

**DETERMINANTS OF FERTILITY BEHAVIOR AMONG
PERSONS IN UNION IN OGO OLUWA LOCAL
GOVERNMENT AREA, OYO STATE, NIGERIA.**

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CERTIFICATION

This is to certify that OJELEKE TOYIN IDOWU, of the Department of Demography and Social Statistics, Faculty of Social Sciences, carried out a Research on the Topic “**Determinants of Fertility Behavior Among Persons in Union in Ogo Oluwa Local Government Area, Oyo State Nigeria**” in partial fulfillment of the award of Bachelor of Science (B. Sc) in Federal University Oye-Ekiti, Nigeria under my Supervision



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DATE

DEDICATION

Dedication to God, my family and people of Ogo Oluwa Local Government.

ACKNOWLEDGEMENT

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ABSTRACT

This paper examines the relationship between determinants and fertility behavior among persons in union in Ogo Oluwa Local Government area, Oyo State. Data for this paper was collected using systematic random sampling technique; the respondents were persons in union aged 15-49 who had ever married. The data for this work was generated from questionnaire survey administered to 400 persons in union of the reproductive age of 15-49 years. These persons in union were sampled from 8 villages in the Local Government Areas. Statistical techniques such as Descriptive statistics, Chi-Square (X^2), and Multinomial Logistic Regression analysis were employed as tools for the analysis.

The results of the descriptive statistics revealed there is high incidence of 1-4 children ever born, living children and ideal number of children within the local government area. The result of the Chi-Square showed significant relationship between age at marriage, number of partner in union, number of marriage, occupation, early marriage, unemployment, partner's religion, sex preference and fertility behavior.

The multinomial logistic regression result identified key indicators of fertility behavior in the local government area which were; partner's education, partner's occupation and place of residence determined 1-4 children ever born, while age at marriage, partner's occupation, place of residence, level of education, early marriage and contraceptive use determined more than 5 children ever born. Thirty-nine per cent of the variation in fertility behavior was explained by these variables. Based on these findings, compulsory education for maternal, child and youth, promotion of family planning, increase in age at marriage, and family planning availability was recommended.

Keyword: *fertility behavior, contraceptive use, education, children ever born, age at marriage.*

CHAPTER ONE

INTRODUCTION

1.0 Introduction

One of the most serious problems facing many developing countries is the rapid and uncontrollable increase in their population (Effiong, 2016). This is caused to bearing of more children by women and determined by some determinants especially age at first marriage, place of residence, contraceptives, wealth status and culture and religion.

Fertility has the greater effects in population dynamic and various indicators have elicited fertility behavior among persons in union. Such indicators are living children, children ever born, gravity etc (AJALA, 2013). There is no doubt that great efforts have gone into the analysis of both historical and contemporary data of fertility patterns and changes. Due to the fact that the importance of fertility among persons cannot be over-exaggerated, it has received much attention globally. This importance stems from the fact that it is a major expansionary force in population changes, and a major counteracting force to population growth. So, the forces causing fertility in a population are more complex than those causing mortality (Ebere 2015).

Nevertheless, one understands the determinants of fertility behavior are not yet clear especially in the developing nations. There has been confusion as regards as the effects of these determinants on fertility behavior; explanation has not been achieved to the satisfaction of many people. A lot of studies have been done on the determinants of fertility behavior among persons in union with different indicators but the gap I will like to fill in this study is determinants of fertility behavior among persons in union's children ever born (the number of children they have ever had whether living or dead) in Ogo Oluwa Local Government area, Oyo State, Nigeria.

1.1 Background to the Study

A fertility rate has been decreasing over the last decades in developed and developing countries, particularly African countries like Nigeria, Egypt, and Ghana as a result of high concentration on fertility control. It has received more attention and focused more from demographers than any topic (David Yaukey, 2007). Fertility refers to the incidence of births or number of live births a woman has (Siegel, 2004). It differs from fecundity, which refers to the physiological capability of women to reproduce. Fertility is the key factors for the population growth. For the health of mother, child and welfare of the family, population growth should be monitored and regulated through fertility (Odusina, 2015). According to demographic transition theory stage one; people have more children for the purpose of giving helping hand to parents in domestic affairs, and also as an insurance against old age by the parents. Many people being illiterate, ignorant, and superstitious are averse to any method of birth control, Children are regarded as God given and preordained, being without child is termed as a curse and the parents are looked down upon by the society. All these factors are responsible for high birth rate in the country (Kwat, 2005). Fertility is directly determined by a number of factors that, in turn, are affected by many social, cultural, economic, health, and other environmental factors (Kane, 2004). These factors influenced their fertility behavior. Most of these factors operate through four other factors: (1) the proportion of women in sexual unions; (2) the percentage of women using contraception; (3) the proportion of women who are not currently fecund (primarily because of breastfeeding); and (4) the level of induced abortion (Kane, 2004).

Due to the fact that fertility played a vital role in the population, it has received much attention throughout the globe. These attentions reduce infant and maternal mortality, increase family savings, enhance standard of living and make country to develop adequate and comprehensive

health. Fertility decline allowed more resources to be saved and invested in the economy rather than being spent, for example, on a steadily rising number of children (Dyson, 2010). Fertility regulation prompts saving which boosts the economy of a country. Some other determinants like age at marriage, education, religion, obesity, wealth, sex preference and family form also contribute to the number of children persons in union bear.

According to Jokela *et al.*, Obesity has been associated with poorer reproductive physiology in men. Their findings imply that obesity might affect fertility rates. Also, obesity was associated with approximately one-third lower fertility in obese adolescents compared to normal-weights (Jokela *et al.*, 2008).

Higher fertility rates are associated with higher extraversion, lower neuroticism and lower openness to experience in both sexes (Winter, 2014). Fertility rate is also increased during wars because of depression, anxiety induced sexual misbehaviors, uncertainty and disruptions (Weeks, 2008, 2005). Fertility is also affected by the perception and opinion of couples toward children as resources, capital and liabilities.

The level of fertility of any given population is known to be influenced by both indirect and direct determinants and factors. The former refers to socio-economic and cultural systems and include factors such as place of residence, polygamy, technology, housing, health and social security (Palamuleni, Kalule-Sabati and Makiwane, 2007). The latter are also referred to as proximate determinants or intermediate fertility variables and include the proportion of women in the total population who marry, wealth status, age at first marriage and social class (Ebere, 2015). These proximate determinants are of interest because of their impact on fertility, and consist of a set of biological and behavioral factors through which social, economic, and cultural

conditions can affect fertility. According to Freedman (1986), the proximate variables stand between fertility and all other preceding variables.

Changes in proximate determinants as a result of behavioral and biological variations may promote or hinder fertility (Ebere, 2015).

For instance, an increase in the level of education and age at marriage may affect fertility behavior of persons in union's children ever born positively and negatively, whereas changes in other proximate determinants will have positive effects {decline in the duration of postpartum infecundity (Ebere, 2015)}. However, Bongaarts and Potter (1983) reported that proximate determinants effects may compensate one another, although the net impact is not necessarily zero. Chimere-Dan (1990) observed that breastfeeding and post-partum sexual abstinence curbed childbearing in the rural areas substantially more than in urban areas. Analysis of the Nigeria Fertility Survey (NFS) 1981-82 reviews that first marriage is the major proximate determinant of fertility, followed by breastfeeding and postpartum sexual abstinence (Chimere-Dan, 1990).

The age at first marriage has a major effect on child bearing because women who marry early have on average a longer period of exposure to pregnancy and a greater number of life time births (CSA, 2006). In a study carried out on differentials of fertility in Awassa, factors associated with level of infertility was the age at first marriage, the age at first sexual intercourse and the age at first birth (Ebere, 2015).

Nigeria's population was estimated to be 187 million in 2016 (PRB; world population prospect; 2016 World Health Statistics) with a total fertility rate of 5.5, making it the seventh most populous nation in the world (PRB; world population prospect; 2016 World Health Statistics).

As a result of these above prevailing consequences of high fertility and important of fertility in a population that we deemed it fit to carry out a survey on the determinants of fertility behavior

among persons in union in Ogo Oluwa Local Government area, Oyo State. This will help to determine fertility behaviors and attempt suggestions to balance fertility for the purpose of boosting economic growth and increase the standard of living in the study area.

1.2 Statement of Research Problems

One of the factors in population dynamics that has significance in changing the population size and structure over time is fertility. In some cultures and religions early marriage and child bearing are the norm. Early child bearing and high parity increase the woman's chance of complications in childbearing (WBD, 2010). Pregnancies are most dangerous for women under age (less than 18 years), have too many births (more than four), too close births (World Bank, 2010), and do not want another pregnancy and may lead to unsafe abortion (Ebere 2015). Studies in different countries indicate that wherever fertility is high, maternal, and infant and child mortality rates are high (Bekele, 2011). High fertility impedes youth dependency in less-developed region; declining fertility is responsible for aging of more population in developed regions; variable fertility has created major fluctuations in cohort size, such as baby boom, in many more-developed countries (David Yaukey, 2007). According to the World Bank 2010, high fertility results to; Infant and child mortality, maternal mortality, poor enrolment of pupils in schools, poor economic growth and environmental degradation. Low fertility in some country like China poses abortion, problem of siblings, marriage problem etc. Population growth has also contributed to global warming (World Bank, 2010 p. 3). Rapid population growth results to environmental damage and the consequences for environment damage are water pollution and scarcity, air pollution, solid and hazardous waste, soil degradation, deforestation, loss of biodiversity and atmospheric change. These and other factors characterize the Sub-Saharan African population. High population hinder county to develop adequate and comprehensive

health service (World Health Organization positive definition for health in 1946 constitution says, Health is a complete state of physical, mental and social well being and not merely an absence of infirmity or disease).

Nigeria total fertility rate has been decreasing over the time from 7.3 in 1972 to 5.5 in 2013 and it is projected to be 2.3 in 2100 (UNDESA, NDHS, World Population Prospects 2015). The urban residence 4.7, Rural residence 6.2, South west 4.6, Wealth Quintile; lowest 7.0, second 6.7, middle 5.7, fourth 4.9, highest 3.9, No education 6.9, primary 6.1, secondary 4.6, more than secondary 3.1(2013 NDHS) [TFR is births per 1000 women and this means that, if the age-specific fertility rate continued unchanged, women in Nigeria would have average these children each during their childbearing]. Oyo state remains the fifth most populous state in Nigeria with the population of 5,580,890 and Ogo Oluwa Local Government remains the least populous local government in Oyo state with the population of 65,198 (annual abstract of statistics 2012; 2006 population), total fertility rate 4.5 that is birth per woman (2013 NDHSS) and percentage of woman age 15-19 have had a live birth 10.1, are pregnant with first child 2.0 while have begun childbearing 12.4.

A series of topics have examined in studies of fertility in Nigeria. Examples of studies on fertility in Nigeria are; trends (Van De Walle, 1965 among others), fertility behaviour in rural community: Determinants and implication (Efiong, Itimitang, Wilson Etukudo and Ben Victor), family planning (Renne, 1996; Lacey, Adeyemi & Adewuyi,1997; Odimegwu,1999), abortion (Makinwa-Adebusoye, Singh & Andaru, 1997), determinants and differentials, reproductive health (Otoide, Oronsaye & Okonofua, 2001; Adebayo& onyeonorue, 2003), poverty and fertility dynamics (Oduola, 2002); the relationship between child labour and fertility preferences of parents (Togunde and Newman, 2005), trends and

determinants, (Osuafor, 2011), Determinants and consequences (Casterline, June 2010) and a host of others (Ebere 2015). These studies are not critically examined and looked the determinants of fertility behavior among persons in union in Ogo Oluwa local government area.

Finally, there is dearth in literature on the high number of children ever born that person in union bear. Some people have a high number of children they has ever had whether living or death, more than four while some have less than four. Determinants of these fertility behaviors among persons in union in the study area are inadequately and not critically examined in literature. Therefore, this study examines the fertility behavior among persons in union in Ogo Oluwa Local area, Government Oyo state Nigeria.

1.3 Objectives of the Study

1.3.1 General Objective

The purpose of this study is to explore and determine the fertility behaviors among persons in union in Ogo Oluwa Local Government area.

1.3.2 Specific Objectives

1. To profile the socio-demographic characteristics of persons in union in Ogo Oluwa Local Government area.
2. To examine the fertility behavior among persons in union in Ogo Oluwa Local Government area.
3. To examine the determinants of fertility behavior among persons in union in Ogo Oluwa Local Government.

1.4 Research Questions

1. What is the profile of the socio-demographic characteristics of persons in union in Ogo Oluwa Local Government area?
2. What is the fertility behavior of persons in union in Ogo Oluwa Local Government area?
3. What determine fertility behavior in Ogo Oluwa Local Government area?

1.5 Justification of the Study

The level of education, place of residence, contraceptives use, occupation, religion and culture; and age at first marriage are only used by Effiong in his 2016 work not consider other factors affecting fertility behavior. Many researchers have worked on this topic in different parts of the world and the determinant of fertility behavior varies from each other. Some of these researchers in Nigeria like Effiong, Ebere, Feyisetan and Bankole worked immensely on fertility but they did not take into account the remote areas particularly Ogo Oluwa Local Government area. If high fertility is unchecked, it would poses health risks for children and their mothers, detracts from human capital investment, slows economic growth, and exacerbates environmental threats (Casterline 2010). More so, gifted children will be abandoned as a result of many children to cater for. On the other hand, decline in total fertility rate will lead to problems such as labour force threat, in long-run.

This study focuses on determinants such as wealth status, religion, place of residence, partner's occupation, partner's education, place of residence, family form, occupation, education, age at first marriage and contraceptive use among persons in union in Ogo Oluwa Local Government area, Oyo State. All these factors have not being critically looked into in previous studies, and also there is dearth in literature on the number of children ever born per person in union in Ogo Oluwa Local Government area, Oyo State.

1.6 Definition of 6 Terms

Fertility Behavior: This is the range of actions and mannerisms made by couples in conjunction with themselves or their environment on birth. This refers to a person's beliefs and actions regarding their birth. It is the processes couples go through, and reactions they have towards fertility.

Persons in union: these are persons who have married, engaged or otherwise romantically paired.

Monogamous: This involved one man and one woman in a marriage or courtship (Fasoranti, 2016).

Children ever born (CEB): This is the number of children a woman has ever had whether live or death.

Child mortality: This is the deaths to children between the ages of 1 year and puberty.

High fertility: High fertility is defined as a total fertility rate (TFR) of 5.0 or higher. The TFR represents the average lifetime births per woman implied by the age-specific fertility rates prevailing in one historical period. There are micro- and macro-level demographic concomitants of a high TFR (Casterline, June 2010).

Reproductive age: In women, these are years between menarche and menopause, roughly from ages 15-49. The term is imprecise, since some women can become pregnant and bear children at younger or older age. In men, those years between the onset of puberty and loss of fertility.

Family planning: Voluntary planning and action by individuals to have the number of children they want and to space their births as they wish.

Number of Living children: In this study, number of living children is the total number of children still alive excluding those that are dead born to women.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Various researches have been conducted on fertility behavior with different topics, such as women's empowerment and fertility behavior in Oyo state, fertility preferences, effects of fertility behavior on child survival and child nutritional status, patterns and determinants of fertility in Nsukka region etc. Early and most recent researchers has been developed a meaningful literature on the determinants of fertility behavior. This literature review records and gathered body of information that the age at mother's marriage, education, wealth status, and use of contraceptives affect fertility behavior. The goal of this literature review is to elucidate the effects of these determinants on fertility behavior.

