FERTILITY AND FAMILY PLANNING IN ZARIA CITY AND ENVIRONS

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A Thesis submitted to the Post-Graduate School, Ahmadu Bello University, Zaria, in partial fulfilment of the requirements for the award of degree of Master of Science (M.Sc.) Sociology

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DEDICATION

To God, my father...

To Jesus Christ, my Saviour and Lord,

To Holy Spirit, my Counsel and inspiration.

CERTIFICATION

This thesis entitled ''Fertility and Family Planning in Zaria City and Environs'' by Godswill James meets the regulations governing the award of the degree of Master of Science of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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DECLARATION

I hereby declare that this thesis is a product of my own research effort. It has not been presented in any previous application for a degree. All sources of information have been duly acknowledged by means of references.

Godswill James.

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The complex process of seeing a thesis from conception through the finished product involves a great deal of work that would hardly come to fruition without the supportive role of ''significant others''. This thesis would be incomplete, therefore, without my acknowledging these sources of support.

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ABSTRACT

This study investigates, through empirical research, the on-going debate on the alleged increased contraceptive use and lower fertility in sub-Saharan Africa in relation to the Northern part of Nigeria. The interest in the topic was kindled by the fact that most studies in fertility and family planning in Nigeria have been carried out in the southern part of the country to the neglect of the North. Moreover, almost all of these Studies have consistently made no attempt to compare the fertility outcomes of contraceptive users and nonusers so as to assess the extent of the impact of family planning programmes on fertility.

A review of the existing literature reveals positive relationship between family planning programmes and fertility reduction especially in Ado-Ekiti, Nigeria. The literature also shows that persuasive socio-cultural treasons still account for people's desirefor children in African countries, and the interplay of these socio-cultural variables with family planning programmes result in fertility reduction or otherwise.

The study population consists of mothers between the ages of 15 and 49 years who reside in Zaria and environs. Samples were drawn on the basis of quota sampling technique from the family planning clinics and maternal and child health care units of selected
health institutions in Zaria. Data were collected by

moans of questionnaire which was used as interview schedule.

From the data collected and analysed, it is found that contraceptive users have lower average fertility than non-users. Fertility varies substantially by age at first marriage, ethnicity, religion, education and occupation. However, the desired and achieved fertility arc high in the sample. Contraceptive use varies with education, religion and achieved parity, and the most widely used method of contraception are the less permanent and reversible, particularly the condom, injectable, IUD and the natural methods. The major factor for non-use of contraceptives is found to be related to the perceived health risks associated with them, rather than ignorance or non-availability of contraceptives.

Based on these and other findings, it is advocated that family planning programmes which integrate with reproductive health care services and also sustainable economic and social development projects that benefit the individual woman and her family should be vigorously pursued in Nigeria. This advocacy is based on the understanding that no family planning programme can be effective" without giving simultaneous attention to women's poverty, illiteracy and powerlessness which create the demand for a large number of children.

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CHAPTER ONE

INTRODUCTION

Increased contraceptive use and lower fertility in sub-Saharan Africa are of great importance and the subject of considerable debate at the present time. For, African countries are poor, have high rates of fertility and population growth, and until recently, few had programmes directed at reducing fertility. Furthermore, high fertility norms are deeply entrenched in African societies. Consequently, many researchers observed that prospects for the development of family planning programmes and substantial increases in the acceptability of regulating family size are not bright (Oni and McCarthy,1990).

One major component of Nigeria's 1988 National Population Policy is the target to ''reduce the number of children a woman is likely to have in her life time, now over six, to four per woman by the year 2000, and reduce the present rate of population growth from 3.3 percent per year to 2.5 percent by 1995 and 2.0 percent by the year 2000''.(Federal Republic of Nigeria,1988:14). Several related targets include reducing pregnancy to mothers under age 18 and above 35 and extending coverage of family planning services to 50 percent of women of child-bearing age by 1995 and 80 percent by 2000.

These national policy initiatives in Nigeria have, in recent times, been accompanied by extensive changes at the local levels. In Zaria and environs, family planning

has become an essential part of comprehensive maternal and child health care services. All government hospitals and clinics now include family planning units. Besides, there are various private organization initiatives (e.g. Rotary International) in family planning information, education, and communication in the forms of workshops, training of nurses and clinic workers as well as mass media campaigns.

Given these changes, this study seeks to examine and ascertain how knowledge and use of contraceptives affect fertility.

1.2 Statement of Research Problem:

Studies in fertility and family planning in Nigeria have mostly been concentrated in the southern part of the country to the neglect of the north, where, according to the 1991 National Population Census, over half of the population of the entire country resides. Again, earlier studies on the subject and related areas(Schieffellin,1967; Trevor, 1975; Pittin,1986; Oni and McCarthy,1990, Reinis, Rutstein and Ajayi, 1991; Caldwell, Orubuloye and Caldwell,1992) have consistently made no attempt to compare the reproductive patterns of contraceptive users and non-users so as to assess the extent of the impact of family planning programmes on fertility. Non-availability of reliable statistical data in this regard makes firm conclusions on demographic trends and possible impact of population control measures

virtually impossible. There is also the need to document the level of fertility by various socio-economic variables particularly age, ethnicity, religion, education and occupation so as to assess the influence of socio-cultural factors on fertility performance in the area.

It is against the backgrounds stated in the foregoing that this study is set to address the following questions: What are the socio-economic characteristics of the current contraceptive users and non-users? What is the pattern in the fertility of contraceptive users and non-users? To what extent has contraceptive use influenced fertility? What is the pattern in the current use and non-use of contraception in Zaria, a northern Nigerian town ? What policy implications can be generated from these pattern?

1.3 Objectives of the Study:

The study aims to achieve the following objectives:

1. To examine the socio-economic characteristics of the current contraceptive users and non-users.

2. To compare the patterns of fertility of contraceptive users and non-users so as to identify any possible impact of family planning on fertility.

3. To document current patterns in the use and non-use of contraceptives.
4. To generate practical recommendations on how to increase the use of contraceptives and induce reduction in fertility.

1.4 Relevance of the Study:

The impetus to undertake this study arose out of the felt need to improve our understanding of the impact of family planning and associated socio-cultural factors on reproductive performance. That achieved, will be a significant contribution to knowledge in the field of demography especially in view of the near total absence of demographic surveys in the northern part of Nigeria.

The problem of large family size and the need for family planning in sub-Saharan Africa cannot be over-emphasized. Family planning improves the health of children and mothers. Children are more likely to fall ill and die if they are born too close together (less than 2 years apart),or born after the mother has already had many children (five, six,or more). Having too many children too quickly also increases the mother's risk of having complications during pregnancy and delivery. If a woman becomes pregnant when she is too young (under 15 to 17 years) or too old (over 40 years), her chances of having a complication is increased.

Moreover, family planning helps the entire family-father, mother,old children, and even grand parents.

Raising children requires a lot of time, energy, and money. By helping parents to have the number of children they can raise properly, family planning helps ensure that available resources are commensurate with the family size. Here lies the ultimate significance of this study

1.5 Scope of the Study:

The study limits itself to the examination of the patterns in fertility within marriage, that is, within the child-bearing cycle. Hence only the mothers who are between the ages of 15 and 49 years are selected for interview. The samples consist of mothers who either attended Family Planning Clinic for contraceptive practice or Maternal and Child Health Clinic for mother and child care only. The sample cannot be used to estimate the prevalence of certain behaviours or conditions in the entire area. The discussion is confined to variations in fertility and contraceptive use.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction:

This chapter reviews literature on family planning. The chapter is divided into two broad sections. The first section is a review of related literature, while the second consists of a theoretical framework.

2.2 Review of Related Literature:

A number of studies have been undertaken on fertility and family planning. Attempt is made in this section to review some of the studies in some detail to highlight the impact of family planning and associated socio-cultural factors on fertility.

2.2.1 Family Planning Programmes and Fertility Changes

First country reports of the World Bank fertility survey project indicated the first symptoms of fertility reduction in parts of the sub-Saharan African countries of Nigeria (1989: XV), Senegal (1988:32), Mali (1989:31), Botswana (1989:24), Kenya (1989: XIX) and Zimbabwe (1989). Botswana and Kenya indicated the most spectacular declines. The report for Botswana, for instance concludes:

> There are indications that fertility began to decline some 10-15 years before the survey, around the same time the family planning programme was introduced in 1973 (Botswana DHS,1989:24)

For Kenya, van de Walle and Foster (1990:10) concluded that

> Although future studies may still indicate the fertility transition in Kenya is not decisive, there are indications that change has finally taken place. It may be that Kenya has finally collected the rewards from long and disappointing history of involvement with family planning programmes.

In Nigeria evidence indicated that a fertility decline of over 10 percent had occurred in South West Nigeria and possibly in South East Nigeria as well (Nigeria DHS, 1991:7; Reinis, Rutstein and Ajayi, 1991:5). The evidence of the onset of fertility decline in South West Nigeria was noticed when a demographic survey was conducted in the Ekiti District beginning in 1989. Findings demonstrated both fertility decline and a rapidly rising level of contraceptive practice. Hence , Caldwell, Orubuloye and Caldwell (1992) commented that "Sustained fertility decline has probably started in Ado Ekiti and has been achieved by a rapid use of contraception".

The fertility declines detected in Botswana, Zimbabwe, Kenya and Southern Nigeria are presumably the beginning of sustained decline among older women that characterised the non-African transitions. In particular, the Ado Ekiti experience seems to indicate positive relationship between family planning programmes and fertility reduction, and further, seems to suggest that

contraceptives supply can by itself generate demand.

However, there remains considerable uncertainties about the extent to which these declines represent changes in socio-economic and cultural factors. Opinions also vary as to whether these declines represent initial stages of a decline in completed family size or targets. Van de Walle and Foster (1990) for instance agreed that changes in fertility, particularly at younger age may arise from changes in various proximate determinants (age at marriage, spousal separation, duration of breast feeding etc.) which do not imply a fundamental change in the motivation to have large families. There is also a possibility that the decline in fertility that are observed among younger women are the result for a desire to space births, and of a greater willingness of women to use various contraceptives techniques to delay the next birth. Even though it is observed that there is a large and consistent increase with age in the proportion of women who do not want more children, the motivation is clearly not sufficient, and the distinction between spacing and stopping too confusing.

Nonetheless, it might seem reasonable to deduce from the review of literature so far, that natural fertility is gradually giving way to planned fertility. This study will therefore make efforts to explore factors associated with these changes.

2.2.2 Socio-economic determinants of fertility

Demographers have increasingly concluded that the relationship between aggregate economic indicators and the onset of the decline in marital fertility does not lend itself to easy generalization (Freedman, 1987: 64). The classical ''threshold hypothesis'' which states that there is a critical level of economic and social development at which fertility starts to decline has been largely discarded in demographic theory as the leadership of the world fertility survey (WFS) has acknowledged:

> WFS has failed to identify any single aspect of development that is the critical lever of demographic change. Its onset appears to be determined more by ill-understood cultural factors than by any objectively ascertainable development indicators (Gille, 1985: 279).

We are now left with a complex picture in which changes in beliefs, values and roles facilitated by the spread of education and by the activities of family planning programmes have played a major role in the observed reduction of fertility in developing countries (Van de Walle and Foster,1990). Given this complexity one finds that government programmes designed to reduce fertility can be successful for some cultural group even at low level of development. For instance, Caldwell and Caldwell (1988) have used a comparison of different measures of development and fertility to argue against

the World Bank's (1986) proposition that the failure of the family planning programmes in African countries can be attributed to an insufficient level of development. Using data from four countries in Africa (Ghana, Kenya, Cote d'Ivoire and Nigeria) and other four in Asia (India, China, Indonesia and Thailand), the Caldwells concluded that development alone cannot explain the '' under -. achievement'' of African countries in family planning programmes and suggested that cultural factors especially religion must be invoked.

This conclusion seems particularly relevant to the study area and indeed the predominantly Muslim northern part of Nigeria in which Islam has, over the years been a great impediment to planned fertility (Renne, 1996). Among the Hausa Muslims of northern Nigeria, there is the belief that children are God's given blessing and that procreation is an important part of Islamic marriage (Abdul ' Ati, 1982), and as Renne (1996) rightly observed for some northern Nigerians, the idea of calculating birth is an anathema - a view derived less from fatalism than from a form of humility. Thus, one accedes to the will of God and should not try to supersede it. Consequently, there have been several known instances of active resistance put against projects either rightly or wrongly identified as family planning projects.

