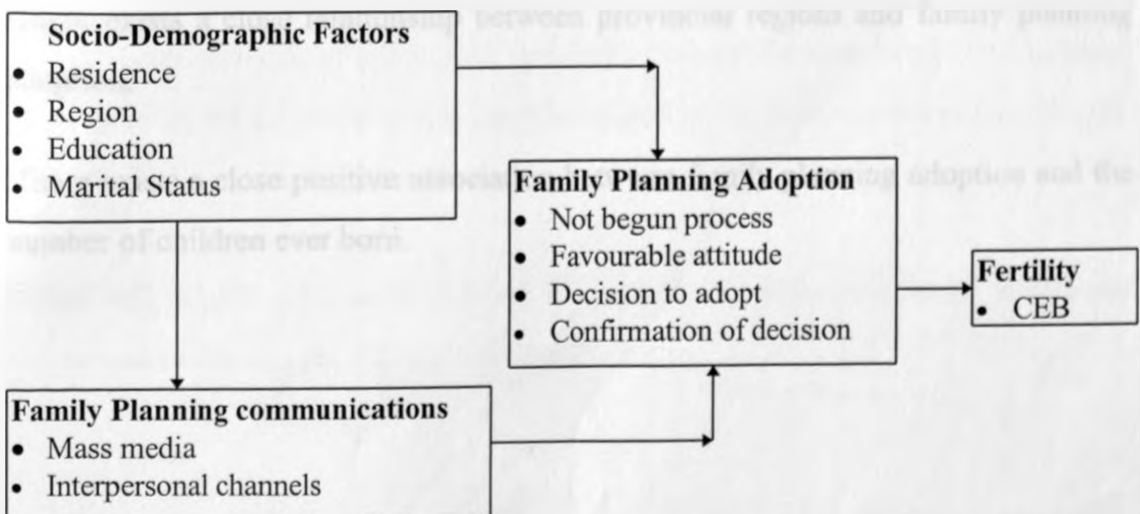
2.0.7 OPERATIONAL HYPOTHESES

1. Age is positively associated with the source of family planning information.

2. There exists a positive association between marital status and the source of family planning information.

3. A woman's education level is positively associated with the source of family planning information.

4. The residence of a woman is positively associated with the source of family planning information.

5. There exists a positive relationship between the source of family planning information and family planning adoption.

6. Residence is positively associated with family planning adoption.

7. Education is positively associated with adoption of family planning.

8. There exists positive association between marital status and family planning adoption.

9. Age is closely associated with family planning adoption.

10. There exists a close relationship between provincial regions and family planning adoption.

11. There exists a close positive association between family planning adoption and the number of children ever born.

2.0.8 DEFINITION OF VARIABLES AND CONCEPTS:

AGE: The number of years the respondents have completed since birth. Categorised into 7 major 5 year age groups of reproductive women i.e 14 to 49 years. The variable refers to the years lived by the respondent since birth and upto the interview time. Information on this variable was obtained by asking both questions on age of the mother and the date of birth to avoid misreporting. The age was later grouped into five year age groups (KDHS, 1993).

MARITAL STATUS: Marital status is subdivided into four categories, that is; never married, currently married, the widowed and separated. The currently married is defined to include those married and those living together. The separated includes those divorced and separated.

PLACE OF RESIDENCE: This refers to the respondent's usual place of residence. For purposes of this study, the variable was collapsed into only two broad categories, urban and rural areas.

REGION: The variable in this study refers to provinces in the country covered by the Kenya Demographic and Health Survey which include Nairobi, Central, Coast, Eastern, Nyanza, Rift Valley and Western.

EDUCATION: This variable was defined in terms of educational levels completed. It is measured in terms of the highest standard of education completed. For purposes of this study, the variable was operationalised in terms of no-education, primary, secondary and higher education.

COMMUNICATION: All those planned or unplanned processes through which one person influences the behaviour of target groups.

MASS COMMUNICATION: Defined as a process through which communication is directed simultaneously at a large population and on a massive scale. Any media which can be used for such a purpose is defined herein as <u>mass media</u>. The mass media focused on in this study include the radio, television, newspapers and posters.

INTERPERSONAL COMMUNICATION: A process in which the communicator and the communicatee engage in a face-to-face interaction. Interpersonal channels in this study refers to such channels through which information about family planning is communicated and include husbands, friends/relatives, health workers, community based distribution agents, school/teacher and the church.

ADOPTION: Is defined as the decision to make full use of a new idea as the best course of action. In this case, the idea in reference is family planning.

CONTRACEPTIVE USE: The variable refers to married women aged 15-49 years who reported to be using a method of contraception during the KDHS, 1993, to delay or prevent conception. The variable can therefore be defined as the number of users divided by the number of couples who are "eligible" to be users.

In Kenya the definition causes problems since a large number of wives report use of non-clinical methods such as rhythm, withdrawal and abstinence and whose reporting of such methods is extremely unreliable. The variable in the present study will be measured in terms of current use.

CHAPTER THREE

METHODOLOGY

3.0.0 INTRODUCTION

This chapter describes the study area, the study population, sample size plus methods and procedures of data analysis. The study uses percentages, proportions and means. Other statistical techniques are cross-tabulations which are used together with the chi-square test. A brief discussion on each of these methods of analysis is given. The chapter also discusses the innovation decision process model by Rogers which has been used to examine contraceptive use not only as a discrete event but also as a process.

3.0.1 THE STUDY AREA

The 1993 Kenya Demographic and Health Survey (KDHS) was a national representative survey. All regions of Kenya were covered by the survey, except for seven northern districts which together contain less than four percent of the country's population. These include the three districts of North Eastern province, and Samburu, Turkana, Isiolo and Marsabit districts in Eastern province.

3.0.2 THE STUDY POPULATION

The universe population in this study consists of all 7,540 women aged 15-49 who were interviewed from Mid-February until Mid-August 1993 during the Kenya Demographic and Health Survey, 1993.

Knowledge and use of family planning is not confined to ever-married women just as reproduction is not confined to the same group (Rogo, 1988). Hence, all reproductive women interviewed have been included regardless of their marital status, social and economic backgrounds.

3.1.0 METHODS OF DATA ANALYSIS

In this study, percentages, cross tabulations, descriptive statistics and the chi-square statistical test have been used in data analysis. The innovation decision process model adopted from Rogers, 1983 has also been applied. Each of these is discussed in this chapter. Graphs, used to present results are also discussed.

3.1.1 PERCENTAGES

Usually, the purpose of constructing a two way table is to see if there is some sort of association between two variables. The actual number of observations in the data which appear in each cell is called the observed value for the cell. But it is often difficult simply by inspecting the observed values in a table to determine what relationship it is. The solution to this difficulty in this analysis was the computation of percentages for the cells. By constructing percentages, the unequal "bases" involved were taken into account and allowed comparisons to be made.

3.1.2 GRAPHS

It has been said that a picture is worth a thousand words and when it comes to understanding numerical data, this is especially true. Graphs in this analysis have been used to present information simply and quickly. They give visual impressions of magnitude, grouping trends and patterns in data. The goal in using the graphs is to show clearly and accurately the important features of the data presented.

3.1.3 CROSS TABULATION ANALYSIS

Cross tabulation analysis is carried out to establish the distribution of family planning messages in the country according to each selected mode of family planning communication. The cross tabulations were also carried out to establish the level of exposure to family planning messages through the mass media in relation to socio-demographic characteristics of the population.

The cross-tabulation analysis was used because of its simplicity and appropriateness for comparative purposes. The results of the cross tabulations were utilized in the analytical interpretation of the findings of the chi-square analysis. The same results were used to describe the data to shed more light on the characteristics of the group.

3.1.4 CHI-SQUARE

The statistical significance of association in cross-tabulations is determined using the chi-square test. This is a method of analysis which tests the existence of association between variables in a contingency table. It is commonly used in social sciences to evaluate whether or not frequencies which are empirically obtained differ significantly from the expected under certain theoretical assumptions. The situations to which the test is applied are of the type where we have both observed and expected variables we wish to know whether the differences between them can be reasonably explained. It measures the probability of getting a given divergence in a sample from corresponding theoretical values. The test involves a comparison of frequencies rather than percentages. Sample observations must be independent of each other and randomly drawn from target population. The larger the difference between the observed and the expected frequencies the larger the value of the chi-square (Gupta, 1979) and hence the statistical significance of association.

The null and alternative hypotheses for associations in a table to be tested using the chi-square distribution are:

H_0:   There is no association between the two variables in the population (any association between the variables is due only to chance).

H_1:   There is some association between the two variables in the population (and the association between the variables in the sample reflects this).

NB: These statistical hypotheses say nothing about the type of association. It is possible for variables to be associated in complicated and sometimes perverse ways.

If there is really no relationship between the two variables, then the observed values should closely approximate the expected values. Under the null hypothesis, any deviation of the observed values from the expected values will be due to chance alone. The chi-square distribution provides a model from which we can calculate the probability of the observed values deviating from the expected values by a particular amount. If this probability is large, greater than a selected level of significance (usually 0.05), we say there is a good possibility that the deviation of observed from expected values occurred by chance alone and we therefore accept the null hypothesis of no relationship between the variables.

If the model shows us that the probability is very small, i.e less than selected level of significance, the deviation of observed from expected values could occur by chance under the null hypothesis-the null hypothesis can be rejected and we accept the alternative hypothesis that there is a relationship between the variables. Of course, the more the observed values deviate from the expected values, the less likely it is that the null hypothesis is true.

The formula for calculating the chi-square statistic is

$$\chi^2 = \frac{(O-E)^2}{E}$$

According to the formula, we subtract the expected value for a cell from the observed value for the cell, square the difference and divide the result by the expected value of the cell. This operation is repeated for each cell of the table and the results for all the cells are summed. This sum is the obtained value of chi-square for the table.

DEGREES OF FREEDOM

The shape of the chi-square distribution changes according to the parameter "degrees of freedom". Degrees of freedom for a table refer to the number of cells in the table whose values can be arbitrarily determined given the marginals of the table.

The degrees of freedom in any table is equal to the number of rows in the table minus 1, times the number of columns in the table minus 1. If R equals the number of rows in a table and C the number of columns.

$$df = (R - 1) (C - 1)$$

NB: It cannot be emphasized too strongly that the chi-square statistic does not describe the nature of the association between two variables in a table. The fact that a table is found to contain a statistically significant relationship does not mean that the results in the table necessarily support the researcher's empirical hypothesis. It only shows that the results whatever they might be, were unlikely to have occurred by chance.

CRITICAL REGION IN A CHI-SQUARE DISTRIBUTION

A chi-square distribution can never take on values less than zero (chi-square cannot have negative values). No matter what the degrees of freedom of the distribution, chi-square values begin at zero and increase in a positive direction. Chi-square equals zero when observed values precisely equal the expected values in a table. In locating the critical region for an alpha level say on 0.05, as is the case in this analysis we are interested in locating the most unlikely 5 percent of the values in the chi-square distribution which correspond to a great deal of deviation of observed values, since this indicates association in a table.

3.1.5 THE INNOVATION DECISION PROCESS

The innovation decision process is the mental process through which an individual passes from first knowledge of an innovation to a decision to adopt or reject and to confirmation of this decision, Rogers (1983). Rogers had earlier called this the "adoption process" implying that all individuals adopt rather than reject new ideas as a result of the process.

In the current study which adopts Roger's model, the innovation or new idea is family planning. Diffusion scholars have long recognized that an individual's decision about an innovation is not an instantaneous act. (Rogers, 1983). Rather, it is a process that occurs over a period of time and consists of a series of actions. Recent research and conceptualization concentrate on the exact nature of these sequential stages in the process.

In this study of family planning, the traditional view of the innovation decision process is adopted. This is the "adoption process" as postulated by a committee of rural sociologists in 1955 and consists of five stages (Rogers, 1983).

The five stages include:

Awareness Stage

The individual learns of the existence of the new idea but lacks the information about it.

Interest Stage

The individual develops interest in the innovation and seeks additional information about it.

Evaluation stage

The individual makes mental application of the new idea into his present and anticipated future situation and decides whether or not to try it.

Trial Stage

The individual actually applies the new idea on a small scale in order to determine its utility in his own situation.

Adoption Stage

The individual uses the new idea continuously on a full scale.

In this study, the use of a contraceptive method is examined not only as a discrete event (ie use or non use), but also as a process. It is generally accepted that the adoption of an innovation such as family planning entails several stages, such as those outlined by Rogers in his model of diffusion of innovations, above.

In the current study, these five mutually exclusive stages have been operationally defined in the following manner:

1.   Not yet begun the adoption process

- Knows no contraceptive methods

- Does not intend to use contraceptives

- Has never used contraceptives

2.   Awareness/knowledge of the innovation

- Knows at least one modern method

- Does not intend to use contraceptives

- Has never used contraceptives

3.   Reached a favourable attitude

- Knows at least one modern method

- Intends to use contraceptives

- Has never used contraceptives

4.   Decision to adopt the innovation

- Has used a contraceptive method in the past (but is not currently using one)

5.   Confirmation of the decision

- Is currently using a contraceptive method

The respondents in this study have been categorised into the above five stages of the family planning adoption process. This helps to examine whether first, there exists any relationship between family planning adoption and family planning information sources. Secondly, whether there is any association between family planning adoption and individual socio-demographic factors under consideration. Thirdly, the same categorization has been used to examine whether there exists any association between family planning adoption and the number

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

INTRODUCTION

This chapter presents and interprets the results of family planning communications as they relate to socio-demographic factors and also presents the results of how both the family planning communications and socio-demographic factors relate to family planning adoption. Finally, it presents how family planning adoption relates to fertility in Kenya which has been looked into in terms of the number of children ever born.

As pointed out in chapter three, this study has made use of descriptive statistics, cross tabulations and the chi-square test for data analysis. In this chapter, the hypotheses developed in chapter two are also tested and the association between each of the independent variables with the dependent as well as their significance are established. Results from each of the hypothesis have been analysed and discussed below.

4.0.1 THE REACH OF FAMILY PLANNING MESSAGES

In all seven provinces, majority of women had seen or heard of family planning messages through mass media or interpersonal channels. However, there were marked differences by provinces in terms of the percentage of population reached and the communication channels most frequently mentioned.

MASS MEDIA

As shown in Table I and Figure I, exposure to family planning messages through the mass media was greatest at the Coast and Rift Valley provinces, where 20.9 percent and 20.6 percent of the respective populations had seen or heard most family planning information through at least one channel. The percentage was slightly lower in Nairobi (18.3 percent), Nyanza (17.7 percent) and Western (15.2 percent) provinces and dropped markedly in Central (9.7 percent) and Eastern (7.4 percent) provinces.

In all the seven provinces, radio reached far more people with family planning messages than any other medium or channel. It was followed by newspapers which was the next most extensive medium. Posters and television respectively followed with the lowest percent coverage as source of most information on family planning in the country.