2.1 Literature Review

Many scholars have been given much attention on fertility studies globally. These attentions caused fertility decline and reviewed some determinant of fertility behavior in different areas. In the developed world, popular authors like; Kohler, Billari, Ortega, Frejka, Shea Rutstein, Barbara Entwisle, Albert I. Hermalin, William M. Mason, Rebecca Winter and several others have done a lot of work on fertility (Ebere, 2015). In the developing Countries, a lot has been done on the subject. In Nigeria, for example, authors like; Odunsina 2015, Ebere 2015, Ajala 2013, Feyisetan and Bankole (2002), Isiugo-Abanihe (1994, 1996, 1999, etc.), Ibisomi (2007, 2008), and a host of others have given attention to fertility issues. The above studies reveal that fertility has declined below replacement in majority of developed countries, especially in European countries and China (Ebere, 2015). Many explanations have been given for such pattern of fertility as

outlined by Kohler, Billari and Ortega (2006). They are; postponement of childbearing, age of leaving the parental home (age entry union) and in southern Europe, inadequate job opportunities made them to continue with their educational carrier including Nigeria (Ebere, 2015). Fertility had declined to some extent in some developing countries especially in Asia and some parts of Nigeria notably western, southern and eastern regions. However, in Sub-Saharan Africa it remained high. Even though there have been evidence of fertility decline in some countries in Sub-Saharan Africa but studies also show some stalls in fertility (Ebere 2015). The affected countries include; Nigeria, and the stalling occurred between 1999-2003; Ghana, 1998-2003; Kenya, 1995-2003; Madagascar, 1987-1993; Rwanda,(Bongaarts ,2006, 2008; Garene, 2008; Shoumaker, 2009; Sneeringer, 2009; Westoff and Cross, 2006). The causes of these stalls are; early birth, no formal education, low contraceptive use, low labour force participation, income and social status. High Fertility has persisted in Nigeria as evidenced by several studies. The results of NDHS and UNDESA surveys for the past 41 years have shown a TFR of 7.3 births per women in 1972 to 5.5 births in 2013 (UNDESA, NDHS, 2015). This high fertility like in other African countries is attributed to high level of illiteracy especially in the northern part of Nigeria, men dominating in the issues of reproductive health, polygamy, son preference, low status of women, high level of infant and child mortality, early and universal marriage, early child bearing as well as child bearing within much of the reproductive life span, low use of contraception and high social values placed on child bearing (Feyisetan and Bankole, 2002). In the face of perceived high infant and child mortality, the fear of extinction encouraged high procreation with the hope that some of the births would survive to carry on the lineage (Feyisetan and Bankole, 2002). The traditionally high values placed on marriage ensured not only its universality but also its occurrence early in life with the consequence that child bearing started early in life and in

most cases continued until late in the reproductive span. The institution of polygamy which sometimes promotes competition for childbearing among co-wives also contributed to sustain high fertility. Use of modern contraception was traditionally unacceptable as it is perceived as violating the natural process of procreation (Ebere, 2015).

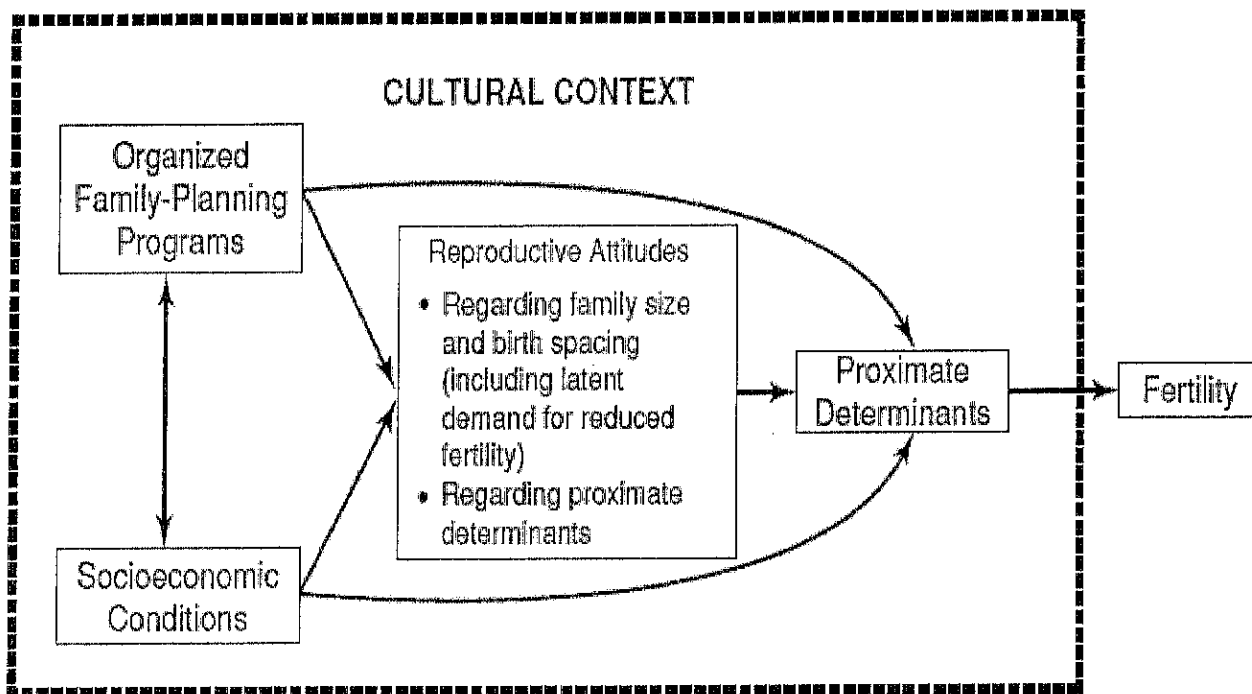
In 1956, two famous demographers, Kingsley Davis and Judith Blake, wrote an influential paper about the behavioral and biological variables that are “intermediate” and thus directly influence fertility. These particular variables were distinguished from all of the other kinds of variables because the latter, by necessity, influence fertility by operating through the few intermediate variables (Davis and Blake Poston, 2010). Davis and Blake expanded on the three intermediate variables in the following ways:

(1) the amount of intercourse is affected by the proportion of persons who marry, the length of time these persons are married, and their frequency of sexual intercourse while married; (2) the probability of conception is affected by **contraception** and by voluntary or involuntary **infecundity** (i.e., the inability to conceive); (3) The probability of a birth resulting from a given conception depends on the likelihood of miscarriage and abortion. They further emphasized that each intermediate variable can operate to increase as well as decrease fertility (Dudley L. Poston, 2010). Bongaarts recognized that the “Davis and Blake framework for analyzing the determinants of fertility has found wide acceptance, but it has proven difficult to incorporate into quantitative reproductive models”. He thus set out the following seven proximate determinants:

- (1) Marriage and marital disruption,
- (2) Contraceptive use and effectiveness,
- (3) Prevalence of induced abortion,
- (4) Duration of postpartum infecundability,

- (5) Waiting time to conception,
- (6) Risk of intrauterine mortality, and
- (7) Onset of permanent sterility.

This is their framework for analyzing the determinants of fertility:



2.2. Factors Responsible For Fertility Behaviour

Bongaarts and Davis and Blake came up with seven proximate determinants of fertility. These proximate determinants of fertility in Africa are the key factors that influence fertility behavior among women of childbearing age in Africa. This section will elucidate these determinants.

2.2.1. Age at First Marriage

A fundamental direct determinant of the pace of childbearing after the onset of the biological capacity to reproduce is the age at first birth, which in turn is typically heavily determined by the age at entrance to a formal union (Casterline 2010). However, the determination of when to start family or age at marriage is determined by socioeconomic variables such as educational

demands, career, law, suitable suitors, and economic backgrounds (Davis and Blake, 1956, Bongaarts, 1978). An inverse association between age at first union and lifetime number of births is one of the most established relationships in the research literature (Bongaarts 1982).

Contemporary high-fertility countries are characterized by early age at first union and a resulting early age at first birth.

While age at first union appears to be increasing in the high-fertility countries, the pace is relatively slow. Were the average age at onset of childbearing to increase in the high-fertility countries, almost certainly reduction in the overall fertility rate (TFR) would follow. Because the ages at first union and first birth are young in these societies, there is much scope for fertility reduction due to this mechanism (Casterline 2010). In Nigeria for instance, the law states that a girl must at least complete her basic education and must be at least 18 years before entering into marriage union. However, enforcing such law in Nigeria has been an uphill task given the cultural diversity in the country (Obono, 2003). This is because culture and religion plays significant positive influence on age of entry in marriage union and on fertility level (Lutz, 2002). The World population prospects; 2006 World health Statistics shown that the median age at first marriage in Nigeria among women age 25-49 is 17.9 years. Urban women marry four years later than rural women (21.1 and 16.9 years, respectively). The median age at first marriage varies substantially by level of education. For women age 25-49 with no education the median age at marriage is 15.5 years, compared with 22.0 years for women with more than secondary education (Ebere, 2015). Men enter into first union at a later age than women; the median age at first marriage for men age 25-59 is more than 26 years of age (NPC and ICF Macro, 2009). Teenage pregnancy is high in Nigeria. Twenty-three percent of young women age 15-19 have begun childbearing, that is, they have given birth or are currently pregnant with their

first child (NPC and ICF Macro, 2009). They identify the causal effect of schooling on demographic variables through the exposure of certain age groups to the massive schooling building program (Ebere, 2015).

2.2.2. Level of Education

Education curb early marriage in a societies, it is an indirect population policy to control fertility.

The socio-economic and cultural factors affecting fertility includes; education, income, employment status, gender equity, place of residence, religion, among others. Empirically there is a strong positive correlation between education and delay in the onset of fertility, and a strong negative correlation between education and the number of children (Strauss and Thomas, 1995).

However, this may not indicate a causal relationship running from education to fertility, both due to the potential for reverse causality, and to possible omitted variables: girls who drop out of school early are also probably those most at risk of having children early (Casterline 2010).

The relationship between education attainment of parents and level of fertility generally noted in surveys of sub-Saharan African countries and other parts of the world has been an inverse one.

People with high educational attainments (either husband or wife) as it is revealed in NDHS data 2013 have lower fertility than low educational people. Education can affect birthrate through a number of channels including changes in the level of contraceptive knowledge, desire for children and economic productivity. Educated women are more likely to postpone marriage, have smaller families and use contraception more than uneducated women. The educational level of the parents (wife or husbands) influences access to modern knowledge and new ways of life. In addition, education tends to break down barriers to communication about family planning between spouses (Ebere, 2015). Similarly it has important implications in raising family planning discussions like the use of contraception, which ultimately reduces the fertility level and helps to

reach the replacement level of fertility with their husbands. Woman's education, directly and indirectly influences contraceptive use (Azhar and Pasha, 2008).

Breierova and Duflo (2004), for instance, find that education increases the age at marriage and reduces fertility in Indonesia using IV techniques. They identified the causal effect of schooling on demographic variables through the exposure of certain age groups to the massive schooling building program. Using a similar technique as Breierova and Duflo, Osili and Long (2007) also find a negative causal relationship between schooling and fertility in Nigeria. In many countries of western, Northern and Southern Europe, women now enter motherhood at an average age of 28-29 years, up from age 24-25 in the early 1970s. For example, Spanish and Swiss women became the oldest first-time mothers in Europe with a mean age of 29.3 in 2005 (Frejka and Sobotka, 2008). This table shows Nigeria level of education with their total fertility rate and percentage of women age 15-49 currently pregnant.

Background	Total fertility rate	Percentage of women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
No education	6.9	15.6	7.3
Primary	6.1	12.6	6.3
Secondary	4.6	9.2	4.9
More than secondary	3.1	8.0	3.9

Source 2013 NDHS Note: Total fertility rates are for the period 1-36 months prior to the interview.

NDHS 2013 also gives account of age specific mother's at age at time of birth 15-19, 20-24, 25-29, 30-34, 35-39, 40-44 and 45-49 with age specific fertility rate of 122, 235, 253, 234, 160, 78, 29 respectively (2013 NDHS note). In a similar study in Awassa by Samson and Mulugeta (2009), educational status of women was mainly found to be associated with high fertility, even after adjustment for other basic socio-demographic variables. Mothers with educational status of above primary school had less risk of having 5 or more child ever born. Those mothers below primary school did not show a significant difference with illiterate mothers in their level of fertility. According to 2013 NDHS data; education has great influence in family size. Those who had more than secondary education had fewer children than secondary education. No formal education and primary education had closed fertility behavior. Those with no formal education tend to have high fertility because of inadequate information on family planning (Ebere, 2015)

2.2.3. Contraceptive Use

Contraception is another proximate determinant of fertility which influences fertility strongly. The chief means by which people attempt to limit their family size are contraceptive techniques and devices, surgical sterilization, and induced abortion (Dudley L. Poston, 2010). Family planning cannot be overlook in fertility behavior. The effectiveness of contraceptive use in the family to influence fertility behavior was determined by men hence men should be involved in contraceptive use (Odusina 2015). Female education has been seen as a key determinant of contraceptive use (NPC and ORC Macro, 2004b). Better educated women are argued to be more willing to engage in innovative behavior than less educated women, and in many third world contexts, the use of contraception remains innovative (Caldwell, 1979; Dyson and Moore, 1983).

According to Oyedokun, 2007, Women with better formal education are argued to have more knowledge of contraceptive methods and its important or of how to acquire them than are less educated women because of their literacy, greater familiarity with modern institutions, ignorance, nonchalant attitude, and greater likelihood of rejecting a fatalistic attitude towards life.

Promoting family planning on radio or television and integrating it with other related sector can be an important means of raising awareness, improving knowledge and stimulating use of modern contraceptive methods (Feyisetan and Ainsworth, 1984; Olaleye and Bankole 1994; Parr, 2002). All and modern methods of contraceptive prevalence rate in Nigeria stand at 15 and 10 respectively (PRB; World Population Prospect; 2016 World Health Statistics), while results from the Integrated Baseline Health Survey (IBHS) indicate that contraceptive prevalence rate is still low in Nigeria and it varies by demographic and socio-economic characteristics (Ebere, 2015). A study by Okezie *et. al.* in 2010 reviewed that mass media messages have a powerful effect on modern contraceptive use. Also, in three communities in Kaduna state, Adiri *et. al.* in 2010 showed that mass media messages have a powerful effect on modern contraceptive use. They went further to reveal that exposure to mass media messages resulted to greater likelihood of use of modern contraception (Ebere, 2015). The study also revealed that education is positive in explaining women's current use of contraceptives.

Prolonged breast-feeding is one of the traditional practices that serve as a means of contraception. With increases in the levels of education of women, the period of breast-feeding tends to decrease (United Nations, 1995; Jejeebhoy, 1995; Cleand and Jejeebhoy, 1996). Breastfeeding practices are affected by education through knowledge autonomy and emotional autonomy (Jejeebhoy, 1995). Both modern and traditional family planning prevent pregnancy-

related health risk in women, reduce infant mortality, and help to prevent diseases such as HIV/AIDS, reduce adolescent pregnancies and slow population growth (WHO, 2018). All and modern contraceptive methods are influenced by social, economic, and religious factors (Dudley L. Poston, 2010). One other factor affecting contraceptive use is unmet need for contraception. Unmet need for family planning refers to fecund women who are married or living in union and not using any contraception and do not want any more children or want to postpone for at least two years (Titilayo, 2018). It is estimated that more than 100 million women globally especially in less developed countries or about 17% of all married women, would prefer to avoid pregnancy but are not using any form of family planning (Ross and Winfrey, 2002). Also, within the less developed areas of the world, about one-fourth of all pregnancies are unintended (Haub and Herstad, 2002). The NDHS 2003 showed that Nigeria has unmet need of 17% (NPC and ICF Macro, 2004b). These poor reproductive health indices contribute to high rates of unintended pregnancies and about 610,000 induced abortions that occur annually (Henshaw *et al.*, 1998). Reports on unmet need in Nigeria correlate with this high level of unmet need for family planning and the attendant high rate of unintended pregnancy. In Ile-Ife, Adeyemi *et al.* (2005) reported an incidence of 59.4% of unmet need for family planning among women in their first postnatal year, while Etuk and Ekanem (2003) found an incidence of 30% of unintended pregnancies in Calabar. There are several reasons for unintended pregnancies but husband's refusal and fear of the side effects of contraceptives had been consistent (Wolff *et al.*, 2000; Omolase *et al.*, 2008; Mwageni *et al.*, 1998).