For instance in Zaria and environs, family planning campaign posters are known to be destroyed and activities of family planning programmes disrupted (Renne,1996). In

Katsina, one of the Muslim Hausa cities, suspicion that family planning was included in the Expanded Programme on Immunizatuion (EPI) exercise affected the programme implementation. Parents perceived the injection administered for immunization as sterilization drugs for their babies. This reaction differs considerably from the favourable response in Togo to the integration of family planning message with EPI services (Huntington and Aplogan, 1974).

While these instances in their face value portray the failure of family planning programmes in the northern states of Nigeria, they are too few to generalise that Hausa Muslims do not accept family planning. There are considerable provisions within the doctrine of Islam for different interpretation of development issues including family planning. To some extent, the interpretation depends on individual's cultural, social, economic and political background. Nonetheless, the instances help to point to the fact that some resistance to family planning still exist in African societies. It further gives credence to the Caldwells' (1988) assertion that focus should be shifted from a well-defined development schedule to socio-cultural factors in explaining the under .achievement of family planning programmes in African countries.

In Van de Walle and Foster's (1990) findings, the African countries in which observable fertility transition has been achieved like Botswana, Kenya and

Zimbabwe have a higher rate of female literacy. They therefore attribute fertility behaviours to female education. Indeed several survey findings in African countries and elsewhere indicate negative relationships between female education and fertility (see Blake and del Pinel, 1980, Cochrane, 1979; Anker and Knowles, 1982, Ekanem, 1974; Caldwell, Orbuloye and Caldwell,1992).

In the review of World Fertility Survey countries, the negative relationship held in 40 percent of cases after controlling for duration of marriage, urban/rural residents, wives' occupation and husbands' education (Faroog and Degraff, 1988). These findings seem to refute the role of economic crisis (SAP) in fertility decline in preference for the role played by female education. It is therefore necessary to agree with Page (1988) that crises-led fertility changes, triggered by frustrated aspiration would not be '' as far - reaching as those generated by fundamental socio-economic development''.

An analysis of the contextual effects of education on fertility in Africa provides a more detailed picture. In analysis of WFS data from African countries, Lesthaeghe (1984) is reported to have shown that the effects of an individual's educational level on marital fertility are dependent on the average level of schooling in a given area. Here the focus is shifted from education *per se* to educational norm in an area.

For example in Kenya, the fertility increasing effect of primary education diminishes with the average

level of school, so that in the urban areas (where the average level of education is highest) the effect becomes negative. It is suggested that education at the individual level tends to disrupt traditional practices which lengthen birth intervals, but that subsequently, higher average levels of education produce social conditions conducive to the adoption of contraception.

Results concerning the determinants of fertility other than education have been more ambiguous. Ohadike (1968) had shown that the higher the monthly family expenditure, the greater the tendency to have few children. In other words, the economic theory of the effects of family income on the ''cost of children'' was seen to assume a very important role in some parts of Nigeria. One way of examining this relationship is through wives participation in labour force.

In a study conducted in Bukuru, Jos, Uyanga (1977) found that wife employment and family income significantly influence the desired family size. Other factors which influence family size are the wife's idea of how large a family should be, age, years of marriages, knowledge and probable use of contraceptives.

On the whole, one is left in a complex position in which fertility behaviour with reference to specific geographical and cultural circumstances have to be examined to arrive at valid conclusions. This assignment forms part of the focus of the present study.

2.2.3 Cultural Determinants of high fertility rate in Nigeria

It is a general observation that African traditional societies and religions stress the importance of ancestry and descent. Family life is embedded within the lineage system which is most highly elaborated in West Africa. The importance of ancestors, both living and dead mean that the younger generations assisted the older generation to such an extent that for males, at least, high fertility ultimately brought substantial economic returns. The emphasis on descent meant that high fertility was morally correct and that childlessness and rearing of few children was evil whether it was the result of barrenness or the death of all or most children. Thus, there exists persuasive cultural and economic reasons for people to desire children as a means of maintaining ''houses'' among others (Renne, 1995).

In Nigeria, there is strong obsession with the females procreative function primarily for the perpetuation of the family and lineage. Olusanya (1989) explains this succinctly as follows:

> The traditional African family forms part of a lineage, a corporate group whose members are recruited on the basis of filiation. One of its main characteristics is its perpetuity. The lineage does not die; its members die and the membership is replenished through birth... Ideally, a considerable expansion of membership enhances the power and prestige of the group and reduces the ever-present danger of mortality. This, really is the crux

of the problem of persistently high fertility (Olusanya,1989).

It follows that the social pressure arising from the obsession to replenish lineage has conditioned the female from childhood into a kind of ''demographic martyr'' that she has come to believe very strongly that it is a matter of life and death to bear children. Although both husband and wife feel concerned if the wife does not become pregnant within a few months of marriage, it is usually the wife who gets more restive and goes from one traditional healer to another in order to achieve this societal obligation of reproduction.

Reluctance and indeed, refusal to tamper with the work of God of creating children through women derives from the attitude as well as from the belief that God created each woman to give birth to a predetermined number of children and that God himself will provide for the children's upkeep. Thus the norms that prescribe acceptable behaviour and roles within the family, especially those related to its procreative functions are the factors that sustain high fertility and to that extent, too, resist family planning and fertility reduction in Nigeria,

Furthermore, as widows have no claim on their deceased husbands' property, their only security is derived from their children so that they too have reasons for wanting a large surviving number of children and strive to achieve it at all costs. Trevitt (1973),

summarizes this succinctly for the Hausa as follows:

> A woman with no children of her own is described as ''the one who feels most sadness'' Children provide the most important bond between a Hausa man and his wife, and a wife who has no children is consequently less secured in her marriage than a wife who has children who will continue her husband's family. Children give a mother status amongst other women in the compound and form the focal point of her life within.

This kind of relationship between a mother and children is not unique to Hausa society, but holds in other parts of Nigeria and tropical Africa, especially if she is not well educated or lacks outside employment as other means of attaining status.

For instance, Talbot in 1926 reported that among the Yoruba, a barren woman was treated as an outcast. According to Ademola (1982) in his study among some traditional Ekiti groups in north-eastern Yorubaland, the corpses of adults who die childless were mutilated. While a dead man had a stick thrust into his reproductive organ, certain leaves were tied to those of a woman and words like ''you must not come into the world in this manner again'' pronounced. Infact the Yoruba word for barrenness is ''agon'' which derives from the verb ''gon'' meaning, to despise.

Among the Ishan of Edo state, Nigeria, children are not only greatly desired, male ones are preferred for same purpose for which other African groups do. The Ishan say ''you do not have a daughter and name her the family

keeper'' (Okojie, 1960). This saying does not necessarily connote female inferiority. The implication here is that it is really the male child who remains in the family house after the parents' ' death and saves it from physical and social disintegration. Generally, the emphasis on male children in both literate and non-literate Nigerian families stems from this fact: girls marry and not only go away, but take up their husbands' surnames. Whatever achievements they make in life goes to their husbands' families.

Indeed the obsession with this societal obligation (ie perpetuation of the earthly segment of the lineage), is so strong among many cultural groups in Nigeria that men get married when they are sexually impotent in order to save either their own faces or the faces of their immediate relatives (see Fadipe, 1970).

Infact in a case where a sexually potent man cannot be arranged for the wife (as is the case today in towns), it is usually the woman, thinking she is failing in her customary function, who after a period of infertility, deserts the husband because their ''blood does not agree''. Among the Efiks of Cross River State and the Ibibios of Akwa Ibom State, sometimes when the wife is "barren" and the husband is sexually potent, it is the wife who arranges another wife for the husband so as to fulfil his procreative function for the same reasons explained earlier.

These examples indicate important cultural values attached to children and childbearing, which, in essence impede the adoption of the small family ideal in Nigeria, and to a great extent too, the practice of contraception. In fact children are so valued that their worth is expressed in names such as ''Omonigho'' (in Urhobo) meaning child is greater than wealth, and ''Alheri'' (in Hausa) meaning good fortune. The birth of a child brings joy to the family even when others would consider additional child a burden, more so if it is a male. The male child is particularly treasured for he assumes continuity of the lineage as expressed in such Ibo name like ''Obiefule'' meaning ''let my lineage not be lost''. The interplay of these socio-cultural and economic factors and family planning programmes will produce either positive or negative impact on fertility in Nigeria, and indeed Africa.

2.3 Theoretical Framework:

The most widely known theoretical framework on fertility found in the current literature is the economic model, which suggests that couples attempt to maximize the well-being of their immediate household and that fertility regulation is made within this context (Easterlin and Grimmins, 1985). That is, the expected economic benefits to the household from children are balanced against perceived costs and a target outcome result. In other words, it is suggested that once

controlled fertility becomes the norm and replaces natural fertility, couples attempt a purposeful balancing of the expected gains and losses from various family sizes and then act accordingly, using whatever fertility controlling measures available to them. Thus, we can view the economic model as becoming applicable when people come to understand that control is possible, desirable and feasible. The economic model of fertility, then, centres on the desirability aspects and articulates the various factors that affect the benefits and costs of children and hence the ''demand'' for them. What most family planning programmes are all about is making it easier for couples to plan and implement their fertility goals effectively (Berelson, 1977). That is, they help convert couples who were ''ready'' into couples who participate in Family planning (Coale, 1973).

However, this model has some apparent limitations especially within the context of African reproductive behaviour. For instance, the model presupposes that couples decide the number of children they want and that they discuss this topic. This is not necessarily the case in Nigeria, particularly in rural areas and among Muslims. Discussion of these issues is considered a shameful act on the one hand and unnecessary on the other (Khan, 1979). It is not only possible that husbands and wives have different fertility preferences but also likely that they may not discuss this matter. Generally, when it comes to the issues of fertility and

the use of contraception, the wives in most cases are at the mercies of their husbands in the northern part of Nigeria.

Indeed, African groups hardly, if ever, draw up a balance sheet of the economic cost to be incurred and benefits to be derived from marriage and childbearing. As Olusanya (1989) rightly observes, the African's idea of procreation is virtually deterministic and providential. It would therefore be inappropriate to base this study wholly on the tenets of economic model.

Nonetheless, it would still be helpful to organise the discussion in this study around the framework of ''demand and supply'' of children. That is, it is assumed that certain cultural and socio-economic factors affect the perceived costs and benefits of children and hence, the demand for them. One vital intermediate variable which will complement this framework and enhance better understanding of fertility behaviours among African women is the one Olusanya (1989) termed the ''Martyr Syndrome''. This is simply the readiness on the part of women to die, if necessary, for the belief that it is their God-ordained function to propagate the family line optimally.

Essentially, the Martyr Syndrome presupposes that there are strong socio-cultural demands and benefits for procreation among Africans. Children perpetuate the family name and give social and psychological

satisfaction to parents; the more children a mother has, the more ''blessed'' she is regardless of the means to sustain the children. In the providentialist conception, the children will be automatically provided for by God. Therefore the idea of her performing the procreative function even to the point of death becomes an obsession. For instance, among the Hausa, a woman with no children of her own is described as ''the one who feels most sadness'' because children provide the most important bond between a Hausa man and his wife. A wife who has no children is consequently less secure in her marriage than a wife who has children who will perpetuate the family name(Trevitt, 1973). Consequently, childbearing among women tends to be a matter of life and death.

This implies that even if the economic benefits were not derived from children as some instances portray in recent times, the persistence of this idea would continue to sustain fertility at high level. The extent of change in this vital intermediate variable will more clearly indicate the imminence or otherwise of change in fertility and the extent to which any programme designed to influence it is succeeding. The Martyr Syndrome therefore is an important intermediate variable in the explanation of fertility behaviour of Nigerian women, and as such, the framework upon which this study is based.

2.4 Research Hypothesis:

The following hypotheses are postulated to guide the realization of the objectives of this study:

1. Socio-cultural factors, particularly religion, ethnicity, education and occupation are significantly related with the pattern in fertility and contraceptive use.
2. The users of contraceptives have lower average fertility than the non-users.

