

**PERCEIVED ACCEPTABILITY OF ASSISTED REPRODUCTIVE
TECHNOLOGY (ART) AS TREATMENT MODALITY FOR
INFERTILITY IN IJEBU LAND, OGUN STATE, NIGERIA**

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**A THESIS IN THE DEPARTMENT OF SOCIOLOGY SUBMITTED TO
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CERTIFICATION

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DEDICATION

This work is dedicated to the memories of my beloved parents, Pa Samuel Ogunsuyi Aluko-Arowolo and Madam Alice Omoyemi Aluko-Arowo and also, to the living, my dearly beloved wife, Titilola Kikelomo Aluko-Arowo Esq and my children, Mosopefoluwa, Akinola and Oyedotun.

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ACRONYMS

ART - Assisted Reproductive Technology

LGAs - Local Government Areas

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ABSTRACT

Infertility is a social and cultural problem that makes People Living with Infertility (PLWI) to seek solutions through different means. The 2007 - 2010 clinic records at General Hospital, Ijebu-Ode, a secondary health care facility that serves several communities in Ijebuland, have shown that the prevalence of infertility is on the increase. Assisted Reproductive Technology (ART) is a major breakthrough or innovation for the treatment of infertility. In Nigeria, previous studies have focused on the importance of ART with little attention paid to the sociocultural factors which affect its acceptance. This study, therefore, examined the sociocultural factors that have potential to influence the perception and acceptance of ART in Ijebu, Ogun State, Nigeria. Innovation Adoption Theory by Rogers (1995) and Health Belief Model by Rosentock (1978) were employed as guide with cross-sectional survey design adopted using a three-stage sampling technique. Two local government areas (LGAs) - Ijebu-Ode and Ijebu North - were purposively selected followed by a random selection of five enumeration areas in each LGA. Ten Key Informant Interviews (KIIs) were conducted with ART specialists, traditional birth attendants, religious and opinion leaders to elicit information on their awareness and perception of ART. Also, 10 in-depth interviews were conducted with female and male clients, using ART on the challenges associated with the acceptance of ART. A structured questionnaire was administered to 732 household heads in the LGAs to elicit information on demographic and sociocultural factors, perception, awareness, knowledge and decision making about ART. Quantitative data were analysed using descriptive statistics and Chi-square at 0.05 level of significance while qualitative data were analysed thematically.

Respondents' age was 35.8 ± 7.5 years, 60.7% were male, 59.6% had tertiary education and 63.3% were Christians. About 17.8% were aware and 17.3% had knowledge about ART. Majority (82.7%) of the respondents was not favourably disposed to the use of ART and few (21.3%) had negative perception of it. There was a significant relationship between level of education and perceived acceptability of ART ($\chi^2 = 7.793$, $df=9$). Respondents with tertiary education (11%) compared to 5.7% with lower levels of education were favourably disposed to the use of ART. There were no significant relationships between age, income, duration of marriage, accessibility and perceived acceptability of ART. There were significant relationships between perceived ART acceptability and gender ($\chi^2=13.24$, $df=2$), marital status ($\chi^2=24.612$), religion ($\chi^2=15.769$, $df=6$) and family support ($\chi^2=2.987$, $df=3$). Most PLWI did not use ART facilities on religious ground, stigmatisation, and poor level of awareness, knowledge and inaccessibility. Financial and social costs were perceived as hindrances to acceptability of ART. Husbands of women living with infertility were not in support of ART because of stigmatisation and doubts by the family about the identity of the child. Most clients on ART had tertiary education and accepted it as the last option and usage was based on joint decision of husbands and their wives

Assisted Reproductive Technology is not a common practice in the study area due to sociocultural factors. Public enlightenment and social-marketing are needed to promote the adoption of the technology by persons with infertility.

Keywords: Assisted reproductive technology, People living with infertility, Sociocultural factors.

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ABSTRACT

Infertility is a social and cultural problem that makes People Living with Infertility (PLWI) to seek solutions through different means. The 2007 - 2010 clinic records at General Hospital, Ijebu-Ode, a secondary health care facility that serves several communities in IjebuLand, have shown that the prevalence of infertility is on the increase. Assisted Reproductive Technology (ART) is a major breakthrough or innovation for the treatment of infertility. In Nigeria, previous studies have focused on the importance of ART with little attention paid to the sociocultural factors which affect its acceptance. This study, therefore, examined the sociocultural factors that have potential to influence the perception and acceptance of ART in Ijebu, Ogun State, Nigeria.

A cross-sectional survey design was adopted using a three-stage sampling technique. Two local government areas (LGAs) - Ijebu-Ode and Ijebu North - were purposively selected followed by a random selection of five enumeration areas in each LGA. Ten Key Informant Interviews (KIIs) were conducted with ART specialists, traditional birth attendants, religious and opinion leaders to elicit information on their awareness and perception of ART. Also, 10 in-depth interviews were conducted with female and male clients, using ART on the challenges associated with the acceptance of ART. A structured questionnaire was administered to 732 household heads in the LGAs to elicit information on demographic and sociocultural factors, perception, awareness, knowledge and decision making about ART. Quantitative data were analysed using descriptive statistics and Chi-square at 0.05 level of significance while qualitative data were analysed thematically.

Respondents' age was 35.8 ± 7.5 years, 60.7% were male, 59.6% had tertiary education and 63.3% were Christians. About 17.8% were aware and 17.3% had knowledge about ART.

Majority (82.7%) of the respondents was not favourably disposed to the use of ART and few (21.3%) had negative perception of it. There was a significant relationship between level of education and perceived acceptability of ART ($\chi^2 = 7.793$, $df=9$). Respondents with tertiary education (11%) compared to 5.7% with lower levels of education were favourably disposed to the use of ART. There were no significant relationships between age, income, duration of marriage, accessibility and perceived acceptability of ART. There were significant relationships between perceived ART acceptability and gender ($\chi^2=13.24$, $df=2$), marital status ($\chi^2=24.612$), religion ($\chi^2=15.769$, $df=6$) and family support ($\chi^2=2.987$, $df=3$). Most PLWI did not use ART facilities on religious ground, stigmatisation, and poor level of awareness, knowledge and inaccessibility. Financial and social costs were perceived as hindrances to acceptability of ART. Husbands of women living with infertility were not in support of ART because of stigmatisation and doubts by the family about the identity of the child. Most clients on ART had tertiary education and accepted it as the last option and usage was based on joint decision of husbands and their wives

Assisted Reproductive Technology is not a common practice in the study area due to sociocultural factors. Public enlightenment and social-marketing are needed to promote the adoption of the technology by persons with infertility.

Keywords: Assisted reproductive technology, People living with infertility, Sociocultural factors.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Infertility is of great concern to Nigerian societies due to the premium placed on fertility because of the roles children perform in the family and the society at large. The challenges associated with infertility have necessitated different healthcare seeking behaviours ranging from spiritual, traditional/alternative health care to orthodox medical types, including bio-technological devices such as Assisted Reproductive Technology (ART). ART is pertained to a number of advanced medical techniques that aid fertilization in men and women (Olugbenga, Adebimpe, Olanrewaju, Babatunde & Oke, 2014 and Inhorn, 2002). Assisted Reproductive Technology is one of the safest health care against infertility, which is associated with treatments or procedures that include the in-vitro (IVF) for the purpose of conception. This includes, but is not limited to, in vitro fertilization and trans-cervical embryo transfer, gamete intra fallopian transfer, zygote fallopian transfer, zygote intra fallopian transfer, tubal embryo transfer, gamete and embryo cryopreservation, oocyte and embryo donation and gestational surrogacy (Ola, 2012). ART developed and spread rapidly, if not evenly, throughout the globe after the birth of the first baby conceived through IVF. An estimated 5 million babies have been born using ARTs since 1978, with an average 27% of treatment cycles resulting in the birth of a baby, the majority of these resulting from traditional IVF or intracytoplasmic sperm injection (ICSI), in which fertilization is achieved by injecting a single sperm into the egg (Inhorn & Birenbaum-Carmeli, 2008; Arons, 2007 and Inhorn, 2002).

Globally, it is estimated that one in seven couples have problems becoming pregnant irrespective of the level of development in each country (Ali, Sophie, Iman, Khan, Ali, Shaikh, & Farid-ul-Hasnain, 2011; Pennings, 2008 and Makar & Toth, 2002). Estimates suggest that about 20 to 30 percent of couples in Africa experience either primary or secondary infertility (Adegbola, 2007; Lersen & Raggars, 2001; Okonofua, 1999 and Koster-Oyekan, 1999). In Nigeria and other sub-Saharan African countries, there are indications of high prevalence of infertility (Olugbenga, Adebimpe, Olanrewaju, Babatunde & Oke, 2014; Oladokun, Arulogun, Oladokun, Morhason-Bello, Bamgboye, Adewole, & Ojengbede, 2009 and Okonofua, 2002). Infertility is a major public health problem with devastating consequences (Ola, 2012). It is a cause of physical, social and verbal abuse of persons affected. Infertility is a situation of diminished or absence of being able to produce offspring biologically, which could affect the husband, wife or both (Ali, Sophie, Iman, Khan, Ali, Shaikh, & Farid-ul-Hasnain, 2011 and Akande, 2008). This is often traced to disease(s) of the reproductive system that impair(s) the body's ability to perform basic reproductive functions.