2.2.4. Place of Residence

Rural-urban residence is another strong factor that influences fertility. Women who lived in the urban area were more likely to use contraceptives than those who live in rural areas. The fertility

behavior in urban and rural areas tends to be different (Boupha et al., 2005). The UNDESA, NDHS and World Population Prospects 2015 showed that urban total fertility rate is 4.7 and rural fertility rate is 6.2. This illustrated that the estimates of TFR and fertility level of women in the urban areas were lower than women who lived in the rural areas because of differences in the use of contraceptives (Retherford and Thapa, 200).

2.2.5. Family Type

Other proximate determinants of fertility include polygamy. Having more than one wife at the same time, has implications for the profile of sexual intercourse, and thus, may have an effect on fertility. The 2008 NDHS data shows that 33 percent of married women in Nigeria are in polygamous unions. Twenty-six (26) percent of women reported that they have one co-wife, while 7 percent have two or more co-wives (Ebere, 2015). The level of polygamy increases with age, from 26 percent among women age 15-19 to 44 percent among women age 45-49. A higher proportion of rural women are in polygamous unions (38 percent) than their urban counterparts (22 percent). There are differences in the level of polygamy in various geo-political zones, with the practice being more common in the northern zones: 43 percent in North East, 42 percent in North West as compared with 37 percent in North Central (Ebere, 2015). The level of education also decreases polygamy. Nearly half of women with no education (46 percent) are in polygamous unions, compared with 9 percent of women with more than secondary education. Women in the lower wealth quintiles are more likely to have polygamous marriages than those in the higher wealth quintiles (Ebere, 2015).

2.2.6. Women Employment Status

The employment status of women is related to education. It has been proposed that in the developing countries, the negative relationship between women's employment and fertility level

is only present when higher status occupations of the urban sectors are considered (Agadanian,2000). The relationship between women's participation in the paid labor force and their fertility and contraceptive behavior is commonly conceptualized in two ways. The first main perspective emphasizes the opportunity cost of child bearing, focusing on how the prospect for career development and higher income may depress the women's fertility. The second perspective centers on the work child care conflict, postulating that the less flexible the women's works schedule and arrangements are the more difficult it is for her to provide adequate care for her children. Therefore she more likely tries to limit her fertility (Agadanian, 2000; Yohanneset al., 2003). Also, Beguy (2009) elicited the impact of female employment on fertility in Dakar (Senegal) and Lome (Togo) and found that women in both places who were employed had a longer birth interval than those who were unemployed, especially those who worked outside their homes. Another study confirmed that unemployed women were more likely to have higher pregnancy frequency than employed women (Banerjee , 2004). Women who lived in the urban areas were more likely to use contraceptives than those who lived in rural areas. Closely related to labour force participation is the income. Income affects fertility through its effect on child survival which in turn affects maternal mortality, environmental contamination, nutritional status, personal illness, and controlling the use of medical services (Ebere, 2015).

2.2.7. Wealth Status

The 2005 Ethiopian Demographic and Health Survey (EDHS) revealed that Ethiopian women in the lowest wealth quintile have double the number of children than those in the highest wealth quintile.

The fact that“84 percent of women in the lowest quintile have no education compared with 38percent in the highest quintile” shows the obvious fact that wealth and education go hand-in

hand and, together, makes the biggest fertility impact. The table below shows Nigeria fertility behavior based on their wealth quintile:

Differentials in TFR by Wealth Quintile in Nigeria

Background	Total fertility rate	Percentage of women age 15-49 currently pregnant	Mean number of children ever born to women age 40-49
Wealth quintile			
Lowest	7.0	16.2	7.6
Second	6.7	15.0	7.2
Middle	5.7	11.6	6.5
Fourth	4.9	10.2	5.7
Highest	3.9	8.4	4.5
Total	5.5	12.1	6.3

Source 2013 NDHS Note: Total fertility rates are for the period 1-36 months prior to the interview.

Wealth quintile also constitute fertility size, It is no wonder, then that the wealthy countries of the world have low fertility while most African countries plagued by poverty and illiteracy have, as a group, the highest fertility in the world (CSA, 2006). For example, Nigeria as a case study, northern part of the country tend to have high total fertility rate as a result of poverty, illiteracy,

early marriage, and rural residence. The lower the income levels the higher the child mortality. Higher child mortality is followed by a higher fertility in individuals (Dust, 2005).

2.2.8. Religion Belief

Religion also has influence on fertility behavior as it continues to be associated with variations in the intermediate variables contraceptive because large differences by religion remain in contraceptive choice (CSA, 2006). Numerous results show that religious norms and beliefs play an essential role in building up and developing a family's view on family size and in using contraception. In the United States of America it was found that fertility is high among Muslims and Catholics (Ebere, 2015). In the works of Rainwater, 1969 and cited in Hoffman & Hoffman 1973, it was discovered that some fundamentalist religions such as Catholics, Orthodox Jews, view children as the blessings of God, and that contraception is against God's instructions. Meanwhile, high fertility rate among certain groups of Hindus in India is due to son preference related to the religious rites, in which the male children are responsible for burning their parents' dead bodies (Poffenberger, 1969; Hoffman and Hoffman, 1973). Apparently, traditional Muslims are characterized by the view of God procreation. They believe that childbearing and childrearing are ordained by God. Also they believe in polygamy (one man married to two or more women) (Fasoranti, 2016).

2.2.9. Sex Preference

The preference for male children is one of the major causes of high fertility in most countries of Africa (Isiugo-Abanihe, 1994a; 1994b). The preference for a particular sex is derived from the perceived value or benefits of that sex to parents (Karki, 1998). Among the Isokos of Delta State, and in many parts of Nigeria, male children are valued for role in retaining or perpetuating family name, staying permanently in or near family compound or residence, provision of old-age

security and serving as a source of defense and social prestige to parents (Ebere, 2015). On the other hand, female children particularly assist their mothers in a range of household chores, including cooking, washing of plates and clothes, sweeping and cleaning the house as well as baby minding (Edewor, 2001; Orubuloye, 1987). Parent's perceptions of these benefits of male and female children influence their fertility attitudes and preferences as well as actual fertility. The preference for sons causes parents to have so many children in the bid to have at least a son to perpetuate family name and also to inherit family properties (Orubuloye, 1987; Isiugo-Abanihe, 1994a; 1994b; Edewor et al, 1997; Edewor, 2001). For instance, In July 2008, the British Broadcasting Corporation (BBC) News agency broadcasted a story about the oldest woman ever to give birth. In northern India, Omkari Panwar, 70 years old, gave birth to twins in 2008. She and her husband, Charam Singh, a farmer in his mid-70s, already had two children, both girls. They badly wanted a male, so they took out a bank loan to pay the costs for in vitro fertility therapy which resulted in the birth of a boy and a girl, both weighing around two pounds (Ebere, 2015).

Although the traditional role of female children and women still persists in several spheres, changes are beginning to occur in parents' perception on the value of daughters and the status of women. (Edewor, 2001) in his study of changing perceptions of the value of Daughters and Girls Education among the Isokos of Nigeria revealed that "parents" perception on the value of daughters have been found to be more caring and supportive of aged parents than sons. Consequently, parents now consider the education of daughters very rewarding since educated daughters become better equipped to provide support to their parents. Mothers with only girl were 496 times more likely to prefer a son as compared to those with boys only. Mothers with illiterate husbands were nearly 10 times more likely to prefer a son than those married to highly

educated husbands. Also, achievement of the desired sex whether a son or a daughter was associated with less desire for more children, intention to prolong pregnancy spacing and intention to use contraceptives.

It is on this grounds that we have decided to carry out a survey on the determinants of fertility behavior among the persons in union in Ogo Oluwa Local Government area, Oyo State. This will enable us make area specific recommendations to improve fertility situation in the local Government.

2.3 Theoretical Framework

Many scholars had come up with different theories on fertility behavior. This study explores Cultural and Economic and Ideational Theories to examine fertility behavior in Ogo Oluwa Local Government area.

2.3.1 Economic theory of fertility behavior

The economic theories are based on the assumption that fertility behavior of persons in union in a population is based on mainly economic considerations. The theories propounded by Harvey Liebenstein, Richard Easterlin and Caldwell are important in this regard. Incorporating the cost-benefit analysis of children in his theory, Harvey Liebenstein, in 1953, proposed that the fertility decision of a couple is based on the balance between utility and disutility of an additional child. He further states that there are three types of utilities of an additional child, viz., as a 'consumption good' where a child is considered as a source of pleasure for the parents; as a 'productive unit' where a child is expected to contribute to the family income after he enters into the labour force; and as a 'source of security' for the parents in their old age (Willis 1974). The disutility refers to the direct and indirect costs and expenses involved in having another child. While the direct costs relate to the conventional expenses involved in the bringing up, the

indirect costs are the opportunities, measured in economic terms, foregone in the event of an additional child. He states that a couple makes a 'rough calculation' regarding the balance between the utilities and disutility's before deciding for another child. The concept of 'utility and disutility' is dynamic and is governed by the overall levels of development of the society (Liebenstein, 1953). The process of economic development operates through income effects, survival effects and occupational distribution effects. On the basis of this, Liebenstein maintained that as economic conditions improve, the number of high parity children for the representative family has a tendency to decline. In the same view, Gary S. Becker, in his work titled "An Economic Analysis of Fertility" published in 1960, proposed that the micro consumption theory in economics is applicable to fertility. Like a consumer with a given taste makes a decision to purchase durable goods after a careful evaluation of its utilities and costs, the household choice of fertility is made after considering the utilities vis-a-vis monetary and opportunity cost of the another child. According to Becker's theory, both children and household durable goods are identical. Becker's economic theory of fertility was based on two traditional economic postulates: first, the household behavior is rational on the basis of changing taste and second that the prices of commodities desired by the representative households remain indifferent to the households' consumption decisions (Willis 1974). According to Becker, knowledge about family planning measures is an important factor determining fertility behavior. He argued that with a uniform knowledge across different income groups there will be a positive association between income and fertility levels because higher income will enable couples to have more number of children. He stressed that once the knowledge of birth control measures is evenly spread, a positive association is bound to emerge between fertility and income. Becker's economic explanations of fertility and income attracted severe criticism later. While some

scholars argued that the 'consumer durable' model is not applicable to children and that it cannot predict fertility differentials by income, others, including Easterlin, have argued that tastes cannot be taken as immutable facts, and insisted that tastes change systematically according to one's upbringing (Willis 1974). Caldwell propounded the theory of intergenerational wealth flow to explain the fertility behavior of people. He argued that the fertility behavior of people in any society is rational and determined by the economic worth of the children. Caldwell said that fertility levels in a society will be high if children are economically useful to parents, and on the other hand, low if the children are economically burdensome to their parents. In other words, if the flow of wealth is from younger generation to older ones, fertility levels tend to be high. On the contrary, flow of wealth in the opposite direction, i.e., from parents to children, results in low fertility levels. In all primitive and traditional societies children are useful to parents in several ways and are classified as capital, and the flow of wealth in such societies is from younger generation to older generation. This explains high fertility in such societies. As against this, in the modern societies, children are economic liabilities to parents because parents will cater for their shelters, pay for school fees, food, health etc., and wealth flows from parents to children. This explains a low fertility in such societies. According to Caldwell, a reversal in the direction of flow of wealth is a precondition for any decline in fertility levels. This reversal necessitates emotional and economic nucleation of family. In many developing countries this nucleation of family has already begun under the influence of westernization. Caldwell is of the opinion that further strengthening of this process will bring down the birth rates in the less developed parts of the world thus bringing down overall growth in population in coming decades. Easterlin gives more comprehensive theory combining sociology and economics of fertility (Bhende and Kanitkar, 2001). Easterlin defined the process of modernization as "transformation in economic,

social and political organization and in human personality” (Easterlin, 1983). He argues that although fertility transition has accompanied the process of modernization, the specific links between the two are not clear. In his view, modernization influences fertility only indirectly. Easterlin further added a set of ‘intervening variables’ between modernizations and ‘proximate variables’. These intervening variables are the demand of children, supply of children and costs involved in fertility regulations. While the demand of children refers to the number of surviving children a couple would want if fertility regulations were costless, supply of children is the number of surviving children a couple would have if fertility is not deliberately controlled. In a pre-modern society the demand for children is greater because of the nature of the economy and adverse mortality conditions. The individual couples in such societies, however, cannot produce as many children as they want, and demand for children, thus, exceeds supply. In such circumstances, the couples tend to have as many children as possible. In other words, the observed fertility is identical to natural fertility. In due course of time, the process of modernization sets in and improving mortality conditions increase the potential supply of children. The regulation costs begin to decline along with a corresponding decline in the demand for children. Since the society lacks deliberate attempts to limit family size, the couples now have more children than they want. Thus emerges the situation of an excess of supply over demand that generates motivation for family size limitation. The couples then weigh the disadvantages of excess supply against the regulation costs. In the initial stage, since fertility regulation costs are high, natural fertility continues to prevail. As modernization proceeds, the excess supply over demand further grows and motivation for fertility control becomes still stronger.

2.3.2 Cultural theories of fertility behavior

Cultural theories view fertility differentials in terms of factors, both material and non-material, that form part of our cultural milieu. Specifically, such theories emphasize mainly the psychological attributes of individuals, which, in turn, are the product of prevailing culture. Though, economic considerations were included in the explanation, they are treated as just one of the several factors affecting psychological attributes.

2.3.2.1 Theory of Social Capillarity

In 1890, Arsene Dumont, a French scholar, propounded the theory of 'social capillarity. In a civilized community, the principle of social capillarity governs the fertility behavior of population (Dumont, 1890). This principle is based on the recognition that every society is marked with a set of hierarchic social order in which individuals in the upper hierarchy enjoy greater prestige than those belonging to the lower hierarchy. There is a constant effort on the part of the individuals to rise in the hierarchy of social status. A large family is said to be an obstacle in the process of upward social mobility. Dumont, thus, attributed fertility differences among different people to the will of moving up in the social order, i.e., social capillarity. This aspiration or will to advance up in the hierarchy of social status is different from the desire to dominate others by power politics or wealth. On the other hand, in a society where status and caste are rigid factors, social capillarity is very weak. Dumont maintained that poverty is not the cause of high fertility. Citing demographic data from France, he argued that the regions of high fertility are precisely those that are remote from urban centers and are marked with ignorance and poverty. Likewise, he argues that wealth is not the cause of low fertility, for both wealth and low fertility are common products of the will to advance up in the social hierarchy. The principle of social capillarity was the first logical attempt of providing an explanation of fertility

transition. For instance, Kingslay Davis' theory of change and response concerning fertility also acknowledges the role of the desire to rise in the social scale in declining fertility. The theory of social capillarity however attracted criticism as it was not backed by sound statistical proof.