2.5 Summary:

In summary, the existing literature suggest that Nigeria's Ado-Ekiti experience shows positive relationship between family planning programmes and fertility reduction and further seems to suggest, though not explicitly, that contraceptive supply can by itself generate demand. Educational levels seem to have some effect on fertility, but the relationship is complex, involving contextual effects. Other factors including family income and occupational status play little role in themselves, but do seem to have an effect on the relationship between education and fertility. Finally, it is evident that persuasive cultural and social reasons which account for people's desire for children still exist, and the interplay of these socio-cultural variables with family planning programmes result in fertility reduction or otherwise.

In the light of these, the study will attempt to

use empirical data to assess the role of family planning programmes in fertility behaviour in Zaria city and environs.

CHAPTER THREE

METHODOLOGY

3.1 The Location of the Study

This study covered Zaria and Sabon Gari Local Government Areas. Both Local Government Areas have their headquarters in Zaria town. Zaria is situated in the northern part of Kaduna State and is one of the ancient towns in northern Nigeria. The major sub-urban clusters in the areas include Zaria City, Sabon Gari, Tudun Wada, Wusasa and Samaru. Agriculture is the major occupation of the indigenes of the area which they practise on both small and large scales.

The locations of the study have an estimated total population of 600,000, mainly Hausa-Fulani of Muslim faith. Non-Hausa populations occupy predominantly the sub-urban areas of Sabon Gari, Wusasa and Samaru and constitute the minority among the residents of the areas. According to Kisekka (1992), women in the reproductive age (15 - 49 years) account for 21.7 percent of the population of the areas. Crude birth rate is 34/1000 and the overall literacy rate is 17.2 percent among men and 8.1 percent among women. Maternal mortality ranges between 8 and 11 per 1000 live births depending on availability of health care facilities.

3.2 Research Design

The main objective of this study is to examine the patterns in the fertility of contraceptive users and

non-users with a view to ascertaining the impact of family planning programmes and other associated factors on the reproductive behaviour of women. The study population is made up of mothers between the ages of 15 and 49 years who live in Zaria City and environs. The contraceptive users are drawn from women who have been attending family planning clinics for contraceptive services while the non-users are selected from women who have attended maternal and child health clinics for mother and child care services excluding contraceptives. Female population is used in this study because in discussing fertility, attention is usually focused more on female reproductive performance than men's. Moreover, the principal target of family planning in Nigeria is the female population.

3.3 Sampling

Five family planning centres/maternal and child health clinics were purposively chosen for the study from various sections of Zaria. They compose of two government, two private, and one missionary institution. The government institutions chosen are Babandodo Health Centre, Zaria City and Ahmadu Bello University Sick-Bay, Samaru. The choice of Babandodo Health Centre was based on the fact that it was strategically located in the heart of Zaria City, which is dominated by the Hausa-Fulani of Muslim faith. It is also one of the most well-attended health institutions in Zaria City. Its

inclusion ensured a good representation of the indigenous Hausa-Fulani population in the sample. Ahmadu Bello University Sick-Bay, Samaru, was chosen to ensure a good representation of people of other socio-cultural and economic backgrounds. Samaru's population is highly heterogeneous because of the presence of Ahmadu Bello University Main Campus in the area. Consequently, ABU Sick-Bay as the major health institution that renders services to members of the University community attends to people of diverse socio-economic and cultural categories.

The private institutions selected for the study are Limi Clinic, Sabon Gari and Jama'a Hospital, Samaru. The choice of private health institutions was informed by the need to represent those who, because of one reason or another, do not attend any other category of clinic for maternal and child health care and for family planning services. Similarly, the choice of a missionary health institution was imperative so as to represent those who, for some religious reasons feel more incline to attend missionary hospitals for all health issues and practices. Hence, St. Luke's Anglican General Hospital, Wusasa was chosen for the purpose.

A total of 300 respondents, made up of 200 contraceptive users and 100 non-users were selected for this study by quota sampling technique. Contraceptive users were drawn from family planning units, while non-users were selected from Maternal and Child Health Care

units of these institutions. A quota of 50 contraceptive users and 25 non-users each was allocated to the government and missionary institutions mentioned above, while 25 users and at least 12 nonusers each was allocated to the private institutions. At each visit to these health institutions, available respondents were interviewed until each quota was filled. Through this sampling procedure, data were collected from sufficient socio-economic categories and, hence, the sample from this study provides evidence of the range of socio-economic characteristics of women present in Zaria City and environs.

3.4 Methods of Data Collection

Data were collected by means of questionnaire. The instrument covered items on the following variables: socio-demographic characteristics, family size, contraceptive practice, fertility preference and sex composition of the family. Some staff in the selected health institutions were involved in the administering of the questionnaire. In view of the specific nature of the study and the sensitivity of some of the questions asked, the staff involved were women aged 18 years and older, who had had at least secondary school education. They were either natives of Zaria or residents in Zaria for at least the last five years, and understood both the culture and language of the Hausa people.

The questionnaires were a mixture of open-ended and close-ended questions. They were administered to the respondents at the clinics - for the contraceptive users at the family planning clinics, and for the nonusers at the Maternal and Child Health Care clinics - where they go for contraceptive advice/use and for maternal and child care services respectively. For the literate respondents, the questionnaires were given to them to fill-in by themselves, but for the non-literate, their responses were translated into the questionnaires by the research assistants.

3.5 Techniques of Data Analysis

Three types of analytical tools are employed in the analysis of the data to achieve the stated objectives of the study. They are simple descriptive statistics, and correlation analysis. Simple descriptive statistics involving the use of measures of central tendency, measures of dispersion and percentages are employed to describe the background characteristics of contraceptive users and nonusers as well as the patterns of fertility.

For the achievement of the broad objective of the study (i.e. measuring the effects of contraceptive use on fertility), some statistics like Chi-square (X^2) is employed.

Finally, the fertility of the two categories of respondents (i.e. contraceptive users and non-users) were

compared using their mean ($\bar{x}$) and standard deviation (SD). One-way Analysis of variance (ANOVA) was used for comparing the means, and Student's t-test was used for testing the level of significance. P-value 0.05 or less was considered significant.

3.6 Operationalization of Variables

The independent variables in this study include the socio-demographic data such as age, age at marriage, ethnicity, religion, education and occupation and contraceptive practive. These variables are used to explain the dependent variable, fertility. The current fertility is examined along the following dimensions: the age-specific fertility level and the total fertility level. The age-specific fertility levels present the age pattern of fertility for each sub-group of women; the total fertility levels are summary measures of the number of children women in each sub-groups would have at the end of their reproductive years, should they experience the age-specific fertility rates by the age of 50.

Fertility is further examined along family size (both actual and desired). Actual family size refers to the actual number of children women have (i.e. total number of living children) whereas desired family size is the total number of children women would like to have in the whole life. For the purposes of this study, a large family size is one with five or more children, and a small family size is one with four children or less.

This definition of large and small families is in conformity with the Nigerian population programme which advocated four children per a woman.

3.7 Field Experiences and Problems

Generally, the problems encountered in the field were quite minimal because the management and staff of the selected clinics were co-operative and supportive. However, one major problem encountered in the field was attempts by some respondents to conceal some information. The attitude was informed by the fact that some of the married women especially the Hausa-Fulani women who attended family planning clinics for contraceptive practice did so without the knowledge of their spouses. They therefore tended to be cautious of the information they disclosed. Moreover, in the northern states the subject of family planning and fertility are very sensitive issues and are closely associated with sex; discussing them in public tends to evoke feelings of shyness and shame, since it is purely a personal issue. In fact some women called it an intrusion upon their private life and declined interview. This had implications for the study as some time was spent to convince the respondents on the purpose of the research which was purely academic and the fact that their names were not needed. This was complemented by the supportive roles played by some staff of the clinics. In the end, only very few women refused to respond.

CHAPTER FOUR

DATA ANALYSIS

4.1 Introduction:

The chapter is organised into three broad sections. The first section presents data on the background characteristics of contraceptive users and non-users. The second section examines the fertility histories of contraceptive users and non-users and the third examines the patterns in the use and non-use of contraception.

4.2 Background Characteristics of Contraceptive users and non-users:

Table 4:2:1 documents the age distribution of respondents

Table 4:2:1

Age distribution of respondents.

Age Group years	Respondents Category					
	Users		Nonusers		Total	
	No	%	No	%	No	%
15 24	38	19.0	8	8.0	46	15.3
25 34	87	43.5	44	44.0	131	43.7
35 44	54	27.0	38	38.0	92	30.7
45 +	21	10.5	10	10.0	31	10.3
Total	200	100.0	100	100.0	300	100.0

The data in Table 4:2:1 indicate that the highest percentage of respondents (43.7%) fall within the age bracket of 25 to 34 years. The mean age of contraceptive users in the sample is 31.9 years while that of the non- users is 34 years.

Table 4:2:2 shows the distribution of respondents by age at first marriage.

Table 4:2:2

Distribution of respondents by age at first marriage.

Age at First Marriage	Respondents Category					
	Users		Nonusers		Total	
	No	%	No	%	No	%
14 or less	39	19.5	12	12.0	51	17.0
15 - 19	76	38.0	52	52.0	128	42.7
20 - 24	53	26.5	30	30.0	83	27.7
25 +	32	16.0	6	6.0	38	12.6
Total	200	100.0	100	100.0	300	100.0

The data in Table 4.2.2 indicate that 19.5 percent of users and 12 percent of non-users married at age 14 years or younger. The majority (64 %) of the nonusers and nearly 58 percent of the users had married before their 20th birthday. The mean age at first marriage for the whole sample is 18.9 years. This rather high mean age at marriage in a northern Nigerian community is contrary to expectations and casts doubts on the accuracy of ages reported at first marriage particularly by older women. It is well - known that recall . lapse increases with age and older women, who "first married", many years ago might have misreported their ages. However, separate analysis of the mean age at first marriage of the 125 Hausa-Fulani respondents in the sample shows an 16.1 years at first marriage, suggesting that marital union starts relatively earlier among the indigenous population. This has some implications for the overall completed family size as will be seen later.

The distribution of respondents by ethnic group is presented in Table 4:2:3 ‘’Others’’ include some other ethnic groups in the north such as the Kanuri, Igala,Nupe, Tiv, Idoma, Igbira. etc., and some few ethnic groups from the

southern part of Nigeria.

Table 4:2:3

Distribution of respondents by ethnic group.

Ethnic groups	Respondents Category					
	Users		Nonusers		Total	
	No	%	No	%	No	%
Hausa/Fulani	89	44.5	36	36.0	125	41.7
Yoruba	54	27.0	20	20.0	74	24.7
Ibo	20	10.0	5	5.0	25	8.3
Others	37	18.5	39	39.0	76	25.3
Total	200	100.0	100	100.0	300	100.0

The data in Table 4:2:3 show that the Hausa/Fulani form the largest group in the sample constituting 41.7 percent. This is quite expected since they constitute the dominant population in the area of study. On the whole, the data reveal that contraceptive use and non use cut across ethnic groups.

Table 4:2:4 documents respondents by religious affiliation. ''Others'' represents respondents who are inclined to traditional religion as well as those with no declared religion.

Table 4:2:4

Distribution of respondents by religious affiliation

Religious Affiliation	Respondents Category					
	Users		Nonusers		Total	
	No	%	No	%	No	%
Roman Catholic	27	13.5	25	25.0	52	17.3
Protestants	86	43.0	30	30.0	116	38.7
Muslim	79	39.5	43	43.0	122	40.7
Others	8	4.0	2	2.0	10	3.3
Total	200	100.0	100	100.0	300	100.0

The data in Table 4:2:4 indicate that the majority of nonusers (43%) are Muslims, whereas Protestants constitute the largest religious group (43%) among users. However, it is interesting to note that contraceptive use in recent times cuts across religious boundaries. This observation is evident by the 39.5% and 13.5 percent of users who are made up of the Muslims and Catholics respectively. The Islamic religion and Catholicism are considered to be the most opposed religious groups to artificial family planning.

Table 4:2::5 presents the distribution of respondents by highest level of educational attainment as at the time of survey.

Table 4:2:5

Distribution of respondents by highest level of educational attainment

Level of Education	Respondents Category					
	Users		Nonusers		Total	
	No	%	No	%	No	%
Non/Koranic	26	13.0	28	28.0	54	18.0
Primary	50	25.0	29	29.0	79	26.3
Secondary	58	29.0	31	31.0	89	29.7
Post secondary	66	33.0	12	12.0	78	26.0
Total	200	100.0	100	100.0	300	100.0

The data in Table 4:2:5 show that 13 percent of users and 28 percent of non users have never had any formal education ; 38 percent of users and 57 percent of non-users have had at least primary education while 33 percent of users and only 12 percent of non users have had post secondary education. These findings suggest that on the whole, contraceptive users have had more years of formal education than non users.