INTERPERSONAL CHANNELS

The source of family planning information through interpersonal communication, "the process through which the communicator and the communicatee engage in a face-to-face interaction" was examined in the Kenyan provinces. The interpersonal communication in this case consisted of discussing family planning with a husband, friend/relative, health worker, CBD, school/teacher and church speaker.

The results in Table I demonstrates that interpersonal channels in general reached over 75 percent of the entire women population as opposed to the mass media which only reached about 15 percent of the women. This shows that interpersonal channels are the most powerful source of family planning information in Kenya. Exposure to family planning information through interpersonal channels was greatest in Central and Eastern provinces where 85.4 percent and 84.1 percent of the respective provincial populations got most information from the same.

Table 1: Percentage of all Female Respondents who got most Family Planning Information Through the Mass Media and Interpersonal Channels by Province

Source of FP Information	Regions						
	Nairobi	Central	Coast	Eastern	Nyanza	Rift Valley	Western
All mass media	18.3	9.7	20.9	7.4	17.7	20.6	15.2
Specific mass media							
Radio	14.8	8.2	18.4	5.8	16.9	19.4	14.2
Television	1.1	0.1	0.7	0.2	0.2	0.1	0.4
Newspapers	1.9	1.1	1.3	0.7	0.2	0.4	0.5
Posters	0.5	0.3	0.5	0.7	0.4	0.7	0.1
All interpersonal Channels	75.1	85.4	73.7	84.1	75.5	72.5	79.5
Specific Interpersonal Channels							
Husband	0.5	0.2	0.5	0.6	0.5	0.6	0.3
Friends/Relatives	21.6	18.2	24.2	24.3	25.7	23.2	24.2
Health Worker	41.3	54.9	37.1	47.1	39.3	35.9	43.3
CBD	2.5	1.9	5.2	3.8	4.0	6.4	4.7
School/Teacher	9.0	9.4	6.7	7.6	5.5	6.1	6.9
Church	0.3	0.8	-	0.7	0.6	0.3	0.1
Other	6.6	4.9	5.4	8.5	6.8	6.8	5.3
Total number of women	366	1075	1088	1044	1263	1752	945

Source: Computed from Kenya Demographic and Health Survey, 1993.

Fig. 1: REGIONS AND SOURCE OF FAMILY PLANNING INFORMATION
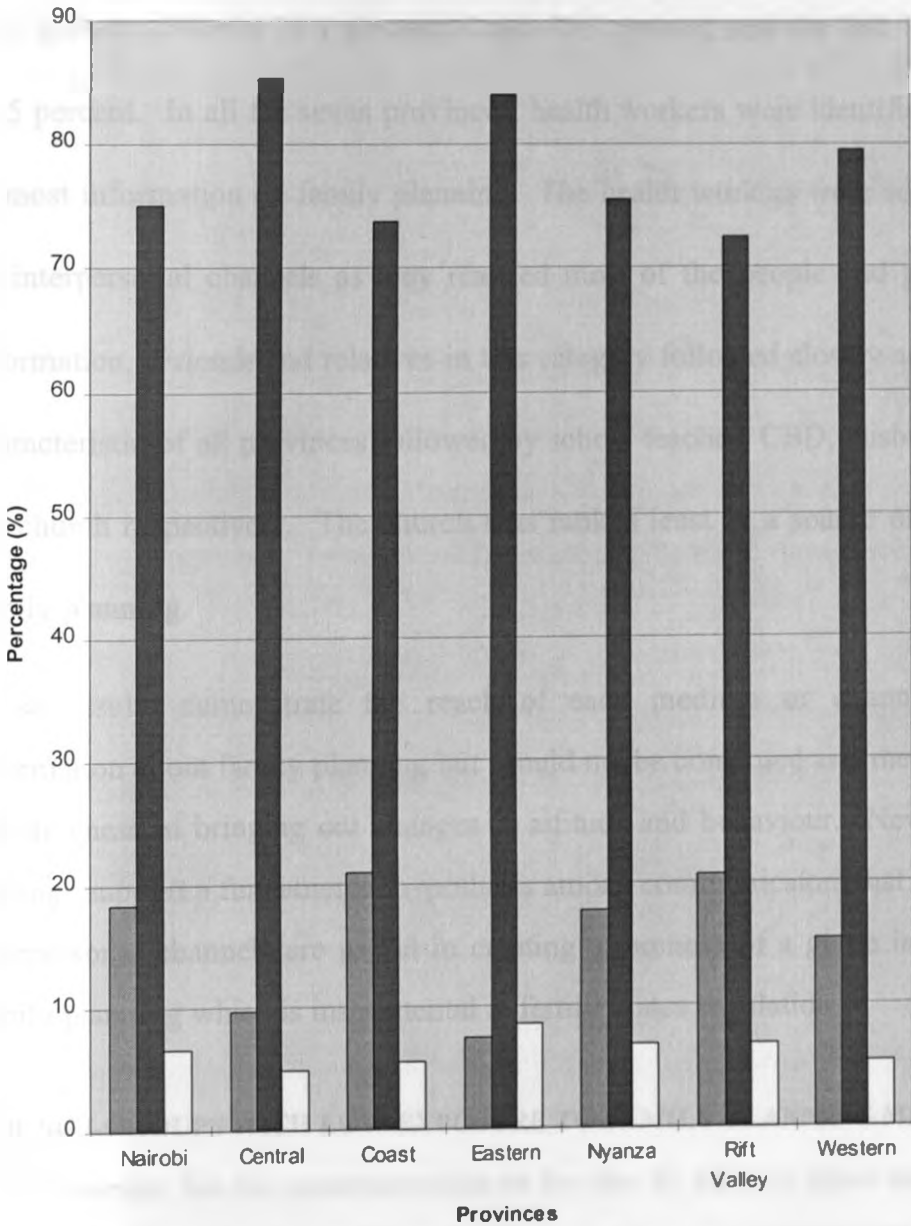
In the other provinces, the proportions were as follows: Western 79.5 percent, Nyanza 75.5 percent, Nairobi 75.1 percent, Coast 73.7 percent and the Rift Valley Province 72.5 percent. In all the seven provinces, health workers were identified as the source of most information on family planning. The health workers were so distinct among all interpersonal channels as they reached most of the people and gave them most information. Friends and relatives in this category followed closely and this was also characteristic of all provinces followed by school teacher, CBD, husbands and finally the church respectively. The church thus ranked least as a source of information of family planning.

These results demonstrate the reach of each medium or channel in diffusing information about family planning but should not be construed as a measure of relative effectiveness in bringing out changes in attitude and behaviour. Nevertheless, these findings support a fundamental hypothesis among communicators that mass media and interpersonal channels are useful in creating awareness of a given issue in this case family planning which is instrumental in fertility rates regulation.

4.1.0 SUB-GROUPS WITH LOW EXPOSURE TO FAMILY PLANNING MESSAGES

It is important for the communicators to be able to identify those segments or sub-groups within the total population that have not been reached effectively by the IEC program. For example the program may have greater penetration among members of a specific age group, education category or even a marital category. Therefore, a number of socio-demographic variables were examined in an attempt to identify sub-groups within the population with lower exposure to family planning messages. These sub-groups could logically be the target population for future IEC efforts.

For this analysis, the percentage population of all women who got most family planning information through mass media and interpersonal channels by various socio-demographic factors has been tabulated and interpreted and the chi-square analysis has also been undertaken to establish whether there exists any relationship between source of family planning information and the individual socio-demographic factors.

4.1.1 RESIDENCE AND SOURCE OF FAMILY PLANNING INFORMATION

Table 2 shows that interpersonal channels reached more people in both urban (75.3 percent) and rural (78.1 percent) areas than the mass media which reached only 20.4 percent of population in the urban areas and 15.2 percent in rural areas.

The difference in the interpersonal channels exposure is however minimal and is as expected since there is more of interpersonal communication about family planning in rural areas as opposed to urban areas. The large population that is however reflected in urban areas having heard most information from interpersonal communication is most likely due to the mass flow of rural folk to the urban areas through rural-urban migration.

Of the mass media, the radio reached the largest proportion of the population both in the urban areas (16.9 percent) and the rural (14.0 percent) as a major source of most information on family planning. This could probably be because most of them could afford it as opposed to their rural counterparts where most people are economically unstable.

Table 2: Percentage of Female Respondents who got most Family Planning Information From Mass Media and Interpersonal Channels by Residence

Source of FP Information	Residence	
	Urban	Rural
All Mass Media	20.4	15.2
Specific Mass Media		
Radio	16.9	14.0
Television	1.4	0.1
Newspapers	1.5	0.6
Posters	0.7	0.4
All Interpersonal Channels	75.3	78.1
Specific Interpersonal Channels		
Husband	0.3	0.5
Friends/Relatives	22.3	23.4
Health Worker	40.8	42.3
CBD	3.4	4.6
School Teacher	8.2	6.8
Church	0.3	0.4
Other	4.3	6.8
Total number of women	1157	6376

Chi-square Value: 26.88336
Significance level: 0.0000
Source: Computed from Kenya Demographic and Health Survey, 1993.

Fig.2: RESIDENCE AND SOURCE OF FAMILY PLANNING INFORMATION
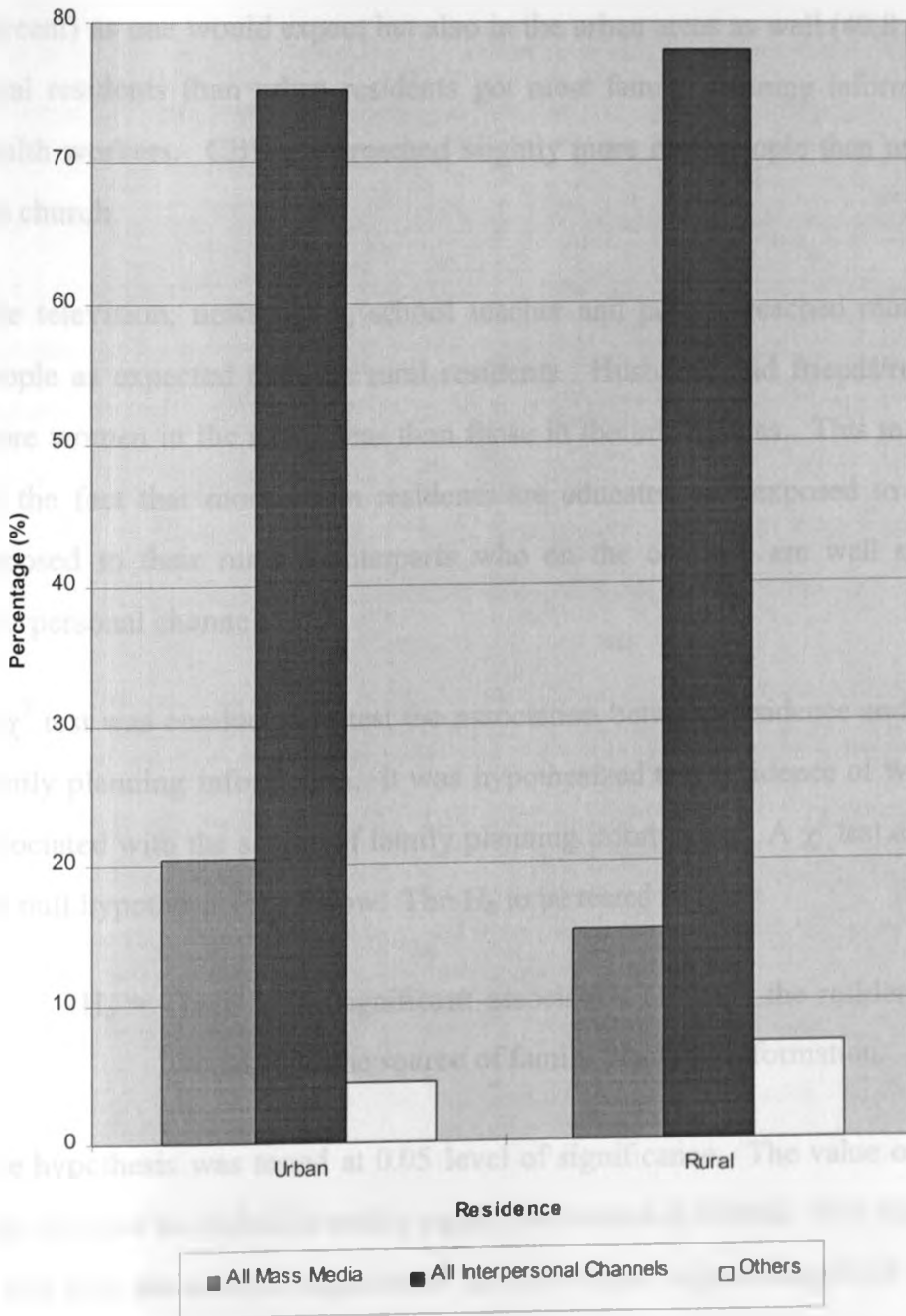
Of the interpersonal channels on the other hand, the health worker is conspicuously the most vital source of family planning information not only in the rural areas (42.3 percent) as one would expect but also in the urban areas as well (40.8 percent). More rural residents than urban residents got most family planning information from the health workers. CBD also reached slightly more rural people than urban and so did the church.

The television, newspapers, school teacher and posters reached more of the urban people as expected than the rural residents. Husbands and friends/relatives reached more women in the rural areas than those in the urban areas. This may be explained by the fact that more urban residents are educated and exposed to mass media as opposed to their rural counterparts who on the contrary are well reached through interpersonal channels.

A χ^2 test was conducted to test the association between residence and source of most family planning information. It was hypothesized that residence of women is closely associated with the source of family planning information. A χ^2 test conducted to test the null hypothesis (H_0) below. The H_0 to be tested states:

H_0 = There is no significant association between the residence of a
woman and the source of family planning information.

The hypothesis was tested at 0.05 level of significance. The value of the chi-square was found to be 26.88336 with a significance level of 0.0000. This significance value is less than the selected alpha level for the critical region being 0.05 hence we reject the H_0 and accept the alternative hypothesis (H_1).

The alternative hypothesis (H_1) states:

H_1 = There is a significant association between a woman's residence and the source of family planning information.

Therefore, the place of residence of a woman influences her source of family planning information be it from the mass media or some interpersonal channel.

4.1.2 EDUCATION AND SOURCE OF FAMILY PLANNING INFORMATION

The percentages in Table 3 and Figure 3 demonstrates a relationship between source of mass media information on family planning and education. The total population of women who identified mass media as source of most information on family planning in regard to their educational status is as follows; 9.8 percent of those with no education, 9.8 percent of those with primary education, 21.4 percent of those with secondary education and 43.2 percent of those with higher education.

The reverse is true as the same table indicates when interpersonal channels were considered as the source of most family planning information. The category of women who got most of the family planning information from interpersonal channels were as follows: about eighty percent (80.2) of those with no education, 78.2 percent of those with primary education, 75.0 percent of those with secondary education and only 43.2 percent of those with higher education.