There are two types of infertility: the primary and the secondary infertility. Primary infertility is a state in which a woman has never been pregnant or a state in which a man is unable to impregnate a woman. Secondary infertility means that the infertile person has had one or more children or pregnancies in the past, but a medical/biological problem is impairing further fertility (Ali, Sophie, Iman, Khan, *et al*, 2011; Akande, 2008; Adegbola, 2007 and Okonofua, Harris, Odebiyi, Kane & Snow, 1997). The Nigerian Demographic and Health Survey (NDHS) (2008) reported that both primary and secondary infertility are very high in Nigeria. Approximately four percent of women aged 30 years and above have never given birth to a child.

However, community-based data suggest that up to 30 per cent of couples in some parts of Nigeria may have problem in achieving a desired conception after more than twelve months of regular sexual intercourse (Ola, 2012; Anate, 2006). Specifically, it is noted that there is an increase in reported cases of infertility in Ijebu as evidenced in the reported cases at the General Hospital, Ijebu-Ode from 2007 to 2010. In 2007, twenty five percent of women that reported to the hospital for maternal health care were on infertility treatment. In 2008 about nineteen percent cases of infertility were reported, in 2009 and 2010, nineteen and twenty eight percent cases of infertility were reported respectively¹

However, little efforts have been geared towards the amelioration of infertility and assisting individuals and couples that are suffering from it (Oladokun, Arulogun, Oladokun *et al*, 2009; Anate, 2006; Okonofua, 2002; Inhorn & van Balen, 2002 and Lersen & Raggars, 2001). This is because governments and international donor agencies preoccupy themselves with the control of the high population growth rate through fertility reduction (Pennings, 2008; Adegbola, 2007 and Obono, 2004). Though population policy in Nigeria points to the need for assistance to infertile couples who come to family planning clinics (Federal Government of Nigeria - FGN 2004), infertility is yet to be addressed holistically as a health and social issue. The quest of infertile couples to resolve the problem of infertility has resulted in the patronage of various treatment outlets with different treatment options.

¹ The raw data were obtained from the General Hospital, Ijebu Ode, Ogun State Nigeria.

Assisted Reproductive Technology is not without social, cultural, environmental and ethical encumbrances which are constraining its acceptability in Ijebu, South-western Nigeria.

1. 2 Statement of the Problem

Infertility is seen, apart from its biological element, to have social implications. These are rooted in the culture that suggests that a couple is fulfilled and productive when the husband and wife are able to bear children and the wife's motherhood potential and status are respected. Motherhood in Nigeria is synonymous to both social and economic productiveness. And it is noted to be the only way for women to improve their status in terms of allocation of resources within the family and community. Motherhood has deeper social relevance in Ijebu, South-Western Nigeria. In Ijebu communities, motherhood status is a great factor that provides the means for socio-economic upward mobility and improved status for the wife within the family and communities which brings about security at old age. But a childless wife or widow may become a destitute and isolated.

The experience of isolation is understood to be a negative sense of social difference from others in terms of defined societal norms and values. This can be agonising, especially during old age as children are valued more as social security for their aged parents. Socio-cultural notice is taken of a childless couple as people living with infertility – PLWI- are considered as liability to the society and adding no value to it. Infertility, therefore, is not only a medical, but also a socio-cultural problem. Culture, in form of attitudes, customs and perceived socio-religious dogmas, equates PLWI with reproductive and marital failure with devastating effects on the affected ones in many Nigerian communities. Infertility causes personal grief and suffering because inability to have children, especially by an infertile woman, exposes her to

ridicule, social isolation, stigma and economic hardship and the privilege of motherhood is the only way for women to improve their status within the family and the community in SSA and other patriarchal societies.

Therefore, there is need to redress the situation with proven methods such as Assisted Reproductive Technology (ART). But this is not without its social, psychological and economic costs. Infertility and its ART options pose significant problem for many reproductive health, maternal health care and family planning intervention programmes and create disharmony within the family structure. Other issues are who is the father or mother of the babies born through ART? Should the source of the child's conception be disclosed to the child? Beyond this, ART also raises some fundamental social and ethical questions: When a woman carries an embryo from the egg of another woman, who is the mother? Or when sperm is obtained from another man, who is the father? These questions among Ijebu, Yoruba of South-western Nigeria and elsewhere in sub-Saharan Africa have proven to be quite volatile (Richards, 2002).

Infertility and ART interventions are, therefore, problematised as a combination of inability to bear children and the stigma associated with failure to reproduce children as culture demands and the socio-cultural and environmental consequences underscoring ART intervention. The social, cultural and psychological consequences of childlessness may be very severe. On the other hand, the adoption of ART as a modality to correct infertility is equally not well embraced. The reasons are not entirely on the cost alone but also social, psychological and cultural factors (UNFPA, 2010). This is because the reaction of most African people to assisted infertility treatment is often negative.

Management and motivation for acceptance of bio-technology innovation revealed many gaps which need to be filled. Other important issues about ART are awareness and knowledge of its existence, lack of access to few treatment centres, cost on the part of health seekers and decision making on ART utilization between the husband and wife. Infertility treatment with ART, therefore, in the general context of reproductive health needs to be appraised or evaluated due to its ethical, social and cultural connotations. A major question that suffices, therefore, is what are the ethical, social and cultural factors influencing the choice and acceptability of ART in the treatment of infertility?

1.3 Research Questions

1. What are the people's perception of infertility and motherhood?
2. What is the level of awareness and knowledge of ART in Ijebu?
3. What is the level of ART utilization as a method of treating infertility?
4. What is the attitude towards ART intervention for infertility problem?
5. What are the social, economic and cultural factors influencing acceptability of ART?

1.4 Objectives Of The Study

The general objective of the study was to investigate people's attitude towards ART intervention in the treatment of infertility in Ijebu division of Ogun State of South-Western Nigeria. However, the specific objectives were to:

1. Examine people's perception of infertility and motherhood.
2. Assess the level of awareness of ART in Ijebu.
3. Measure the attitude of respondents towards ART utilization

- 4 Measure the utilization patterns of ART.
- 5 Identify factors influencing acceptability of ART.

1.5 Justification for the Study

Assisted Reproduction Technology is becoming an increasingly popular choice for People Living with Infertility (PLWI) in South-western Nigeria. This has inspired researchers in medical sciences to consider the implications of successful treatment on families, both in the short and long runs. However, most of the empirical researches done until now hardly have inputs from methods and theories in social sciences. Theories and models in social sciences are noted to be the foundation of socio-cultural and ethical analysis of health related issues because they represent the view points from which guidance can be obtained on the pathways to decision making, and health care consumption. Apart from decision making between the husband and wife, infertility treatment, including ART is defined and determined by patriarchal norms and values.

Generally in South-western Nigeria, infertility is viewed and interpreted within the family structure, patriarchy and motherhood wherein this context, infertility is considered a problem associated with women folks alone, and solutions including the types of medical and technological interventions such as Assisted Reproductive Technology available to PLWI have not been free of the same dominant views and dogma. Therefore, gender division of male and female plays a major role in constituting the social meaning of infertility and options of treatment, especially ART, available to the affected persons. As a result, infertility in Nigeria and other developing countries and bio-technology intervention have been understudied and neglected within the primary health policy foci. It is only recently that attention is being focused

on the importance of male contributory factor to infertility problem by the physician, government, non-governmental organisations and societies at large (Jegade & Fayemiwo, 2010). This may have implications for policy design on ART, its implementation and consumption of findings if medical and social sciences are not synchronized. On the other hand, analysis of health policy commitment for information and/or education, services, management and motivation for acceptance of bio-technology innovation shows many gaps which need to be filled.

This study, therefore, added to the existing literature on the issues of infertility and ART intervention particularly the synergy between medical and social sciences. It is hoped that it would help to redirect opinion moulding on infertility and enhance the existing body of knowledge on infertility and ART intervention, including its social determinants and consequences. It is also believed that the study will contribute to policy focus on infertility in Nigeria and help in developing a platform on which strategy for a holistic solution can be predicated, especially in the area of ART. It is believed that the study will help government, non-governmental organisations (NGOs), demographers, social scientists, and other stakeholders to have a rethink on the phenomenon of infertility, medical and bio-technological efforts geared towards its amelioration.

1.6. Scope of Study

The study location is Ijebu local government areas of Ogun State in South-western Nigeria. The study examined various socio-cultural perceptions associated with the application of ART to mitigate infertility, which many considered as an unnatural method of conception. Adult members of different socio-economic status, educational levels, religious affiliations and marital

status were involved in the study to understand societal perceptions and attitude towards ART. People living with infertility - either primary or secondary types - were involved in the qualitative aspects of data gathering. The infertile respondents were reached through hospitals and snowballing method. Another category of respondents were the ART specialists who are involved in the treatment of infertility.