Table 4:2:6 documents respondents by occupational status.

Table 4:2:6

Occupational distribution of respondents

Occupation	Respondents' Category					
	Users		Non-users		Total	
	No	%	No	%	No	%
Civil Servant	63	31.5	26	26.0	89	29.7
Self employed	39	19.5	21	21.0	60	20.0
Housewife	98	49.0	53	53.0	151	50.3
Total	200	100.0	100	100.0	300	100.0

The data in Table 4:2:6 indicate that 53 percent of non users and 49 percent of users are housewives. Civil servants constitute 31.5 percent among users and 26 percent among non

users, while 19.5 percent of users and 21 percent of non users are women in the informal sector. Overall, more than 50 percent of respondents are housewives. This is not surprising because among the Hausa/Fulani who, in this study constitute the highest proportion of respondents, female participation in labour force outside the home is not common. The traditional practice of confining married women to the house "Kulle" has restricted them to being "full time" housewives.

The effort made so far in this section has been geared towards presenting the independent variables which are likely to influence the respondents' reproductive behaviour which will be examined in the next section.

4.3 Fertility Patterns:

Fertility differentials for contraceptive users and non users by social background characteristics (age, ethnicity, religion, education and occupation) are examined in this section. The aim is to identify possible differences in the reproductive behaviour of the respondents with regard to these variables. The section also examines the impact of family planning on fertility by comparing the age-specific fertility levels of users and non-users of contraceptives.

Table 4:3:1 documents the mean number of children ever born distributed according to mothers' current age and age at first marriage.

Table 4:3:1

Distribution of mean number of children ever born by mothers' current age and age at first marriage

Current Age (Years)	Age at first Marriage (years)											
	14 or less		15 -19		20 - 24		25 +		Total		No of women	
	Us	Ns	Us	Ns	Us	Ns	Us	Ns	Us	Ns	Us	Ns
15 -24	2.0	-	2.0	2.5	1.3	1.0	-	-	1.9	1.6	38	8
25 -34	4.8	4.5	3.4	3.4	2.4	2.2	1.8	1.0	3.1	2.9	87	44
35 - 44	6.3	7.3.	5.8	6.3	4.5	5.1	3.5	4.3	5.5	6.9	54	38
45 +	7.6	8.3	6.5	7.7	5.8	7.0	4.5	5.0	6.8	7.3	21	10
Total	5.3	6.5	4.0	6.3	2.9	3.1	3.0	3.3	3.9	4.9	200	100

* Us means users; Ns means Nonusers

From the data in Table 4:3:1 it is evident that younger ages at first marriage are associated with higher mean number of children ever born within each age group. For example, within age group 25 - 34 years, women who married at 14 years or less have 4.8 children (for users) and 4.5 children (for non-users) compared with 1.8 children for users and 1.0 child for non-users who married at 25 years or more. The figures for the older women (45 years and above) show higher completed family sizes for women who married at earlier ages compared with those who married later. For instance, women who married at age 14 years or less have 7.6 children (for users) and 8.3 children (for nonusers) compared with 4.5 children for users and 5.0 children for non-users who married at age 25 years or more. These findings imply that fertility varies inversely with the age at first marriage; the lower the age at marriage, the higher the fertility and vice versa. This pattern is expected in societies where value is attached to child bearing and the practice of contraception is not wide spread. Early marriage for a woman means longer exposure to childbearing and

consequently more births, while late marriage implies shorter exposure and fewer births, all other factors remaining constant. A comparison of contraceptive users and non-users shows that for all ages at marriage, the contraceptive users consistently have lower fertility than non-users.

Table 4:3:2 shows mean number of children ever born by mothers' age at the time of survey by ethnic group.

Table 4:3:2

Distribution of mean number of children ever born by mothers' age at survey and by ethnic group

Current Age (Years)	Ethnic group											
	Hausa/ Fulani		Yoruba		Ibo		Others		Total		No. of women	
	Us	Ns	Us	Ns	Us	Ns	Us	Ns	Us	Ns	Us	Ns
15 - 24	2.4	1.7	2.0	1.0	1.3	-	1.0	1.8	1.9	1.6	38	8
25 - 34	3.1	3.7	2.6	3.1	2.4	3.0	4.1	4.7	3.1	2.9	87	44
35 - 44	6.1	7.7	4.8	6.4	4.8	6.0	6.0	5.8	5.5	6.9	54	38
45 +	7.2	8.1	6.2	7.0	-	-	6.6	7.1	6.8	7.3	21	10
Total	5.3	6.0	4.1	5.1	3.1	3.6	4.7	5.3	3.9	4.9	200	100

* Us means users; Ns means Nonusers

The data in Table 4:3:2 show some substantial variations in fertility for ethnic groups. The mean fertility is highest among Hausa-Fulani (5.3 and 6.0 for users and nonusers respectively), lowest among Ibo (3.1 and 3.6 for users and non users respectively), and intermediate among Yoruba (4.1 and 5.1 for users and nonusers respectively) and other group (4.7 and 5.3 for users and non-users respectively). Completed fertility is also highest among the Hausa Fulani (7.2 and 8.1 for users and non-users), lowest among the Ibo, and intermediate among the Yoruba (6.2 and 7.0 for users and non-users) and other group (6.6 and 7.1 for

users and non-users). The age-specific pattern of fertility also varies; Hausa Fulani women record higher fertility at younger ages (under 25 years) than women from Yoruba, Ibo and other groups. Thus , the Hausa - Fulani have a consistently higher fertility than other ethnic groups in the sample. A comparison of contraceptive users and non-users indicate that for all the ethnic groups in the sample, the users consistently have lower fertility than nonusers.

Table 4:3:3 documents the mean number of children *ever born by mothers' age at survey and by religious* affiliation.

Table 4:3:3

Distribution of mean number of children ever born by mothers' age at survey and by religious affiliation

Current Age (Years)	*Religious affiliation*										No of women	
	Catholic		Protestant		Muslim		Others		Total			
	Us	Ns	Us	Ns	Us	Ns	Us	Ns	Us	Ns	Us	Ns
15 - 24	2.0	1.0	1.6	1.5	2.3	1.8	1.0	-	1.9	1.6	38	8
25 - 34	3.1	3.2	2.8	2.5	3.1	3.1	4.7	4.0	3.1	2.9	87	44
35 - 44	5.2	6.4	5.0	5.6	6.9	7.9	-	-	5.5	6.9	54	38
45 +	6.6	7.2	6.0	7.0	7.6	8.0	6.0	7.0	6.8	7.3	21	10
Total	4.3	4.9	3.9	4.1	5.0	6.1	4.2	4.6	3.9	4.9	200	100

Us means users; Ns means Nonusers.

When the religious affiliation of the women is considered, as shown in the Table 4:3:3, it is found that mean fertility is highest for the Muslims (5.0 and 6.1 for users and nonusers respectively), lowest for the Protestants (3.9 and 4.1 for users and non-users respectively) and intermediate for the women adhering to other religious group (4.2 and 4.6 for users and non-users respectively) and Catholics (4.3 and

4.9 for users and non users respectively). Completed fertility is also highest for the Muslims (7.6 and 8.0 for users and non- users respectively), lowest for the Protestants (6.0 and 7.0 for users and nonusers respectively) and women adhering to other religious group (6.0 and 7.0 for users and non-users respectively) and intermediate for Catholics (6.6 and 7.2 for users and non-users respectively). Muslim women also record the highest fertility at the younger ages (under 25 years). Thus, the Muslim women have consistently higher fertility than the women from other religious group in the sample. A comparison of users and non-users indicates that users consistently have lower fertility than nonusers for all religious groups in the sample.

Table 4:3:4 shows mean number of children ever born by mothers' age and level of educational attainment.

Table 4:3:4

Distribution of mean number of children ever born by mothers' age at survey and level of educational attainment

Current Age (Years)	Level of Educational attainment											
	None/ Koranic		Primary		Secondary		PSecond.		Total		No. of women	
	Us	Ns	Us	Ns	Us	Ns	Us	Ns	Us	Ns	Us	Ns
15 -24	2.3	3.0	2.1	2.0	1.6	1.0	1.6	-	1.9	1.6	38	8
25 -34	4.7	4.5	3.8	3.4	2.7	2.6	2.3	2.6	3.1	2.9	87	44
35 - 44	8.1	8.9	6.9	8.0	5.2	6.4	4.1	4.8	5.5	6.9	54	38
45 +	8.7	-	8.1	8.4	7.5	7.8	4.6	6.0	6.8	7.3	21	10
Total	5.3	6.8	4.7	5.8	3.6	4.1	3.0	3.8	3.9	4.9	200	100

Us means users; Ns means Nonusers.

It is observed from Table 4:3:4 that cumulative fertility varies substantially with level of educational

attainment. Mothers with post secondary education have the least mean fertility (3.0 and 3.8 for users and non-users respectively); while those with non-formal education have the highest (5.3 and 6.8 for users and non-users respectively). Women with primary education have lower fertility than those with at least Koranic education but when compared to women with secondary education they have a substantially higher fertility level. The same trend follows for initial (under 25 years) and completed (45 years and above) fertility. Clearly, education is inversely related with fertility at all ages. A comparison of contraceptive users and non-users indicate that the users have consistently lower fertility than non users for all levels of educational attainment in the sample.

Table 4:3:5 provides data on the mean number of children ever born by mothers' age and by occupational status. The respondents are grouped according to three major occupational categories in the area namely, the civil service (formal sector), self employed (informal sector) and full time housewife, defined here as a married woman who does not engage at all in any income generating activities outside the home.

Table 4:3:5

Distribution of mean number of children ever born by mothers' age at survey and by occupational status

Age Group (Years)	Occupational Status									
	Civil Servant		Self Employed		Housewife		Total		Nos of women	
	Us	Ns	Us	Ns	Us	Ns	Us	Ns	Us	Ns
15 -24	17	-	2.0	2.0	1.9	1.6	1.9	1.6	38	8
25 -34	2.6	2.8	4.3	3.6	2.8	2.7	3.1	2.9	87	44
35 - 44	4.5	5.3	6.5	8.1	7.4	8.0	5.5	6.9	54	38
45 +	5.6	6.4	7.9	8.6	8.5	8.0	6.8	7.3	21	10
Total	3.7	4.3	4.9	5.1	5.4	5.8	3.9	4.9	200	100

Us means users; Ns means Non-users.

From the data in Table 4:3:5, it is found that mean fertility is highest for the housewife (5.4 and 5.8 for users and nonusers respectively), lowest for the civil servant (3.7 and 4.3 for users and nonusers respectively), and intermediate for women in informal sector (4.9 and 5.1 for users and non-users respectively). Civil servants also have the lowest initial and completed fertility. A comparison of the self-employed and housewives shows that the pattern of variation in fertility within age group is not very consistent and on the whole, the differences in mean (range: 0.5 to 0.7) is not very significant. However, when the women of other occupations (i.e. housewife and self employed) are compared with the women in civil service, the difference in overall mean fertility (range: 1.1 to 1.8) is very significant. This implies that the type of occupation(formal or informal) is significantly associated with fertility. The women in civil service have consistently lower fertility than those in the informal sector. A comparison of contraceptive users and nonusers shows

that the users have slightly lower fertility than non-users for all occupational statuses in the sample.

Information was also collected on the number of additional children women desire and the total number of children they would like to have in their lifetime. When the number of desired children is combined with ''achieved fertility'' a clear picture of the future fertility potentials of the women emerges. A comparison of the actual and desired family size may be indicative of fertility norms and the need for fertility control programmes in the society. Table 4:3:6 shows the number of living children and the additional number of children desired by respondents.

Table 4:3:6

Percentage distribution of respondents who need more children by number of living children.

Number of Living children	Additional number of children desired									
	None		1 - 2		3 or more		Undecided		Total	
	Us	Ns	Us	Ns	Us	Ns	Us	Ns	Us	Ns
4 or less	24	5	51	28	46	16	12	8	133	57
%	18.0	8.8	38.3	49.1	34.6	28.0	9.0	14.0	100	100
5 or more	40	16	13	11	9	3	5	13	67	43
%	59.7	37.2	19.4	25.6	13.4	7.0	7.5	30.2	100	100
Total	64	21	64	39	55	19	17	21	200	100
%	32.0	21.0	32.0	39.0	27.5	19.0	8.5	21.0		

Us means users; Ns means Non-users.