This implies that family planning messages exposure from mass media increases with a woman's level of education. On the other hand, the reverse is found to happen when interpersonal communication is taken into consideration. Here, exposure to family planning information through interpersonal channels decreases with increase in education. For example, women with higher education have the least communication in regard to family planning as opposed to the other women with lower educational attainments. These women seem to get most of their information from the mass media.

The source of family planning information on interpersonal channels decreases with increase in the education of the woman. The reverse is however also true when the school/teacher is considered and identification of interpersonal channels as source of most information increases with the woman's education.

Table 3: Percentage of Respondents who heard most Information on Family Planning From Mass Media and Interpersonal Channels by Education

Source of FP information	Education			
	No Education	Primary	Secondary	Higher
All Mass Media	9.8	15.4	21.4	43.2
Specific Mass Media				
Radio	9.7	14.4	18.1	16.2
Television	0.1	0.2	0.7	5.4
Newspapers	-	0.3	1.9	18.9
Posters	-	0.5	0.7	2.7
All Interpersonal Channels	80.2	78.2	75.0	43.2
Specific Interpersonal Channels				
Husband	0.2	0.5	0.6	-
Friends/Relatives	29.0	25.2	14.6	5.4
Health Worker	45.4	42.0	40.3	18.9
CBD	5.3	4.3	4.1	-
School Teacher	0.2	5.8	14.7	18.9
Church	0.2	0.4	0.6	-
Other	10.0	6.4	3.6	13.5
Total number of women	1296	4445	1755	37

Chi-square Value: 140.60083
Significance level: 0.0000
Source: Computed from Kenya Demographic and Health Survey, 1993.

Fig.3: EDUCATION AND SOURCE OF FAMILY PLANNING

Legend:
- All Mass Media
- All Interpersonal Channels
- Others

Y-axis: Percentage (%)

X-axis: Education (No Education, Primary, Secondary, Higher)
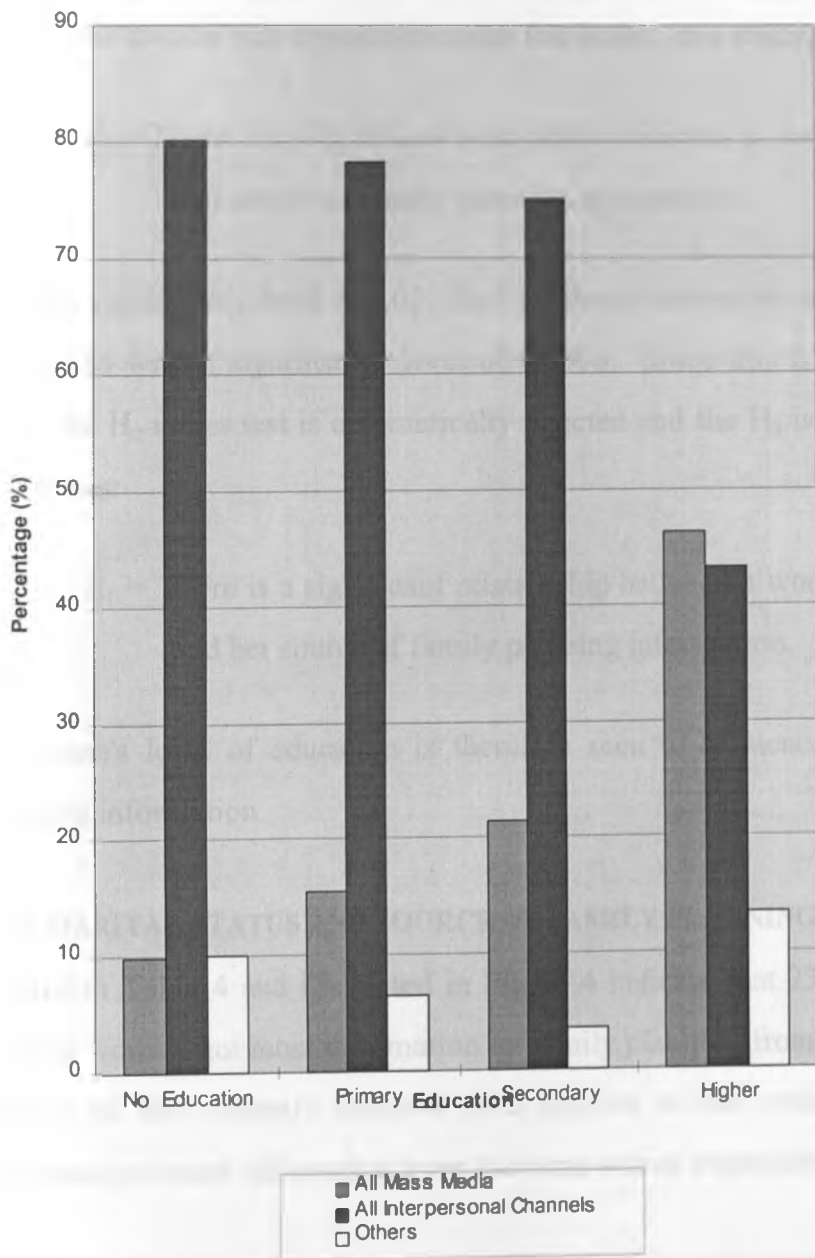
It was hypothesized that a woman's education level is closely associated with her source of most family planning information. A χ^2 test was conducted to test this hypothesis and the null hypothesis under test in this case states;

H_0= There is no significant relationship between a woman's education and source of family planning information.

Under a significance level of 0.05, this hypothesis was tested and the value found to be 140.60083 with a significance level of 0.0000. Since this is less than the set alpha level, the H_0 under test is automatically rejected and the H_1 is accepted which in this case states:

H_1 = There is a significant relationship between a woman's education and her source of family planning information.

A woman's level of education is therefore seen to influence her source of family planning information.

4.1.3 MARITAL STATUS AND SOURCE OF FAMILY PLANNING INFORMATION

Results in Table 4 and illustrated in Figure 4 indicate that 23.7 percent of the never married women got most information on family planning from mass media while 12.6 percent of the currently married, 11.2 percent of the widowed and 12.2 of the separated got most information from the same source respectively.

Radio is well reflected as the major source of information among the mass media. Of the widowed women, none identified the television, newspapers and posters as source of most information. The newspapers and posters were also not identified as source of family planning information by the separated.

Interpersonal channels stand out as the major source of most information on family planning among a cross-section of all the women regardless of their marital status. Slightly over eighty three (83.4) percent of the currently married women lead in

identifying this as the major source. They were closely followed by the separated (83.6 percent), the widowed (81.9 percent) and finally the never married category with 64.9 percent.

Table 4: Percentage of Respondents who get most Family Planning Information on Mass Media and Interpersonal Channels by Marital Status

Source of FP Information	Marital status			
	Never Married	Currently Married	Widowed	Separated
All Mass Media	23.7	12.6	11.2	12.2
Specific Mass Media				
Radio	19.7	12.2	11.2	11.9
Television	0.7	0.1	-	0.2
Newspapers	1.9	0.2	-	-
Posters	1.3	0.1	-	-
All Interpersonal Channels	64.9	83.4	81.9	83.6
Specific Interpersonal Channels				
Husband	0.1	0.7	-	-
Friends/Relatives	29.0	19.7	30.6	25.9
Health Worker	13.5	55.7	42.7	51.5
CBD	2.8	5.1	7.3	4.7
School Teacher	18.9	1.7	0.9	1.5
Church	0.4	0.4	0.4	-
Other	11.4	4.0	6.9	4.2
Total number of women	2317	4582	232	402

Chi-square Value: 332.43671
Significance level: 0.00269
Source: Computed from Kenya Demographic and Health Survey, 1993.

Fig. 4: MARITAL STATUS AND SOURCE OF FAMILY PLANNING INFORMATION

Percentage (%)

90
80
70
60
50
40
30
20
10
0

Never Married   Currently Married   Widowed   Separated

Marital Status

■ All Mass Media
■ All Interpersonal Channels
□ Others
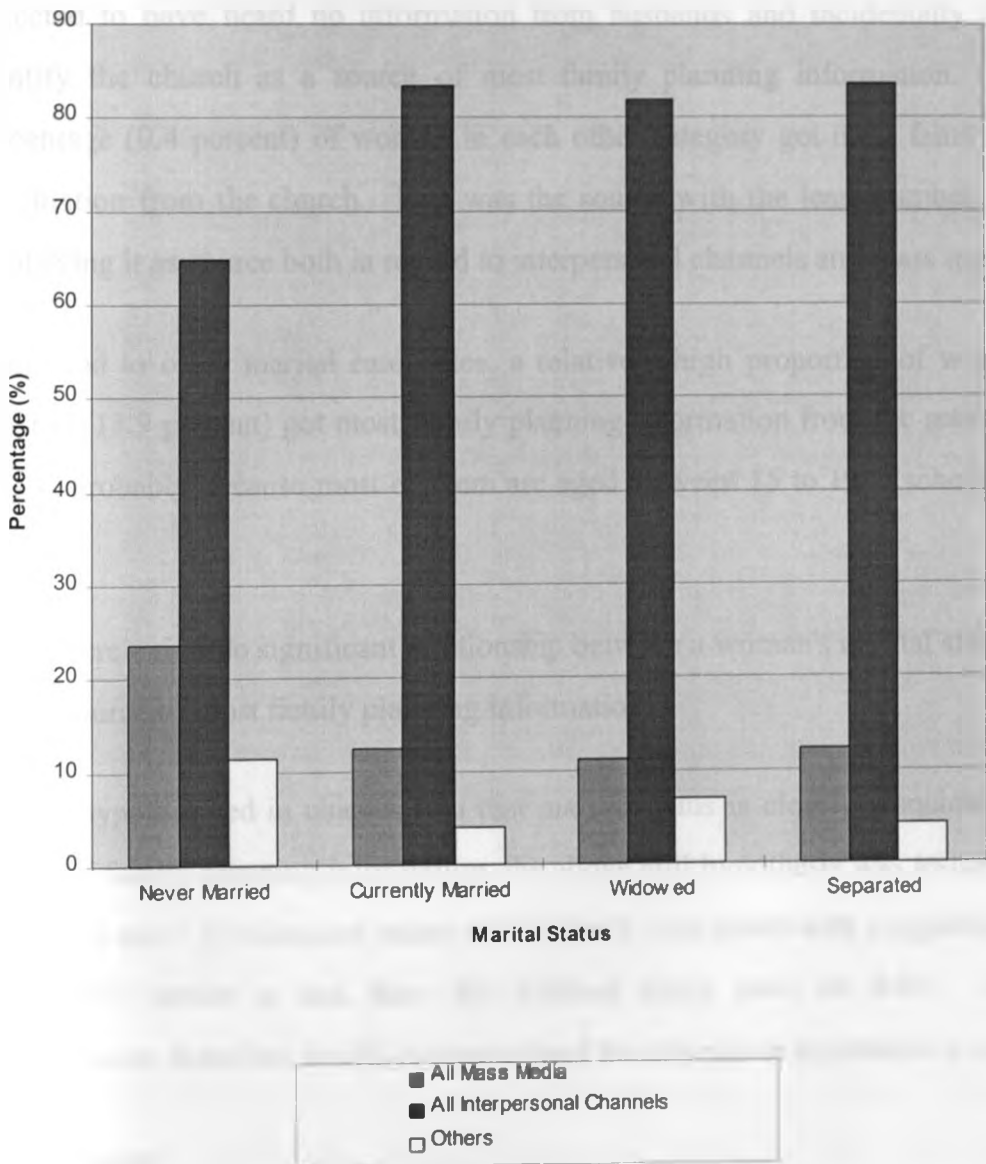
The health worker is the most commonly identified as a source of most information by most women followed by friends and relatives. In this category, the separated are reflected to have heard no information from husbands and incidentally also, none identify the church as a source of most family planning information. An equal percentage (0.4 percent) of women in each other category got most family planning information from the church. This was the source with the least number of women identifying it as source both in regard to interpersonal channels and mass media.

Compared to other marital categories, a relatively high proportion of women never married (18.9 percent) got most family planning information from the school/teacher. This is probably because most of them are aged between 15 to 19, a school attending age.

H_0 = There exists no significant relationship between a woman's marital status and her source of most family planning information.

Having hypothesized in chapter two that marital status is closely associated with the source of family planning information, the above null hypothesis was tested under the chi-square test. A chi-square value of 332.43671 was found with a significance level of 0.00269 which is less than the selected alpha level of 0.05. Under the circumstances therefore, the H_0 is rejected and the alternative hypothesis accepted.

The H_1 states:

H_1 = There is a significant association between a woman's marital status and her source of most family planning information.

A woman's marital status (never married, currently married, widowed or separated) is therefore, found to influence the source of most family planning information.

4.1.4 AGE AND SOURCE OF FAMILY PLANNING INFORMATION

As reflected in Table 5 and in Figure 5, age is no exceptional to other socio-demographic factors and indeed as confirmed with other variables the large percentage of the population regardless of their age has been reached in regard to family planning information through interpersonal channels.

With focus on mass media, it is clear from table 5 that exposure to most information on family planning through the mass media gradually decreases with an increase in the age of the women. Whereas 23.3 percent of the women aged 15-19 identified mass media as the main source of information, the subsequent age group's follow: 19.5 percent for those aged 20-24; 13.4 percent for 25-29; 11.7 percent for 30-34; 12.5 percent for 25-39; 7.2 percent for 40-45 and 10.0 percent for those aged 45-49.

In regard to the interpersonal channels, the reverse is true thus exposure to most family planning information through such channels gradually increase with the increase in age of those who obtained most information from interpersonal channels. They were as follows: 63.9 percent for those aged 15-19; 76.2 percent for those aged 20-24; 83.8 percent for women aged 25-29; 84.0 percent for women aged 30-34; 83.8 percent for women aged 35-39 and 87.4 percent for women aged 40-44 and finally 80.6 percent for those aged 45-49.

Women aged 40-45 years reflect the highest percentage of women who got most family planning information through interpersonal channels while those aged 15-19 years comprise the least percentage of those who got the same information through a similar source. This shows that there is more information transfer through interpersonal channels amongst the elder women as opposed to the young. The older women therefore appear to discuss issues relating to family planning more often and freely than the young ones do.