2.3.2.2 Theory of Increasing Prosperity

In 1910, Brentano presented another explanation of fertility differentials in his theory of increasing prosperity. According to Brentano, the key to fertility differences is rooted in the differences in material prosperity of different peoples. He argues that man is essentially a creature of pleasure, the sources of which vary from group to group. This explains high fertility level among them. On the other hand, the wealthy have a large number of competing pleasures, and in general, their gratification is found outside home. Brentano suggested that a general decline in fertility levels is the function of technical, scientific, industrial and commercial progress which makes more and more sources of pleasure available to a growing number of people. In order to avail themselves of the facilities of pleasure, people must have material means at their disposal. They have to make choice between family size and opportunities of pleasure. Brentano has not been successful in differentiating between sexual enjoyment and pleasure of parenthood. For the poor, sexual indulgence is identical with the desire of offspring, whereas for the rich the same is not true. Brentano's arguments imply that sexual indulgence is the main pleasure for the poor and lack of information about contraceptive measure leads to high birth rate. But ignorance rather than pleasure then appears to be the main determinant of fertility levels among the poor. On the other hand, among the rich since there is no increase in 'sexual continence', the choice is between parenthood and alternative pleasure.

2.3.2.3. Growth of Rationalism and Fertility Decline

Roderich von Ungern-Stenberg, in his book, *The Causes of the Decline in the Birth Rate within the European Sphere of Civilization*, published in 1931, argued that increasing prosperity is not the cause but the goal, and birth control is the means for attaining this goal. He also denies that fertility decline is the result of changing age structure of population, or decline in the marriage frequency, or decline in infant mortality rates. A generally lower birth rate in the urban centers does not imply a causative association between urbanization and fertility decline either.

2.3.3 Ideational theory

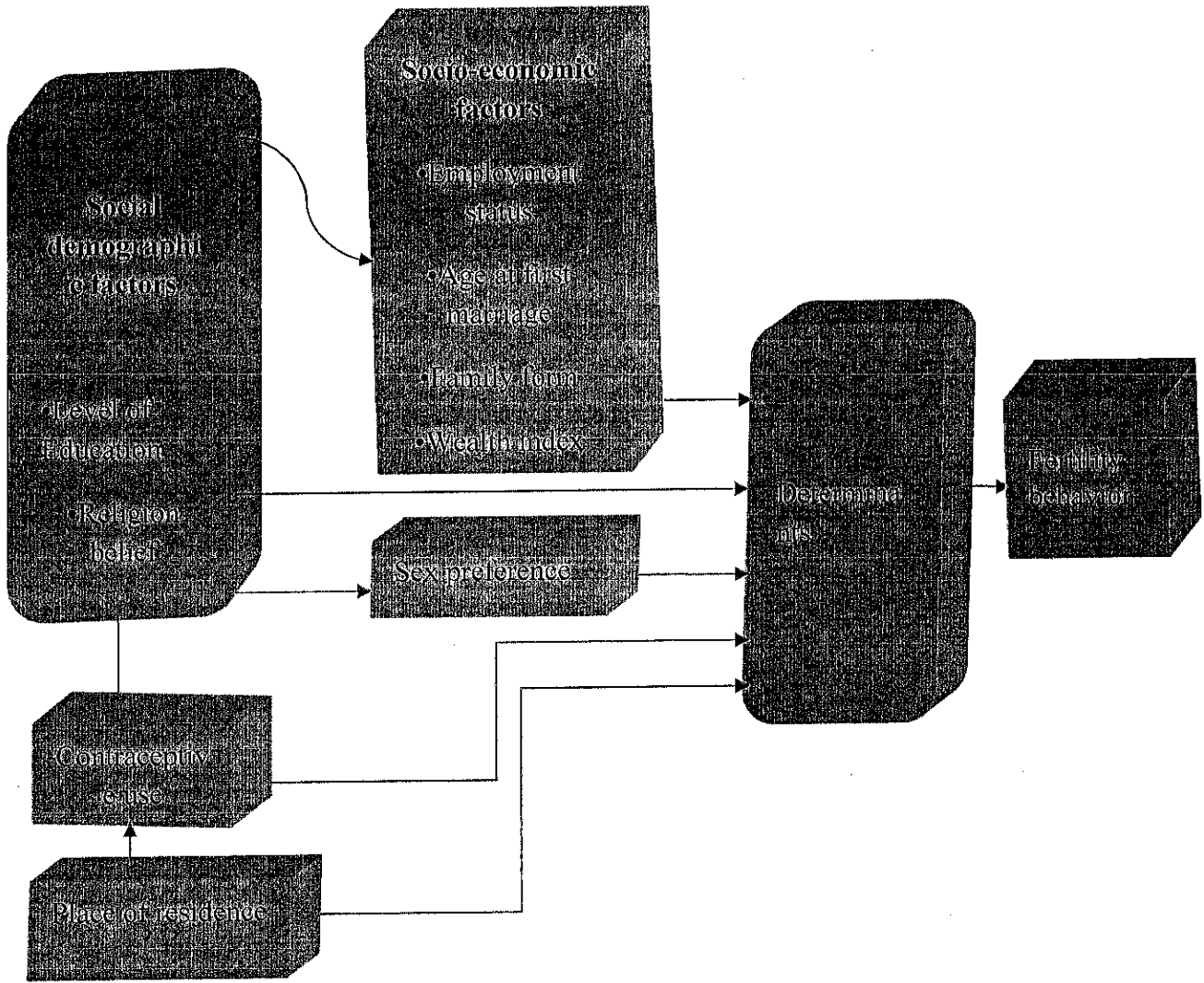
This perspective attributes fertility declines to the diffusion of innovations in birth control technologies and social norms, perhaps after mortality decline have created excess supply of children (David Yaukey, 2007). Diffusion of such information is clearly important to many fertility transitions, especially those reliant on modern technologies innovation (Bongarrts and Watkins, 1996). The diffusion of norms and technologies may affect to stop fertility at a desired number of children, or to space children even where desired levels have not yet been reached (Caldwell et al., 1992). For instances there is an innovation called sex doll, this decline fertility; for some people cannot do without sex and all contraceptives are not 100% reliable, sex doll is not fecund and it satisfies human sex urges. Like all other theories reviewed, however, the ideational theory is incomplete and neither identifies when diffused innovations will be adopted nor elaborates the institutional factors underlying the origin of such ideational changes (David Yaukey, 2007).

2.4 Conceptual Framework

This diagrammatic figure below illustrates and depicts the relationship between the determinants and fertility behavior among the couples. The independent variables as indicated below are the

determinants of fertility behavior which include wealth status, employment, age at marriage, contraceptive use, religion, sex preference, family form, place of residence and level of education. The level of education affects wealth status and contraceptive use, employment and age at marriage. Furthermore, religion affects family form, sex preference and contraceptive use. Finally, place of residence influence the contraceptive use.

Three theories were drawn from literature to explain the influence of determinants (independent variable) on fertility behavior (dependent variable). These theories include Cultural and Economic and Ideational, all of which are explained in the theoretical framework.



CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter dwells on the procedure of research. The research design was descriptive and analytical in nature. It encompasses research design, study location and position as well as settlement, study population, sample size and sampling procedure, methods of data collection and analysis, the field experience, and criteria for eligible respondent are presented below. Also, the validity and reliability of the instrument used in this work explained.

3.1 Research Design

All persons in union aged 15-49 (the prime reproductive cohort of the population) who had ever married in Ogo Oluwa Local Government area constitute the universe of the study. Eight villages were purposively selected to be sample they are Idi-araba, Temidire, Ajaawa, Owolake, Pontela, Ilofe, Peere and Odo Oba.

3.2 The Study Area

3.2.1 Location and Positions

Ogo Oluwa Local Government is located in Oyo State, Nigeria (fig 1). It is made up of several villages and towns namely; Temidire, Orile Oje, Igboile Oje, Peere, Ayegun, Idi Araba, Aroje, Odo Oba, Iwata, Alaruru, Eesade, Kufo, Ilofe, Owode, Otamokun, Pontela Akiola, Ojutaye, Ajaawa, Agric, Elegu, Ojutaye, Alaruru, Pontela Olode etc,.. Ogo Oluwa Local Government share boundaries in the East with Ejigbo Local Government of Osun State: in the South with Oyo East and Afijio Local Government areas, in the North with Ogo Oluwa West Local Council Development Area and in the West with Orire Local Government Area (OYSG, 2017).

Geographically, it is also known as the Ogo Oluwa areas. It has the areas of 369km², time zone WAT (UTC+1)(OYSG, 2017).

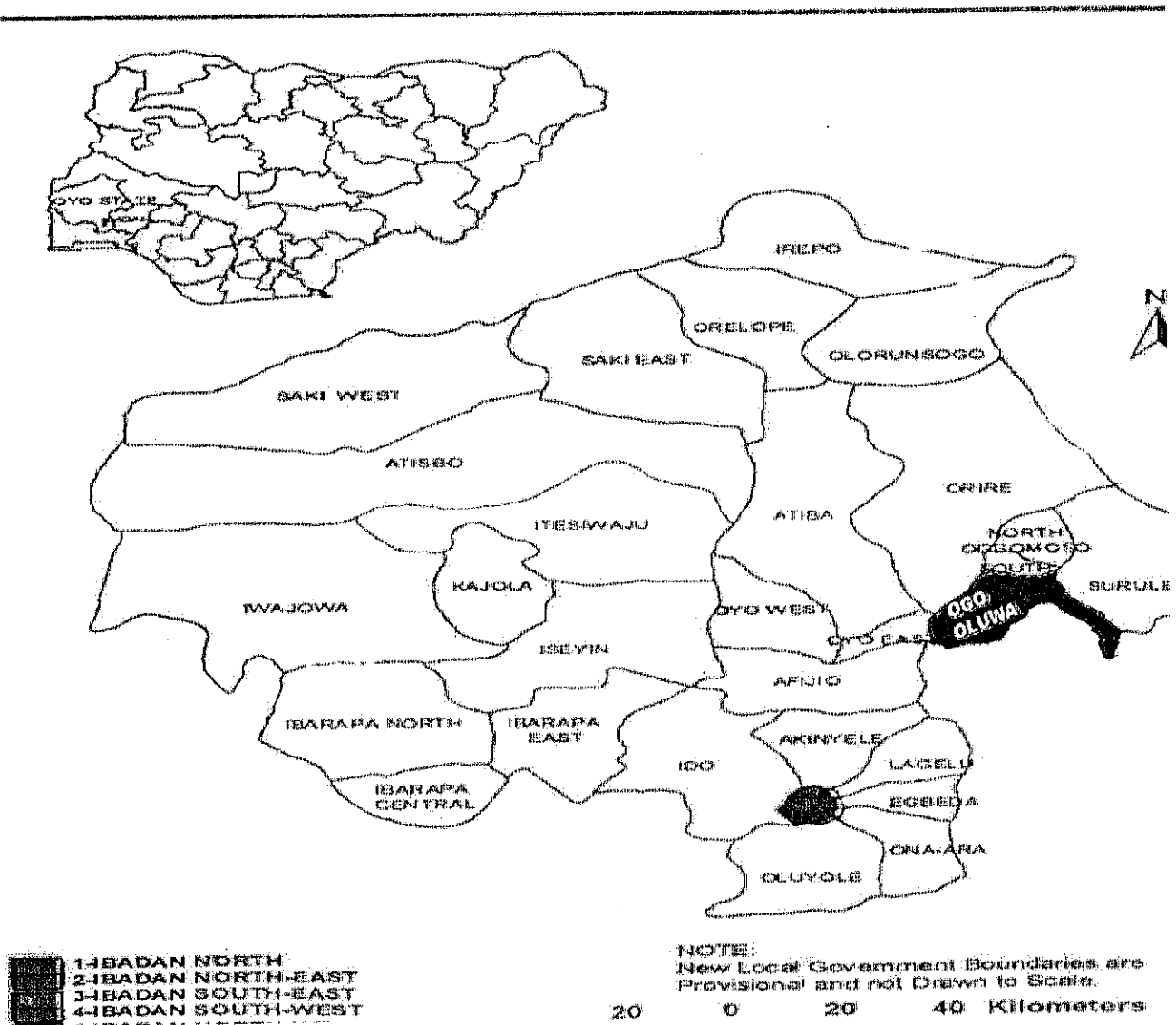


Figure 1: Map of Oyo State showing the study Area

Source: Welfare impact of rural infrastructural development in Oyo State, Nigeria (Olagunju 2017)

3.2.2 Study Population and Settlement

According to annual abstract of statistics 2012; 2006 population, Oyo state has a population of 5,580,890 and Ogo Oluwa Local Government has a population of 65,198. Over 70% of the communities in the study area are still rural in structure. In terms of function, they are both rural and urban.

Some of the rural communities include; Eesade, Aroje, Otamokun, Ojutaye, Kufo, Ilofe, Iwata, Pontela, Olugusi, Orile Oje, Peere, Olugusi etc. These people usually settle around their farmlands in a scattered form. Some towns such as Ajaawa, Odo-Oba, Owolake and Temidire are relatively higher in population due to the presence of Government establishments and business activities going on in the areas and extension of Ogbomoso South Local Government.

3.3 The Selection of Sample Population

The study area, Ogo Oluwa Local Government has more than twenty (20) villages and towns. In the selection of sample population the following procedures were adopted.

From the villages and towns that constituted Ogo Oluwa Local Government area, eight (8) villages and towns were selected; it was purposive selected for the study.

From each of the eight (8) villages and towns selected for the study, fifty (50) respondents aged 15-49 who had ever married were also randomly selected ensuring a fair spread of the respondents across the villages and town. This gave a study population of four hundred (400) respondents. Systematic random sampling is used in order to give all the elements in the population an unbiased chance of being selected.

3.3.1 Sample Size

The Oyo State level of birth in 2013 as it is recorded in Nigeria Bureau statistics (NBS) was 51.9%. Therefore, $P= 0.519$. The sample size was determined using the Leslie Fischer's formula for the calculation of sample size in population greater than 10,000.

$$n = \frac{Z^2 pq}{d^2}$$

Where:

n is minimum sample size

Z is a constant at 95% confidence interval which is (1.96)

p is population of birth (0.519)

q is 1-p (1- 0.519 = 0.481)

d is desired precision at 5%; (0.05)

$$n = \frac{(1.96)^2(0.519)(0.481)}{(0.05)^2}$$

$$n = \frac{(3.8416)(0.245)}{0.0025}$$

$$n = \frac{(0.959013182)}{0.0025}$$

$$n = 383.61$$

Thus, the calculated sample size is approximately 400 persons in union.

3.4 Data Collection Methods

In collecting the data for the study, primary methods of data collection was used. The main instrument for data collection was a structured questionnaire with open and close ended questions titled "Determinants of Fertility Behavior among persons in union in Ogo Oluwa Local

Government area, Oyo State, Nigeria". It was divided into 3 sections with a total of 44 items. Section A was designed to provide background information of respondents. Section B was on the information on the behavioral factors of the fertility. Section C entailed information about the determinants of fertility. Questionnaires were self administered to 400 persons in union aged 15-49 (the prime reproductive cohort of the population) who had ever married.

3.5 Study variables

3.5.1 Dependent Variable

1. Children ever born

3.5.2 Independent Variables

1. Wealth index
2. Contraceptives use
3. Place of Residence
4. Family form
5. Level of Education
6. Occupation
7. Religion belief
8. Age at marriage
9. Early marriage
10. Number of marriage
11. Partner's occupation

12. Partner's level of education

13. Partner's religion

14. Sex preference

3.5.3 Inclusive Criteria

All persons in union aged 15-49 (the prime reproductive cohort of the population) who had ever married were only allowed to participate in the survey.

3.5.4 Exclusive criteria

Unmarried persons in union in Ogo Oluwa Local government areas regardless of age, sex or fecundity were excluded from the survey.

3.6 Validity of Instrument

The questionnaire instrument was validated by my supervisor (Mr Babalola, Federal University Oye Ekiti). He checked the appropriateness of the items in the questionnaire in terms of coverage, clarity of language, suitability and relevance.

3.7 Reliability of Instrument

The instrument was trial-tested using 5 respondents in Oye Ekiti environment.