The data in Table 4:3:6 show that 59.5 percent of users and 58 percent of non-users expressed desire for additional children, and 32 percent of users and 21 percent of

nonusers said they wanted no additional children. The remaining 8.5 percent of users and 21 percent of non-users were not certain as to whether they would like to have any additional children.

Analysis of the responses by number of living children reveals that among the mothers who have had four children or less, 18 percent of users and 8.8 percent of nonusers said they are wanted no additional children, 38.3 percent of users and 49.1 percent of nonusers desire between one and two children, 34.6 percent of users and 28 percent of non-users desire three children or more and 9 percent of users and 14 percent of non-users are undecided. On the other hand, among the mothers who have had five children or more, 59.7 percent of users and 37.2 percent of non-users desire no additional children, 19.4 percent of users and 25.6 percent of nonusers desire between one and two children, 13.4 percent of users and 7 percent of nonusers desire three children or more while 7.5 percent of users and 30.2 percent of nonusers are undecided. Thus the data indicate that 72.9 percent of users and 77.1 percent of non-users still desire additional children after having had a small family size of four children or less, while only 18 percent of users and 8.8 percent of nonusers desire none. But with a large family size of five children or more, many mothers (59.7 and 37.2 percent for users and non-users respectively) begin to desire no additional children; yet 32.8 percent of users and 32.6 percent of non-users still want more children. These findings reveal that the desire for more children is high among the respondents. The findings

further reveal an inverse relationship between the number of living children and the desire for additional children, i.e. as the number of living children increases, the desire for additional children declines and desire for no additional children increases.

Another most glaring observation from Table 4.3.6 is the large proportion of women who did not give numeric response to the question; these women could not specify exactly the number of additional children they desire. They gave such answers as ''up to God/Allah,'' ''as many as possible'' ''undecided'' or gave no response at all. This type of response is indicative of the fatalistic and providentialist approach of the women to childbearing and the rather pervasive feeling among them of lack of control over their reproductive functions. Overall 59.0 percent of the respondents (users and nonusers combined) still desire additional children. The mean number of desired additional children for the women who gave numeric answers to the question is 2.7. On the other hand of the 28.3 percent of the respondents (users and non-users combined) who desire no more additional children, the mean number of surviving children per woman is 5.6, with non-users having the higher mean of 6.1 while the users have a lower mean of 5.0

In an attempt to find out the desired family size (i.e. the total number of children wanted for life time), all the women interviewed were asked the question ''if you could choose exactly the number of children to have in your whole life, how many children would that be? '' The possible

expected responses would be either numeric or non-numeric. Typically, answers to such questions are taken as indicative of the fertility expectations of the women. Attempts are made here to relate these expectations with the background characteristics of the respondents. Table 4:3:7 documents the respondents' desired fertility by ethnic group.

Table 4:3:7

Percentage distribution of respondents according to desired family size by ethnic group.

Ethnic groups	Desired family size							
	4 or less		5 or more		Undecided		Total	
	#	%	#	%	#	%	#	%
Hausa/Fulani	36	28.8	63	50.4	26	20.8	125	100
Yoruba	39	52.7	25	33.8	10	13.5	74	100
Ibo	15	60.0	8	32.0	2	8.0	25	100
Others	40	52.6	23	30.3	13	17.1	76	100
Total	130	43.3	119	39.7	51	17.0	300	100

The data in Table 4:3:7 show that 43.3 percent of respondents desire four children or less, 39.7 percent desire five children or more, while 17.0 percent are undecided. Variations in desired family size between ethnic groups are not very substantial except for the Hausa/Fulani who have a much smaller proportion of women (28.8%) who desire four children or less and a very high proportion (50.4 %) who desire 5 children or more. Among the Yoruba, Ibo and other ethnic groups, the desire for small family size of 4 children or less is greater than that of the large family of 5 children or more. In contrast, among the Hausa/Fulani, the desire for large family is substantially greater than that of the small

family. In any case, while the desire for large family size seems to defy ethnic boundaries, as evidenced by the rather large proportion of Yoruba(33.8%), Ibo(32.0%), and other group (30.3%), who prefer 5 children or more, the Hausa/Fulani stand out as the one ethnic group whose preference for large family size is highest. They also have the highest proportion (20.8%) among those who are undecided on matters of desired family size.

Table 4:3:8 presents the respondents desired fertility by religious affiliation.

Table 4:3:8

Percentage distribution of respondents according to desired family size by religious affiliation.

Religious affiliation	Desired Family Size							
	4 or less		5 or more		Undecided		Total	
	#	%	#	%	#	%	#	%
Roman Catholic	23	44.2	19	36.5	10	19.2	52	100
Protestant	69	59	40	34.5	7	6.0	116	100
Muslim	31	25.4	58	47.5	33	27.0	122	100
Others	7	70.0	2	20.0	1	10.0	10	100
Total	130	43.3	119	39.7	51	17.0	300	100

Evidently, the Muslims constitute the highest proportion (47.5%) among the women who prefer 5 children or more. They also constitute the highest proportion (27.0%) among those who are undecided on matters of desired family size. Most women of the Catholic and Protestant faiths, other religious inclinations, other than Islam prefer 4 or fewer children. On the contrary, the desire for 4 or less children among the Muslims is substantially less than their desire for 5 children or more, suggesting that Muslims tend to desire more children than other religious groups in the sample. It

tends to follow therefore that the Muslims have a more providential attitude toward childbearing than other religious groups.

Table 4:3:9 shows analysis of desired family size by level of educational attainment of respondents.

Table 4:3:9

Percentage distribution of respondents according to desired family size by educational attainment.

Level of Educational attainment	Desired Family Size							
	4 or less		5 or more		Undecided		Total	
	#	%	#	%	#	%	#	%
None/Koranic	3	55	32	59.3	19	35.2	54	100
Primary	25	31.7	37	46.8	17	21.5	79	100
Secondary	45	50.6	33	37.1	11	12.3	89	100
Post Secondary	57	73.1	17	21.8	4	5.1	78	100
Total	130	43.3	119	39.7	51	17.0	300	100

The data in Table 4:3:9 indicate that preference for small family size of 4 children or less increases with the level of educational attainment. For example, whereas only 5.5 percent of women with no formal/western education want 4 children or less, 31.7 percent with primary, 50.6 percent with secondary and 73.1 percent with post secondary education want the same number of children. On the other hand, while 59.3 percent of women with no formal education and those with only Koranic education desire 5 children or more, 46.8 percent with primary, 37.1 percent with secondary and only 21.8 percent with post secondary education wish to have the same number of children. These suggest that preference for large family size decreases as women acquire more education.

As might be expected, mothers with little or no western education are more likely than those with relatively higher education to be undecided on matters relating to fertility preference. These findings imply that desired family size varies inversely with level of educational attainment and that the idea of pre-determnng number of children is associated with level of educational attainment.

Table 4:3:10 relates desired family size to respondents' occupational status.

Table 4:3:10

Percentage distribution of respondents according to desired family size by occupational status.

Occupational Status	Desired Family Size							
	4 or less		5 or more		Undecided		Total	
	#	%	#	%	#	%	#	%
Civil Servant	63	70.8	21	23.6	5	5.6	89	100
Self-employed	23	38.3	27	45.0	10	16.7	60	100
Housewife	44	29.1	71	47.0	36	23.8	151	100
Total	130	43.3	119	39.7	51	17.0	300	100

The data in Table 4:3:10 indicate some variations in desired family size between occupations. Most notable are the civil servants among whom 70.8 percent want 4 children or less and only 29.1 percent of whom want large family size of 5 children or more. Only 5.6 percent of them are undecided on matters of fertility preference, suggesting that they have pre-determined views of fertility in favour of small family size.

Overall, it is commonly observed that the women hardly ever give less than the number of children they already have as the number they desire to have; that is, they often

give responses that would rationalize their past fertility performance. In fact only 11.3 percent indicated a desire for fewer than the number of living children they already have, 28.6 percent desired as many as they have and the vast majority (60.1%) indicated a desire for more children than the number they have at the time of the survey.

As many as one-sixth (17 percent) gave non-numeric responses to the question of desired family size. There is hardly any variations in the proportion giving such responses by age, and number of living children. Non-numeric responses were mainly in form of "as many as God gives", "up to God", "as many as possible'', or some other answers '' as many as my husband wishes'' and '' I don't know or care''. These types of responses again indicate the fatalistic and providentialist approach of the women towards their reproductive performance.

The figures for the women who gave numeric answers to the question show that the desire for children, not just a few but many, is pervasive among the women. Their mean desired family size is 5.1 children for all. The number desired is relatively stable among the various age groups but directly related to achieved parity- probably reflecting the effect of rationalization.

The extent of sex preference in the population was also investigated. Two questions were asked to elicit the information; namely (a) ''would you worry, if among your children you have (i) only one son ? (ii) only one daughter ?'' and; (b) ''would you worry if all your children are (i) males ? (ii) females ? ''. The responses to these questions

portray a relatively high preference for male children. For instance, while only 29.7 percent of the women would be worried if all the children are males, 59 percent would feel unhappy if the children are all females; 23 percent will be worried with only one son while 20 percent would be worried with only one daughter. Apparently, it can be said that there is a definite preference for males among the women who expressed a preference. Whatever the size of the family, all would prefer more male than female children. It is most likely that a larger proportion of women who desire additional children in this study do so in order to achieve their desired sex composition. Even though it was not required in the questionnaire, some women evidently specified their desired sex composition which were all in favour of male children when they responded to the question on additional children wanted. Overall, 59 percent of women expressed some preference in the sample. A comparison of data for users and nonusers of contraception show that 50.5 percent of users express son preference as against 76 percent of non-users. In conformity with earlier observations about fatalistic attitudes to individual fertility behaviour, about one third of these women (32.6 %) were either undecided or unwilling to state the sex they prefer.

In view of the apparent impact that husband - wife communication has on acceptance and continuation of family planning the women were asked whether they had ever discussed with their spouses how many children the two of them think is best to have. In response, 45 percent claimed to have

discussed. The proportion of those who discussed is higher among users and the literate than among non-users and non-literate. Compared with other religious adherents, the Muslims are the least (28.6 %) likely to discuss family planning and family size with their spouses. In more than two third of the cases, it is the husband who generally makes the final decision on the number of children the couple should have. In the remaining cases the decision is made jointly by husband and wife on the one hand and solely by the wife on the other.

Given the possible disagreement of women with their partners on matters of family size, the overall conditions in which many families live, and the apparently limited control that women have over many aspects of their lives, there might exist a gap between the number of children women say they want and the number they actually have. In this study, the mean number of living children per woman who wants no more children is 5.6 whereas the mean desired number of children for the same category of women is 5.4, suggesting (though the difference is not very substantial) that these women had more children than they had wanted to have.

Finally in this section, Table 4:3:11 presents age-specific fertility level of contraceptive users and nonusers. Various measures (e.g. Number of pregnancies, live births, living offspring and desired number of children) are used to compare the reproductive performance and expectations of contraceptive users and non-contraceptive users with the view to assessing the general impact of contraceptive use in the sample population.

Table 4:3:11

Age-Specific fertility levels of contraceptive users and non-users

Age Group (Years)	Mean number of pregancies		Mean No. of children ever born		Mean No. of living offspring		Mean desired No. of children		No. of women	
	Us	Ns	Us	Ns	Us	Ns	Us	Ns	Us	Ns
15 - 24	2.0	1.6	1.9	1.6	1.9	1.6	4.8	4.0	38	8
25 - 34	3.5	3.3	3.1	2.9	2.9	2.9	5.1	4.7	87	44
35 - 44	6.0	7.3	5.5	6.9	5.2	6.8	5.2	6.1	54	38
45 +	7.9	8.4	6.8	7.3	5.7	6.8	5.3	6.0	21	10
Total	4.3	5.3	3.9	4.9	3.6	4.7	5.1	5.3	200	100

Us means users; Ns means Nonusers.

The data in Table 4:3:11 indicate that contraceptive users have lower fertility than non-users. The users have on the average 3.9 children ever born as against 4.9 for non-users. These give the difference in mean of 1.0. Contraceptive users also have lower mean number of living children (3.6) than non-users (4.7). These represent a difference of 1.1. However, for the age group 34 years or younger, when the respondents have 3 or less live births, the current fertility tends to be higher among users than non-users. But for the older age group, 35 years and above, when the women have achieved the mean live births of 5 or more, the current fertility tends to be lower among users than non-users. This implies that contraceptive use begins to have substantial impact on fertility when the users have achieved their desired parity and this starts at about 35 years of age.