Table 5: Percentage of Female Respondents who got most Family Planning Information on Mass Media and Interpersonal Channels by Age in Kenya

Source of FP Information	Age group						
	15-19	20-24	25-29	30-34	35-39	40-45	45-49
All Mass Media	23.3	19.5	13.4	11.7	12.5	7.2	10.0
Specific Mass Media							
Radio	20.1	17.4	12.8	11.1	12.0	6.9	9.6
Television	0.7	0.3	0.2	0.1	0.3	-	0.2
Newspapers	1.3	1.2	0.3	0.4	0.3	0.3	0.2
Posters	1.2	0.6	0.3	0.2	-	-	-
All Interpersonal Channels	63.9	76.2	83.8	84.0	83.8	87.4	80.6
Specific Interpersonal Channels							
Husband	0.2	0.6	0.4	0.8	0.1	0.5	0.9
Friends/Relatives	32.2	23.9	18.4	16.4	19.4	22.1	23.5
Health Worker	10.2	38.2	57.8	60.1	56.9	56.7	50.7
CBD	1.8	4.0	4.9	5.8	6.3	7.2	4.6
School/Teacher	19.0	9.2	1.8	0.8	0.8	0.5	-
Church	0.4	0.4	0.5	3.2	0.3	0.6	0.9
Other	12.8	4.3	2.8	4.3	3.6	5.4	9.4
Total number of women	1786	1603	1199	1111	743	653	438

Fig. 5: AGE GROUP AND SOURCE OF FAMILY PLANNING INFORMATION
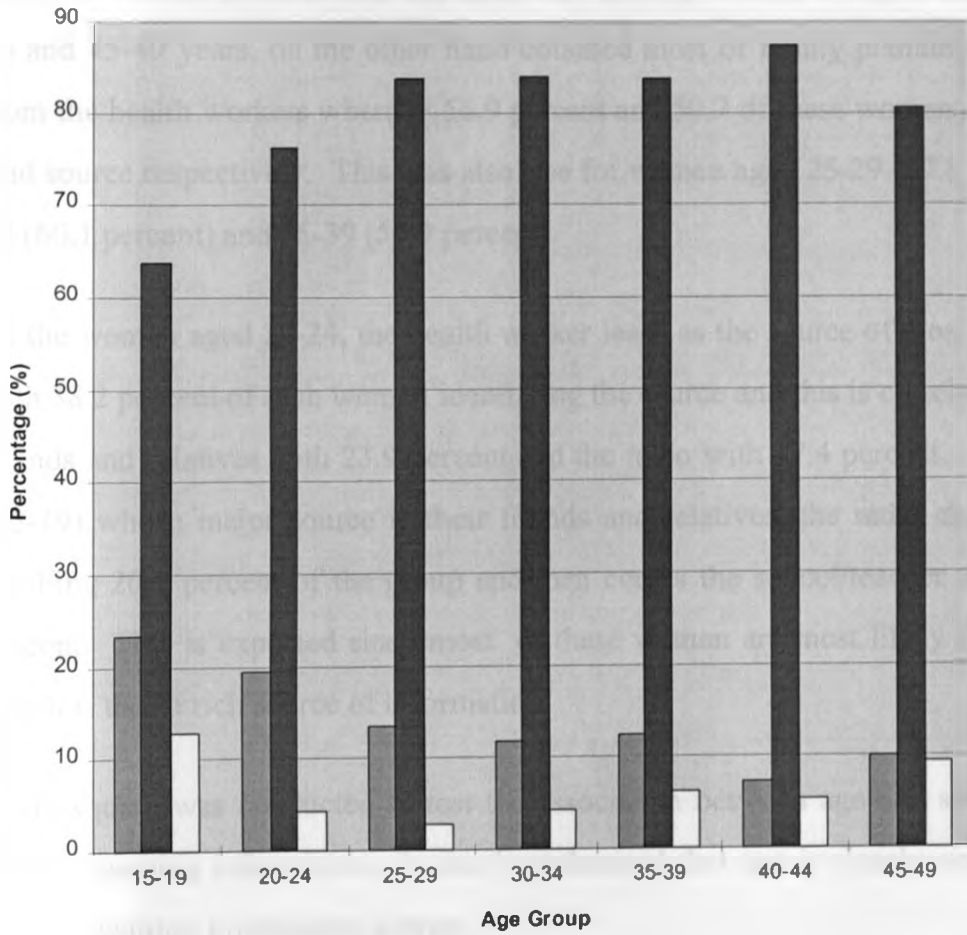
Of all women aged 15-19 years, the highest percentage in regard to source of family planning information is reflected in the row of friends/relatives. This means therefore that majority of the people in that particular age group (32.2 percent) obtained most of their information from friends and relatives. Elderly women of reproductive age, 40-44 and 45-49 years, on the other hand obtained most of family planning information from the health workers whereby 56.9 percent and 50.7 of these women identified the said source respectively. This was also true for women aged 25-29 (57.8 percent), 30-34 (60.1 percent) and 35-39 (56.9 percent).

Of the women aged 20-24, the health worker leads as the source of most information, with 38.2 percent of such women identifying the source and this is closely followed by friends and relatives with 23.9 percent and the radio with 17.4 percent. Of the youth (15-19) whose major source is their friends and relatives, the radio closely follows reaching 20.1 percent of the group and then comes the school/teacher reaching 19.0 percent. This is expected since most of these women are most likely still in school which is thus a rich source of information.

A chi-square was conducted to test the association between age and source of most family planning information. It was hypothesized that age is closely associated with family planning information source.

To demonstrate this, a chi-square test was conducted to test the H_0 which in this case states:

H_0 = There exists no significant relationship between the age of a woman and her source of family planning information.

This hypothesis was tested at 0.05 level of significance and the chi-square value was found to be 376.76983 with a significance of 0.0000 level. This is less than 0.05 hence we reject the H_0 and accept the H_1 which states:

H_1 = There exists a significant relationship between a woman's age and her source of family planning information.

The variable is significant therefore and the conclusion is that the age of a woman is closely associated with her source of most family planning information.

4.2.0 EXPOSURE TO FAMILY PLANNING MESSAGES AND CONTRACEPTIVE USE

As stated in the introduction, one of the reasons there has been little evaluation of IEC programs is the difficulty of measuring their impact. Ideally, communicators would like to know whether their efforts influence people to change attitudes and modify behaviour. In short, they would like to determine whether a cause - and - effect relationship exists between IEC efforts and contraceptive use. Unfortunately, a one-shot survey does not permit one to test whether greater communications effort cause increased contraceptive use. Indeed, some would argue that the causal relationship is the reverse: contraceptive use results in great exposure. For example, those using contraceptives would have greater self involvement in the topic and be more attentive to family planning since it would relate to their behaviour; thus, they would be more likely to answer that they had heard or seen a family planning message. In the analysis below as mentioned in Chapter Three, the use of a contraceptive method has been examined not only as a discrete event (i.e. use or non-use) but also as a process.

4.2.1 FAMILY PLANNING ADOPTION IN KENYA

Table 6 and Figure 6 show percentages of women in the respective stages of the family planning adoption process in Kenya. In the whole country, 21.0 percent of all women are in stage I. This is the ignorance stage whereby the women know no contraceptive methods, have no interest in using them and have also never used.

About twenty percent (21.3) of the Kenyan women have reached the awareness stage of family planning and although they have no interest in use of contraceptives, and have neither used them, they do at least know of some method.

Table 6: Stages in the Adoption Process for Family Planning in Kenya Among All Women Aged 15 to 49 Years

| Stages in FP Adoption	Distribution of Respondents	
	Frequency	Percent
Lack of Knowledge	1582	21.0
Knowledge	1609	21.3
Favourable Attitude	1476	19.6
Decision to Adopt	922	12.2
Confirmation of Decision	1951	25.9
Total number of women	7540	100

Source: Computed from KDHS, 1993

On the other hand, 19.6 percent of the women have reached a favourable stage in family planning adoption. Whereas this group of women have never used contraceptives, they do express some interest in their use. They are thus potential contraceptive users categorised as those in a favourable stage.

Only 12.2 percent of the Kenyan women are shown to have at some point made a decision to adopt family planning but are found to have stopped hence currently not using contraceptives. These may also be referred to as discontinuers. Though not found currently using contraceptives at the time of the survey, they are at an advanced stage than those who have only reached a favourable attitude by expressing interests.

Reasons as to why such women may have discontinued use of contraceptives may include pregnancy, postpartum amenorrhoea/post partum infecundity, the need to conceive another child, separation with spouse, (hence in the absence of coital interruptus there is no need for contraceptive use), abstinence or even a conscious decision to use natural family planning among others.

Fig. 6: FAMILY PLANNING ADOPTION IN KENYA
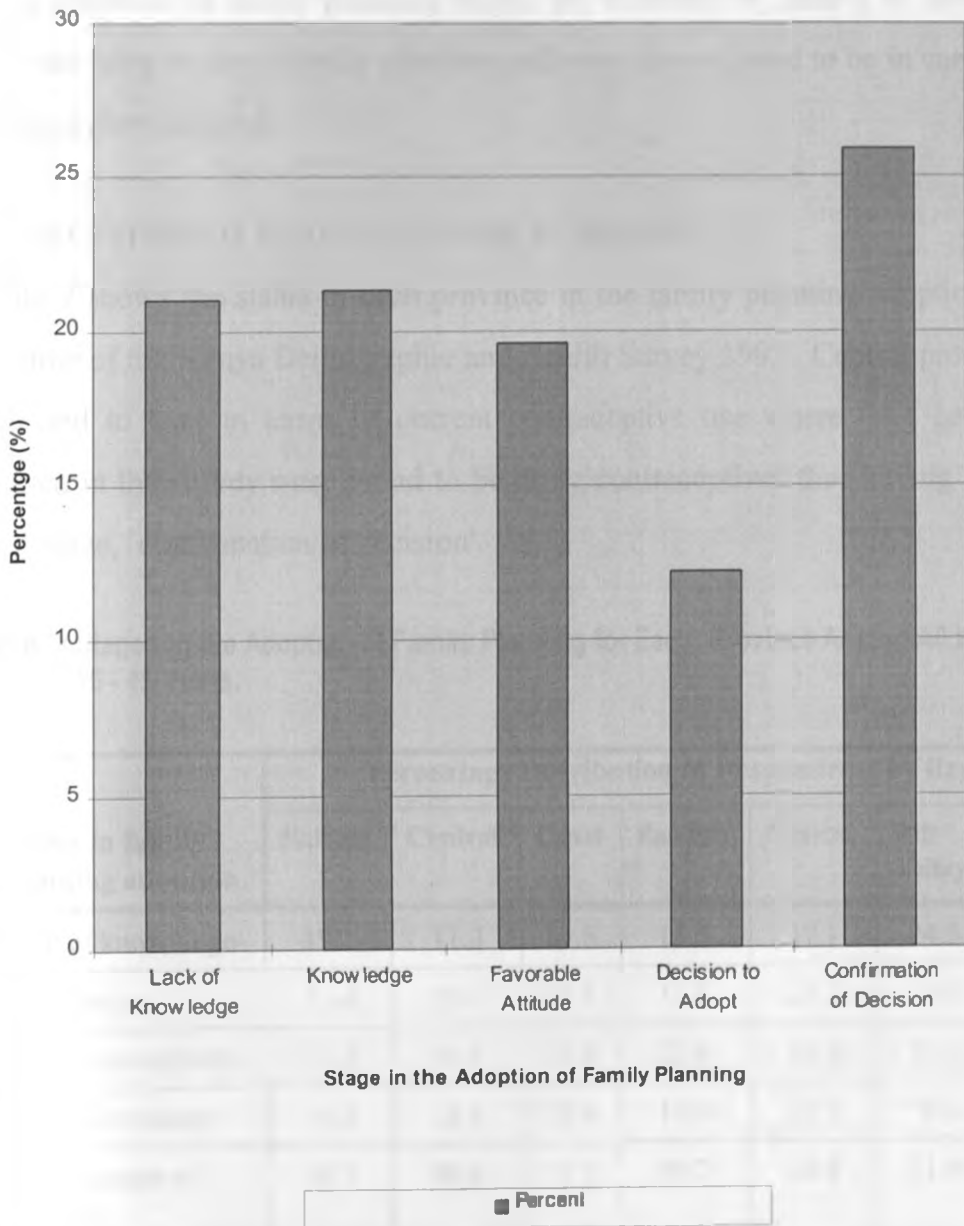
A large proportion of Kenyan women of reproductive age (25.9 percent) compared to other adoption of family planning stages, are reflected in Table 6 to have confirmed their decision to adopt family planning and were hence found to be in current use of a contraceptive method.

4.2.2 ADOPTION OF FAMILY PLANNING BY REGION

Table 7 shows the status of each province in the family planning adoption process at the time of the Kenya Demographic and Health Survey 1993. Central province is well reflected to lead in terms of current contraceptive use where 40.4 percent of the women in the survey were found to be using contraceptives thus having achieved the final stage, 'confirmation of decision'.

Table 7: Stages in the Adoption of Family Planning for Each Province Among All Women Aged 15 - 49 Years.

Stages in family planning adoption	Percentage Distribution of Respondents by Regions						
	Nairobi	Central	Coast	Eastern	Nyanza	Rift Valley	Western
Lack of knowledge	19.1	11.3	31.8	15.5	17.1	24.5	30.5
Knowledge	13.4	25.0	29.1	17.5	23.2	24.0	15.5
Favourable attitude	12.3	10.5	11.6	22.4	29.2	20.5	22.2
Decision to adopt	16.6	12.8	10.4	14.9	11.7	9.6	11.7
Confirmation of decision	38.7	40.4	17.1	29.7	18.8	21.4	20.2
Total number of women	507	1094	717	1406	1158	1562	1096

Chi-square value: 625.625
Significance level: 0.0000
Source: Computed from Kenya Demographic and Health Survey, 1993.

Nairobi closely follows central province with 38.7 percent of the women in the survey found in this final stage and Eastern, 29.7 percent; Rift Valley 21.4 percent, Western 20.2 percent; Nyanza, 18.8 percent and Coast province, 17.1 percent follow respectively.