3.8 Data Analysis and Presentation of Results

Analysis of the quantitative was done by using SPSS 20.0 and STATA/SE 13.0 statistical software. Analysis was conducted at three levels: (i) Univariate using percentages, (ii) Bivariate using cross tabulation & chi square, and (iii) Multivariate using multinomial logistic regression analysis.

The Univariate analysis involves the percentage distribution and frequency count of the determinants and social-demographic characteristics of the respondent.

The next level is Bivariate analysis. The Chi-square analyzed the selected determinants and the dependent variable (children ever born).

The third analysis is Multivariate analysis. This involves the uses of multinomial logistic regression to analyze the effect of each level of the determinants on the dependent variable.

3.9 Field Experience and Limitations

As stated earlier, eight (8) villages were purposively selected for the data collection for this study (Ilofe, Pontela, Temidire, Peere, Ajaawa, Owolake, Idi araba, Odo Oba). My fieldwork commenced on the 24th of July, 2018 and ended 12th of September, 2018 with a visit to the eight selected villages and towns in Ogo Oluwa Local Government Area, Ogbomosho, Oyo State, Nigeria. On the 15th of July, 2018, questionnaires were distributed to 5 persons in union aged 15-49 in Temidire area, Oye Ekiti. This was to pre-test the instrument prior to the original data collection in order to make necessary corrections to questions that were too ambiguous or double barreled.

There were issues with distribution of questionnaire during the working hour (8am-4pm) especially in the villages; majority of them was farmers why those that were in town were engaged in teaching and vocational works. I and my colleagues who helped me in the data collection had to wait till when they come back from works and rest to be able to administer the questionnaires so as to get valid information. Aside this, it was also slightly challenges to get the respondents' attention and also get them settled in their places during their free time. While some of persons in union showed interest and were glad to be asks question, some of them were

unwilling and uninterested, stating that they have filled it before without benefits, I persuaded them to know the purposes and confidentiality of their data but all were aborted.

In administering questionnaires to the respondents, an introduction on the research topic, the purpose and the content of the questionnaire were all explained for them to have a clear understanding of what was required to ask and fill in the options provided. Also, before the questionnaires were administered, respondents' consent was obtained and questionnaires were distributed using simple random sampling method. In other words, respondent were randomly picked based on their village size. The respondents were guided on each of the questions, on what each question means and on how to answer each of them. Each of the questionnaires was checked for any incompleteness and to errors. Majority of the respondents were illiterate which make us stressed ourselves to interpret questionnaire items one after the other into their local language. Doing this cost us much quality time.

Another problem we have encountered is falsification of age. So many respondents try to falsify their age, but I caught them in section B of the questionnaire on their fertility behavior. Catching them allowed them to give their true age. Other challenges I encountered are unfavorable weather condition, financial constraint, transportation, remembrance of respondent bad experience. Some respondents who lost their child/children or husband mourned and unhappy, when we ask their fertility behavior. The data collection was quite stressful and hectic but interesting all the same.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION

4.0 Introduction

The data presentation and analysis of results of the research work on determinants of fertility behavior, among persons in union in Ogo Oluwa Local Government area, Oyo State. The univariate, bivariate and multivariate data analysis was also presented. The respondents' determinants and personal characteristics such as age, ethnic group, wealth status, early marriage, family form, partners' level of education, religion, occupation and marital status etc. were presented. Also presented are the determinants and the relationship between determinants and fertility behavior and its effects.

4.1 Univariate Analysis

Table 4.1.1 presents results of univariate analysis conducted to answer research question one.

Research question 1: What is the profile of the socio-demographic characteristics of persons in union in Ogo Oluwa Local Government area?

Table 4.1.1: Socio-Demographic Profile of the Respondents

VARIABLE	FREQUENCY(N)	PERCENTAGE (%)
Family form		
Monogamous household	340	88.54
Polygamous household	44	11.46
Age of the respondent		
15-19	18	4.6
20-24	41	10.65
25-29	62	16.10
30-34	59	15.32
35-39	54	14.03

40-44	60	15.58
45-49	91	23.64
Gender		
Male	174	45.31
Female	207	53.91
Marital status		
Married	374	97.14
Separated	4	1.04
Widowed	7	1.82
Number of marriage		
Married 1 time	350	91.38
Married 2 times	30	7.83
Married 3 times	1	0.26
Married 4 times	1	0.26
Married 5 times	1	0.26
Number of other partner(s)		
1	35	53.03
2	27	40.91
3	3	4.55
6	1	1.52
Level of education of the respondent		
None	13	3.38
Primary	41	10.65
Secondary	143	37.14
Tertiary	187	48.57
Partner's level of education		
None	14	3.64
Primary	36	9.35
Secondary	141	36.62
Tertiary	193	50.13
Occupation of the respondent		
Farming	55	14.29
Teaching	91	23.64
Personnel manager	94	24.42
Vocational works	52	13.51
Government works	79	20.52
Others	14	3.64
Partner's occupation		
Farming	50	12.99
Teaching	81	21.04
Personnel manager	78	20.26
Vocational works	80	20.78
Government works	87	22.60
Others	9	2.34
Religion of the respondent		

Catholic	5	1.30
Protestant	179	46.61
Pentecostal	84	21.88
Other Christian	74	19.27
Islam	40	10.42
Traditionalist	1	0.26
Other religion	1	0.26
Partner's religion		
Catholic	6	1.56
Protestant	186	48.44
Pentecostal	81	21.09
Other Christian	70	18.23
Islam	39	10.16
Traditionalist	1	0.26
Other	1	0.26
Place of residence		
Rural	145	37.79
Urban	239	62.24
Ethnic group		
Hausa/Fulani	4	1.04
Igbo	29	7.53
Yoruba	351	91.17
Other	1	0.26

SOURCE: FIELD SURVEY

4.1.1: Socio-Demographic Profile of the Respondents

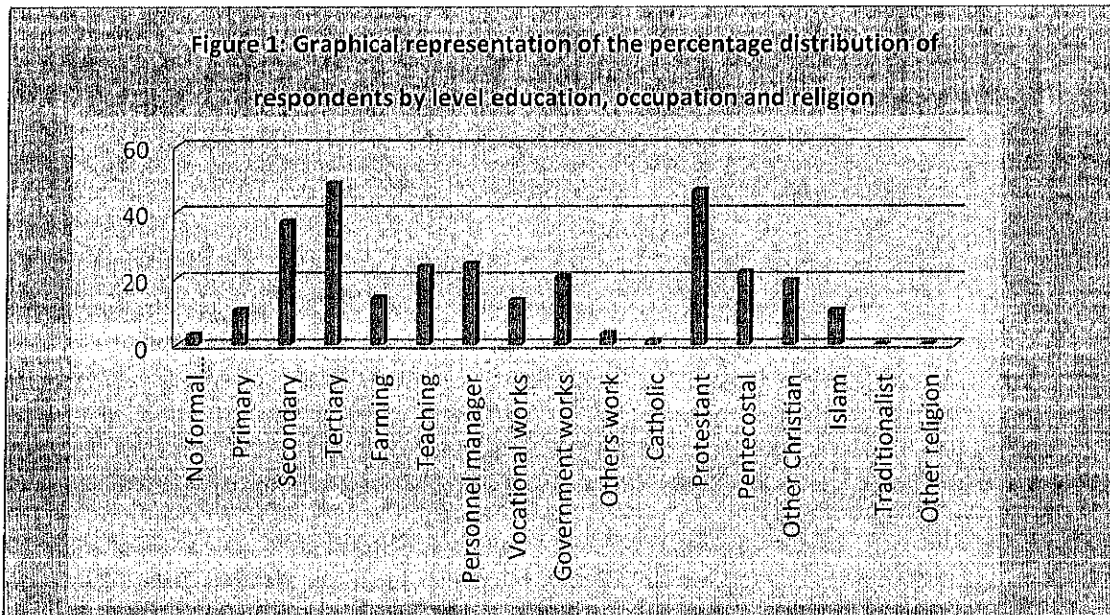
From the table 4.1.1, the data revealed that among persons in union in Ogo Oluwa Local Government areas 88.54% were monogamous household while 11.46% reported polygamous family form. Looking at the respondent partner's level of education 3.64% and 9.35% had no formal education and primary respectively. Also, 36.62% were secondary and post secondary reported by 50.13%. Respondent partner's religion, 1.56%, 48.44, and 21.09% were Catholic, Protestant and Pentecostal respectively. Also, 18.23% reported Other Christian and 10.16% were Muslim, traditionalist was 0.26% while other religion reported by 0.26%. In addition, based on the data collected 12.99% partner's occupation was farming. More so, 21.04%, 20.26% and 20.78% partner's occupation were teaching, personnel manager and vocational works respectively. Finally, 22.60% was government workers and 2.34% engaged in other occupation.

Among persons in union who were in reproductive age (15-49), age group 45-49 had the highest number of respondents reported by 23.64%, age groups by 25-29, and 40-44 and 30-34 by 16.10%, 15.58% and 15.32% respectively. The age group 15-19 had the lowest reported by 4.6%, while the age groups 23-39 and 20-24 were 14.03% and 8.10.46% respectively. According to respondent gender, 40% were male while 60% were female. Among the reproductive age of persons in union, 97.14% were married and living together and 1.04% were married but separated while 1.82% was widowed.

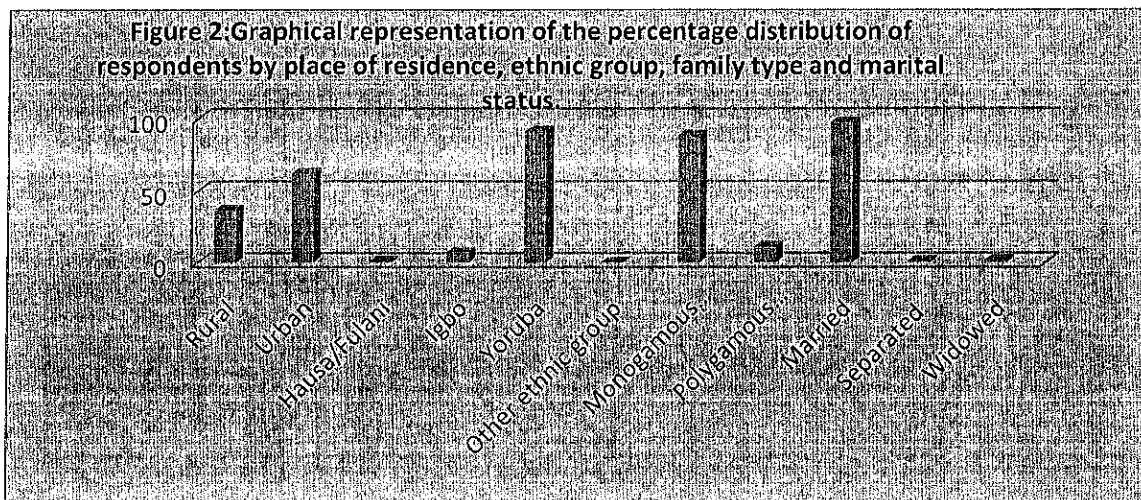
The number in which the persons married, majority of the respondents married once reported by 91.38%, 7.8% married twice and 0.26% married thrice, 0.26% married four times while 0.26% married 5 times. Also, 53.03% had only one partner, 40.91% had two partners and 4.55% had three partners and 1.52% had six partners. According to respondent's level of education, post secondary has the highest number reported by 48.57%, secondary by 37.14%, no formal education by 3.38% and primary by 10.65%. Among the respondent's occupation in Ogo Oluwa Local Government area, 12.99%, 2.24% and 22.60% was farming, others occupation and government works respectively while teaching had the highest with 41.88%. Personnel manager and vocational works were 20.26% and 22.60% respectively.

On respondents' religion, 46.61% were protestant, 1.30% was attending Catholic Church, 21.88% were Pentecostal, other Christian was 19.27%, and Muslim was 10.42%. Both traditionalist and other religion had the same percentage reported by 0.26%

According to respondent's place of residence, most of them were residing in urban area (62.24%) while other was living in rural area (37.79%). Finally, majority of them were Yoruba (92.50%), Igbo and Hausa/Fulani reported by 7.53% and 1.04% respectively. 0.6% was other ethnic group.



Source: field work



Source: field work

Research Question 2: What is the fertility behavior of persons in union in Ogo Oluwa Local Government area?

Table 4.1.2: Distribution of the Study Population by Fertility Behavior

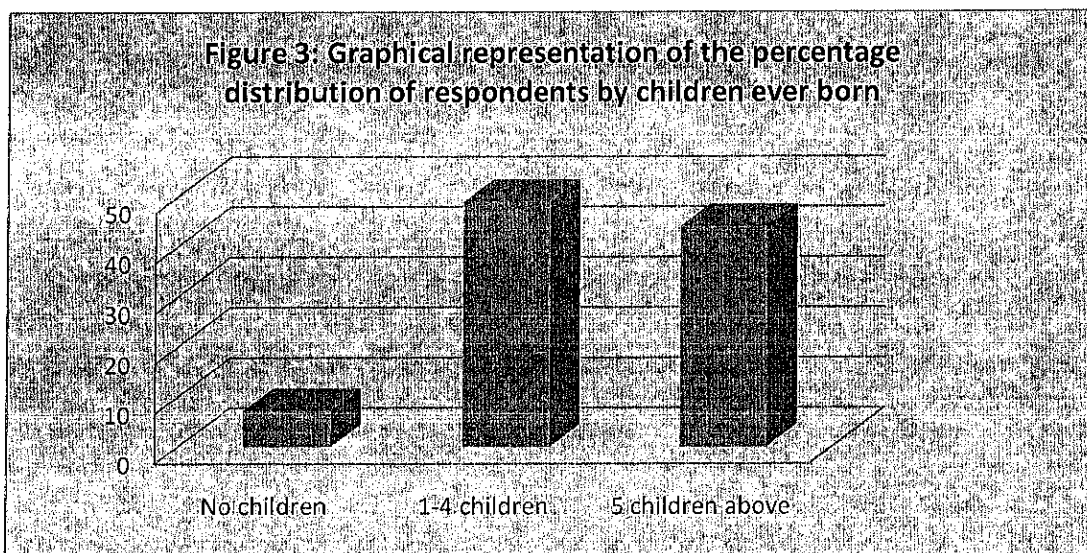
VARIABLE	FREQUENCY(N)	PERCENTAGE (%)
Number of respondent's Children ever born		
No children	28	7.27
1-4 children	188	48.83
5 children above	169	43.90
Ideal number of children		
No children	1	0.31
1-4 children	262	81.37
5 children above	59	18.32
Ideal number of boy(s)		
No boy	7	2.08
1-4 boys	320	94.96
5 boys above	10	2.97
Ideal number of girl(s)		
No girl	14	4.18
1-4 girls	319	95.22
5 girls above	2	0.60
Number of respondent's living children		
No living children	30	7.79
1-4 living children	197	51.17
5 children above	158	41.04

SOURCE: FIELD SURVEY

4.1.2: Distribution of the Study Population by Fertility Behavior

From the table 4.2 above, 7.27% persons in union had no children, while 48.83% had one to four children ever born and 43.90% had more than five children ever born. Majority of the respondents agree to have one to four children reported by 81.37%, more than five by 18.32%, 0.31% agree to have no children.

Furthermore, 2.08% agree to have no boy, majority agree to have one to four boys reported by 94.96% while 2.97% agree to have more than five boys. Also, majority of the respondents agree to have 1 to 4 girls reported by 95.22%, 4.18% agree to have no girl while 0.60% agree to have more than five girls. Finally, on the number of living children, 7.79% had no children, 51.17% had one to four living children while 41.04% had more than five living children.