1.7. Conceptual Definition

With the development of fields of study such as genetics and biotechnology, people are increasingly aware of new ways to exercise control or manipulate technology to have conception and therefore escape from biological problems that would have been otherwise unsolved. One of such developments is Assisted Reproductive Technology (ART). However, there is need for further clarification of such terms used in this study; such terms apart from ART modality, are infertility, parenthood, acceptability, motherhood, decision making, Ijebu, health seeking behaviour, etc that may not be in common usage in the social sciences literature.

1.7.1 Infertility: Infertility, which may be primary or secondary, is the inability to achieve and/or maintain pregnancy within twelve months of regular and unprotected sexual intercourse. Infertility is known as a situation of diminished or absence of biological ability to produce offspring in either male or female, but not as irreversible as sterility. Infertility may be due to a variety of causes, including abnormal hormonal level, low sperm production and scarring of the fallopian tubes. Infertility is generally a loathsome phenomenon in Africa.

The measure of infertility used here is the proportion of women (because men are hardly labelled as infertile) who are childless by the age of 40 to 44 years or 45 to 49 years, i.e. at the end of their fecundity period of life. Again, in Africa, incidence of infertility in each region is

noted to have substantial variation between countries and within regions (Frank, 2008). For example, the proportion of women in their forties who are childless in Africa ranges from a significant number in West Africa to a fifth or a third of women population in Central Africa (Frank, 2008). Infertility is also when a man is not fertile. This may happen when a man can have penile erection, but, the husband's spermatozoa are defective which cannot aid pregnancy in a woman, or, when a woman cannot conceive pregnancy. In other words, the word "infertile" connotes that something prevents either a woman, man, animal or plant from the act of reproducing children or young ones. Otherwise, fertility is the human sexual activity to impregnate a female or the female conceiving a baby through heterosexual intercourse. The majority of adult male and female engaging in regular and unprotected intercourse will achieve pregnancy if they are fertile. General attitude to infertility in Ijebu, and elsewhere in Nigeria is that it is only when one is buried by a child or children that people can say that the fellow is a mother or father – *eni ti omo sin, lo bimo*. If there is no child to perform this final rite of passage to any individual, though, a parent, he/she is still regarded as an infertile person.

There are two broad types of infertility: primary and secondary infertility. Attitude to primary infertility and secondary type is not the same.

1.7.2 Primary Infertility: This is defined as a situation whereby a couple has never conceived despite regular and unprotected sexual intercourse for a period of 12 months and beyond. In other words, it is when a man fails to impregnate a woman or when a woman is unable to achieve desired pregnancy. Primary infertility, however, is viewed with disdain. People who are suffering from infertility on their part may, sometime, react negatively to the situation of infertility which may lead to psychological problems, because they are apprehensive of

innuendoes, stigmatisation or what the significant others and general public are saying - that they are yet to experience motherhood. Sometimes, people sympathize with infertile persons but in most cases people react negatively to their plight. But those who are unable to carry pregnancy to term are still respected and sympathised with than those who are experiencing difficulty in having conception because there is hope of successful pregnancy outcome.

1.7.3 Secondary Infertility: This can be described as a situation whereby a couple had previously conceived but further conception becomes impossible after 12 months of regular and unprotected sexual intercourse. In other words, it is when a man fails to impregnate a woman after the initial achievement(s) or when a woman is unable to achieve further pregnancy after the initial achievement(s). Persons with secondary infertility who may be with one child at least is not considered childless; *olomo kan ti kuro ni egbe agan. O ti kuro ninu kilo bi*, that is, someone with one child is no more a contemporary of a childless one. With one child, the fellow has crossed the border of infertility.

1.7.4 Infertility Behaviours: Infertility behaviours are biological and behavioural attitudes of infertile persons towards others who are not infertile and actions and reactions of others towards those who are experiencing infertility. It involves a whole gamut of perception, attitudes and actions towards infertility as relating to its causes, care seeking behavior, consequences and outcome of treatment.

1.7.5 Health Seeking Behaviour: This involves all steps taken in health care consumption to attain healthy living. It refers to the steps taken by sick persons to restore their health. The state of illness would ordinarily prompt an individual to seek health care intervention in such areas as early recognition of symptoms, timely consultation in health facilities and compliance with

effective treatment. In this respect, steps taken in fertility seeking to adopt assisted reproductive technology is regarded as health seeking behaviour. This may prompt a couple to take a decision together or the health seeking behaviour may be influenced based on the husband's prerogative

1.7.6 Decision-making: This is the process of deciding on what to do about something, situation and/or circumstance. Health-seeking behaviour of infertile people, especially women, is interplay of power within the matrimonial set up that has implications for the health care of infertile persons. The political process and procedure in this sense undermines the rights of women to take decisions on matters that concern them, even, matters on reproductive issues (Gage & Njoku, 1994). Household power structure alone may act as an inhibition or hindrance to redressing infertility problem among women in Nigeria and Africa at large. This, especially, has made infertility or women's health in Africa, a matter of great concern. This process alone has been identified as one of the factors leading to low or non utilization of health services in the Nigerian society and also engenders poor health communication between husband and wife (Erinosho & Osotimehin, 1996 and Arkutu, 1995). While the foregoing represents a more or less general understanding in Nigerian society, studies have examined the low utilization of formal health services *vis-a-vis* health of infertile women as consequences of women's lack of autonomy in decision-making (Adegbola, 2007 and Jejeebhoy, 1998). Unilateral decision-making on infertility treatment may affect on the long run the acceptance of suggested infertility treatment option such as Assisted Reproductive technology (ART) modality.

1.7.7 Assisted Reproductive Technology (ART) modality: Assisted reproductive technology generally is regarded as a new innovation across the world but more specifically a novel intervention for conception in Ijebu. ART, in strict medical sense, is not a cure to infertility but

purely a bio-technology contraption involving laboratory manipulation to aid conception. The term includes any reproductive technique involving a third party, for instance a sperm donor. However, there is yet no strict definition of the term. This is a method used to achieve pregnancy by artificial or partially artificial means. This includes all fertility treatments in which birth eggs from a woman's ovaries, combining them with sperm in the laboratory and returning them to the woman's body or donated to another woman (Bellina & Oosteen, 1985). Otherwise, ART is the surgical manipulation in the human reproductive system starting with stimulating the ovaries to increase egg production. After stimulation, the physician extracts one or more eggs from ovary, and unites them with sperm in a laboratory setting with the intent of producing one or more embryos. Fertilization takes place outside the body and egg is reinserted into the woman's reproductive tract in a procedure called embryo transfer. There are others methods such as surrogacy where a surrogate mother/another woman helps to carry the foetus already formed outside the normal conjugal intercourse of the infertile wife or where eggs or sperm may be extracted from different donors when the wife's eggs are bad or where the husband's spermatozoa are defective.

Assisted Reproductive Technology is also used on couples who are discordant for certain communicable diseases, for example, Acquired Immune Deficiency Syndrome (AIDS), to reduce the risk of infection when pregnancy is desired. Since the inception of ART as a major scientific breakthrough of producing the first world's test tube baby through in-vitro fertilization (IVF) in 1978, ART has succeeded in bringing new and innovative way in reproductive health to solve fertility problem and enhance ability to perpetuate mankind scientifically (Inhorn and Birenbaum-Carmeli, 2008; Arons, 2007 & Inhorn, 2002).

The most common type of ART is in-vitro-fertilization (IVF). In-vitro fertilization is the fertilisation of eggs outside the body under laboratory conditions similar to those inside the body. The procedure is performed with sedation on in-patient basis. Under the guidance of either laparoscopy or ultrasound, a needle is used to retrieve the maturing eggs from the ovaries. Motile sperms are collected from the man's semen and washed. The sperm and eggs are then combined in culture fluid in small dishes, which are placed in a specialized incubator. This maintains an environment as close as possible to normal body conditions while fertilisation occurs. Following fertilisation, embryos are observed for cell division. Developing embryos are transferred to the uterus. Extra embryos may be frozen (Bellina & Oosteen, 1985). All said and done, ART utilization would be based on its acceptability to PLWI.

1.7.8 Acceptability: Acceptability of ART as either good enough to be used for the purpose of conception or not in Ijebu, South-western, Nigeria, is an outcome of perception of its efficacy, social and financial cost effectiveness. Otherwise, if the perception is negative or the awareness is poor the acceptability of the modality would be low. Acceptability is linked also to desire to be a parent – father or mother – irrespective of socio- cultural dictates or demands.