Fig. 7: FAMILY PLANNING ADOPTION BY REGION

Fig. 7: FAMILY PLANNING ADOPTION BY REGION

Legend:
- Lack of Knowledge
- Favorable Attitude
- Confirmation of Decision
- Knowledge
- Decision to Adopt

X-axis: Provinces (Nairobi, Central, Coast, Eastern, Nyanza, Rift Valley, Western)
Y-axis: Percentage(%)
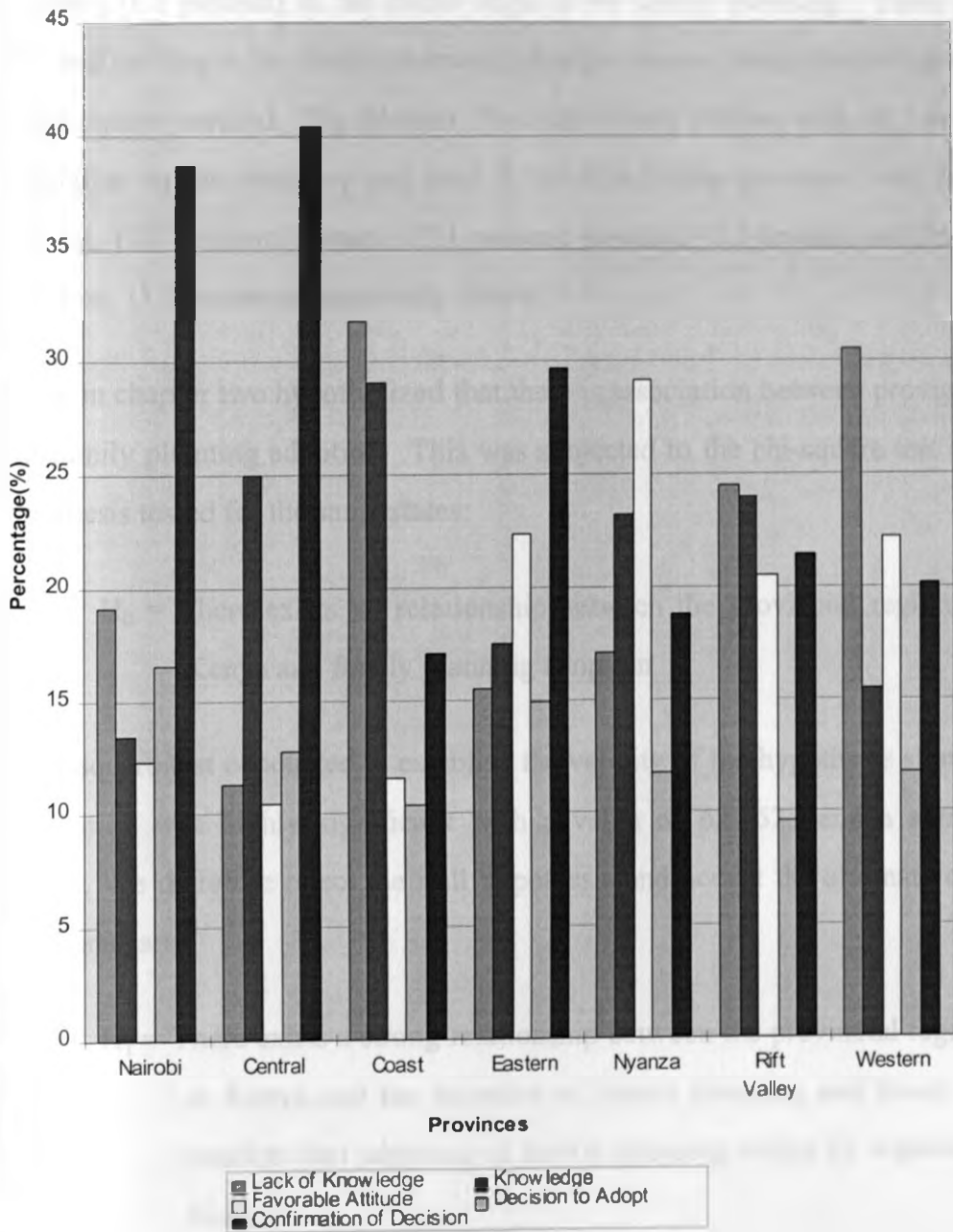
As shown in Table 7, Coast province has the largest proportion of her reproductive women (31.8 percent) in the initial stage of the family planning. These are women who had not begun the family planning adoption process hence did not know even one contraceptive method. The Western Province closely follows with 30.5 percent of her population in this category and next is the Rift Valley province with 24.5 percent. Nairobi, 19.1 percent; Nyanza, 17.1 percent; Eastern, 15.5 percent and finally Central province, 11.3 percent respectively follow.

It was in chapter two hypothesized that there is association between provincial regions and family planning adoption. This was subjected to the chi-square test and the null hypothesis tested for the same states:

H_0 = There exists no relationship between the provincial regions in Kenya and family planning adoption.

A chi-square test conducted to establish the validity of the hypothesis showed that the association was highly significant with a value of 625.625 and a significance of 0.0000. We therefore reject the null hypothesis and accept the alternative hypothesis which states:

H_1 = There exists a strong relationship between the provincial regions in Kenya and the adoption of family planning and hence the confirm that adoption of family planning varies by regions in Kenya.

4.2.3 ADOPTION OF FAMILY PLANNING BY RESIDENCE

Table 8 and Figure 8 demonstrate that almost equal proportions of population in both urban and rural areas are yet to begin the family planning adoption process with 21.7 percent and 20.8 percent respectively in this category. In the second stage of awareness, differences are observed with the higher proportion of the rural women

(22.4 percent) found in this stage as opposed to their urban counterparts (16.5 percent).

It is clear from the table that yet more of the rural women (21.3 percent) tend to reach the favourable stage hence positive attitude towards family planning adoption as opposed to their urban counterparts with only 11.5 percent of the population in this stage. This is by way of their expressed interest in using contraceptives.

The urban women are more advanced compared to their rural counterparts when they have to make a decision to adopt family planning. Though women at this stage are also referred to as discontinuers, they have a high potential to use contraceptives. The urban women therefore have more potential of being contraceptive users (16.8 percent) in proportion compared to their rural counterparts (11.2 percent). These are women bound to confirm their decision faster than women in previous stages. It is among the urban women of reproductive ages that a higher proportion of the population (33.4 percent) have reached the final stage of family planning adoption process compared to only 11.2 percent of the rural women are in the same category. This is as expected since the urban residents are said to be more receptive to innovations than their rural counterparts.

A chi-square test was conducted to test the association between residence and adoption of family planning. It was hypothesized that the residence of a woman is closely associated with her source of family planning information.

The null hypothesis tested states:

H_0 = There exists no relationship between the residence of a woman and her adoption of family planning.

Table 8: Stages in the Adoption Process for Family Planning by Residence Among Women age 15-49 years

Stages in the family planning adoption	Percentage Distribution of Respondents by Residence	
	Urban	Rural
Lack of knowledge	21.7	20.8
Knowledge	16.5	22.4
Favourable attitude	11.5	21.3
Decision to adopt	16.8	11.2
Confirmation of Decision	33.4	24.2
Total number of women	1339	6201

Source: Computed from Kenya Demographic and Health Survey, 1993.
Chi-square value: 92.68567
Significance level: 0.0000

The hypothesis was tested at 0.05 level of significance and the chi-square value was found to be 92.68567 with a significance level of 0.0000. This significance level is less than the set alpha level for the critical region hence we reject the H_0 and accept the alternative hypothesis which states:

H_1 = There is a significant association between a woman's residence
and her adoption of family planning.

The place of residence of a woman can therefore be seen to influence her adoption of family planning. Indeed, the association between the two is reflected as perfect.

Fig. 8: FAMILY PLANNING ADOPTION BY RESIDENCE
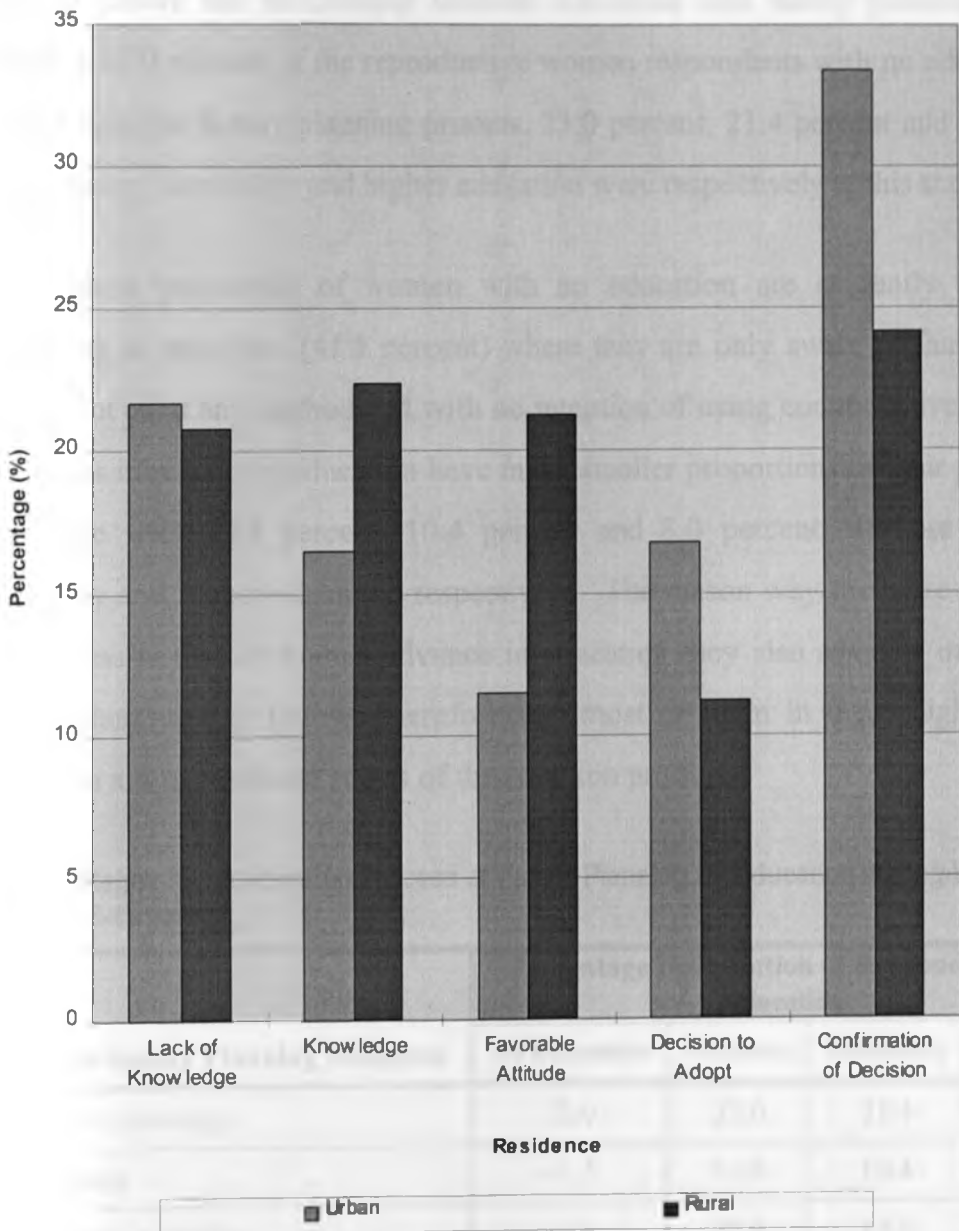
4.2.4 FAMILY PLANNING ADOPTION BY EDUCATION

Table 9 shows the relationship between education and family planning adoption. Whereas 13.9 percent of the reproductive women respondents with no education were yet to begin the family planning process, 23.0 percent, 21.4 percent and 21.3 percent with primary, secondary and higher education were respectively at this stage.

The highest proportion of women with no education are evidently found to be stagnating in stage two (41.5 percent) where they are only aware of family planning having not used any method and with no intention of using contraceptives. The other categories in respect to education have much smaller proportions of their population at this stage with 19.8 percent, 10.4 percent and 8.0 percent of those in primary, secondary and higher education respectively. The reason why these are such smaller proportions is that as women advance in education they also advance in adoption of family planning. It follows therefore that most of them in these higher levels of education are in advanced stages of the adoption process.

Table 9: **Stages in the Adoption Process of Family Planning by Education among Women Aged 15-49 years.**

Stages in family Planning Adoption	Percentage Distribution of Respondents by Education			
	No Education	Primary	Secondary	Higher
Lack of Knowledge	13.9	23.0	21.4	21.4
Knowledge	41.5	19.8	10.4	8.0
Favourable Attitude	17.8	22.0	15.6	1.1
Decision to Adopt	8.8	11.7	15.9	20.6
Confirmation of Decision	18.0	23.6	36.8	49.1
Total number of women	1352	4345	1800	44

Source: Computed from Kenya Demographic and Health Survey, 1993.
Chi-square value: 613.177
Significance level: 0.0000

Fig. 9: FAMILY PLANNING ADOPTION BY EDUCATION
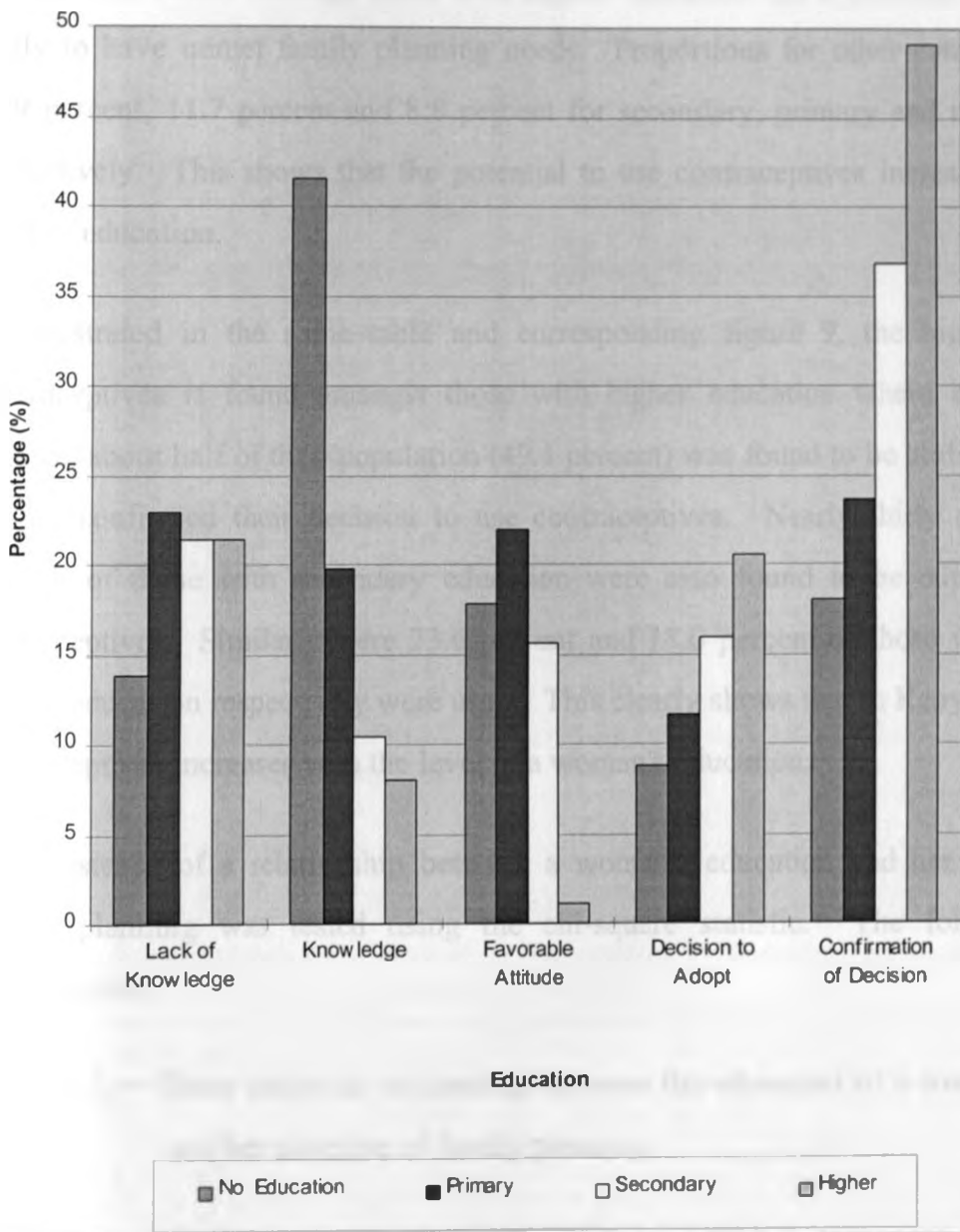
A minimal proportion of women with higher education (1.1 percent) were at the favourable attitude stage hence with knowledge of the family planning innovation. In the same stage were 17.8 percent of women with no education, 22.0 percent and 15.6 percent of those with primary and secondary education respectively.