Source: field work

4.2. Bivariate analysis

This section presents the bivariate analysis of the association between the determinants and children ever born with the results of chi-square test of association.

Research question 3: What determine fertility behavior in Ogo Oluwa Local government area?

Table 4.2: Distribution of Respondents by Fertility Behavior, Determinants and Selected Background Characteristics

INDEPENDENT	DEPENDENT VARIABLE	Chi-square
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VARIABLES	CHILDREN EVER BORN			and P-value
	No CEB	1-4 CEB	5 CEB above	
Age				
15-19	2(7.14)	14(7.45)	2(1.18)	X ² = 66.3999 Pr = 0.0000
20-24	10(35.71)	25(13.30)	6(3.55)	
25-29	10(35.71)	36 (19.15)	16(9.47)	
30-34	1(3.57)	24(12.77)	34(20.12)	
35-39	3(10.71)	22(11.70)	29(17.16)	
40-44	2(7.14)	27(14.36)	31(18.34)	
45-49	0(0.00)	40(21.28)	51(30.18)	
Total	28(100.00)	188(100.00)	169(100.00)	
Number of marriage				
Married once	26(92.86)	177(94.65)	147(87.50)	X ² = 34.3634 Pr = 0.000
Married twice	0(0.00)	10(5.35)	20(11.90)	
Married trice	0(0.00)	0(0.00)	1(0.60)	
Married four	1(3.57)	0(0.00)	0(0.00)	
Married five	1(3.57)	0(0.00)	0(0.00)	
Total	28(100.00)	187(100.00)	168(100.00)	
Number of other partner in union				
1 partner	2(50.00)	10(45.45)	23(57.50)	X ² = 17.8124 Pr = 0.007
2 partners	1(25.00)	10(45.45)	16(40.00)	
3 partners	0(0.00)	2(9.09)	1(2.50)	
6 partners	1(25.00)	0(0.00)	0(0.00)	
Total	4(100.00)	22(100.00)	40(100.00)	
Level of education				
No formal education	1(3.57)	4(2.13)	8(4.73)	X ² = 6.4312 Pr = 0.599
Primary education	1(3.57)	19(10.11)	21(12.43)	
Secondary education	13(46.43)	74(39.36)	56(33.14)	
Tertiary education	13(46.43)	90(47.87)	84(49.70)	
Total	28(100.00)	188(100.00)	169(100.00)	
Partner's level of education				
No formal education	1(3.57)	4(2.13)	9(5.33)	X ² = 6.1004 Pr = 0.636
Primary education	3(10.71)	14(7.45)	19(11.24)	
Secondary education	10(35.71)	75(39.89)	56(33.14)	
Tertiary education	14(50.00)	94(50.00)	85(50.30)	
Total	28(100.00)	188(100.00)	169(100.00)	

Occupation				
Farming	2(7.14)	22(11.70)	31(18.34)	$X^2= 42.0150$ Pr = 0.000
Teaching	5(17.89)	28(14.89)	58(34.32)	
Personnel manager	9(32.14)	55(29.26)	30(17.75)	
Vocational works	8(28.57)	21(11.17)	23(13.61)	
Government work	3(10.71)	54(28.72)	22(13.02)	
Other occupation	1(3.57)	8(4.26)	5(2.96)	
Total	28(100.00)	188(100.00)	169(100.00)	
Partner's occupation				
Farming	5(17.86)	16(8.51)	29(17.16)	$X^2= 22.4980$ Pr = 0.013
Teaching	4(14.29)	34(18.09)	43(25.44)	
Personnel manager	4(14.29)	48(25.53)	26(15.38)	
Vocational work	10(35.71)	34(18.09)	36(21.30)	
Government work	5(17.86)	52(27.66)	30(17.75)	
Other occupation	0(0.00)	4(2.13)	5(2.96)	
Total	28(100.00)	188(100.00)	169(100.00)	
Religion				
Catholic	1(3.57)	1(0.53)	3(1.79)	$X^2= 26.1165$ Pr = 0.010
Protestant	9(32.14)	98(52.13)	72(42.86)	
Pentecostal	9(32.14)	36(19.15)	39(23.21)	
Other Christian	4(14.29)	39(20.74)	31(18.45)	
Islam	4(14.29)	13(6.91)	23(13.69)	
Traditionalist	0(0.00)	1(0.53)	0(0.00)	
Other religion	1(3.57)	0(0.00)	0(0.00)	
Total	28(100.00)	188(0.00)	168(100.00)	
Partner's religion				
Catholic	1(3.57)	1(0.53)	4(2.38)	$X^2= 28.6524$ Pr = 0.004
Protestant	11(39.29)	103(54.79)	72(42.86)	
Pentecostal	8(28.57)	33(17.55)	40(23.81)	
Other Christian	2(7.14)	37(19.68)	31(18.45)	
Islam	5(17.86)	13(6.91)	21(12.50)	
Traditionalist	0(0.00)	1(0.53)	0(0.00)	
Other religion	1(3.57)	0(0.00)	0(0.00)	
Total	28(100.00)	188(100.00)	168(100.00)	
Ethnic group				
Hausa/Fulani	0(0.00)	2(1.06)	2(1.18)	$X^2= 13.1905$ Pr = 0.040
Igbo	2(7.14)	15(7.98)	12(7.10)	
Yoruba	25(89.29)	171(90.96)	155(91.72)	
Other ethnic group	1(3.57)	0(0.00)	0(0.00)	
Total	28(100.00)	188(100.00)	169(100.00)	
Place of residence				
Rural	7(25.00)	68(36.17)	70(41.67)	$X^2= 3.1069$ Pr = 0.212
Urban	21(75.00)	120(63.83)	99(58.58)	
Total	28(100.00)	188(100.00)	169(100.00)	
Early marriage				
Strongly agree	5(17.86)	35(18.62)	24(14.29)	

Agree	8(28.57)	27(14.36)	45(26.79)	$X^2 = 9783$ Pr = 0.001
Undecided	1(3.57)	5(2.66)	11(6.55)	
Disagree	9(32.14)	64(34.04)	68(40.48)	
Strongly disagree	5(17.86)	57(30.32)	20(11.90)	
Total	28(100.00)	188(100.00)	168(100.00)	
Contraceptive use				$X^2 = 15.2855$ Pr = 0.054
Strongly agree	2(7.14)	25(13.37)	33(19.76)	
Agree	12(42.86)	73(39.04)	76(45.51)	
Undecided	0(0.00)	10(5.35)	12(7.19)	
Disagree	10(35.71)	66(35.29)	36(21.56)	
Strongly disagree	4(14.29)	13(6.95)	10(5.99)	
Total	28(100.00)	187(100.00)	167(100.00)	
Unemployment				$X^2 = 17.0427$ Pr = 0.030
Strongly agree	4(14.29)	25(13.30)	28(16.57)	
Agree	8(28.57)	38(20.21)	57(33.73)	
Undecided	3(10.71)	10(5.32)	14(8.28)	
Disagree	6(21.43)	69(36.70)	46(27.22)	
Strongly disagree	7(25)	46(24.47)	24(14.20)	
Total	28(100.00)	188(100.00)	169(100.00)	
Sex preference				$X^2 = 26.5778$ Pr = 0.001
Strongly agree	6(21.43)	13(6.91)	19(11.24)	
Agree	5(17.86)	19(10.11)	28(16.57)	
Undecided	1(3.57)	13(6.91)	22(13.02)	
Disagree	8(28.57)	101(53.72)	83(49.11)	
Strongly disagree	8(28.57)	42(22.34)	17(10.06)	
Total	28(100.00)	188(100.00)	169(100.00)	
Wealth status				$X^2 = 13.5321$ Pr = 0.095
Strongly agree	3(10.71)	18(9.57)	17(10.06)	
Agree	6(21.43)	30(15.96)	51(30.18)	
Undecided	2(7.14)	10(5.32)	10(5.92)	
Disagree	13(46.43)	95(50.53)	74(43.79)	
Strongly disagree	4(14.29)	35(18.62)	17(10.06)	
Total	28(100.00)	188(100.00)	169(100.00)	
Family form				$X^2 = 12.1663$ Pr = 0.002
Monogamy	27(96.43)	175(93.09)	139(88.57)	
Polygamous	1(3.57)	13(6.91)	30(17.75)	
Total	28(100.00)	188(100.00)	169(100.00)	

SOURCE: FIELD SURVEY

4.2: Distribution of Respondents by Fertility Behavior, Determinants and Selected Background Characteristics

The table above shows the association between determinants and fertility behavior. There is no significant relationship between partner's level of education and fertility behavior in Ogo Oluwa local government area ($X^2= 6.1004$, $Pr = 0.636$). Those who had no formal education with no children ever born, one to four CEB and more than five CEB were reported by 3.57%, 2.13% and 5.33% respectively. Primary education reported by 10.71%, 7.45% and 11.34% and had any, one to four and more than five children ever born respectively. 35.71%, 39.89% and 33.14% respondents had secondary education and had no children, one to four children and five children above respectively. Furthermore, tertiary education reported by 50% no children, 50% for one to four and 50.30% for five CEB.

There is significant relationship between partner's religion and fertility behavior in Ogo Oluwa Local Government area ($X^2=28.6524$, $Pr = 0.004$), partner's religion that was catholic and had no children reported by 3.57%, catholic that had one to four children were 0.53% while catholic that had more than children were 2.38%. Protestant that had no children was 39.29%, protestant that had one to four children were 54.79% and protestant that had more than five children ever born were 42.86%. Furthermore, partner's respondent religion that was Pentecostal and had CEB reported by 28.57%, one to four by 17.55% and more than five by 23.81%. For other Christian, that had no children reported by 7.14%, one to four children by 19.68 while more than five by 18.23%. Muslim that had any CEB 17.86%, with one to four was 6.91% and more than five children were 12.50%. In term of traditional religion, those that had no CEB reported by 0.00%, one to four by 0.53% and also more than five by 0%. More so, other religion that had no children reported by 3.57%, one to four was 0% and more than five was 0%.

There is relationship between respondent partner's occupation and children ever born among the persons in union in Ogo Oluwa Local government area Oyo State ($X^2 = 22.4980$, $Pr = 0.013$). Teaching that had no CEB were 14.29%, were one or four children 18.09% and more than five 25.44%, for farming that had no CEB reported by 17.86%, one to four by 8.51% and five above by 17.16%. Personnel manager occupation that had no CEB were 14.29%, one or four 25.53% and five above were 15.38%. According to respondent partner's occupation, teaching with any CEB is 35.71%, one to four 18.09% and five above were 21.30%. In addition, government work that had no CEB reported by 17.86%, one to four 27.66% and more than five by 17.75. Other occupation that had no CEB reported by 0%, one to four by 2.31% and five above by 2.96%.

There is strong relationship between respondent age at marriage and children ever born among persons in union in Ogo Oluwa Local government area, Oyo State ($X^2 = 66.3999$, $Pr = 0.0000$). Respondents in age group 15-19 years had 7.14% for no CEB, 7.45% for one to four and 1.18% for 5 CEB above, ages 20-24 had 35.71% no CEB, 13.30% one to four and 3.55% above five. Furthermore, 35.71% no CEB, one to four 19.15% and five above 9.47% were for age group 25-29, 3.57% no CEB, 12.77% one to four and 20.12% five above were for age group 30-34. For age group 35-39, 10.71% reported no CEB, 11.70% one to four and 17.16% five CEB above. In age group 40-44, 7.14% had no CEB, 14.36% one to four and 18.34% five above. For age group 45-49, there is no percentage (0%) for any CEB; while one to four had the highest percentage reported by 30.18% among all ages in those that have one to four CEB and 21.28% had five above.

There is association between number of partner in union and children ever born ($X^2 = 7.8124$, $Pr = 0.007$). One partner with no children ever born reported by 50%, for one to four children by 45.45% and more than five by 57.50%, for two partners with no CEB reported by 25%, one to

four by 45.45% and five above by 40%. More so, three partners with no CEB reported by 0%, one to four by 9.09% and five above by 2.50%, for six partners with no Children ever born reported by 25% and one to four and five above have by 0%.

There is no relationship between respondent level of education and children ever born among persons in union in Ogo Oluwa Local government area, Oyo State ($X^2= 6.4312$, Pr = 0.599). No formal education with any CEB reported by 3.57%, one to four by 2.13% and more than five by 4.73%. Primary education with no children ever born reported by 3.57%, one to four by 10.11% and above five by 12.43%, for secondary education, with no CEB reported by 46.43%, one to four by 39.36% and five above by 33.14%. Lastly, tertiary education with no CEB reported by 46.43%, one to four by 47.87% and five above by 49.70%.

There is strong relationship between respondent occupation and children ever born among persons in union in Ogo Oluwa Local government area, Oyo State ($X^2= 42.0150$, Pr = 0.000), farming with no children ever born reported by 7.14%, one to four by 11.70% and five above by 18.34%. For teaching with no CEB reported by 17.89%, one to four by 14.89% and more than five by 23.64%, personnel manager with no CEB reported by 32.14%, one to four by 29.26% and five above by 17.75%. Also, for the vocational work with no children ever born reported by 28.57%, one to four by 11.17% and five above by 13.61%, government work with no CEB were 10.71, one to four 28.72% and five above 13.02%. Further, other occupations with no children ever had born reported by 3.57%, one to four by 4.26% and five above by 2.96%.

There is relationship between respondent religion and children ever born among persons in union in Ogo Oluwa Local government area Oyo State ($X^2= 26.1165$, Pr = 0.010), catholic with no children ever born reported by 3.57%, one to four by 0.53%, and five above by 1.79%, for

protestant with no CEB were 32.14%, one to four were 52.13% and five above were 42.86%. Also, for the Pentecostal with no CEB reported by 32.14%, one to four by 19.15% and more than five CEB by 23.21%, other Christian with no children ever born reported by 14.29%, one to four by 20.74% and five above by 18.45%. In addition Muslim with no CEB reported by 14.29%, one to four by 6.91% and more than five by 13.69%. Other religion with no children ever born reported by 3.57%, one to four and five above by 0%, for Traditionalist with no CEB and five above reported by 0% and with one to four were 0.53%.

There is relationship between respondent ethnic group and children ever born among persons in union in Ogo Oluwa Local government area Oyo State ($X^2 = 13.1905$, $Pr = 0.040$), Hausa/Fulani ethnic group, respondent with no children ever born with no children ever born reported by 0%, one to four by 1.06% and more than five CEB by 1.18%, for the Igbo with no CEB reported by 7.14%, one to four by 7.98% and five above by 7.10%. For the Yoruba with no children ever born reported by 89.29%, one to four by 90.96% and five above by 91.72%, for other ethnic group with no CEB reported by 3.57%, one to four and five above had the same 0% percentage for children ever born.

There is no relationship between respondent place of residence and children ever born among persons in union in Ogo Oluwa Local government area ($X^2 = 3.1069$, $Pr = 0.212$), rural with no children ever born reported by 25%, one to four by 36.17% and five above children ever born by 41.67%, for the urban with no children reported by 75%, one to four CEB by 63.83% and more than five by 58.58%.

There is relationship between respondent early marriage and children ever born persons in union in Ogo Oluwa Local government ($X^2 = 9783$, $Pr = 0.001$), 17.86% no children ever born, 18.62%

one to four and 14.29% five above respondents strongly agree that early marriage affected their childbearing, 28.57% no CEB, 14.36% one to four and 26.79% more than five CEB agree that early marriage affected their fertility and 32.14% no CEB, 34.04% one to four and 40.48% disagree, 17.86% no CEB, one to four 30.32% and 21.35% more than five strongly disagreed while 3.57% no CEB, 2.66% one to four and 6.55% five above CEB neither agree nor disagree that early marriage affected their childbearing.