1.7.9 Parenthood: Parenthood is the ability of husband and wife to be parents to at least a surviving child. This is the state of being a parent- parenting one's offspring to adhere to the societal norms, values and practices. It entails activities or skills needed to look after children as a parent. While the actual biological experience of becoming a parent occurs the instant the baby enters the world, the psychosocial transition to parenthood is, nevertheless, a much more lengthy process that begins with the initial contemplation of conception, continuing through the early years of the child's life, till when the child becomes an adult or a contributor to labour

productivity and community needs. The transition to parenthood is a near universal experience for individuals and families. In a more restricted view, the transition to parenthood is defined as the relatively brief period that goes from the beginning of a pregnancy to the first months following the child's birth. Contextually, in Ijebu like in other Yoruba societies, parenthood like motherhood, bestows respectability on the parent and any couple without any child is derided and stigmatised, with the wife bearing the brunt more vicariously than the husband

1.7.10 Motherhood: It is the state of being a mother, a mother with her biological child/children. This is against one who fosters children of relations or who adopts children of other women. If this is the case, the woman in question is not regarded as a mother but wife. Motherhood privilege position is the only way for women to improve their status within the family and the community. In Nigeria, motherhood is synonymous to both social and economic productiveness and benefits. In the allocation of resources, there is an emphasis placed on biological offspring because properties cannot be given to a child or children outside of the family, even if that child is adopted. In Ijebu communities, motherhood status is a great factor that provides the means for socio-economic upward mobility and improved status for the wife within the family and communities and in anticipatory of economic security at old age. But a childless wife or widow may become a destitute and isolated.

1.7.11 Ijebu People: Ijebu is one of the sub-ethnic groups of the Yoruba-speaking people of South-western Nigeria. Ijebu historical accounts are traced to three migrative expeditions. One account has it that the Ijebu migrated from Ile-Ife, the cradle of Yoruba race or Benin and led respectively by Olu-Iwa, Arisu and Ogborogan (Obanta). The area is located in the tropics and the people represent eight percent of total Yoruba population. The Ijebu people inhabit six out of

the twenty Local Government Areas (LGAs) of Ogun State. Ijebu dialect and Yoruba are spoken predominantly, in addition to English language. Ijebu occupies a total landmass of 5,690.02sq kilometres with estimated population of 1,009,814. Ijebu is rich in agricultural products like lumbering, horticulture, fishery and agro-allied industries. Others are cocoa, oil palm, maize, cassava, rice, yam, cocoa yams, fruits, vegetable, kolanut, and others. Ijebus are also into commercial activities. In terms of natural resources, the Ijebus are rich in resources like luxuriant forest vegetation, good sandy beaches, large limestone deposits, tar sand deposit, glare sand, clay, kaolin, feldspar, mica, phosphate and bitumen. The whole of Ijebu province is homogeneous. The people speak the same dialect, a variant of Yoruba language. And they all recognise the Awujale of Ijebu Ode as the head or the first among the kings. Also, Ijebu Ode is recognised as the headquarters of all Ijebus. There are other rulers in other towns like Ijebu-Igbo, Ijebu-Oru, Ago-Iwoye and Ijebu-Ife. They all share compelling similarity with Ife's historical antecedents and still hold allegiance to Ile-Ife in certain areas, especially in the belief system and the essence of motherhood, patriarchy and other issues connected with fertility.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL ORIENTATION

2.1 Literature Review

2.1.1: Infertility as a Health Problem

In sub-Saharan African (SSA) countries, reproductive issues in terms of fertility, family planning, contraception technology and childbirth have become dynamic areas of research for social scientists, medical anthropologists and reproductive health experts. By contrast, however, there is a noticed neglect of reproductive inabilities or conditions, such as infertility, miscarriage and still births which are equally very prominent public health problems and destructive to familial and social well being. Attention to rates of infertility and treatment options by scholars, policy makers and healthcare providers in SSA countries has not been encouraging (Oladeinde, 2008). The poor attention and low importance given to infertility in relation to other fertility issues is having implications for the national health profile, medical technology and policy thrust of each country as those involved in the problem of infertility are significant for policy attention (Anate, 2006; Olatunbosun & Edou-ard, 2002 and Okonofua, Harris, Odebiyi, Kane & Snow, 1997).

The neglect is not without the government policy thrust, which emphasizes fertility control and, therefore, places emphasis on population control. This is because Nigeria and other SSA nations are still grappling with their demographic and epidemiological transition to low fertility and efficient public health. In view of the much higher level of fertility in Africa than in other regions of the world, it is surprising to observe that, contrary to expectation, the level of infertility is higher in Africa than elsewhere, but the prevalence is under reported (Olugbenga, Adebimpe, Olanrewaju, Babatunde & Oke, 2014; Ola, 2012; Adesiyun, Ameh, Avidime, & Muazu, 2011 and Frank, 2003).

Infertility can be caused by any interruption in the usual process of fertilization, pregnancy, and birth. The most common male infertility factors include azoospermia and oligospermia. In rare cases, infertility in men is caused by a genetic disease such as cystic fibrosis or chromosomal abnormality. The most common female infertility factor is ovulation disorder. Other causes of female infertility include blocked fallopian tubes and inability of the fertilized egg to implant in the uterus. These health disorders are accounting for more than 60 percent reported cases in gynaecology clinics (Anate, 2006), especially public health facilities in South-western Nigeria. Several other cases are unreported due to the fact that infertility is also associated with witchcraft, cultural and other cosmic influences in Africa. Thus, to an average person, infertility is not a case for the orthodox medical intervention alone but an all encompassing attention including the determination of its socio-cultural origin(s).

Infertility, in the strict medical sense, is not a disease. However, it is a health problem with very definite psychological, emotional, physiological and socio-cultural implications. It is a health problem with a stigma which often results to mental disharmony, health discontinuity,

matrimonial disharmony, divorce and ostracism. Other problems are the responsibilities towards the care for infertility. This is in terms of economic, social and cultural cost. To limited extent infertility cost is borne by the couple but with greater consequence(s) on the female partner in the long run (Arons, 2007). Infertility, as noted by Ekhaïse & Richard (2008) and Adesiyani, Ameh, Avidime & Muazu (2011) constitutes a grave emotional and social problem in all the societies where great importance is attached to children. The family structure is affected negatively with wives who are unable to bear children suffering the brunt of isolation more than their husbands (Oladokun *et al*, 2009; Umezulike & Efezie, 2004 and Larsen, 2004). Infertility produces profound social consequences for African women, particularly, in terms of economic deprivation, grief, stigmatisation, powerlessness, frustration and other forms of psychological problems (Olatunbosun & Edouard, 2002). Generally, the woman's status is particularly affected.

2.1.2: Prevalence of Infertility

Demographic and epidemiological transitions in sub-Saharan region are pointing to increased population growth and high fertility (Olugbenga, Adebimpe, Olanrewaju, Babatunde & Oke, 2014 and Population Reference Bureau -PRB, 2012). Infertility rate among men and women is estimated to be 40 percent of the total number of couples within the child-bearing age, with sub-Saharan African (SSA) countries, including Nigeria, estimated to be 20 to 30 percent of total married couples (Adesiyani *et al*, 2011 and Population Reference Bureau -PRB, 2008). In some cases, both man and woman may be infertile or sub-fertile, and the couple's infertility could arise because of immunological or genetic conditions; it may be that each is independently fertile but the couple cannot conceive together without assistance (Anate, 2006).

Equally, infertility is on the increase due to high prevalence of sexually transmitted infections, pre-marital sex leading to pregnancy and consequently unsafe abortion which leads to what Richards (2002) called “spoiling the womb”. Thus, while the focus at the national policy level has been population control through family planning, programmes including immunisation for all round health care for children, a major concern at the individual and community levels is the inability of not having one’s “own” babies when desired.

In Nigeria, 20-25 percent of married couples or one in five (1:5) couples is experiencing either primary or secondary infertility (Ashiru, 2008). This is not unconnected with the high rate of reproductive health diseases and nutritional defects occasioned by poverty and ignorance ((Adesiyan *et al*, 2011 and Adesoji, 2009). There are indications that there may be a higher prevalence of infertility than the reported estimates (Adesiyan *et al*, 2011; Adesoji, 2009 and Oladeinde, 2009). The rate of infertility among Nupe and Gwari is 10.5 percent, Tiv 10 percent, and 6.9 percent among the Chaamba, all in the North Central geographical Zone of Nigeria. The rate is between 13.5 and 14.3 percent among the Hausa, Fulani and Kanuri in Northern Nigeria. Among the Igbo and other ethnic groups within the Eastern Nigeria, including Cross River State, the percentage is between 16 and 19.1 (Oladeinde, 2009 and Adegbola, 2007). In South-western Nigeria, the rate of infertility is reported to be 14 percent (Oladeinde, 2009 and Adegbola, 2007). However, most cases of infertility are not reported and therefore not documented (Anate, 2006). This makes it difficult for researchers to obtain accurate data on the phenomenon (Akande, 2008). About 70 percent of gynaecological cases reported in hospitals across Nigeria are on infertility (Anate, 2006). Therefore, efforts towards providing succor for the afflicted have been

piecemeal rather than concrete effort(s) towards the management of infertility (Adegbola, 2007). The incidence and prevalence of infertility among Nigerians and specifically in Ijebu, South – Western Nigeria areas have not been widely reported compared to developed countries or Central African and Middle Eastern countries that are receiving wide publicity through research and government patronage (Inhorm & Birenbaum-Carmeti, 2008 and Anate, 2006). Where it is reported, male infertility is hardly mentioned (Frank, 2008).