If it is assumed that women who are 45 years or older in the sample have achieved completed fertility, it is evident that contraceptive users have lower total fertility than nonusers.

There is hardly any substantial variation in fertility preference between users and nonusers at all age groups. Overall, the difference between users and nonusers in terms of mean fertility preference is 0.2. The difference between mean number of pregnancies and mean number of children ever born represents '' pregnancy wastage'' (i.e. the failure of pregnancy to result in live birth). Analysis shows that 8.6 percent of the respondents' pregnancies were not carried to full term. Such wastage might be due to induced abortion on the one hand or spontaneous abortion (miscarriage) and still births on the other. However, the difference between live births and number of living children indicates that infant/child mortality is low (about 0.3 for users and 0.2 for non-users on the average).

On the whole, the data indicate that contraceptive users have fewer children and are more pre-disposed to desire a smaller number of children than non-users.

Pattern of the Current Use and Non-use of Contraceptives:

This section examines the contraceptive practices of the respondents with the view to ascertaining the trends in the current use and non-use of contraceptives in the population. The analysis centres on who uses what method and why? and; who refuses and why?

Current Use of Contraceptives

Table 4:4:1 documents the current use of contraceptives by respondents' age and methods used. ''Others'' include diaphragm, spermicides and abortion.

Table 4:4:1

Percentage distribution of contraceptive users according to age and methods used.

Age group (years)	Pill		IUD		Condom		Injectable		Sterilization		Natural		Others		Total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
15 - 24	18	47.4	-	-	3	7.9	6	15.8	-	-	10	26.3	1	2.6	38	100
25 - 34	22	25.3	13	14.9	7	8.0	21	24.1	1	1.1	22	25.3	1	1.1	87	100
35 - 44	5	9.3	13	24.1	7	13.0	14	25.9	4	7.4	7	16.7	2	3.7	54	100
45 +	1	4.8	5	23.8	1	4.8	7	33.3	1	4.8	5	23.8	1	4.8	21	100
Total	46	23.0	31	15.5	18	9.0	48	24.0	6	3.0	46	23.0	5	2.5	200	100

The data in Table 4:4:1 indicate that the majority of contraceptive users (24%) are currently using injectables. Pills and natural methods of contraception account for 23 percent of users each, whereas IUD and condom are currently used by 15.5 percent and 9 percent of respondents respectively. Very few women in the sample are currently using sterilization (3 %) and "Other" forms of contraception (2.5%). As Table 4.4.1 shows, the the pill is more widely used by younger mothers while the older mothers are more inclined to use injectables and IUD. Compared with all other methods, the injectables and natural methods are the most widely used methods by mothers of all ages in the sample.

Respondents were asked to give reasons for practising contraception. Analysis of their responses reveals that 47.5 percent of them are currently practising contraception for birth

spacing. The second most common reason (21.5%) is to stop further child birth. About one sixth (17%) of respondents practise contraception to postpone first birth while 14% practise for temporary economic and occupational reasons. Child spacing, therefore, represents the most common need for practising contraception in the sample. However, even though 21.5% of respondents claimed using contraception to stop further child birth only 3 percent of them are willing to adopt the permanent method of sterilization. This is perhaps because the women do not want to undergo surgery which is ultimately related to the matyr syndrome factor.

The data reveal that women who practise contraception for child spacing are significantly younger than other contraceptive users and also have fewer pregnancies and live births. Women in paid employment (i.e. Civil servants) and those with more education are more likely to be practising contraception for child spacing. Overall, the mean duration of child spacing was reported as two years.

Current use of contraception varies by level of educational attainment. The higher the level of educational attainment of the women, the greater the proportion currently using contraception; this more or less holds true even within specific parity levels. About 33% of the women with post-secondary education, 29% with secondary education, 25% with primary education and 13% with no formal education were currently using contraception in the sample. The women with little or no formal education tend to patronise natural method of contraception and IUD more than other methods. The same applies to women of Muslim faith.

The current contraceptive use also varies with the number of living children that the respondents have. For example, 5.5 % of contraceptive users with one child, 20.5% with two children 26.2% with three children, and 30.8 with four or more children are currently using contraception.

On the first source of knowledge of contraceptives, 20.5 percent said it was through friends, 13 percent - spouse, 28 percent - mass media, 24.5 percent advice by health workers and 19 percent said they learnt from school. The finding implies that the mass media plays a significant role in disseminating information on family planning. The recently increased efforts by government and other agencies at promoting family planning services through electronic and print media as well as workshops and conferences, seem to make a significant impact in Zaria.

Current Non-use of Contraception

Non-users were asked if they knew that couples could predetermine the number of children to have in life time. In response, the overwhelming majority (96%) said they know. Eighty seven percent of the non-users claim knowledge of the methods of contraception. Of these, 47 percent could mention at least one modern method. These findings suggest that non use of contraceptives among the women in the sample is not due to ignorance.

Analysis of the extent to which the respondents can mention the modern methods of contraception reveals that condom is the most well known (93.6%) followed by the pill (80.8%) injectable (31.9%), IUD (25.5%), spermicide (8.5%), abortion (6.4%), diaphragm (2.1%)

and sterilization (14.9). Thirty eight percent of the women mentioned natural family planning method. There are considerable variation in knowledge when education is considered. A higher level of educational attainment is most markedly associated with greater knowledge of contraception. As many as 72.9% of women with post secondary education, compared with 58.6 % with secondary education, 29.9% with primary education and 2% with no formal education could mention at least one method of modern contraception. Among the religious groups, knowledge of modern methods is lowest among the Muslims (17.6%), and relatively similar for the two groups of Christians - Catholics and Protestants (49.5% and 52.3% respectively) while 37.6 percent of women from other religious groups could mention at least one modern method of contraception.

The responses to the question: '' Have you ever used any type of modern contraceptive methods ?'', made some interesting revelations. Forty-two percent of non users said they had ever used modern contraceptive method. Respondents who have little or no formal education and of Muslim faith are most likely to be never users of modern contraceptives in contrast to respondents of other educational levels and religious callings in the sample.

When the respondents who have ever used modern contraceptives were probed further about the reasons why they discontinued use of contraceptives, 42.3% attributed it to health reasons, 25% claimed husband's opposition, 28.9 gave "personal" reasons while only 3.9% claimed religious reasons. On how they space birth without contraceptives, 63% said they use abstinence, 23% - traditional

methods, 9% - long breast feeding while 6% reported that they did not space at all.

When the non-users were asked what factors had influenced their non-use of contraceptives, the most common reason (46.9%) was health reasons, the second most common reason was ''strictly personal'' (27.9%), while 25.1% was influenced by religion. Clearly, ''speculative'' health risks associated with using modern contraceptives is the major discouraging factor for their use in the area. The strong personal reasons and the husbands' opposition reported by the respondents might be due to the belief that modern contraceptives cause bleeding and can led to infertility. Actually some women reported having had bleeding after using some modern contraceptive methods, hence their discontinuation. It is also possible that the husband's opposition is aimed at restraining his wife from promiscuity - a general behaviour believed to be associated with women who are using contraceptives. The personal reason and husband's opposition might also be induced by religious factors.

Further analysis indicates that 17% of women who are not currently practising contraception expressed intention to use it in future. The proportion of women younger than 35 years intending to practise contraception in future is consistently higher among Christians than among Muslims, and among those who have some western education than the non literate. Moreover, the proportion of non users who want to practise contraception in future tend to increase with the number of pregnancies, live births and living children. The highest proportion of women who want to use contraceptives are among those who have had about six pregnancies

and live birth, or who have had about five currently living children.

Finally, in order to estimate the extent of demand for family planning services and contraceptive effectiveness, the respondents were asked whether any of their pregnancies could be described as mistimed. In response, 76% of the non-users and 84 % of the users said they had planned all their pregnancies. Overall, the total proportion of unplanned pregnancies is 18.7%, and more than one seventh of the users in the sample had unplanned and unwanted pregnancies. Apparently, this level of unwanted pregnancies among users and non-users indicates the need for more effective family planning services whether for birth spacing or termination of child bearing.

4.5 Test of Hypotheses

Chi-square is used to test the first set of hypotheses which state that socio-cultural factors, specifically ethnicity, religion, education and occupation are significantly related with the pattern of fertility of both users and non-users of contraceptives. The results of the tests are shown in Tables 4.5.1 to 4.5.8. To test the second hypothesis which states that contraceptive users have lower average fertility than non-users, the t-test analysis is used. The outcome of the analysis is shown in Table 4.5.9.

Test of hypothesis 1

Tables 4.5.1 and 4.5.2 show the relationship between ethnic group and fertility of contraceptive users and non-users respectively.

Table 4.5.1

Relationship Between Ethnic Group and Fertility For Contraceptive Users.

Ethnic Group	Number of Children		
	1 - 4	5 +	Total
Hausa/Fulani	50 (56.2%)	39 (43.8%)	89 (100%)
Yoruba	41 (75.9%)	13 (24.1%)	54 (100%)
Ibo	15 (75%)	5 (25%)	20 (100%)
TOTAL	106 (65%)	57 (35%)	163

X^2 = 6.79 (Significant at .05 level)
Missing cases = 37

The result in Table 4.5.1 indicates that significant difference exists in fertility across ethnic group for the contraceptive users. This means that ethnicity is significatnly related with the pattern of fertility of cotraceptive users. The missing cases consist of the respondents from some minor ethnic groups both in the northern and southern parts of the country who were too few each to

constitute separate ethnic category for the purpose of analysis.

Table 4.5.2

Relationship Betwen Ethnic Groups and Fertility For Non-Users of Contraceptives.

Ethnic Group	Number of Children		
	1 - 4	5 +	Total
Hausa/Fulani	19 (54.8%)	17 (47.2%)	36 (100%)
Yoruba	12 (60%)	8 (40%)	20 (100%)
Ibo	4 (80%)	1 (20%)	5 (100%)
TOTAL	35(57.4%)	26 (42.6%)	61

X^2 = 1.38 (not significant at .05 level)

Missing cases = 39

The Chi-square result in Table 4.5.2 indicates that there is no significant difference in fertility across ethnic groups for the non-users of contraceptives. This means that ethnicity is not significantly related with the pattern of fertility of the non-users of contraceptives. The missing cases are the respondents from some minor ethnic groups both in the northern and southern parts of the country who were too few each to constitute separate ethnic category for the purpose of analysis.

Tables 4.5.3 and 4.5.4 show the relationship between religious affiliation and fertility of contraceptive users and non-users respectively.

Table 4.5.3

Relationship Between Religious Affiliation and Fertility for Contraceptive Users.

Religious Affiliation	Number of Children		
	1 - 4	5 +	Total
Roman Catholic	18 (66.6%)	9 (33.3%)	27 (100%)
Protestant	64 (74.4%)	22 (25.6%)	86 (100%)
Muslim	44 (55.7%)	35 (44.3%)	79 (100%)
TOTAL	126 (65.6%)	66 (34.4%)	192

X^2 = 6.4 (Significant at .05 level)

Missing cases = 8

The result in Table 4.5.3 shows that there is a significant difference in fertility across religious groups for the contraceptive users. This means that religious affiliation is significantly related to the pattern of fertility of the contraceptive users. The missing cases consist of the respondents who claim to be either free thinker or traditionalist. They were too few to constitute a separate category each for analysis purpose.

Table 4.5.4

Relationship Between Religious Affiliation and Fertility for Non-Users of Contraceptives

Religious Affiliation	Number of Children		
	1 - 4	5 +	Total
Roman Catholic	16 (64%)	9 (36%)	25 (100%)
Protestant	22 (73.4%)	8 (26.6%)	30 (100%)
Muslim	20 (59.5%)	23 (53.5%)	43 (100%)
TOTAL	58 (59.2%)	40 (40.8%)	98

X^2 = 5.49 (Not significant at .05 level)

Missing cases = 2

The result in Table 4.5.4 indicates that there is no significant difference in fertility across religious groups for the non-users of contraceptives. This means that religious affiliation is not significantly related to the pattern of fertility for the non-users of contraceptives. The missing cases consist of the respondents who claim to be traditionalist. They were too few to constitute a separate category for analysis purpose.