Of the potential contraceptive users also called discontinuers, the highest proportion of women was found amongst those with higher education (20.6 percent). These are likely to have unmet family planning needs. Proportions for other categories were 15.9 percent, 11.7 percent and 8.8 percent for secondary, primary and no education respectively. This shows that the potential to use contraceptives increases with the level of education.

As illustrated in the same table and corresponding figure 9, the highest use of contraceptives is found amongst those with higher education where among these women, about half of their population (49.1 percent) was found to be at the final stage having confirmed their decision to use contraceptives. Nearly thirty seven (36.8) percent of those with secondary education were also found to be currently using contraceptives. Similarly were 23.6 percent and 18.0 percent of those with primary and no education respectively were users. This clearly shows that in Kenya, the use of contraceptives increases with the level of a woman's education.

The existence of a relationship between a woman's education and her adoption of family planning was tested using the chi-square statistic. The following was hypothesized.

H_0 = There exists no relationship between the education of a woman and her adoption of family planning.

H_1 = There exists a significant association between the education of a woman and the adoption of family planning.

The above null hypothesis was tested at an alpha level of 0.05 significance and the value of chi-square was found to be 613.177 with a significance of 0.0000 reflecting a perfect relationship, a situation where the observed frequencies are precisely equal to the expected. It follows therefore, that the null hypothesis is rejected and the alternative hypothesis accepted.

Education is thus seen to influence a woman's adoption of family planning. Indeed this analysis shows that women with higher education are all past the first stage of family planning adoption. Most of them were found to be in the final stage having confirmed their decision to use contraceptives.

4.2.5 FAMILY PLANNING ADOPTION AND MARITAL STATUS

Table 10 and Figure 10 shows that family planning adoption is lowest amongst never married women where 42.2 percent of women in this category were found having not started the family planning process. Closely following are those currently married who are expected to be well exposed to family planning information. However, 12.3 percent of women in this category are yet to begin the adoption of family planning process. Slightly over ten (10.5) percent of the separated and 7.5 percent of the widowed are also found in this category.

Table 10: Stages in the Adoption Process of Family Planning by Marital Status Among all Women Aged 15-49 years.

Stages in family planning adoption	Percentage Distribution of Respondents by Marital Status			
	Never Married	Currently Married	Widowed	Separated
Lack of Knowledge	42.2	12.3	7.5	10.5
Knowledge	22.6	22.2	43.3	21.1
Favourable Attitude	17.0	25.4	15.5	17.6
Decision to Adopt	6.0	12.8	17.8	20.5
Confirmation of Decision	12.1	27.3	16.0	30.7
Total number of women	2280	4639	231	400

Source: Computed from Kenya Demographic and Health Survey, 1993
Chi-square value: 1195.437
Significance level: 0.0002

Fig. 10: FAMILY PLANNING ADOPTION BY MARITAL STATUS

Percentage (%)

45

40

35

30

25

20

15

10

5

0

| Lack of Knowledge | Knowledge | Favorable Attitude | Decision to Adopt | Confirmation of Decision |

Marital Status

■ Never Married   ■ Currently Married   □ Widowed   ▣ Separated
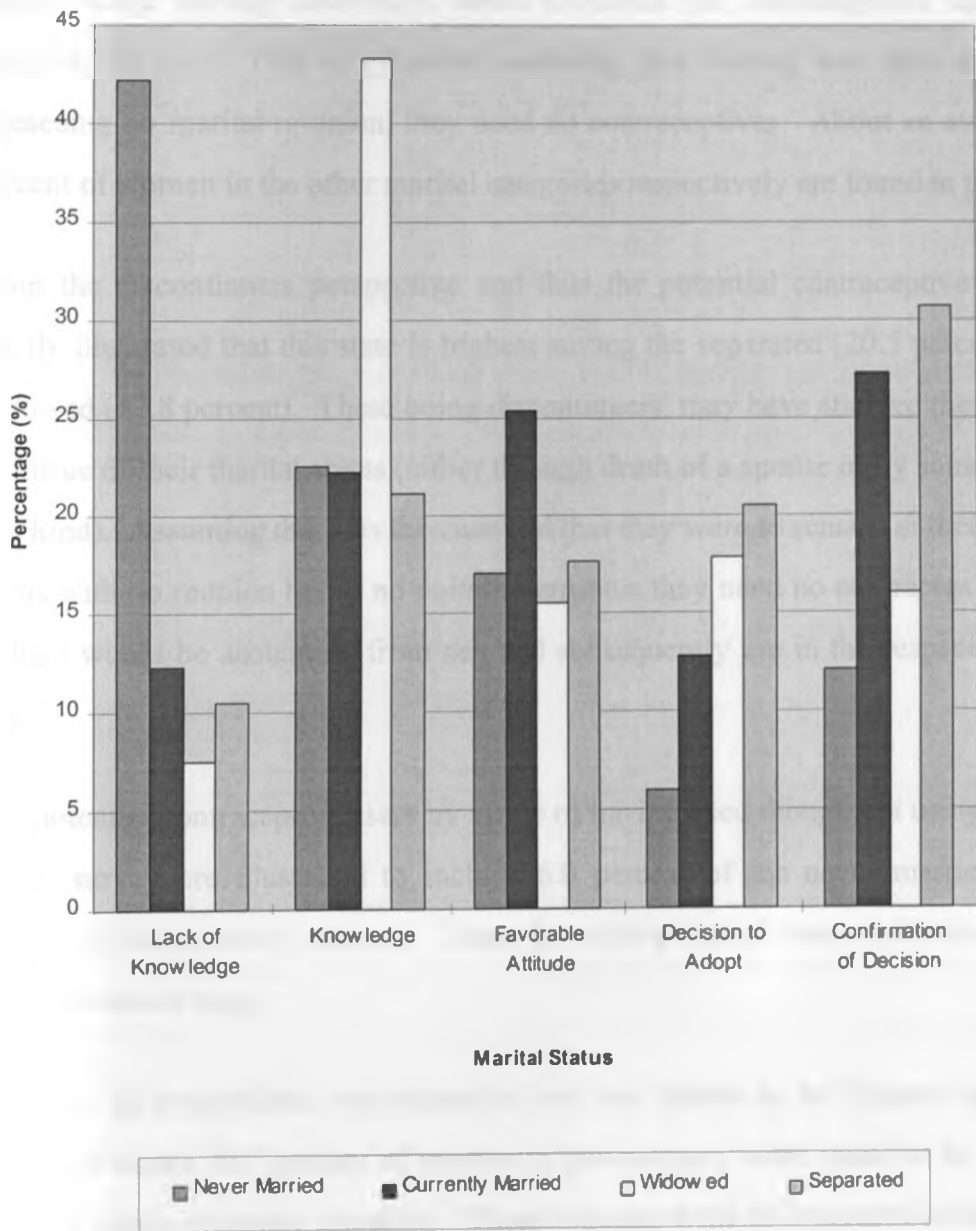
The largest proportion of the widowed women are illustrated to be stagnating in the second stage having knowledge about existence of contraceptives but with no intention to use. This is expected assuming that having lost their spouses and foreseeing no marital re-union, they need no contraceptives. About an average of 16 percent of women in the other marital categories respectively are found in this stage.

From the discontinuers perspective and thus the potential contraceptive users, it is clearly illustrated that this state is highest among the separated (20.5 percent) and the widowed (17.8 percent). These being discontinuers, may have attained their said stage by virtue of their marital status (either through death of a spouse or by some separation of a kind). Assuming this was the case and that they were to remain in their respective status with no reunion hence no coital interruptus they need no contraceptive method, as they would be abstaining from sex and subsequently are in the respective stage to stay.

The potential contraceptive users by virtue of having used though not using at the time of the survey are illustrated to include 6.0 percent of the never married and 12.8 percent of the currently married. Those have the potential thus considered to be at a fairly advanced stage.

In terms of proportions, contraceptive use was found to be highest amongst the separated where 30.7 percent of women in this category were found to be in the final stage of family planning adoption. These together with 16.0 percent of the widowed confessed being in current use of a contraceptive method despite their marital status. This clearly implies that they are still active in sexual intercourse or had alternatively adopted a long term contraceptive method. Only 27.3 percent of the currently married were found to be in current use of contraceptives while among the never married, 12.1 percent of women in this category were also currently using contraceptives.

To establish whether marital status may influence family planning adoption in any way and therefore whether any association exists, a chi-square was conducted and the following null hypothesis tested:

H_0 = There exists no relationship between the marital status of a woman and her adoption of family planning.

The chi-square procedure by SPSS gave a value of 1195.437 with a significance of 0.00002. At a significance level of 0.05, this is highly significant hence the null hypothesis stated above is rejected.

The alternative hypothesis is on the other hand accepted and it states:

H_1 = There exists a relationship between a woman's marital status and her adoption of family planning.

Marital status therefore influences a woman's adoption of family planning.

4.2.6 FAMILY PLANNING ADOPTION AND AGE

Table 11 and the corresponding figure 11 demonstrate how age influences adoption of family planning. It is clear from the same that about half the proportion of women aged 15-19 years (47.4 percent) are yet to begin the family planning adoption process. There are fewer proportions of women in this stage in the subsequent age groups implying that as women advance in age, fewer are ignorant about family planning.

The second stage in the adoption process considered, over half the proportion of women respondents aged 45-49 years (55.5 percent) are in this stage closely followed by 39.3 percent of women aged 40-44 years. This is the stage where women have heard about some family planning method, have never used and have no intention to. This is so because at this age, most are approaching menopause and are settled with how they go about planning their families (even if its abstinence) and thus would hardly be convinced about the use of contraceptives. Information on family planning

appears to have caught up with them rather late in their reproductive span. Their minimal need to use contraceptives and reluctance to adopt the innovation (probably due to their age factor) explain their position.

Other women in this stage of adoption process are in smaller proportions across the other age groups. In the third stage where women have a favourable attitude towards family planning, it is demonstrated by the figure and table that about 20.0 percent of women respondents across the various age groups except 40-49 years are in this stage. All have an intention to use contraceptives though they have never used.

Table 11: Stages in Adoption Process for Family Planning by Age Groups of All Women 15 - 49 years.

Stages in family planning adoption	Percentage Distribution of Respondent Age Group						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Lack of knowledge	47.4	22.2	12.7	10.3	10.6	3.8	3.3
Knowledge	23.0	13.8	11.8	16.3	21.9	39.3	55.5
Favourable attitude	19.9	27.3	20.4	18.4	19.1	11.1	3.3
Decision to adopt	4.1	13.7	17.7	16.7	13.8	11.7	11.1
Confirmation of decision	5.7	23.0	37.5	38.3	34.6	34.2	26.7
Total number of women	1754	1638	1221	1088	768	638	434

Source: Kenya Demographic and Health Survey, 1993.
Chi-square value: 2053.706
Significance level: 0.0000

Stage four, the decision to adopt family planning gives room to the potential contraceptive users also here called discontinuers. Only 4.1 percent of women aged 15-19 years are found in this stage. This is because most of them are still too young to even know about family planning as evident in stage one. Larger proportions of women are found in subsequent age groups and these are now potential contraceptive users at a fairly advanced stage despite the fact that they are discontinuers. On the other hand, 11.1 percent of women aged 45-49 are likely not to turn to contraceptive

use again as most are bound to have reached menopause thus no more need for contraceptives.

Fig. 11: FAMILY PLANNING ADOPTION BY AGE GROUP
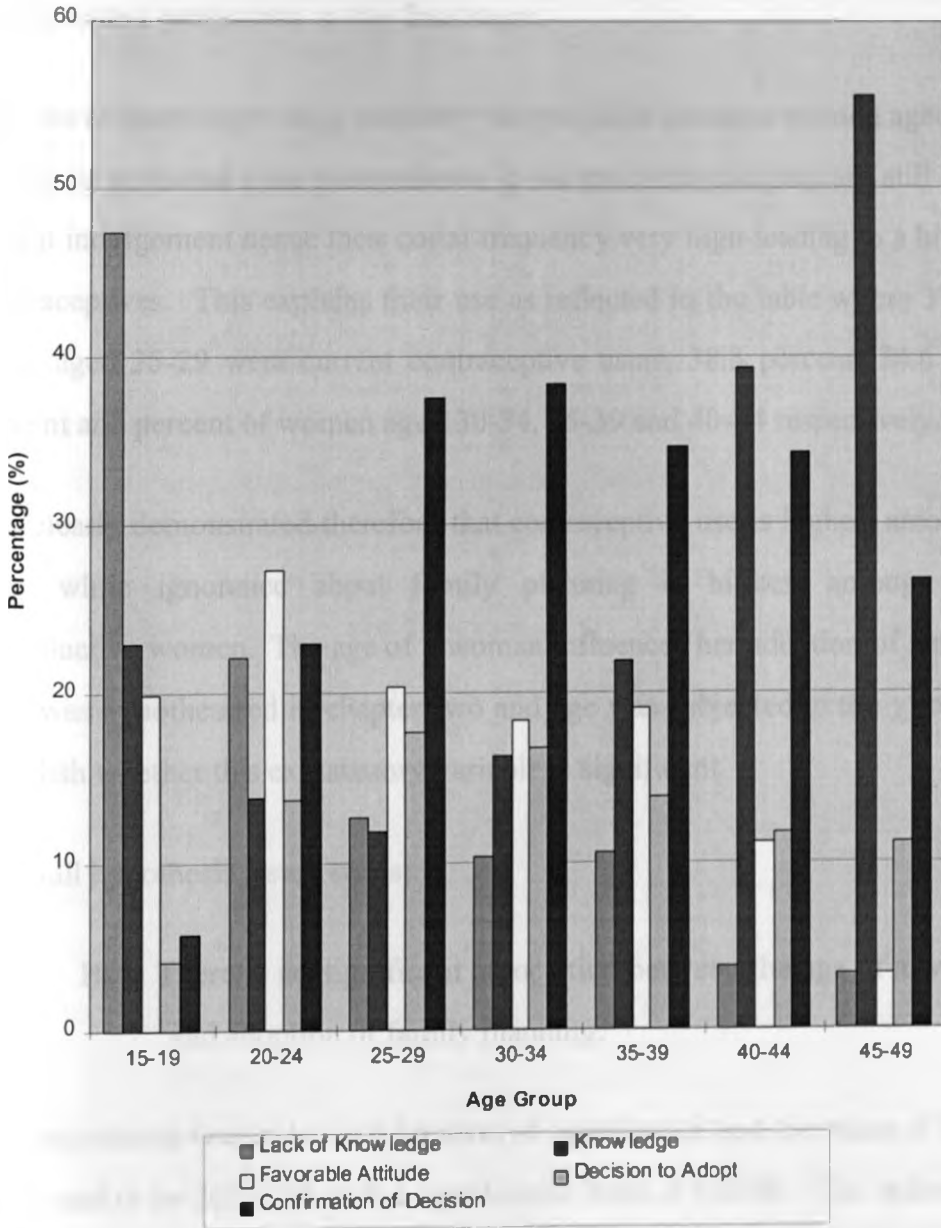
In the final stage where the decision to use contraceptives was confirmed by way of current use of contraceptives, only 5.7 percent of women aged 15-19 years were found in this stage. These being young women probably in school, it is expected that most do not indulge in sexual intercourse hence no need for contraceptives. This explains their minimal proportion in this final stage.