In a study “Infertility and social suffering: the case of ART in developing countries” sponsored by the World Health Organisation (WHO) in selected developing countries, Abdallah & Daar (2002) noted that there was glaring evidence of prevalence of infertility in developing countries but, given the inconsistencies in defining what is infertility to individual society, the epidemiological dimension was difficult to establish. It is also difficult to assess the rate of infertility and this, therefore, makes comparison among the countries an uphill task. However Abdallah & Daar (2002, pp. 15-21) noted that:

...between 8% and 12% of couples around the world have difficulty conceiving a child at some point in their lives, thus affecting 50 to 80 million people. In some areas, particularly in sub-Saharan Africa, up to one-third of couples are infertile. Throughout the world, the core prevalence of infertility is about 5%, attributable to anatomical, genetic, endocrinological and immunological problems. Between countries and regions, infertility rates vary dramatically, corresponding to the incidence of preventable conditions that lead to infertility. While women’s infertility is the greater focus of research, health care attention, and social blame, male infertility is the cause or contributing factor to infertility in approximately half of infertile couples. Infertility in developing countries raises distinct and complex problems beyond those well known to developed nations. The effects of infertility and the concomitant need for its health care management relate to the cultural realities of specific regions. While the relevance and need for assisted reproductive technologies (ART) may be readily established, some challenge their use in developing nations. This criticism is levelled on two grounds. First, given the overpopulation problem in many developing countries, it is

argued that over fertility, rather than infertility, should be the focus of family planning programmes. Second, treating infertility through expensive ART cannot be justified in low resource settings where other more pressing needs must be given priority.

However, (Makar & Toth, 2002) were categorical that the prevalence level of infertility globally is estimated to be one in seven (1:7) couples who are having difficulty conceiving or carrying pregnancy to maturity and this incidence is relatively similar in most countries of the world. This is independent of the level of each country's development, growth and/or economic vibrancy (Medline plus Wikipedia, 2010). However, in agreement with Abdallah & Daar (2002), (Ekhaise *et al*, (2008) and Ashiru, (2008) noted that the sub-Saharan region represents one of the areas with the highest prevalence of infertility and the need for bio-technology intervention. As submitted by Abdallah & Daar (2002 p. 15 - 21):

From an analysis of the suffering that arises from infertility ...criticisms of the use of ART in developing countries can be rebutted. Infertility in developing countries is pervasive and a serious concern. Further, there is evidence that the infertility rates that are generally quoted are, in fact, underestimates. The consequences of infertility in developing countries range from severe economic deprivation, to social isolation, to murder and suicide. It is suggested that the overpopulation and limited resource arguments falsely target ART and lack a more comprehensive understanding of the public health, social, psychological, economic, political and moral issues that are involved.

It is particularly noted that there is increasing incidence and prevalence of infertility among Nigerians (Ashiru, 2008). The incidence varies with the age at marriage as occasioned by the prevailing social and cultural factors, especially changes in lifestyle due to exposure to foreign cultures, education, urbanization and modernization (Akande, 2008). Recently, infertility among men and women was noted to be on the increase due to issues not unconnected with age at

marriage, which is as a result of time spent on education and skill acquisition. Others are social life, early exposure to pre-marital sex, unsafe abortion resulting from unwanted pregnancies, including exposure to occupational and environmental hazards (Mendiola, Torres-Cantero, Moreno-Grau *et al.*, 2008; Okonofua, *et al.*, 1997 and Smith, Hammonds-Ehlers, Clark, Kirchner & Fuortes, 1997). In all of these elemental factors on infertility, woman status as a mother is called to question.

2.1.3: Motherhood, Women Status and (In)fertility Issues

Motherhood can be defined as the inherent social and biological attributes of a woman to be a mother through her ability to conceive, bring the pregnancy to term and nurturing the child/children. Motherhood in Nigeria and elsewhere in SSA is synonymous to both social and economic productiveness. And it is noted to be the only way for women to improve their status in terms of allocation of resources within the family and community. Motherhood gives women a strong voice, especially in patriarchal societies. It also provides stimulus for emotional, social and economic satisfaction. Above all, children serve as bastion of hope for the woman to inherit whatever wealth she and her husband have worked for during their life time, whenever she dies.

In allocating these resources, there is emphasis on blood relations because properties cannot be given to a child or children outside of the family, even, if that child is adopted. Wildge (2000 p. 2) puts this perceptively as:

...adoption is encouraged only within the family so that property stays within the same group. As relation by blood is so important, illegitimate and adopted children are not accepted easily.

Despite this, the country presently does not have a uniform national guideline/protocol for infertility treatment and child adoption process, including enabling law. What is available now are the individual states and some private organizations guidelines. Furthermore, there is no national data on the acceptability or otherwise of child adoption by Nigerians for appropriate policy formulation and implementation (Oladokun *et al.* 2009). Adoption is not considered as an ultimate solution. A significant proportion of Nigerian women, including men, have intractable infertility problems that may lead to child adoption as an alternative or answer to inability to have children (Oladokun *et al.* 2009 and Okonofua *et al.* 1997). Yet, adoption is a farfetched alternative to provide solution.

Therefore, issues of overpopulation and fertility control is at best any state's political yardstick to limit population and put little or no emphasis on infertility by removing it from the context of reproductive or public health service. This, however, is injurious to the concept of motherhood and benefits it entails. However, infertility is a threat to family harmony as about 20-25 percent of married couples in Nigeria or one in 5 couples are infertile (Ashiru, 2008). The threat is seen in the anxiety displayed in the loss to familial identity, status in the community and respectability to all and sundry. Others are economic insecurity, especially at old age, dent on the couple's ego, especially the man's ability to impregnate a woman and pride of being a father. This is because for a man, having a child, especially a male child, is a proof of sexual potency and for the woman, there is a strong link between motherhood and fertility. Motherhood, therefore, cannot be compromised.

Fertility issues, including childbearing, are a unanimous measure of matrimonial success in all communities. Infertility has for long been considered exclusively a woman's problem,

especially in patriarchal societies like Nigeria. There are primary and the secondary infertility. The two types have not been addressed properly especially in patriarchal societies (Inhorn, 2002 and Widge, 2001). The diagnosis of both primary and secondary infertility is conditioned on the past and current reproductive status of the wife, rather than that of the husband (Widge, 2001 and Daniluk, 2001). This is because fertility has long been considered exclusively women's issue. Therefore, there is a culture of silence when its discussion is aimed at the man/husband. Investigation to the cause(s) of infertility and therapy in the female partner is always more elaborate with attendant inconveniences unlike their men counterpart. The man is often not considered infertile as only the woman is considered culpable for the family's reproductive liability (Ali, Sophie, Iman, Khan, *et al*, 2011; Okonofua, Harris, Odebiyi, Kane & Snow, 1997). In Nigeria, a woman's status is linked to her fertility and failure to have children is often termed as a curse and may lead to stigmatization, battery and divorce. In Africa, a married woman's ability to bear children is very important. However, the actual incidence of infertility in the population is impossible to state with absolute certainty because the diagnosis of infertility is difficult to make (Obono, 2004; Daar & Merali, 2002 and Leiblum, 1997).

Fertility and infertility are particularly of great concern to Nigeria as just like in other sub-Saharan African societies or other developing countries. This is because define the role, status and acceptability of individual couples among their family, relations and significant others (Wildge, 2000). Yet, population policies rarely address infertility explicitly (Okonofua *et al*, 1997). Infertility, as recounted by Akande (2008) causes personal grief and suffering because inability to have children, especially by the woman, exposes her to ridicule, social isolation, stigma and economic hardship. As recalled by Daniluk (2001), the privilege of motherhood is the

only way for women to improve their status within the family and the community in SSA and other patriarchal societies.

Women's status affects their health in many ways because status is the outcome of economic, social and cultural placements in the society. Women's status in a broader term is the importance given to women, the value and recognition attached to their roles and duties in comparison with men (Oppong & Abu, 1987). The foregoing also includes the community's perception and recognition accorded women in performing their roles and duties. The most important among these duties are the conjugal and maternal. The relevance of culture among other things is seen in the way it points to social origin of disease or illness (including infertility) and the central role society plays in disease diagnosis, treatment, prevention and/or prognosis (Jegede, 2010; Erinosh, 2006 and Chinwuzue & Okolocha, 2001). Emphasis, therefore, on culture in all ramifications and particularly on ill-health cannot be overemphasized because it helps to shape the understanding and focus of individuals who are unhealthy by making them to recognise the implication of their state of health on their household, family, lineage (in case of infertility) and community. On the other hand, society is not unsympathetic to its members who are in need as it does not leave its sick or infertile members to seek for intervention or cure alone but renders collective and composite support in finding solution to the problem. Johansson (1991 p.43) indicates societal influence in the types of healthcare consumption available to individuals:

...society is unlikely to leave the individual decision makers to their own imaginative devices. Instead, cultural pressures designed to standardize perception and behaviour will be brought to bear on private decision making with respect to health related preferences.