Tables 4.5.5 and 4.5.6 show the relationship between education and fertility for contraceptive users and non-users respectively.

Table 4.5.5

Relationship Between Educational Attainment and Fertility for Contraceptive Users.

Educational Attainment	Number of Children		
	1 - 4	5 +	Total
Non/Koranic	14 (53.8%)	12 (46.1%)	26 (100%)
Primary	29 (58%)	21 (42%)	50 (100%)
Secondary	43 (74.1%)	15 (25.9%)	58 (100%)
Post Secondary	45 (68.2%)	21 (31.8%)	66 (100%)
TOTAL	131 (65.5%)	69 (34.5%)	200

X^2 = 4.89 (Not significant at .05 level)

The result in Table 4.5.5 indicates that there is no significant difference in fertility across level of educational attainment for the users of contraceptives. This implies that educational attainment has no significant relationship with the pattern of fertility of the contraceptive users.

Table 4.5.6

Relationship Between Educational Attainment and Fertility for Non-users of Contraceptives.

Educational Attainment	Number of Children		
	1 - 4	5 +	Total
Non/Koranic	13 (36.4%)	15 (53.6%)	28 (100%)
Primary	15 (51.7%)	14 (48.3%)	29 (100%)
Secondary	22 (71%)	9 (29%)	31 (100%)
Post Secondary	9 (75%)	3 (25%)	12 (100%)
TOTAL	59 (59%)	41 (41%)	100

X^2 = 5.52 (Not significant at .05 level)

The result in Table 4.5.6 shows that there is no significant difference in fertility across level of educational attainment for the contraceptive users. This implies that educational attainment has no significant relationship with the pattern of fertility of the non-users of contraceptives.

Tables 4.5.7 and 4.5.8 show the relationship between occupation and fertility for contraceptive users and non-users respectively.

Table 4.5.7

Relationship Between Occupation and Fertility for Contraceptive Users.

Occupation	Number of Children		
	1 - 4	5 +	Total
Civil Servant	45 (71.4%)	18 (28.6%)	63 (100%)
Self-employed	22 (56.4%)	17 (43.6%)	39 (100%)
Housewife	64 (65.3%)	34 (34.7%)	98 (100%)
TOTAL	131 (65.5%)	69 (34.5%)	200

X^2 = 2.35 (Not significant at .05 level)

The result in Table 4.5.7 indicates that there is no significant difference in fertility across occupations for the contraceptive users. This means that type of occupation is not significantly related with the pattern of fertility of the contraceptive users.

Table 4.5.8

Relationship Between Occupation and Fertility for Non-users of Contraceptives.

Occupation	Number of Children		
	1 - 4	5 +	Total
Civil Servant	16 (61.5%)	10 (38.5%)	26 (100%)
Self-employed	10 (47.6%)	11 (52.4%)	21 (100%)
Housewife	33 (62.3%)	20 (37.7%)	53 (100%)
TOTAL	59 (59%)	41 (41.%)	100

X^2 = 1.43 (Not significant at .05 level)

The result in Table 4.5.8 indicates that there is no significant difference in fertility across occupations for the non-users of contraceptives. This means that type of occupaton is not significantly related with the pattern of fertility of the non-users of contraceptives.

On the whole, the results have shown that significant relationship exists between fertility and ethnicity as well as religious affiliation, particularly for the contraceptive users. No significant relationship is found to exist between fertility and educational atttainment as well as occupation for both contraceptive users and non-users. It can thus be concluded that socio-cultural factors, particularly religion and ethnicity, are significantly related with the pattern of fertility of the contraceptive users, but for the non-users these factors have no significant relationship. Other factors tested, namely educational attainment and occupation play roles for both contraceptive users and non-users but their contributions are not statistically significant.

Test of hypothesis 2

Table 4.5.9 shows the t-test analysis of the difference in fertility between contraceptive users and non-users.

Table 4.5.9

Comparison of Achieved Fertility of Users and Non-users of Contraceptives.

Category of Respondents	No. of Cases	Mean Fertility	SD	SE	t-value
Nonusers	100	4.92	3.55	.355	2.89
Users	200	3.94	2.51	.178	

$t(298) = 1.66 < 0.05$

The statistical data in Table 4:5.9 show that the mean fertility of the non-users of contraceptives is greater than the users. The results of t-test indicate that the difference in fertility between contraceptive users and non-users is statistically significant ($P < 0.05$). This implies that the variation in fertility between users and non-users is not due to chance. By this result, the hypothesis 2 is confirmed, that is, the users of contraceptives have lower average fertility than non-users.

CHAPTER FIVE

SUMMARY, DISCUSSION AND RECOMMENDATIONS

5.1 Summary:

From the data collected and analysed, it is found that the mean age at first marriage for the whole sample is unexpectedly high (about 19 years) but relatively low (16.1 years) among the indigenous Hausa/Fulani women. Women become more concerned about family size and family planning at the age of about 31 years. The practice of family planning cuts across ethnic and religious boundaries, but more Christians than Muslims practise contraception. The contraceptive users have relatively higher level of western educational attainment than the non-users, but in terms of current occupation, the housewives constitute the highest proportion among users and non-users.

On fertility patterns, the findings indicate that fertility varies inversely with the age at first marriage, and for all ages at first marriage, the contraceptive users have consistently lower fertility than non-users. Substantial differences in fertility performance are observed according to the background characteristics of the women surveyed. The level of education constitutes the basis for the largest differentials. Higher education is associated with lower current fertility at all ages, and contraceptive users consistently have lower fertility than non-users for all levels of educational attainment in the study.

Some important differences also exist across ethnic groups and religion. Fertility at all ages is appreciably

higher among the Hausa-Fulani than the Yoruba, Ibo and other ethnic groups. The overall fertility level is higher among the Hausa/Fulani than all other ethnic groups in the study. With respect to religious groups, the Muslims have the highest level of early (particularly teenage) fertility rate. On the whole, contraceptive users consistently have lower fertility than non-users for all ethnic and religious groups in the study.

With regard to occupational status, it is found that the civil servants consistently have lower fertility for all age groups than the self-employed and housewives. On the whole, the civil servants have the lowest current fertility, and contraceptive users have slightly lower fertility than nonusers for all the occupations in the study.

Available information derived from the analysis of the fertility preferences of the surveyed women shows that the desire to stop childbearing is low while the desire to continue is high even among women who have reached the end of their childbearing years even if they already have many living children. About 28 percent of currently married women indicate a desire to cease childbearing, of this figure, 18 percent are currently fecund women. As the number of living children increases, the desire for additional children declines and the desire for no additional children increases. The mean number of children for women who desire no additional children is 5.6

More than 12 percent and 17 percent of the currently married fecund women could not give a numeric response to the number of additional children and total number of children

they would wish to have respectively. This reflects the extent of their feeling of personal lack of control over their reproductive behaviour or unwillingness to dabble into affairs that to them, are ''up to God''. Those who gave numeric responses indicate a desire to have, not just few, but many children - about 3 additional children and 5.1 desired total number of children on the average. The majority (59%) indicate a preference for male children.

Level of education is inversely related to the number of additional children desired and the ultimate desired family size, though mostly at higher parity levels. Some variations by ethnic groups of origins, religious affiliation and occupational status also exist, though again mostly after achieving high parity levels. These differences are in most cases very pronounced.

Fourty-five percent of couples have discussed on matters of family planning and family size. The proportion of those who discuss is higher among literate users than among non-literate non-users. With respect to religious affiliation, the Muslims are the least likely to discuss family planning and family size with their spouses. A comparison of age - specific fertility of contraceptive users and non-users reveals that contraceptive use ultimately has positive impact on fertility. The contraceptive users have lower completed fertility and current fertility level than non-users.

Evidence from the analysis of the current use of contraception indicate that the most widely used contraceptive methods are reversible, particularly injectables (24%),

natural (23%), and pill (23%). Only 3 percent of the women said they have been sterilized. The main reason for practising contraception is child-spacing (47.5%), and the major source of knowledge of family planning services is mass media (28%). The current use of contraception varied substantially by level of education of the women. The women with little or no education and especially of Muslim faith, tend to use the natural methods of contraception and IUD more than other methods. The current use of contraceptives varied directly with the number of living children.

From the analysis of the current non-use of contraceptives, it was found that the perceived health effects of contraceptives is the major reason (46.9%) for non-use. Other reasons include personal (27.9%) and religious (25.1%). Fifty eight percent of nonusers have never ever used contraceptives while the remaining percentage had ever used but discontinued because of various reasons, namely health (42.3%), husbands' opposition (25%), "personal" (28.9%) and religious (3.9). Respondents who have little or no western education and of Muslim faith are most likely to be never users of contraceptives.

However, awareness of the permanent methods of contraception is low (15%) but high for the temporary methods; condoms (93.6%), pill (80.8%), injectables (31.9%) and IUD (25.5%) respectively. Knowledge of contraceptive methods varies with education and religious affiliation. Furthermore, about 17 percent of non-users have indicated intention to use contraceptives in future. This proportion is

consistently higher among literate Christian women than among non-literate and Muslim women. The proportion is also higher among those who have had high parity levels than among those with low parity.

5.2 Discussion:

The mean complete fertility of women who are 45 years or older in this study is high (6.8 for users and 7.3 for non users). A comparison of the total fertility levels of women of similar age group in studies conducted in 14 other developing countries (Saknas, 1979) shows that they are all consistently lower than that of the present study. Thus, though family planning has some impact on fertility as evidenced by the lower mean fertility for contraceptive users, the overall fertility levels of women in the sample is still high. To some extent this is a function of socio-cultural practices which, ultimately, is a reflection of the value attached to children and childbearing. Since some women are confined to full time housewives in the area, it follows that they tend to see childbearing as a necessary role which they must fulfil at all costs without any regard to the upkeep of the children which, in providential view point, God will provide for. Moreover, child care may not constitute a burden to such women as it would to women who work outside.

Education is one major socio-economic variable identified in this study as the most important determinant of fertility and contraceptive use. A comparison of this finding with previous studies in African countries yields similar

outcome. For example, reports from Ghana (Belcher, 1978); Kenya DHS(1989); Zaire (Bertrand, Malonga and Bertrand, 1983); and Nigeria (Ekanem,1974; Caldwell and Caldwell.1977; Caldwell; Orubuloye and Caldwell,1992) all show women with higher education and socio-economic status to be the innovators regarding modern family planning. With respect to the relationship between education and fertility, most of the available works show that fertility is negatively related to higher education as similarly found in the present study. Some possible explanations for this kind of relationship with regard to the study area are that education determines the extent to which one is influenced by traditional cultural values and religious beliefs. It exposes women to better ambitions and aspirations other than childbearing, and on matters of family planning, better educated women are more likely to visit and return to family planning clinic. Women with more western education also tend to marry at a later age. All these have implications for fertility which tend to be smaller among women with more western education

The study has also observed that workers in the formal sector of employment have lower fertility than those in the informal sector. In comparison with earlier studies, findings for urban areas seem to produce a similar picture. For example, data from urban Nigeria indicate that female labour force participation has little effect on fertility except in the case of formal sector employment (Farooq, 1985). In particular, Okpala (1989) had put urban women in three categories: the civil service, the self employed, and the

housewife, and had found fertility to be lowest among women in the civil service but there was not much difference in fertility between the self-employed and housewives as is case in the present study. The explanations to these types of findings might be that participation in some of the more formal kinds of employment can expose women to new ideas e.g. through women who have few children, and also to the means of family planning. Essentially, female participation in a formal labour force can be a proxy for women gaining access to new ideas, roles and status symbols, regardless of the money that is earned. However, in the case of housewives high fertility can be seen as a compensation for their low status and helps to confirm the rights they do have as housewives; it can also contribute to their social prestige.

The strong male preference (59%) observed among the respondents would of course be expected in a Nigerian society, and is connected with the social security expectations of parents. In a system with no welfare schemes for the aged, parents look up to their children (especially male children) for support in times of need. This attitude is strengthened by the need for continuity of the lineage. Within the context of the martyr syndrome, the last survivor in a lineage is considered cursed.