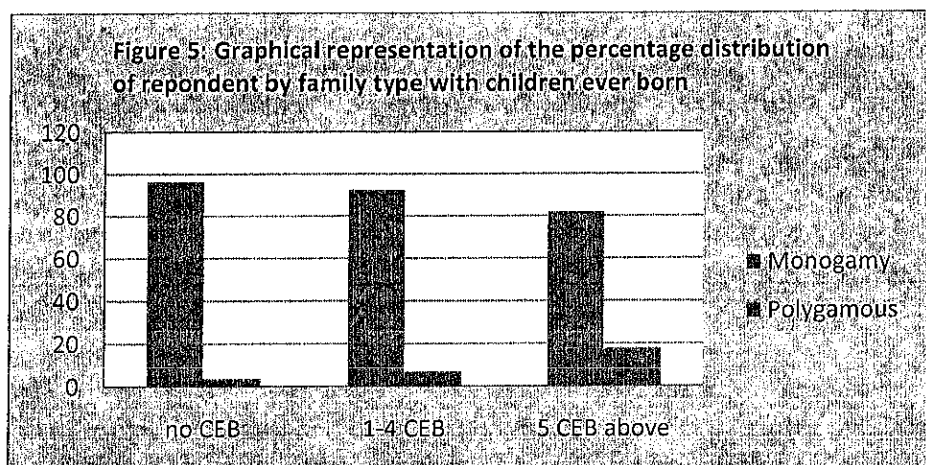
There is no relationship between respondent contraceptive use and children ever born among persons in union in Ogo Oluwa Local government area ($X^2 = 15.2855$, $Pr = 0.054$), 7.14% no children ever born, 13.37% one to four and 19.76% five above couples strongly agree that contraceptive use helped them to limit their childbearing, 42.86% no CEB, 39.04% one to four and 45.51% more than five CEB agree that contraceptives use affected their fertility and 35.71% no CEB, 35.29% one to four and 21.56% disagree, 14.29% no CEB, one to four 6.95% and 5.99% more than five strongly disagree while 0% no CEB, 5.35% one to four and 7.19% five above CEB neither agreed nor disagree that contraceptives use helped them to limit their childbearing.

There is relationship between unemployment and children ever born among persons in union in Ogo Oluwa Local Government area ($X^2 = 17.0427$, $Pr = 0.030$), 14.29% no children ever born, 13.30% one to four and 16.57% five above respondent strongly agree that unemployment influenced their childbearing, 28.57% no CEB, 20.21% one to four and 33.73% more than five CEB agree also and 21.43% no CEB, 36.70% one to four and 27.22% disagree, 25% no CEB, one to four 24.47% and 14.20% more than five strongly disagree while 10.71% no CEB, 5.32% one to four and 8.28% more than five CEB neither agree nor disagree that unemployment influenced their childbearing.

There is relationship between sex preference and children ever born among persons in union in Ogo Oluwa Local Government area ($X^2 = 26.5778$, $Pr = 0.001$), 21.43% no children ever born, 6.91% one to four and 11.24% five above respondents strongly agree that they did not changed their fertility behavior because of male or female children, 17.86% no CEB, 10.11% one to four and 16.57% more than five CEB agree also and 28.57% no CEB, 53.72% one to four and 49.11% disagree, 28.57% no CEB, one to four 22.34% and 10.06% more than five strongly disagree while 3.57% no CEB, 6.91% one to four and 13.02% more than five children ever born neither agree nor disagree that they did not changed their fertility behavior because of male or female children.

There is no relationship between wealth status and children ever born among persons in union in Ogo Oluwa Local Government area ($X^2 = 13.5321$, $Pr = 0.095$), 10.71% no children ever born, 9.57% one to four and 10.06% five above respondents strongly agree that wealth status has no impact on their fertility behavior, 21.43% no CEB, 15.96% one to four and 30.18% more than five CEB agree also, and 46.43% no CEB, 50.53% one to four and 43.79% disagree, 14.29% no CEB, one to four 18.62% and 10.06% more than five strongly disagree while 7.14% no CEB, 5.32% one to four and 5.92% more than five children ever born neither agree nor disagree that wealth status affects their childbearing.

There is relationship between family form and children ever born among persons in union in Ogo Oluwa Local Government area ($X^2=12.1663$, $Pr = 0.002$). Monogamous household that had no children ever born were 96.43%, one to four were 93.09% and more than five were 88.57%. Also, for the polygamous household that had no CEB was reported by 3.57%, one to four by 6.91% and five above by 17.75%.



Source: field work

4.3 Multivariate analysis

The multivariate analysis using multinomial logistic regression was done to show the strength and the direction of the relationship between determinants and fertility behaviour. The result was presented in RRR and confidence interval.

Table 4.3: Multinomial Logistics Regression of Fertility Behavior and Selected Determinants

Determinants	Model 1 (1-4 CEB)	Model 2 (5 CEB above)
	RRR (Lower –upper confidence interval)	RRR (Lower-upper confidence interval)
Base outcome	No CEB	No CEB
Age at marriage		
15-19	1.0(RC)	1 RC
20-24	0.26 (0.02-3.31)	0.22 (0.01-4.55)
25-29	0.10 (0.01-1.68)	0.40 (0.02-9.52)
30-34	31.20 (0.40-2456.16)	275.94* (2.7488-27698.76)
35-39	20.17 (0.19-2133.21)	249.72* (1.85-33631.19)

40-44	25.23 (0.21-2981.77)	849.14* (5.54-130110.3)
45-49	3.59 (1)	1.05 (1)
Level of education		
No formal education	1 (R.C)	1 RC
Primary	2.5e+04*** (44.42-1.36)	180689.1** (33.88-9.64)
Secondary	345.68 (0.54 - 221821.3)	414.82 (0.70-244427.3)
Tertiary	20.33 (0.04-11010.08)	22.58 (0.04-11711.76)
Partner's Level of education		
No formal education	1 (R.C)	1 RC
Primary	0.00* (1.34-0.77)	0.00* (5.28-0.31)
Secondary	7.42 (0.06-917.85)	4.50 (0.35-578.68)
Tertiary	10.33 (0.08-1314.23)	5.96 (0.43-832.85)
Occupation		
Farming	1 RC	1 RC
Teaching	0.94 (0.03-30.16)	2.49 (0.07-86.19)
Personnel manager	0.37 (0.02-7.26)	0.12 (0.01-2.44)
Vocational works	0.45 (0.002-1.25)	0.04 (0.00-1.25)
Government works	0.40 (0.12-12.59)	0.12 (0.00-4.27)
Others	0.10 (0.00-137.09)	0.04 (0.00-69.97)
Partner's Occupation		
Farming	1 RC	1 RC
Teaching	167.83** (5.54-5089.37)	66.33* (2.01-2181.01)
Personnel manager	634.74** (11.04-3e+4.21)	138.15* (2.30-8285.96)
Vocational works	48.65** (2.79-848.76)	19.49* (1.06-357.31)
Government works	351.42*** (11.38-108.12)	86.15* (2.63-2827-31)
Others	1.55 (1)	1.86 (1)
Religion		
Catholic	1 RC	1 RC
Protestant	2250.53* (1.47-3445731)	569.21 (0.29-1121866)
Pentecostal	295.59 (0.23-376748)	218.70 (0.13-364230.3)

Other Christian	291.33 (0.21-406474.2)	81.24 (0.05-146669.7)
Islam	37.65 (0.03-47928.04)	59.87 (0.04-97324.79)
Traditionalist	3.01 (1)	13299.03 (1)
Other	2.90 (1)	5.59 (1)
Place of residence		
Rural	1 RC	1 RC
Urban	0.17* (0.31-0.89)	0.17* (0.03-0.93)
Family form		
Monogamous household	1 RC	1 RC
Polygamous household	6.44 (0.21-200.45)	20.23 (0.66-628.10)
Early marriage		
Strongly agree	1 RC	1 RC
Agree	2.80 (0.32-24.37)	13.56* (1.44-127.61)
Undecided	0.20 (0.00-17.77)	1.27 (0.02-108.11)
Disagree	16.62* (1.24-72.40)	62.28** (4.30-901.15)
Strongly disagree	3.97 (0.22-72.40)	2.89 (0.14-58.20)
Contraceptive use		
Strongly agree	1 RC	1 RC
Agree	0.38 (0.04-3.63)	0.28 (0.02-2.80)
Undecided	2.56 (0-.)	1.32** (0-.)
Disagree	0.42 (0.04-4.66)	0.11 (0.01-1.30)
Strongly disagree	0.08 (0.00-1.70)	0.12 (0.01-2.92)
Unemployment		
Strongly agree	1 RC	1 RC
Agree	0.58 (0.60-5.67)	0.74 (0.07-7.41)
Undecided	0.27 (0.02-4.42)	0.37 (0.02-6.70)
Disagree	8.42 (0.72-99.05)	3.17 (26-38.60)
Strongly disagree	1.51 (0.12-18.55)	1.06 (0.8-14.01)
Wealth status		
Strongly agree	1 RC	1 RC
Agree	10.06 (0.71-141.94)	12.01 (0.80-179.16)

Undecided	2.95 (0.10-91.37)	2.58 (0.69-96.02)
Disagree	3.01 (0.32-28.74)	2.87 (0.28-29.61)
Strongly disagree	1.33 (0.81-21.65)	0.56 (0.03-10.49)
Constants	7.50** (1.73-0.03)	9.43* (0.03-10.49)
Number of observation 384		
Model chi-square 274.57***(0.000)		
Log likelihood -209.29155		
Overall classification (R²) 39.62%		

SOURCE: FIELD SURVEY

** Significant at 0.05 level ** Significant at 0.01 level *** Significant at 0.001 level RC = Reference category. CEB= Children ever born*

Table 4.3 above shows that the model fits perfectly to predict children ever born in the study areas; the model chi-square is significant at 0.000. Thus we reject the null hypothesis and accept the alternative hypothesis. This means that those determinants affect persons in union fertility behavior. Also, 39.62% change in children ever born was caused by age at marriage, level of education, partner's education, occupation, partner's occupation, religion, place of residence, family form, early marriage, contraceptive use, unemployment, and wealth status.

4.3: Multinomial Logistics Regression of Fertility Behavior and Selected Determinants with 1-4 Children Ever Born (Model 1)

It can also be seen from Table 4.3 that respondents that had primary education were more likely to have 1-4 CEB compare with uneducated and it was statistically significant (OR = 245931.6, P<0.001). According to partner's levels of education, primary education reported by 100% more likely to have one to four children ever born than uneducated. The test shows that it is statistically significant to have one to four children ever born (OR = 0.00, P<0.05). Furthermore, partner's occupation such as teaching, personnel manager, vocational works and governments

were 167 and eight times, 634 and seven times, 48 and six times and 351 and four times respectively more likely to have 1-4 CEB than farming and it was statistically significant (OR = 167.83, $p < 0.01$, OR= 634.74, $p < 0.01$, OR= 48.65, $p < 0.01$, OR= 351.42, $P < 0.001$ respectively).

According to respondent's religion, protestant was significant and were more likely to have one to four children ever born than catholic (OR = 2250.53, $P < 0.05$). Urban residence was statistically significant and were 83% less likely to have 1-4 children ever born than rural residence (OR = 0.17, $P < 0.05$) but polygamous household was insignificantly 6.44 times more likely to have one to four CEB than monogamous household (OR = 6.44, $P > 0.05$).

Apparently, people that disagree that early marriage affects their fertility behavior were 16.6 times more likely to have 1-4 CEB than reference category (strongly agree) and it is statistically significant (OR = 16.62, $P < 0.05$). Lastly, age at marriage, level of education, partner's education, occupation, partner's occupation, religion, place of residence, family form, early marriage, contraceptive use, unemployment, and wealth status were 7 times more likely best fit to predict one to four children ever born (OR = 7.50, $P < 0.05$).

Selected Determinants with Five and Above Children Ever Born (Model 2)

Respondents age group 30-34, 35-39 and 40-44 years were had high chances to have more than five children ever born than reference category (OR = 275.94, 249.72, 849.14 respectively, $P < 0.05$). Also, respondents level of education that were primary, secondary and tertiary reported 180689.1, 414.82 and 22.58 more likely to have more than five CEB respectively than uneducated (OR = 180689.1, $P < 0.01$, 414.82, $P > 0.05$ and 22.58, $P > 0.05$ respectively), on partner's level of education with primary also were 100% more likely to have 5 above children ever born compare with uneducated (OR = 0.00, $P < 0.05$). Partner's occupation revealed that those with teaching, personnel manager, vocational works and government works were more

likely to have more than five children ever born than farming (OR = 66.33, $P < 0.05$, 138.15, $P < 0.05$, 19.49, $P < 0.05$, 86.15, $P < 0.05$ respectively). Urban residence was statistically significant and were 83% less likely to have 5 above children ever born than rural residence (OR = 0.17, $P < 0.05$) but polygamous household was insignificantly 20.2 more likely to have five above CEB than monogamous household (OR = 20.23, $P > 0.05$).

Apparently, people with early marriage that agree and disagree that it affected their fertility behavior were 13.56 and 62.28 times respectively more likely to have 5 above CEB than reference category and they were statistically significant (OR = 13.56, $p < 0.05$ and 62.28, $P < 0.01$). Furthermore, respondents that said contraceptive use helps them to limit their childbearing and did not decided were 32% more likely to have 5 above children ever born than strongly agree and it is significant (OR = 1.32, $P < 0.01$). Lastly, age at marriage, level of education, partner's education, occupation, partner's occupation, religion, place of residence, family form, early marriage, contraceptive use, unemployment, and wealth status are 9 times more likely best fit to predict five above children ever born (OR = 9.43, $P < 0.01$).

4.4 Discussion of the findings

The study revealed that among persons in union in Ogo Oluwa Local Government areas, majority were monogamous household while 11.46% were living in polygamous household. There is high post secondary and secondary level of education and majority married once. Sixty-two percent of the respondents were residing in urban area.

From the study ninety-eight of persons in union had given birth in the entire study area where 48.83%, 43.90% and 7.27% of persons in union had given birth to 1-4 and 5 above and no children ever born respectively at the period of the survey.

The study highlights that family form, religion, ethnic group, occupation, age at marriage; number of partner in a union, early marriage, unemployment and sex preference in persons in union were useful predictors of fertility behavior and more people in the marriage enhances high fertility in the family. Also, the findings showed the importance of place of residence in fertility behavior, where rural residence had more than five children ever born compared with urban and people with no formal education compared with other level of education. Factors mentioned by Ebere 2015 and Effiong 2016 were determined fertility behavior such as unemployment, sex preference, age at marriage, early marriage, religion, ethnic group, occupation. An increase in the level of education and age at marriage affected fertility behavior of persons in union children ever born positively and negatively, whereas changes in other proximate determinants will have positive effects. Furthermore, partner's occupation such as teaching, personnel manager, vocational works and governments were contributed to bear one to four children.

CHAPTER FIVE

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1: SUMMARY OF RESEARCH FINDINGS

5.1.1: Fertility Behavior in the Study Areas

Among the respondents, 98.03% of them had given birth in the entire study area, 48.83% and 43.90% and 7.27% of persons in union had given birth to 1-4 and 5 above and no children ever born respectively at the period of the survey. Majority of the respondents in the study areas agree to have 1-4 children 81.37% and 18.32% agree to have 5 children above while 0.31% agree to have no children and this was attributed to cultural and socio-economic influence on reproductive behavior in the study area. The people perceive childbearing as the essence of religion, ethnic group, occupation, early marriage, unemployment, age at marriage, family form, sex preference, and the number of partner in the union, .

On the aspect of living children, the study revealed that more couple had 1-4 living children 51.17%, 5 and above living children reported by 41.04% and no living children had least percentage 7.79% within the local government area. Certain socio-cultural and economic factors were responsible as revealed by our study. They include; early marriage, age at marriage, sex preference, religion, family type etc.