The use of contraceptives is evidently most popular amongst women aged 25-44 years. This is as expected since most women in the specified category are still very active in sexual indulgement hence their coital frequency very high leading to a high demand of contraceptives. This explains their use as reflected in the table where 37.5 percent of those aged 25-29 were current contraceptive users, 38.3 percent, 34.6 percent, 34.2 percent and percent of women aged 30-34, 35-39 and 40-44 respectively.

It is clearly demonstrated therefore that contraceptive use is highest among the middle aged while ignorance about family planning is highest among the youngest reproductive women. The age of a woman influences her adoption of family planning. This was hypothesized in chapter two and age was subjected to the χ^2 test in order to establish whether this explanatory variable is significant.

The null hypothesis tested states:

H_0 = There is no significant association between the age of a woman
and adoption of family planning.

This hypothesis was tested at 0.05 level of significance and the value of the chi-square was found to be 2053.706 with a significance level of 0.0000. This indicates that there is significance of association. The null hypothesis is therefore rejected and the alternative hypothesis accepted which states:

H_1 = There is significant association between the age of a woman and
adoption of family planning.

This shows that the age of a woman is important in regard to adoption of family planning. Therefore, the hypothesis that age is closely associated with family planning formulated in chapter two is accepted.

4.2.7 ADOPTION OF FAMILY PLANNING AND SOURCE OF INFORMATION

Table 12 and figure 12 provide insights into the relationship between source of family planning information and adoption of family planning. At the ignorance stage, therefore amongst those yet to begin the adoption process, we find 39.1 percent of those whose source of most information was the mass media and 19.7 percent of those whose source of most information was interpersonal channels. This implies that majority of those indicating mass media (39.1 percent) as their source of information really got no information on family planning from the same. Similarly are those identifying interpersonal channels as source yet have not begun the adoption process.

In stage two, where women categorised have knowledge of some method thus beginning the adoption process, 17.7 percent and 19.3 percent of those identifying mass media and interpersonal channels as sources of most information are respectively categorised in this group. Amongst those at the favourable stage, not much difference in proportions is found between them and those in stage two. Proportions are found to decrease in the subsequent stage. This is the stage where women have decided to use contraceptives though not found to use any at the time of the survey. These include 12.1 percent and 11.5 percent of proportions of women identifying mass media and interpersonal channels as source of most family planning information respectively.

About sixteen percent (16.3) and 27.1 percent for mass media and interpersonal channels respectively are the proportions of women found to be in current use of the contraceptives. Just as most women highlighted interpersonal channels as source of most of their family planning information, it is demonstrated in the table and illustrated in the figure that these same women have yielded to the information hence found to be in current use of contraceptives. Comparatively, a smaller proportion is found to be in use of contraceptives (16.3 percent) having identified mass media as

source of information. Interpersonal channels are thus more affective in communicating Family Planning information.

In chapter two, it was hypothesized that the source of family planning information is associated closely with family planning adoption. This was tested using the chi-square test.

Table 12: **Stages in Adoption Process for Family Planning by Source of Most Family Planning Information of All Women 15-49 years.**

Stages in Family Planning Adoption	Percentage Distribution of Respondents by Source of Family Planning Information		
	Mass Media	Interpersonal Channels	Other
Lack of Knowledge	39.1	19.7	33.2
Knowledge	17.7	19.3	42.8
Favourable Attitude	14.9	22.4	12.9
Decision to Adopt	12.1	11.5	4.2
Confirmation of Decision	16.3	27.1	6.9
Total number of women	1111	5901	521

Source: Computed from Kenya Demographic and Health Survey, 1993.
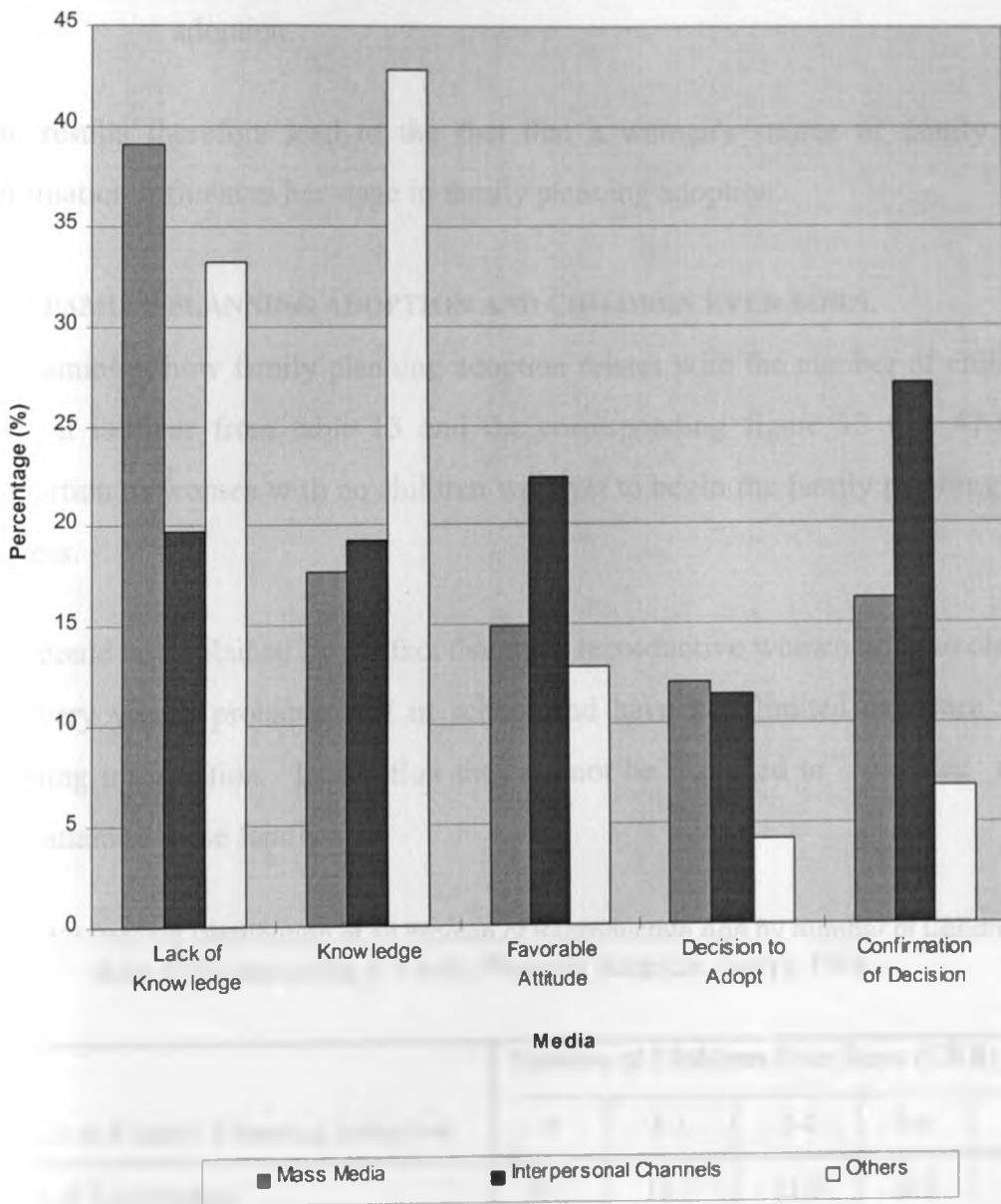*Chi-square value: 1207.808*
Significance level: 0.0000

The H_0 is given below:

> H_0 = There exists no significant relationship between the source of family planning information and the stage in family planning adoption.

From the results of the test the chi-square value was found to be 1207.808 with a significance level 0.0000. The hypothesis was tested at 0.05 significance level and the resulting level happens to be less than this. We thus reject the stated null hypothesis and accept the alternative hypothesis which states as follows:

Fig. 12: FAMILY PLANNING ADOPTION BY SOURCE OF FAMILY PLANNING INFORMATION

Percentage (%)

Lack of Knowledge   Knowledge   Favorable Attitude   Decision to Adopt   Confirmation of Decision

Media

■ Mass Media   ■ Interpersonal Channels   □ Others

H_1 = There exists a significant relationship between the source of family planning information and the stage in family planning adoption.

The results therefore lead to the fact that a woman's source of family planning information influences her stage in family planning adoption.

4.2.8 FAMILY PLANNING ADOPTION AND CHILDREN EVER BORN.

In examining how family planning adoption relates with the number of children ever born, it is clear from table 13 and the corresponding figure 13 that 47.5 percent proportion of women with no children were yet to begin the family planning adoption process.

This could be explained by the fact that most reproductive women with no children are still very young probably still in school and have had limited exposure to family planning information. In addition they cannot be expected to practice until they have attained some family size.

Table 13: Percent Distribution of all Women of Reproductive Age by Number of Children Ever Born (CEB) according to Family Planning Adoption, Kenya, 1993.

Stages in Family Planning Adoption	Number of Children Ever Born (CEB)				
	0	1-2	3-4	5-6	7+
Lack of Knowledge	47.5	13.7	11.5	8.9	6.8
Knowledge	26.6	16.2	16.1	19.5	27.3
Favourable attitude	14.4	26.2	17.1	22.4	18.9
Decision to Adopt	4.8	14.6	17.8	14.5	12.9
Confirmation of decision	6.7	29.2	37.5	34.8	34.2
Total number of women	2103	1798	1352	1039	1246

Source: Computed from Kenya Demographic and Health Survey, 1993.
Chi-square value: 1846.122
Significance level: 0.0000

Fig. 13: FAMILY PLANNING ADOPTION BY TOTAL NUMBER OF CHILDREN
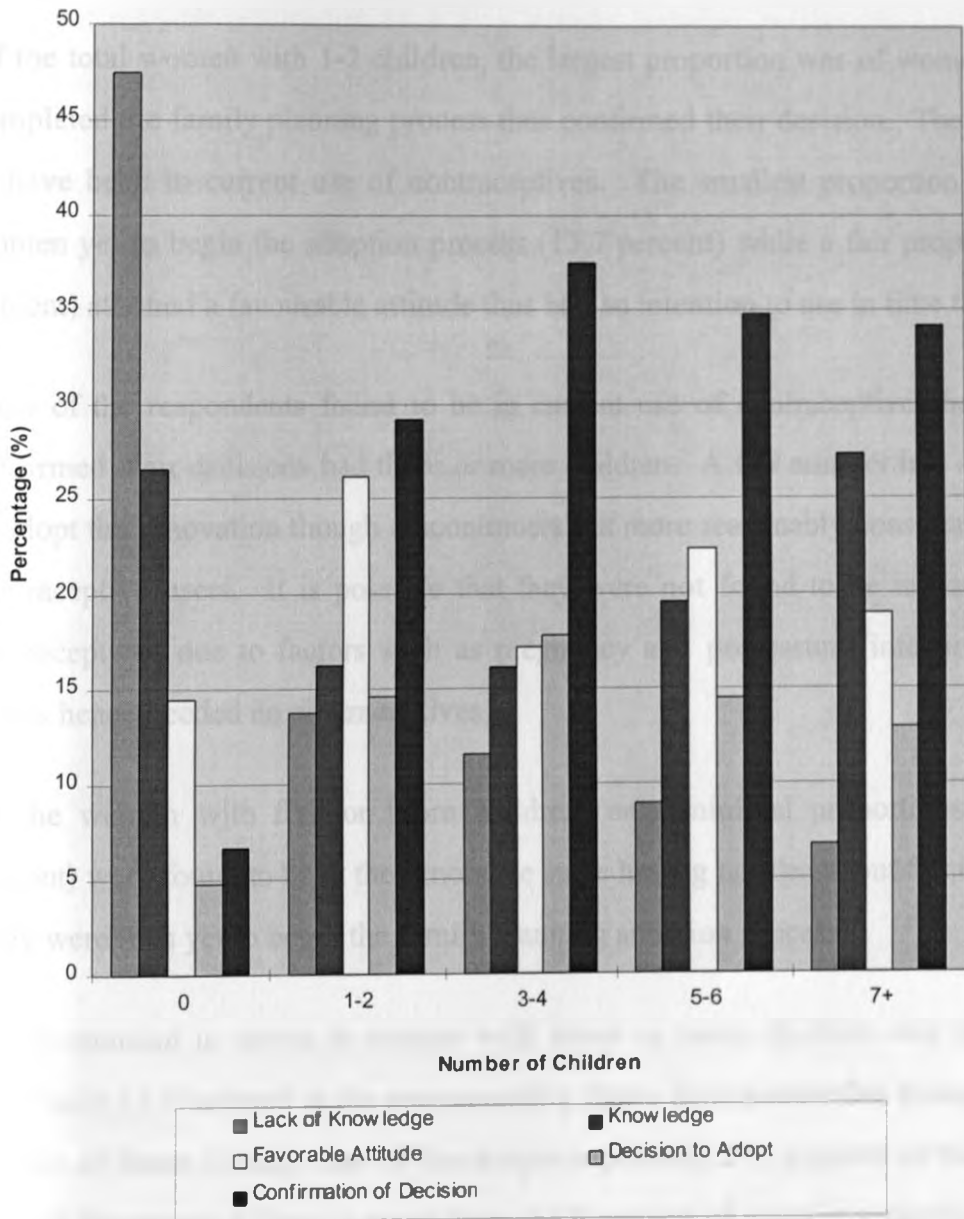
In stage two, only 26.6 percent of women with no children were found with an idea of a family planning method while only 14.4 percent of them in the said category had a positive attitude thus did intend to use. 4.8 percent of them were discontinuers hence had taken sometime before the survey to probably postpone their fertility. On the other hand, 6.7 percent of women in this category had confirmed their decision to use

contraceptives and age could explain this minimal proportion besides the fact that most were yet to gather more information on family planning.

Of the total women with 1-2 children, the largest proportion was of women who had completed the family planning process thus confirmed their decision. They confessed to have been in current use of contraceptives. The smallest proportion was of the women yet to begin the adoption process (13.7 percent) while a fair proportion (26.2 percent) attained a favourable attitude thus had an intention to use in time to come.