When the respondents were asked how many children they would prefer to have in life time, more than one-sixth (17%), and especially the nonusers (24%) did not give a numeric response but instead indicated ''as many as God wishes''. For those who gave figure, they tended to rationalize their past

fertility performance. In a traditional, providentialist society such as Zaria, women would be quite reluctant to give exact numbers of the children they desire to have since they feel they have little or no control over that number. Generally, in the case of Nigerian women, Farooq and Adeokun (1976) had noted that ''a non-numerical response is a way of avoiding direct confrontation with an issue that is believed to be beyond the respondents' control''. The usefulness of such attitudinal questions in a society that is still having some reservations about modern methods of controlling fertility to the desired level and with a high degree of fatalism towards fertility is, however, limited. Responses to the questions may be vague and have very little relationship to intended actions. The implications of the findings of this study are that if the demand for children remains as high as it indicated, it would be difficult to control population growth in Nigeria.

A breakdown of current contraceptive use by modern methods has revealed that the available methods are the less permanent and reversible methods. Only 3 percent of the respondents are currently using sterilization method. A low level of adoption of the sterilization indicates that more emphasis is placed on birth spacing or temporary methods as against family limitation.

It is not immediately clear whether the reported non-use of contraceptives on account of health and strong personal reasons is informed by the reality of health hazards experienced by those who are currently using contraceptives

or by misinformation about contraceptives. Generally, there is a widely held belief among women that the use of modern contraceptives, cause, in addition to various ailments also infertility, which in the martyr syndrome perspective, is a curse. It is certain that this belief has built in them a strong personal opposition to contraceptive use as indicated by the fact that only a negligible proportion of non users (17%) expressed intention to practise contraception in future. Another strong support for this position is that 25 percent of the non-users had ever used contraceptives, but discontinued on grounds of husbands' opposition.

Although the percentage of women in the study who are non contraceptive users and who have some knowledge of contraceptive is high (87%), knowledge alone seems not enough motivation for contraceptive use as evidenced by the fact that 47 percent of the women have never used contraception. The study also found out that fifty nine percent (59%) of women who are non-users of contraceptives considered contraceptives not morally objectionable. Evidently, it might be concluded that low or non-use of contraceptives is not attributable to ignorance and any strong objection based on moral/religious grounds.

Given the high level of awareness of contraception and lack of strong objection to their use based on moral grounds, the low level of use to a great extent might be a function of the interaction of demand and supply considerations which determine whether and how strongly a couple wishes to have or avoid a birth. Demand for children is determined by interplay

between a couple's perception of them in terms of desired quality and quantity and the constraints on the couple. For African couples, the demand - supply considerations further interact with the ''martyr syndrome'' to affect not only their use and non use of contraception but also their choice of family size on the one hand, and sex ratio on the other. This explains the high demand for children and the high level of fertility found in the study.

5.3 Recommendations:

The results of the foregoing analysis and discussion indicate several important reasons why more attention should be paid and improvements made in the provision of family planning services in Zaria and environs. The findings have shown that the contraceptive users have lower average fertility than non-users. However, the findings have also shown that the desired and achieved fertility as well as male preference are high, and that there is still some personal opposition toward contraceptives on the grounds of perceived health effects and religion. To address these problems, there is the need for a programme to be designed in Nigeria for mass enlightenment on population control. Such programme must include re-orientation of the values for large families and the true health implications of contraceptive use. A policy programme which must include welfare package for the aged as incentive for small family size regardless of the sex composition, is also recommended.

There is also the need for special efforts to be made by

the government and other agencies to promote permanent methods of contraception if their prevalence is to be felt on fertility. This is based on the findings that only 3 percent of contraceptive users use the sterilization method and only 14.9 percent of women who are non users of contraceptives could mention them. If emphasis is placed only on birth spacing or temporary/reversible methods as against family limitation, the much needed reduction in fertility would be far from being realized.

The need also exists for the expansion of educational opportunities, especially for females, at least up to secondary school level. This may imply that education be highly subsidized by government and made compulsory for all until the secondary school level. The successful fulfilment of this need will not only help to increase the age at marriage for females and promote more accurate perceptions concerning their fertility, but will also enhance women's capacity for a more lucrative and useful life. Such compulsory education would necessitate a greater investment in education by the government but such an investment in education makes more sense than endless, non-qualitative expansion of maternal and child welfare services.

Generally, education has been identified as a potent force in shaping attitudes (such as the value for children and sex preference) in society. In the context of fertility limitation it exposes the individuals to other values and activities that may compete with childbearing and child-rearing. Education also determines the degree to which a

person accepts traditions and beliefs, especially those governing family size.

It is also recommended that population and sex education should be introduced into primary and secondary school curriculum. This will make for early awareness of issues relating to family or marital life which every child is bound to face later in life.

Finally, it must be emphasized that no family planning programme can be effective without giving simultaneous attention to women's poverty, illiteracy and powerlessness which create the demand for a large number of children. To this end, it is hereby advocated that family planning programmes which integrate with reproductive health care services and also sustainable economic and social development projects that benefit the individual woman and her family should be vigorously pursued in Nigeria.

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Appendix A

Fertility and FamilyPlanning In Zaria City And its Environs

Questionnaire/Interview Schedule

(For Contraceptive users only)

A. *Socio-Demographic Data*

1. What is your age ?----------
2. What is your ethnic group?----------
3. What is your marital status ?

☐ Currently married ☐ Currently divorced ☐ Currently separated

☐ Currently widowed ☐ Others (Please Specify)----------

4. What is you religious affiliation ?

☐ Roman Catholic ☐ Protestant ☐ Muslim

☐ Traditional ☐ Others (Please Specify)----------

5. What is your spouse's religious affiliation?

☐ Roman Catholic ☐ Protestant ☐ Muslim

☐ Traditional ☐ Others (Please Specify)----------

6. What is your occupation ?----------
7. What is your spouse's occupation ?----------
8. What is the highest level of education you have attained ?

☐ None ☐ Koranic ☐ Primary

☐ Secondary ☐ Post Secondary

9. What is the highest level of education your spouse has attained ?

☐ None ☐ Koranic ☐ Primary

☐ Secondary ☐ Post Secondary

10. At what age did you first marry ?----------

B. Fertility

1. How many pregnancies have you had since your first marriage ?----------

12 How many of these pregnancies resulted in live births ?----------

13 How many of the children are are still living ?----------

14 Does your spouse have other wives ? ☐ Yes ☐ No

15 Have you ever discussed with your spouse how many children the two of you think is best number to have ?
☐ Yes ☐ No

16 If No, why not?----------

17 If Yes, a What number did he suggest ?----------

b What number did you suggest ?----------

c What was the consensus ?----------

18 How many additional children do you want to have ?----------

19 Would you worry if among your children you have
a Only one son ? ☐ Yes ☐ No
b Only one daughter ? ☐ Yes ☐ No

20 Would you worry if all your child are
a Males ? ☐ Yes ☐ No
b Females ? ☐ Yes ☐ No

21 If you could start again from the time when you had no children, and could choose exactly the number of children you desire, how many would that number be ?----------

C Contraceptive Use

22 How did you first learn about contraception ?

☐ **Through friends** ☐ **Through mass media** ☐ **Through spouse**
☐ **Advice by medical personnel** ☐ **Others** (Please Specifiy)----------

23 How long ago did you start using contraception ?

☐ **Less than a year ago** ☐ **1 year ago** ☐ **2 years ago**
☐ **3 years ago** ☐ **4 years ago** ☐ **5 years ago**
☐ **6 year ago** ☐ **7 years ago** ☐ **8 years ago**
☐ **9 years ago** ☐ **10 years and abobe** (Please Specifiy)----------

24 What method of contraception do you use ?

☐ Pill ☐ Injectables ☐ I. U. Ds
☐ Spermicides ☐ Diaphragms ☐ Natural
☐ Others (Please Specifiy)----------

25 Why do you practice contraception ?

☐ To postpone first birth ☐ T o space ☐ To stop birth
☐ Temporary economic/Occupational reason
☐ Others (Please Specifiy)----------

26 How do you space your birth?

☐ At least every one year ☐ At least every two years ☐ At least every three years
☐ At least every four years ☐ Others (Please specify)----------

27 Who determines how you space your births ?

☐ Agreement between my spouse and I
☐ Solely determined by me
☐ Solely determine by my spouse
☐ Others (Please specify)----------

28 What are your views about the method of contraception you are currently using ?----------

29 Do you pay money for contraceptives and family planning services you receive here ? ☐ Yes ☐ No

30 If yes, what is your view about the cost of contraceptives and family planning services ?

☐ Affordable ☐ Very high ☐ High ☐ Low ☐ Very low

31 Is there any of your pregnancies that you could describe as "unwanted" or "unplanned " ? ☐ Yes ☐ No

32 If yes, how was your reaction ?----------
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Appendix B

Fertility and FamilyPlanning In Zaria City And its Environs

Questionnaire/Interview Schedule

(ForNon - Contraceptive users only)

A. Socio-Demographic Data

1. What is your age ?----------
2. What is your ethnic group?----------
3. What is your marital status ?

☐ **Currently married** ☐ **Currently divorced** ☐ **Currently separated**

☐ **Currently widowed** ☐ **Others** (Please Specifiy)----------

4. What is you religious affiliation ?

☐ **Roman Catholic** ☐ **Protestant** ☐ **Muslim**

☐ **Traditional** ☐ **Others** (Please Specifiy)----------

5. What is your spouse's religious affiliation?

☐ ***Roman Catholic*** ☐ ***Protestant*** ☐ ***Muslim***

☐ **Traditional** ☐ **Others** (Please Specifiy)----------

6. What is your occupation ?----------
7. What is your spouse's occupation ?----------
8. What is the highest level of education you have attained ?

☐ **None** ☐ **Koranic** ☐ **Primary**

☐ **Secondary** ☐ **Post Secondary**

9. What is the highest level of education your spouse has attained ?

☐ **None** ☐ **Koranic** ☐ **Primary**

☐ **Secondary** ☐ **Post Secondary**

10 At what age did you first marry ?----------

B. Fertility

1. How many pregnancies have you had since your first marriage ?----------

12 How many of these pregnancies resulted in live births ?----------

13 How many of the children are still living ?----------

14 Does your spouse have other wives ? ☐ Yes ☐ No

15 Have you ever discussed with your spouse how many children the two of you think is best number to have ?
☐ Yes ☐ No

16 If No, why not?----------

17 If Yes, a. What number did he suggest ?----------

b. What number did you suggest ?----------

c. What was the consensus ?----------

18 How many additional children do you want to have ?----------

19 Would you worry if among your children you have
a. Only one son ? ☐ Yes ☐ No
b. Only one daughter ? ☐ Yes ☐ No

20 Would you worry if all your child are:
a. Males ? ☐ Yes ☐ No
b. Females ? ☐ Yes ☐ No

21 If you could start again from the time when you had no children, and could choose exactly the number of children you desire, how many would that number be ?----------

C Contraceptive Knowledge and Attitude

22. Do you know that some couples can pre-determine the number of children they want to have in life ? ☐ Yes ☐ No

23 If yes, do you know that they can plan their family so that they have that pre-determined number ? ☐ Yes ☐ No

24 If yes, do you know any of these modern methods of family planning ?
☐ Yes ☐ No

25 If yes mention the methods you know ?
i.---------- ii.---------- iii.----------

iv.---------- v.---------- vi.----------

26 Do you think it is right to use these methods as means of Family Planning?
☐ Yes ☐ No

27 If No, why?

- ☐ Because of the side effects on women reproductive health
- ☐ It is against God's will
- ☐ **All of the above**
- ☐ Don't know/Strictly personal
- ☐ **Others (Please specify)**☐----------

28 Which of the above reasons has greatly influenced your non use of contraceptives?----------

29 Have you ever used any type of contraceptives?
☐ Yes ☐ No

30 If yes,, Why did you discontinue use ?

☐ ☐
☐ ☐

31 Do you intend to use contraceptives in future ? ☐ Yes ☐ No

32 If you have never used any lype of contraceptives, how do you space your births ?

☐ **Long breastfeeding** ☐ **Abstinence** ☐ **Don't space at all**

☐ **Traditional methods, charms, herbs etc** ☐ **Others (Specify)**----------

33 How long do you space your birth?

☐ At least every one year ☐ **At least every two years** ☐ **At least every three years**
☐ ***four years and above*** ☐ **Others (Please specify)**----------

34 Who determines how you space your birth ?

- ☐ Agreement between my spouse and I
- ☐ **Solely determined by me**
- ☐ Solely determine by my spouse
- ☐ **Others (Please specify)**----------