Furthermore, on the aspect of sex preference, majority of persons in union want less than four slightly equal male (94.96%) and female (95.22) as a result of religion and social belief that both male and female are children.

The result of the chi square shows the association of the variables used to show the determinant of fertility behavior except for education, place of residence, contraceptive use, and wealth status which was not significant in the study areas. Other factors mentioned by Ebere and Effiong were

significant such as unemployment, sex preference, age at marriage, early marriage, religion, ethnic group, occupation etc.

5.1.2: Determinants of Fertility Behavior in the Study Area

The variables analyzed in this chapter include; partner's education, partner's religion, partner occupation's occupation, number of partner in union, family form, contraceptives use, level of education, ethnic group, occupation, number of marriage, wealth status and unemployment.

The result on the educational status of persons in union was kindly impressive. Most of them went beyond primary school. Some did not even go to school at all. The illiteracy level was among the main reasons for high fertility within the areas. The multinomial analysis shows that those that had primary education were more likely to have 1-4 and 5 above children ever born while partner's education with primary education were less likely to have 1-4 and 5 above CEB compared to the uneducated. The study showed that educational status of persons in union is also responsible for low contraceptive prevalence which encourages fertility in the local government.

In the aspect of age at marriage, the study revealed that majority of the women gave birth in their teens. The reason is attributed to the low level of educational attainment prevalent in the rural area. Thirty seven per cent of persons in union did not go beyond secondary school.

Some girls were into marriage due to premarital sex which sometimes ends up in pregnancy.

According to occupation to fertility, we found out that they were mainly traders, teachers, farming and government works. For instance, Ilofe and Ojutaye villages recorded the highest number of farmers and all these occupations less likely to have 1-4 and above children ever born compare with farming.

The religion to persons in union is another factor affecting fertility. The result revealed that both Protestant and Pentecostal is high. The Pentecostal and Protestant churches, Islam, traditionalist were also more likely to have 1-4 and 5 above CEB compare with Catholic. Sex preference within the region is very low. In fact, only very few couples agreed that it increases their number of children.

Monogamous household (88.54%) family form on the other hand is very high compare with polygamous household (11.46%) in the local government area. The persons in union in Ogo Oluwa Local Government area gave several reasons for preferring small families. The commonest among the reasons is small family size reduces fertility. The factors responsible were among the ones mentioned above.

In the aspect of contraceptives use, the analysis revealed that contraceptive knowledge and use helps to limit and space childbearing.

Number of partner in the union is another factor that affects fertility behavior in the study areas. Some have 2, 3, 4, 5 and 6 partners which enhanced their high fertility. Most of the persons in union reside in urban area (62.24%) because of the nature of their job.

The result of the multinomial shows significant variation in all the variables in the study areas.

The variables were best fit to predict children ever born in the study areas; the model chi-square is significant at 0.000. This means that those determinants affect persons in union fertility behavior. Also, 39.62% change in children ever born is caused by age at marriage, level of education, partner's education, occupation, partner's occupation, religion, place of residence, family form, early marriage, contraceptive use, unemployment, and wealth status.

5.2: Conclusion

From the outcome of the study, we have been able to establish that Ogo Oluwa Local Government area fertility behavior is in between 1-4 children. It also posed high fertility as a result of strong socio-cultural influences which manifest in the attitude of the people towards childbearing. We have also been able to discover the factors responsible for high fertility behavior in the area. These factors include: low level of education; early marriage; unemployment, religion, polygamous household, more partner in the union, low use of contraceptives.

Conclusively, we have been able to establish that there is high number of 1-4 children ever born followed by 5 above in the local government area and more than five children responsible for consequences of high fertility. It was in a bid to curb these problems that the Government established the population policy of 3 children per persons in union and encourage child and youth education. Owing to these problems associated with high fertility, recommendations were made to balance fertility in the study areas.

The desire of the people which support high fertility should be addressed, the people should be made to understand that the present age differs from ancient times when people bear many children to assist them in the farm, and parents should consider the cost of raising children and not just counting on the benefits alone. Again, the age at which girls go into marriage should be raised by education enhancement.

5.3: HOW TO BALANCE FERTILITY BEHAVIOR IN THE STUDY AREA

Based on the findings of this study, the following measures have been identified to balance fertility in the study area.

5.3 .1: Preference for Small Families

The result showed different change in large and small family size which large is no longer profitable in contemporary times due to the cost of bringing up a child. On this note, we recommend 3 children per persons in union so that parents can bring up their children in the proper way.

5.3. 2: Promotion of Maternal, Child and Youth Education

An improvement in the enrolment of the child in schools will not only raise the age at marriage and the age at first baby birth of the potential mother but will give in-depth understanding on the implication of high fertility in the family and also create opportunity for them to be employed in the public sectors which do not give them the opportunity to bear children frequently. Maternal education on the other hand exposes a woman to ideas concerning family planning which aid fertility control. It also increases a woman's autonomy thereby enhancing her participation in decision making about fertility. The budget made on education is very poor; it is not according to the UNICEF program. So, Government should delegate a monitoring team that will monitor the activities of the education. The problem of nonchalant attitude of the teachers should be curbed, teaching facilities should be available and effort should be made to increase maternal, child and youth education.

5.3. 3: Raising the Age at Marriage

The age at which a girl marries determines the length of the period that she is at risk of pregnancy. The early age at marriage as shown by our study is one of the factors responsible for high fertility in the local government. The age at marriage should be increased so as to reduce the reproductive life span of women. It could be achieved through the education.

5.3.4: Family Planning

The result of our analysis showed that there is no association between contraceptives use and fertility behavior but the rate of its use is very low based on respondent responses.

This is shown by the responses given by the respondents, such as; “it is meant for the literate, it is for women who have completed childbearing, my husband is late, it is costly, it has side effects etc”. From all indication it is obvious that they are ignorant of family planning. On this note, we recommend that there should be strong support by the government and improvement on awareness, information, counseling and service creation about family planning. Awareness could also be created through the media (radio, television, newspaper) especially now that we have indigenous radio stations and newspapers; like Parrot FM, Ajilete FM and Ogbomoso insight newspaper. Again, family planning services should be made available in every primary health post in the communities and at affordable rate and there should be integration between family planning program and other health workers.

5.3.5: Family Planning Sensitization

The Government should establish a sensitization programme intended to change the beliefs of religious leaders who will in turn make their congregation know the importance of contraceptive use especially Catholics and some Pentecostals that abhor effective contraceptive devices it.

References

- Adissu, A. E. (2017). Women's Joint Decision on Contraceptive use in Gedeo Zone, Southern Ethiopia: A community Based Comparative Cross-Sectional Study. *international Journal of family medicine* , 9.
- Annual Abstract of Statistics, 2012: *National Bureau of statistics*, federal republic of Nigeria.
- AJALA, S. K. (2013). Fertility Behaviour and Women's Empowerment in Oyo State. *Journal of Economics and Sustainable Development* , 1.
- BONGAARTS, J. (1978): "A Framework for analyzing the Proximate Determinants of Fertility". *Population and Development Review*. Vol. 13, No. 6-7, pp. 179-189.
- BONGAARTS, J. (2006): "The Causes of Stalling Fertility Transition". *Studies in Family Planning*. Vol. 37, No. 1, pp. 1-16.
- Casterline, J. B. (June 2010). *Determinants and Consequences of High Fertility: A Synopsis of the Evidence*. Washington: Sadia Chowdhury (HDNHE).
- David Yaukey, D. L. (2007). *DEMOGRAPHY: The study of Human Population*. Long Grove: Waveland press, Inc.
- Determinants and consequences of high fertility (June 2010): *A synopsis of the Evidence*.
- Dudley L. Poston, J. F. (2010). *POPULATION AND SOCIETY; An introduction to demography*. New York: Cambridge University Press, New York.
- Dyson, T. (2010). *Population and development the demographic transition*. New york: St Martin's Press, LLC, 175 fifth avenue, New York, NY 10010, USA.
- Ebere, U. C. (2015). *PATTERNS AND DETERMINANTS OF FERTILITY IN NSUKKA REGION ENUGU STATE*. Enugu: University of Nigeria virtual Library.
- Effiong, I. W. (7th April 2016). Fertility Behavior in a Rural Community: Determinants and Implications. *Journal of Scientific Research and reports* , 9-10.

- Fasoranti. (2016). *introductory sociology*. Ado-Ekiti: petoa Educational publishers (A Division of PETOA Co. (Nig) Limited).
- J. Willis, R. (1974). *Economic Theory of Fertility Behavior*. New York: University of Chicago Press.
- JACOB S. SIEGEL, D. A. (2004). *THE METHODS AND MATERIALS OF DEMOGRAPHY, second edition*. 525 B Street, Suite 1900, San Diego, California 92101-4495: Elsevier Academic Press.
- Kane, A. H. (2004). *POPULATION REFERENCE BUREAU'S, POPULATION HANDBOOK*. U.S.A.: the Population Reference Bureau.
- KOHLER, H., BILLARI, F.C, ORTEGA, J.A. (2006): "Low fertility in Europe: Causes, Implications and Policy options". In Harris, F.R (ed), *The Baby Bust: Who will do the work ?, who will pay the Taxes?* Lanham, M.D: Rowman & Littlefield Publishers, pp.48-109
- Kwat, N. (2005). *Theories of population (With Diagram)*.
- NIGERIA DEMOGRAPHIC AND HEALTH SURVEY 2013, National Population Commission Federal Republic of Nigeria Abuja, Nigeria ICF International Rockville, Maryland, USA June 2014, pp.65-114
- National Population Commission (NPC) [Nigeria] and ICF Macro. 2009. *Nigeria Demographic and Health Survey 2008*. Abuja, Nigeria: National Population Commission and ICF Macro, pp.11-116
- Nigeria Population Commission. (2012). *Annual Abstract of Statistics*. Abuja: Federal Republic of Nigeria.
- Oduşina, E. K. (2015). IMPLICATIONS OF A RAPIDLY GROWING NIGERIA
- PHILIPPOV, D and KOHLER, H. (2001): "Tempo Effects in the Fertility Decline in Eastern Europe: Evidence from Bulgaria, the Czech Republic, Hungary, Poland, and Russia". *European Journal of Population*. Vol. 17, No. 1, pp. 37-60.

- POPULATION REFERENCE BUREAU (2010): "World Population highlights: Key findings from PRB's 2010 World Population Data sheet". Vol. 65, No. 2, pp.4-16.
- POPULATION . *EBSU journal of Social Sciences* , 83.
- OYSG. (2017). *Oyo State Latest news*. P.M.B 5129, Secretariat, Agodi, Ibadan: oyo state government press.
- STATISTICS, N. B. (December 2014). *STATISTICAL REPORT ON MEN AND WOMEN IN NIGERIA*. 2013: National bureau os statistics.
- Statistical report on men and women in Nigeria (2014): *National bureau of statistics December 2014*.
- Titilayo, A. (2018). *DSS 407: family planning*. Ado Ekiti: demography and social statistics.
- Weeks, J. R. (2008,2005). *POPULATION; an introduction to concepts and issues. Tenth edition*. U.S.A: United State of America.
- World Health Organization. (2018). *family planning and contraception*. New york.
- Willis, R. (1974). *Economics of the Family: Marriage, Children, and Human*. Chicago: University of Chicago Press.
- Willis, R. J. (1974). *Economic Theory of Fertility Behavior*. New York: National Bureau of Economic Research.
- Winter, S. R. (2014). *The Effects of Fertility Behavior on Child Survival and Child Nutritional status: Evidence from the Demographic and Health Surveys, 2006 to 2012*. ICF International, Rockville, Maryland, USA: United States Agency for International Development.
- Jokela M, Elovainio M, Kivimäki M. (2008) Lower fertility associated with obesity and underweight: the U. S. National Longitudinal Survey of Youth. *American Journal of Clinical Nutrition*,;88:886-89.
- Demographic and Health Survey (2014.), 2006 to 2012*. Shea Rutstein and Rebecca Winter, ICF international Rockville, Maryland USA,

K. Olagunju, G. I Neszmelyi, K. Oguntegbe, A. Ogunniyi, Jan 2017. Welfare impact of rural infrastructural development in Oyo State, Nigeria.

UNCHS (2001) State of the World's cities 2001, United Nation's centre for Human Settlements, London; Easthscan. – (2008) State of the World's cities 2008/9: The Millennium Development Goals and Urban sustainability, United Nations centre for Human Settlement, London Easthscan.

Davis, K. (1945) 'The World Demographic transition', *Annals of American Academy of Political and Social Science* 237:1-11. – (1963) 'The theory of change and response in modern demographic history', *Population index*, 29(4): 345-66.

U.S. Census Bureau, "United States Census 2000," informational census questionnaire.

Jacob S. Siegel David A. Swanson (2004). THE METHODS AND MATERIALS OF DEMOGRAPHY; Elsevier Academic Press

Feyisatan BJ, Bankole A. (2002) Fertility transition in Nigeria: trends and prospects. *Journal of population and social studies*. 11(1): 506-527

Okon MI.(2007) analysis of Urban-Rural fertility differentials in Akwa Ibom State. Ph.D. Dissertation, University of Uyo, Nigeria.

Etukudo IW (1999). Family size preference and family planning practice in rural communities. *International journal of social sciences*. 1(1) 103-118.

African Development Bank (1992). African Development report.

Ushie MA Olumodeji EO Ahah F Agba A Ogaboh M. (2011) Socio-cultural and economic determinants of differential in rural and urban cross River State, Nigeria. *Journal of geography and regional planning*. 4(7): 383-39.

APPENDIX
QUESTIONNAIRE

DEPARTMENT OF DEMOGRAPHY AND SOCIAL STATISTICS

FEDERAL UNIVERSITY OYE EKITI, EKITI STATE, NIGERIA

**DETERMINANTS OF FERTILITY BEHAVIOR AMONG PERSONS IN UNION IN OGO
OLUWA LOCAL GOVERNMENT AREA, OYO STATE.**

TO WHOM IT MAY CONCERN

Dear Sir/Ma

I am an undergraduate student of the department of demography and social statistics, Federal University Oye-Ekiti validating “determinants of fertility behavior among persons in union in Ogo Oluwa Local Government area, Oyo state”. This study is to explore the fertility behaviors among persons in union in Ogo Oluwa. Kindly note that the information provided will be taken confidential. Please give your maximum attentions about the question in this study. There is no right or wrong answer. Thanks and God bless you for your cooperation.

Consent Form

I agree to participate in the project being conducted by an undergraduate student of Federal University Oye Ekiti.

Please express your interest to participate in this survey by ticking either “yes” or “no”

I agree to participate: Yes No

Serial Number:

Date of interview:DayMonthYear;

Area of interview:

Interview Outcome: Completed Not Completed used

SECTION A

This section provides questions relating to the background information of respondents. Please provide answers or tick(✓) the most appropriate option as applicable to you.

1. Please tell me your age in years? (1) 15-19 (2) 20-24 (3) 25-29 (4) 30-34
(5) 35-39 (6) 40-44 (7) 45-49
2. What is your Gender? (1) Male (2) Female
3. What is your marital status? (1) Married (2) Separated (3) Divorced
(4) Widowed
4. *If married*, how long have you been married/living together? _____ years
5. How many times have you been married before? _____ times
6. Does your partner have other spouse? (1) Yes (2) No
7. *If question 6 is yes*, how many? _____ partners
8. What level of education have you attained? (1) No formal education (2) Primary
(3) Secondary (4) Tertiary
9. What is your partner's level of education? (1) No formal education (2) Primary
(3) Secondary (4) Tertiary
10. What is your occupation? (1) Farming (2) Teaching (3) Personnel manager
(4) Vocational works (5) Government works (6) other (specify) _____