Most of the respondents found to be in current use of contraceptives hence having confirmed their decisions had three or more children. A fair number had also decided to adopt the innovation though discontinuers but more reasonably considered potential contraceptive users. It is possible that they were not found to be in current use of contraceptives due to factors such as pregnancy and postpartum infecundity among others hence needed no contraceptives.

Of the women with five or more children, only minimal proportions (about 8.0 percent) were found to be at the ignorance stage having no idea about family planning. They were thus yet to begin the family planning adoption process.

When attention is drawn to women with seven or more children ever born, results from table 13 illustrated in the corresponding figure demonstrate that these include 6.8 percent of those in stage one of the adoption process, 27.3 percent of those in stage two, 18.9 percent of those in stage three, 12.9 percent of those in stage four, and 34.2 percent of those in the final fifth stage. These are very encouraging results because it clearly shows that though these may be categorised as women with very high fertility levels, family planning adoption is not alien to them and indeed a high proportion of these women (34.2 percent) had confirmed their decision hence were in current use of contraceptives. Meanwhile, only 6.8 percent were completely ignorant of family planning hence despite their high fertility are likely to give birth to more children.

From the foregoing and well illustrated by the last row of table 13, it is evident that as women have more children, they advance in the family planning adoption process. The total number of children born to a woman therefore influences her adoption of family planning.

To establish whether there exists any relationship between the number of children ever born and family planning adoption, a chi-square was conducted and the following null hypothesis tested.

H_0 = There exists no relationship between the total number of children born to a woman and her adoption of family planning.

The calculated chi-square gave a value of 1846.122 with a significance of 0.0000. At a significance level of 0.05, this is perfectly significant hence the null hypothesis stated above is rejected.

The alternative hypothesis is on the other hand accepted and it states:

H_1 = There exists a relationship between the total number of children born to a woman and her adoption of family planning.

The total number of children born to a woman therefore influences her adoption of family planning.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0.0 INTRODUCTION

The main objective of this study was to examine how family planning communications are related to socio-demographic factors and how the two affect family planning adoption in Kenya which in turn affects fertility. The data utilized was obtained from the 1993 Kenya Demographic and Health Survey conducted by the National Council for Population and Development and the Central Bureau of Statistics. This chapter gives the summary of the findings and the implied policy recommendations.

5.0.1 SUMMARY AND CONCLUSIONS

Compared to mass media, the data shows that interpersonal channels are the most powerful source of family planning information in Kenya. This is the process through which the communicator and communicatee engage in a face-to-face interaction. This is true regardless of any socio-demographic characteristic of the population in this case region, age, education, residence, marital status.

Interpersonal channels reached over 75 percent of the entire women population as opposed to the mass media which only reached about 15 percent of the same population. We can therefore conclude that interpersonal channels are the most powerful source of family planning information to women in Kenya. The data demonstrates the reach of each medium or channel in diffusing information about family planning and not the relative effectiveness in bringing out changes in attitudes and behaviour. Despite this however, it is also true that both mass media and interpersonal channels are vital in creating awareness of family planning and adoption of the same have a direct effect on fertility.

In demonstrating the reach of each medium or channel in diffusing information about family planning, the health workers stand out distinct among all other channels as the source of most family planning information to a large number of women in the country. They are thus very instrumental in creating awareness of family planning.

Mass media exposure is seen to be higher in urban as opposed to the rural areas while on the other hand interpersonal channels provide higher exposure of family planning information in rural areas.

Women's esposure to family planning messages through the mass media was found to increase with a woman's level of education. Exposure to family planning information through interpersonal channels was on the other hand found to decrease with increase in educational attainment.

Interpersonal channels were found to stand out as the major source of most information on family planning among a cross-section of all the women regardless of their marital status. The separated women are reflected as having obtained no information from husbands as expected and none also identify the church as source implying that they probably do not go to church or if they do, received no counselling from the same. A relatively high proportion of women who have never married point out the school/teacher as source of most family planning information. Most of these are aged between 15-19 years and this tends to explain the phenomenon as this is a school attending age.

Exposure to most information on family planning through the mass media gradually decreases with an increase in the age of women. Focusing on interpersonal channels on the other hand, the reverse is seen to happen hence exposure to most family planning information through such interpersonal channels gradually increase with the increase in age.

About one quarter of the population of Kenyan reproductive women were found to have confirmed their decision to adopt family planning and were hence found to be in current use of a contraceptive method. Except Nyanza and Coast Provinces all the provinces had over a fifth of their respective reproductive women populations in the last stage of family planning adoption hence had confirmed their decision to use of contraceptives. Central Province leads with the highest proportion of her population in this stage, followed by Nairobi, Eastern, Rift Valley and Western Provinces respectively.

A larger proportion of urban residents compared to the rural were found to be currently using contraceptives and this maybe due to the basic reason that urban residents are more receptive to innovations than their rural counterparts. The same urban areas are reflected to have more potential contraceptive users than the rural areas.

The reproductive women with higher education appear most receptive to the innovation of family planning and indeed, only a fifth of them were found to be at the initial ignorance stage while about half of the same category of women were found to have confirmed their decision to use contraceptives.

Of the uneducated reproductive women, barely one fifth of the group had confirmed decision to use contraceptives and when compared to other women, they also had the largest proportion of women who were found to be still at the awareness stage with knowledge of some family planning method yet with no intention to use.

The data demonstrates that about half the population of Kenyan women who are never married were ignorant about family planning where only about a tenth were currently using contraceptives. It is interesting to note that even among the widowed and the separated, contraceptive use was still very popular.

A cross sectional analysis of the women in the various reproductive age groups shows that most women aged 40-49 years have the largest proportion of their population at the awareness stage of the family planning adoption process. This is a category of women also demonstrating high use of contraceptives despite their age. On the other hand, most of the 15-19 old women had no information on Family Planning and very few were using contraceptives probably because they were yet to start the reproductive process.

It has been demonstrated in this study that family planning sources are closely associated with socio-demographic factors of the population. These two (sources of family planning information and socio-demographic factors) were found to influence the adoption of family planning and therefore contraceptive use in the country. The adoption of family planning is found to be closely associated with the number of children ever born which is a direct measure of fertility. Thus, the conclusion here is that an interplay of socio-demographic characteristics of the population, their source of family planning information and their subsequent adoption of family planning (hence their use or non use of contraceptives) directly influences the fertility of the country.

While the importance of family planning communications has been highlighted, it is also important to note the utility of the Kenya Demographic and Health Survey in obtaining feedback on family planning communications.

The KDHS offers several advantages; first, the survey provides data from a nationwide representative sample of the main target population for most family planning programs; women of reproductive age.

Second, the inclusion of communications questions in the KDHS has a minimal increment on its cost as many of the items on contraceptive use and socio-demographic traits are already included in the core questionnaire so that the number of items in the communications module is small.

Third, by combining the communications questions in the KDHS, the study benefits from all the technical assistance made available to the research project. This assistance includes the areas of sampling, questionnaire design, selection and training of personnel, coding and editing of data and analysis.

In summary, the KDHS provides an opportunity to collect data from a representative sample of the target population at a relatively low cost, with standard controls to assure the quality of data. The KDHS provides useful feedback to communicators on the research of previous IEC activities among different sub-groups within the population.

In this study, communications data provide evidence of the importance of family planning messages in relation to adoption of family planning hence contraceptive use.

5.0.2 RECOMMENDATIONS

A number of recommendations emanate from the findings of this study.

First, interpersonal channels should be enhanced as they are the most powerful source of family planning information. This should be done for instance through providing refresher training courses particularly for health workers and CBDs to maintain and improve their rich source of information. The providers should be trained to encourage discussions of family planning among couples.

Focusing on mass media on the other hand, Information Education and Communication (IEC) materials should be developed which would target the entire community regardless of their socio-demographic characteristics. Such IEC materials would include posters and pamphlets in simple language to target the less educated clients as well as, radio and television programs.

A market research should also be conducted to discover when a majority of the women usually listen to the radio and television and use these times to broadcast radio programs and sports publicizing family planning services. Special attention should be

given to the less educated rural women who appear to have limited information on family planning. This would help in making such channels more effective.

Another recommendation from the study is that policy makers should address the population on matters pertaining to family planning at different levels. This arise due to the fact that there exists sub-groups within the population that have had relatively low exposure to family planning messages. These sub-groups include for instance the less educated or those with no education at all and the rural residents among others.

It is further recommended that a more detailed research need be conducted in the country on family planning communications to provide the empirical evidence of its effectiveness on contraceptive use and fertility thus quantifying the effects of a communications program. Besides, further research should focus on multivariate analysis to determine the important factors influencing communication source.

81

BIBLIOGRAPHY

AWUONDO, C & W. GIKONYO, (1991
Family Planning Posters. Differentials in and Design Intention and Audience Interpretation Consequences for Message Effectiveness. African Research Studies in Population IEC.

BERTRAND J.T., (1982)
Family Planning Communications and Contraceptive Use in Guatemala El Salvador and Panama. Studies in Family Planning 13: pp 190-199.

BOONGAARTS J. (1978)
A Framework for Analyzing the Proximate Determinants for Fertility. Population and Development Review 4 No:11

BLALOCK, H.M. (1963)
Social Statistics. Auckland, Australia.

BULATAO, R. And R. LEE (Editors) (1983)
Determinants of Fertility in Developing Countries Volume 2. Fertility Regularitions and Institutional Influence.

CHURCH, C.A. (1989)
Lights! Camera! Action! Promoting Family Planning with Television, Video and Film. Population Reports. Series J. No. 38. Baltimore, The Johns Hopkins University, Population Information Program, December.

COLEMAN, P.L. (1988)
Enter-educate: New Word from Johns Hopkins. JOICFP Review, No. 15, 15th May, 1985 pp.28-31.

COLEMAN, P. (JHU/PCS) (1990)
Marketing and Promoting the Tatiana and Johnny Project. Personal Communication, 1990.

DAVIS, K. AND J. BLAKE, (1956)
Social Structure and Fertility an Analytical Framework: Economic Development and Cultural Change Vl.4, April.

EASTERLIN, R. (1975)
>An Economic Framework for Fertility Analysis. Studies in Family Planning Volume 6 pp 54-63, 1975. The Population Council, New York.

EASTERLIN, R.A. (1978)
>The Economics and Sociology of Fertility: A synthesis. In Tilly, E.Ed. Historical Studies of Changing Fertility. Princeton.

CLELAND, J. AND C WILSON, (1987)
>Demand Theories of the Fertility Transition. An Iconoclastic View. Population Studies 41(i): 5-30 March, 1987.

FPAK (1991:)
>Kenya Provider and Client Information Education and Communication Project. Baseline Situation Analysis, Kenya.

FOREIT, K.G. (1989)
>The Impact of Mass Media Advertising on a Voluntary Sterilization Program in Brazil. Studies in Family Planning 20(2) 107-116.

GILLERY, R.H. AND S. H. MOORE (1986)
>Radio-Spreading the Word on Family Planning. Population Reports, series J. No. 32 pp 884-886.

GUPTA, C.B. (1979)
>Introduction to Statistical Methods. vikas Publishing House PVT. Ltd. Jangpura New Delhi - India.

HERMALIN, A.I. (1982)
>Role of Surveys in Analysis of Family Planning Programs: Proceedings of a Seminar held in Begota (Colombia).

NCPD et al. (1989)
>Kenya Demographic and Health Survey. Macro Systems, Inc. Columbia, Maryland U.S.A.

NCPD et al. (1994)
>Kenya Demographic and Health Survey. Macro International Inc. Calverton, Maryland U.S.A.

NCPD et al. (1994)

   Sessional Paper No. 4 of 1994 on National population Policy for Guidelines. Government Press, Kenya.

NCPD et al. (1997)

   Sessional Paper No. 1 of 1997 on National population Policy for sustainable Development. Government Press, Kenya.

ODALLO, D. AND W. GIKONYO (1991)

   Content of Analysis of Letters from Listeners of "Mwenda Pole Hajikwai". Family Planning Radio Programmes.

PIOTROW, P.T. et al. (1990)

   Mass Media Family Planning Promotion in Three Nigeria Cities. Studies in Family Planning 21: pp 272.

ROGERS, E.M. (1983)

   Diffusion of Innovations. 3rd Edition, New York, The Free Press.

ROGERS, E.M. and J.D. STOREY (1987)

   Communication Campaigns In: Berger, C.R. and Chaffe, SH. eds Handbook of communication Science. Beverly Hills, California. Sage Publications, 1987 pp.817-846.

ROGO, K.C. (Ed) (1988)

   A Manual of Clinical Family Planning Practice. Kenya Medical Association Ministry of Health. Division of Family Health (GTZ. Nairobi, Kenya).

ROSS, J.A. et al:

   Management Strategies for Family Planning Programs: Centre for Population and Family Health School of Public Health, New York, 1989.

SABIDO, M AND I. SABIDO (1990)

   The Evolution of Soap Operas for Social Change. The Enter-Educate Conference: Entertainment for Social Change. Baltimore John Hopkins University, Centre for Communication Programs, 1990.

UNITED NATIONS (1994)

   International Conference on Population and Development, Cairo, Egypt.

VALENTE, T.W. et al. (1994)

>Radio Promotion of Family Planning in the Gambia. International Family Planning Perspectives, 20: 96-100, 1994.

WABWOBA, H.W. (1987)

>The Role of the Mass Media in the Promotion of Family Planning Among the Urban Poor in Kenya. A Case Study of Kibera. Research Paper, School of Journalism, University of Nairobi.

_____ SUPPORT SYSTEMS (1993)

>Information Education and Communication. Television Campaigns. The Gambia: Using Radio to Promote Family Planning Information. Education and Communication. Population Reference Bureau, Washington.

_____ PSRI (1992)

>Husband-Wife Communication and Interaction District. Prevalence Differentials Study, Kenya.

The import-substitution industrialization strategy pursued in Kenya until the mid-1980s was not successful in increasing manufactured exports. The share of manufactured exports in Kenya declined drastically from a peak of 40% in the early 1960s to about 11.7% of total exports in the 1980s, Mwega (2002). Despite a shift from import substitution to export promotion since the mid-1980s, and reforming the policy environment under the SAPs, the performance of manufacturing sector in Kenya remained poor.

The African region is currently the principal market for Kenya's exports, its share having increased from an average of 29% during 1987-92 to 34% in 1993 and exceeding 44% since 1994. In 1995, the largest African destinations for Kenyan products were Uganda (32%), Tanzania (25%), Democratic Republic of Congo (3%), Rwanda (7%), and Sudan (3%). Commodities exported to the regional markets include refined petroleum products; beer, cigarettes, oils, perfumes, polishing and cleaning preparations, disinfectants, insecticides, paper and paperboard and fabrics.

The decline in share of manufacturing exports was attributed to several causes. Exports to neighbouring countries declined, especially to Tanzania, where the volume of imports from Kenya had not yet reached the levels attained before the break-up of the East African Community in 1977. Other reasons are the growth in domestic demand for such products as paper; anti-export bias (eg import-substitution strategy) of trade policies; and supply constraints, especially the intermittent shortage of foreign exchange to purchase intermediate