Stressing the above otherwise, the cultural pressures or prescription can be brought to bear on the type of existing health care method and the consumers to either reject the intervention or, accept it. Repudiation is not unlikely in case of Assisted Reproductive Technology (ARTs) to help infertile men or women to have conception as this is not conforming to existing prescribed sexual relationship (Inhorn, 2002 and Wildge, 2000). African image, as described above reveals a pyramidal characterization of the society as being structured together in a two frontal principles: the vertical authority and horizontal family/communal support system. Nyasani (1997) in agreement with the above notion of generally observable peculiarity identified African family or kinship setting as a vertical power structure or an overwhelming social apparatus where individuals derive their existence, belief system and propagation of offspring in total submission to what the society dictates and outside of which one is regarded as an outcast. Individuals have little latitude to manoeuvre or courage for self determination outside what is considered as purview of traditional African family, community or kinship setting. Mbiti (1969; p.109) alluded much to this:

...what happens to the individual happens to the whole group and whatever happens to the whole group happens to the individual. The individual can only say 'I am, because we are, and since we are, therefore I am?'

This is one of the cardinal principles in the understanding of the African view of human societies including health care consumption. But if an individual or a group of individuals chose to be contrarian(s) and remains passive or uncompromising to collective norms, the relationship between such individual(s) and the collective group is often cast in tension (Willis, 1997). The question to be asked is how can "maximum" individual(s) liberty who is seeking for instance, ART intervention to help their infertility to be assuaged and reconciled with the dictate(s) of

society/collective group cultural norm and for such individual(s) to get along together with the society/group in the interest of “social harmony”. This coupled with population policy in Nigeria and other SSA countries, which put emphasis on fertility control. Many scholars, government officials and demographers who subscribe to family planning, controlled fertility and generally those who hold contrary opinion about large family size often base their argument in support of population control on the fact that global, environmental and social crises are a result of over-population (Schrater, 2000). Therefore, every effort which could be natural or medical to control population is always encouraged. To them, poverty is a major spin-off effect of large population and consequently to leave population in full rein is detrimental to developmental and modernization strategies. Indeed, it was argued that economic development is a necessary pre-condition for fertility decline (Donaldson & Tisui, 1990). As Isiugo –Abanihe (1996 p.105) surmised thus:

...the consensus of opinion however, suggests that for developing countries, a complementary of organized family planning and development achieve the best result with respect of fertility transition.

Large family, to the anti-natalists is, therefore, considered ambiguous and detrimental to developing countries’ efforts at transition to developed economy. To put differently, pregnancy to the anti-natalists is a ‘disease’ which must be subjected to state control (Schrater, 2000). To recast the above perceptively is what Wilmoth & Ball (1992) called “Limits to Growth” and all these works and ideals are anchored on Malthus’ (1798) postulation on population. The central idea of this postulation is that the potential to grow in human populations is not an infinite frame. Excessive growth is regarded as antithetical to sustainability and strength of the nation’s economy to absorb additional people (Wilmoth & Ball, 1992). This is because large population,

all things being equal increases congestion in the cities and towns with need for high investment to maintain them (Sharon, 1990). To this end, the world Commission on Environment and Development maintained that between 1985 to 2000 (in the first instance and beyond as the case may be), the developing countries will need an increment continuously to 65 percent of their capacity to build and manage urban infrastructures including transportation, sanitation system utilities, schools and hospitals (Schaefer, 2001).

To the anti-natalists, population must be brought under control. This could be done through limitations on reproduction or through increase in the death rate. The anti-natalists as represented by Wilmoth & Ball (1992: p. 640) further asserted:

Since the limits to growth are considered immutable, the only sensible solution is to limit population size to a sustainable level. The price of inaction is eventual ecological disaster that will result in widespread famine, disease, misery, and, potentially, the extinction of the human species

Interpreting population growth and fertility from the mindset of anti-natalists gives impetus for further works among the neo anti-natalists, especially from western capitalist countries including the North American and Canadian societies with the likes of Kingsley & Davis (1959) as the arrow heads who believed that over population, if not seriously checked, would wittingly bring about expansion of communism and further deteriorate poorer countries. To the likes of Kingsley and Davis, communism could only thrive where there is over population but not where there is injustice, unequal distribution of wealth and where minority hold sway over the majority (Ake, 2008). Borrowing from the likes of Kingsley et al, new generation writers on population did not depart from this tendency as Zurayk, Khattab, Younis, *et al* (1994) wrote comprehensively on reproductive health in terms of what constitutes fertility and its tendency to antagonize economic

growth if not checkmated in developing countries without any of these ‘holistic’ works making reference to causes and treatment of childlessness or infertility.

The world bank team led by Jamison (2006) in the tradition of the anti-natalist listed priorities in health, especially in the area of public health, including reproductive ones without any reference to infertility, or how its treatment could be available to those who are in need of it, especially the poor who could not afford the cost of ART. Pregnancy and/or high fertility however, is not a disease and neither is ‘over-population, the single major causative agents of environmental degradation, blighted communities, and other ‘vices’ enumerated by the anti-natalists. Rather, the resistance or compliance of individuals/society will depend largely upon their socio-cultural, economic and other elements of liberal democracy in such society (Schrater, 2000 and Ake, 2008).

The issues as highlighted above possibly informed and made the mother of the first tube baby in Nigeria in 1978 to threaten court case(s) against the reporters if they would not stop the story in the press (Akande, 2008) as she would not want her daughter to face stigmatasation. Infertility and ARTs are thus problematic in the context of important domains of social life, such as kinship and inheritance (Karjane, et al, 2008 and Daniluk, 2001,). Problematic in the sense that, there is a huge stigma, deprivation and emotional load attached to being infertile or childless and due to these social pressures, women go through all kinds of interventions – both medical and spiritual - to have a child – possibly a male child because it brings them honour, respectability and give them power-base within the patriarchal family to negotiate the terms of their existence. Again, if the child is not a ‘proper’ product of a conjugal or sexual intercourse, the mother and the child stand to lose everything (Karjane, 2008 and Inhorn, 1994). According to Oppong & Abu

(1987) women are supposed to perform seven roles, which are maternal, occupational, conjugal, domestic, kin, community and individual. In all of these roles, maternal role or mothering is the summit of other roles because, as observed by Widge (2000) ‘only when she becomes a the mother of a son/child does she feel completely at home in her husband’s house’. Further problematic matters are the emotional ups and downs associated with infertility treatment in terms of time spent in consultation, financial implication and anxiety of the failures of the therapy (Karjane, *et al.*, 2008). Given these complex situations, it is certainly not impossible that infertility may increase subsequent risk of depression, anxiety and myriad of psychiatric illnesses (Guerra, Llobera, Veiga & Barri, 1998).

Rapid advances are occurring in all fields of knowledge, but science, medicine, technologies including biotechnology are in the fore-front. This is manifesting in new discoveries, inventions and breakthroughs in what otherwise have been qualified as unexplored areas (Willis, 1997). However, this advancement is also stretching human’s ability to comprehend and adapt to change to a contentious debate (Schaeffer, 2000). For instance, in the field of bio-technology, sex selection and manipulation of embryos and fetuses through the means of genetically engineered organisms, or assisted reproductive devices have been among controversial and highly debatable scientific interventions in reproductive health (Germov, 2000). In the field of medicine, the improvement in the diagnostic techniques have helped in pointing to many unrecognized health problems hitherto unidentified and have helped in finding solutions through limitless research, thus expanding the boundary of possibilities and prescriptions to effectively treat those diseases once labeled as incurable. Again, this is not without ethics, cultural, social, religious, legal and political questions. The discoveries brought

about new dimensions of healthcare delivery to both organic and in-organic diseases as they help in relieving people with debilitating health problems such as cancers, leukaemia, neurological disorder, heart diseases, obstetric and gynaecological problems, including kidney failures (Park, 2000 and Willis, 1997). While utilization of health care services, including ART and accessibility to hospitals are taken for granted in developed countries, the challenges to resolve health problem in Nigeria and elsewhere in sub-Saharan African nations are still posing numerous problems.

This adoption practice and Assisted Reproductive Technology treatment are Siamese twins challenging efforts to redress infertility problem in Nigeria, and elsewhere in SSA (The Nation, 2009). If this practice is not welcome in developing countries, it is also nonetheless not totally a norm in developed countries. It is widely reported in the daily papers – both foreign and national tabloids - that a sperm donor for the late pop musician, Michael Jackson (1958-2009), Mr. Mark Lester, wanted to contest the paternity of the musician's first female child - Paris (The Nation, August 10, 2009:44). Two issues emerged from this disclosure, one, the poor child may likely be deprived of her late 'father's' estate as she would not be counted as a part of Jackson's family and two, she will continually be facing societal opprobrium with emotional and psychological trauma, especially if the child was to have come from any of the Nigerian societies.

Assisted Reproductive Technology methods are not without their fallouts in terms of cultural, economic, religious, ethical and social implications. The implications of ART in the long run are likely going to be considerable. For instance, the risk, burden and the social and financial costs of treatment most often, lie on the woman with infertility problem. Paying

attention to these implications involves, however, core sociological explanations, which are historical, cultural, structural and dialectical. This is because people are in constant dialectical relationship between the way people construct social reality and the obdurate social and cultural reality, which was inherited from past generations, but which is still shaping the reality of the present social world. For instance, if there are benefits derivable from ART as a way of treating infertility, the means to this end is culturally unwholesome, then unarguably, more attention need to be given to the social atrophy that may attend or face the users. In any case, the hope of successful therapy is shifting to Assisted Reproductive Technology (ART), like Invitro - Fertilization (IVF), Gamete Intra-Fallopian Transfer (GIFT), Intra Cytoplasm Sperm Injection (ICSI) and artificial insemination. The global effect of these on the African world view, has contributed to the feeling of surprise, shock, disorientation, and sometimes, helplessness being experienced with the influx of several breakthroughs in science, technology including progress made so far in the health care systems (Kottack, 2000). However, the shock also accounts for maladjustment or lag in adaptation to these foreign influences. For instance, scholarship on reproductive health matters, including fertility and infertility is often culture bound with particular empirical and observable discourses focusing on western version(s) of bio-social reproductive problems and, by extension, its medical and technological interventions and solution (Anleu, 1997 and Henin, 1986). The helplessness or lag, sometimes does predispose the dimension or prevalence level the disease may reach. While infertility is not a disease *per se*, its causation may not be unconnected with the epidemiological undercurrent or prevalence of reproductive diseases common within the SSA societies (Anate, 2006).

Sometimes, the women's agony is exacerbated when therapies fail to mitigate the problem. However, recent medical advances involving assisted reproductive technology are changing and helping families with reproductive defect(s) or problems to have conception. Tens of thousands of children have been conceived this way since England's Louise Brown became the first "test tube baby" (Macionis, 2005). However, ART also raises some fundamental social questions on paternity and other associated cultural issues in developed countries, as well as developing ones: When a woman carries an embryo from the egg of another woman, who is the mother? Or when sperm is got from another man, who is the father? When a couple divorces, which spouse is entitled to use the frozen embryo or the claimant to the custody of the child/children? Can one partner later have children from another woman or other women against the will of the other?

These challenges could be as a result of socio-cultural factors such as poverty, ignorance, low educational status and inadequate facilities, as well as lack of political will on the part of the leaders. Social factors are such variables like education, economy, politics and family while culture involves traditions, customs, values, norms, beliefs and religious practices (Nwochocha, 2004). Socio-cultural factors inherently become challenging in the sense that they are man-made variables and are thereby controlled by the extent to which the society would conform to their over-bearing control, guidance and dictates. In a way, poverty, inadequate facilities and political will can be subsumed under socio-cultural factors which can be said to affect perception, knowledge and the nature of health care utilization. All these influence change either positively or otherwise. Cultural and socio-structural factors aggregate the belief systems, practices, social network, experiences, tradition, values, norms, attitude, and family dynamics including the

political process, sex role and social status involved in the care for infertility (Chiwuzie & Okolocha, 2001; Caldwell & Caldwell, 1999 and Feldman-Savelsberg, 1990). In a way, there is a nexus between the culture, science and/or adoption of technology.

2.1.5 Technology, Environment and Medicine

One of the roles of science is to probe the inter connectivity between health/medicine and environmental factors and also to raise questions on why diseases vary according to locality, status, and season or, why certain environment(s) is/are seen to act as catalyst to certain illnesses and not others (Aluko-Arowolo, 2006). Understanding these questions and possible answers without doubt, has helped the process of change and procedure of intervention at managing and ameliorating the occurrence of ill-health such as infertility. The process also serves as a good incubator in suggesting methods of intervention, for example, assisted reproductive technologies (ART) among others. Ideally, the matrix of change also helped to highlight the nexus between society and medicine, the patients and healers, the health providers and the consumers, etc. This interconnectivity is not without its value orientation sometimes in antagonism to social set up as Zola (1975: p23-48) opined:

...the involvement of medicine in the management of society is not now; medicine at base was always not only a social science but an occupation whose practice was inextricably interwoven into society and or preventive medicine

Public health, for example, is noted to be involved in changing social aspects of life that are believed to be impediments to good health. From simple sanitation at home to working conditions in the places of work, the emphasis is always on the environment. Added to the above

is the frameworks provided by law and legal power, ostensibly employed to act as means to gain the end in terms of healthy living, quarantines, vaccination or inoculation. In some developed countries, health insurance is added as part of the means of healthy living to equally reach the goal (Willis, 1997). The change in the context of medicine from the recent past has brought about certain technical interventions like assisted reproductive technologies (ARTs) to help infertile couple to bear children. Therefore, technical intervention in healthcare consumption is also centred on economic rationalization on public health policies in which healthcare is commodity dispensed favourably to the rich and affluent (Germov, 1997). Though maternal health and other related health problems are under primary healthcare in which consumption is with little or no cost. However, specialised treatment like kidney problem, chelopelvic distortion and other obstetric cares are to be treated as commodities through a form of market mechanism. In which case, the contradictions of socio-economic developments in developing countries cannot be assuaged because of depletion in the social and real income (Germov, 2000 and Turner, 1997). One other reason to be adduced to support the above is that medical profession, medicine and healthcare consumption are contextually urban with little emphasis on rural areas (Jegade, 2010 and Ademiluyi & Aluko-Arowolo, 2009). Urban areas, like developed societies, are noted to be sustainable and economically viable to support this.

To note, in this circumstance, the process of technical or technology intervention and societal/environmental contribution to its acceptability is not devoid of dialectical relationship (Willis, 1997). That is to say each is influencing the other. The degree of influence may not necessarily be equal. That is, there is a particular focus on how technology (for instance ARTs) is having impact on the society or group of individuals who are consuming it. The question to be

asked however is that despite the utilities of technology, how is society furthering its frontier in terms of its utilities and how technology is shaping the society in term of its contradictions?

The questions above can be answered thus: science is known to be neutral in as much as scientific knowledge is simply data, the collection and analysis of measurable events, etc (Dasaolu, 2004) while technology has an ethical dimension because in its applications, it may do either good or harm. In explaining this, Bergmann (2007) further explained: can one then say that the imperative of assisted reproductive technologies - a variant of technology - determine the social end of a marital union to fulfill socio-cultural reasons underlining the union? Or, by extension, can such individuals (the couples) be freed from technology hostage in term of its spinoff effects? Therefore, the disease one may fall victim of depends on a combination of two sets of factors – genetic and environmental factors to which one is exposed to (Park, 2000) - This is because health is in multifactor dimensions. These factors, which lie both within the individuals and externally in the society in which one lives influence health, ill-health and health care utilization. These factors interact and the interactions may be health promoting or deleterious. Interest in health and environmental factors has a long history, beginning over two thousand years ago with the works of Hippocrates (Germov, 1997 and Dobson, 1992). In this respect, he was the first physician to move medical science from the realm of superstition to an objective reality. This was a phenomenal intervention that marked the beginning of rejection of supernatural causes of disease and institutionalisation of scientific interpretation and open-mindedness (Park, 2000; Germov, 1997 and Zola, 1975). However, there is a strong affinity Nigerian society is having with culture in the interpretation of every occurrence.

2.1.6 Culture, Beliefs, Religion connotations of Infertility and ART

Religious responses to assisted reproductive technology (ART) in the context of infertility deal with new challenges and raises questions on ART for traditional and religious communities to ponder. Many religious communities have strong opinions and religious legislation regarding marriage, sex, reproduction and modern fertility technology. From the perspective of religion, infertility, like any other problem in the society, is an outcome of sin of disobedience or rebellion pioneered by Adam and Eve, the first married couple on earth which got them separated from God, the source of undistorted love and consequently thrown out of the garden of Eden (Dasaolu, 2004). Therefore, there is assumed intrinsic relationship between human being and God before this incidence of sin that distorted the relationship. Belief in fertility, fecundity and infertility occurrences is regarded as unfathomable and, therefore, mysterious in most societies of Africa (Inhorn, 2002). This line of thought underlies the classical tradition of creation which centres on axiomatic and unfathomable nature of God.

God and His works are unfathomable, axiomatic and not provable. The classical tradition reflects the acknowledged limits on what man can do and know, and the consequences for those who attempt to exceed these limits (Dasaolu, 2004). Attempt to be equal to God in creative ability must be curtailed by sanction. Therefore as an adherent of classical tradition, Pope John Paul the second described reproductive technology as being on collision course with God's creative power. To avoid this calamity, human effort should be geared towards other issues that would not anger God. Nigeria is not an exception in this belief. Religion manifest tenaciously on every aspect of the society with the tendency to influence the belief system and culture, especially the mystery that surrounds the conception of baby or hindrance to conception. Thus,

health behaviours in all ramifications are subjected to scrutiny of belief system (Akintan, 2001). This is contrasted to the belief system in western societies which the concept of fertility, disease and other reproductive matters are based. In western societies, diseases are understood from the scientific standpoint with particular reference to germ theory. The belief system in the west is a product of the Enlightenment Epoch in which man is the centre or super creature with limitless and perfect ability to know and to do all things (Guinan, 2004). Hence, science and technology and their outcomes are imperative to demonstrate man's inimitable perfection. Based on this perception, patients and physicians in western societies perceive disease in whatever form in terms of organic malfunctioning of the system and it is diagnosed and treated by using clinical methods and techniques (Erinosho, 2006). In spite of this illuminative insight and understanding brought about by science and technology, the belief in witchcraft, magic and other spiritual powers is still rife in Nigeria and elsewhere in sub-Saharan Africa (Osakue & Martin-Hilber, 1998).

It has been observed that involuntary childlessness among Nigerian couples is not encouraged and whenever infertility occurs in any family, the wife bears and endures all manners of abusive words (Osakue *et al.*, 1998). To assuage the stigma, the childless women are made to pay repeated visits to herbal practitioners, diviners, spiritualists, *syncretic* groups of either Muslim or *aladura* sects of the Christianity. In fact, other religious sects are not left out as they employ the use of words to exorcise evil spirit which is believed to be responsible for reproductive break (Erinosho, 2006; Akintan, 2001; Osakue, *et al.*, 1998 and Jegede, 1998). The women in question do this to demonstrate that they are willing to go to any extent to get pregnant, and at the same time in some cases tolerate their husbands' pressure, isolation and

rejection including, extramarital affairs or decision to take another wife outrightly (Osakue *et al.* 1998)

The pressure may be in form of isolation, powerlessness, status inconsistency and role as a wife but not as a mother. Other social risks include conflict with religious doctrine or criticism from the religious leaders, disapproval from friends and resentment from relations. Marital relationship may be impacted negatively by infertility and the type of medication sought due to stress of intense medical treatment, which may result in marital conflict. The implication is further illuminated with the cost of having a child through any of the ARTs methods. The IVF, for instance, costs between 66,667 to 800,000 dollars (10000050 to 120000000 naira). The cost, as stated above, excludes travel times for appointments, time lost at work because of the treatment, and inability to plan for further skill acquisition or academic programme.

Belief in this sense also motivates the generality of African women to seek medical help from orthodox medical practitioners and traditional healers including the prayer houses because there is the tenacity of belief that western medicine would not be able to unravel some mysteries of fertility. Some people, at times, use all methods in *pari-passu* (Erinosho, 2006 and Jegede, 1995). Religion attracts so many auras in the minds of the Yoruba, of which Ijebu are a part. This is because religion is concerned with the unseen or cosmos, where, it is believed that the unseen hand or spirit is the one that controls birth, death, success, sickness and destiny (Akintan, 2001). Therefore, the nature of reproduction itself is perceived as a spiritual exercise and part of destiny and it must be guided spiritually. This entails adhering strictly to certain religious prescriptions.

Christian and Islamic historians in Africa depict traditional religion as static, unchanging and evil. But experience has shown that belief in the traditional religion is shared even among the Christians and Muslims alike. Isichei (1983) records that belief in *egungun* (masquerade) and its worship has helped to ward off witches that are killing children or that would not allow one to conceive in the time past. This is not surprising because the *egungun* spirit is linked with the ancestors or the departed members of lineages who now reside very close to God and who are in a better position and disposition to ward off evil, including reproductive disasters. Amposah (1977) in his comparative study of West African traditional religions noted that everything that concerns the family, its health (including the maternal health), fertility of land and general prosperity are of interest to the ancestors. The ancestors are perhaps in this exalted position because of the belief that when they die they have been translated and are now very close to God (Amponsah, 1977). Not only this, they have experienced in the past whatever problems the living ones are now passing through, and with this experience at their disposal, they are in a better position to be of help. Again, they still have the same attitude which is benevolent towards the living lineage. For this reason, it is not unusual to see among the Yoruba that when a woman is going through trouble or complications to conceive, people often suggest that the ancestors must be consulted to know the kind of divination they are to undertake to know the reason(s) behind the reproductive problems. And when this is done, it is expected that the infertility problem would be remedied.

Apart from ancestral worship, water spirits like *Olokun*, *Ogbesse*, *Osun*, *Ogun* and *Oya* are venerated for similar purposes (Akintan, 2001 and Afolabi-Ojo, 1966). To stress further the importance of religion to the health and well being of women awaiting conception specifically

and women in general, there was a strong link that enmeshed the traditional religion, science and medicine together in Africa. For instance, during the pre-colonial period, inoculation and vaccines were discovered for small pox to stop the epidemic in Nigeria (Ishichei, 1983). From this case, a line of thought has been opened for interconnectivity of religion, science and medicine. Still on historical evidence, according to Ishiche (1983), it is common to witness caesarean operations being performed in Yoruba land especially and other areas in Nigeria by traditional birth attendants (TBAs) for women who are going through trouble in pushing their babies and those that are waiting for conception. This was before or immediately after the coming of the whites (Ishichei, 1983). It is to be emphasized that before embarking on the operation or application of vaccines, a lot of religious fervour or exercise has gone into it.

In this sense, what is known as religion in Yoruba, South-western Nigeria is constructed through what is explicable within the environment to explain the ones that are inexplicable to mankind. This is by using the visible phenomenon to explain the invisible events. Thus, religion is devised to counteract environmental problems, and as a response to certain diseases and life hazards, including the ones associated with fertility. The other foreign religions, especially Christianity and Islam, are within this realm to resolve life's hazards, to explain the cosmos and other celestial occurrences and to give understanding that transcends the ordinary. Though, one may want to argue that with the coming of science and the rapid rate at which it is progressing, one does not need religion to explain certain issues including maternal matters. But this is not the case because the modern church, and to some extent Islamic clerics, are still providing healing, succour and understanding to social problems and diseases in Nigeria and elsewhere in Africa (Erinosho, 2006). Jegede (1995) noted this also, that, in the time of special stress (such as

maternal ill health or infertility) one may find so attractive the support of the highly knit and enthusiastic community of the healing church. Suffice to say that religion is very synonymous with health seeking behaviour especially in the area of infertility in this part of the world. Erinoshio (1998) however, refers to the church and Islamic clerics as “faith healers”. He also called them *syncretic* groups because they combine indigenous and imported forms of therapeutic techniques in their healing activities.

In helping out on any form of ill-health including fertility matters, Christians, Muslims and Traditional religious healers have striking convergence in the therapeutic techniques. These techniques are divinations, power of words, medicinal herbs, symbolic rituals, exorcism, psychotherapy/counselling and sleeping in places or having retreat for intensive prayers. It is not unfounded hearing that infertile women that go to these people for management are conceiving through spoken words in forms of incantations by the TBAs, quotations from the Bible or recitations from the Quran by the Christian and Muslim clerics respectively. In summary, all these religious activities are pointing to something peculiar in the health seeking behaviour of infertile women/men, that no matter what, majority are still consulting healing homes and prayer houses as some could still not explain the mystery of childlessness and thus their fear is justified by the limited understanding they possess.

This limitation may be connected with where they live, their access to orthodox hospitals and general apathy due to low level of education, income and other social deprivations. Some of these factors have been addressed thematically in the preceding pages. However, it is worthy of note that belief in traditional religions, Christianity and Islam has implication for the health seeking behaviour of infertile couple. For instance, Chiwuzie & Okolocha (2001) saw a

correlation between traditional beliefs (and practices) and poor health status of African women by the type of foods they eat and food taboo prescribed for women which excuse them from eating on the basis of religion. Islam, on the other hand frowns at the practice of male doctors attending to female patients and vice-versa (Safe Motherhood Fact Sheet - SMHFS, 2000). This idea, without prejudice, is counterproductive to the women waiting for conception especially where female doctors are not in adequate supply. With regard to Christian religion, some of the adherents, especially, the Pentecostal sect, believe that going to the hospital is a sign of weak faith. Indeed, it is common seeing the “waiting couples” among the adherents of this sect refusing to undergo any medical care once this is going to involve injections and oral medicine. Religion in this respect has great influence on the infertile women or men.

To recapitulate on religion and health seeking behaviour for infertile women and men in Ijebu, like some other places in Yoruba, Nigeria, and elsewhere in Africa, there are different shades of opinions: some are very complementary to technological intervention and some are rather uncomplimentary. Culture is important to health in that it points to social origin of a disease and the central role society plays in disease diagnosis, treatment, prevention and prognosis (Jegade, 2010; Aluko-Arowolo, 2006; Chinwuzo Okolocha, 2001; Jegede, 1998; 1995 and Corin, 1995). The relevance of culture and its interpretation of disease or health matters cannot be over-emphasised because it helps to shape the focus of individuals who are unhealthy to recognise the implication of this on their household, family, lineage and/or community. On the other hand, society does not leave its sick members, including the people who cannot have babies (although pregnancy/infertility is not a sickness) to make decisions alone but makes it a

particular concerns of the society, and renders at the same time, a composite approach that would involve all.

Cultural pressures and societal solutions suggested to assuage the pressure would therefore identify and spell out reasons for sickness and also suggest imperatives for suggested remedies. Culture, as conceptualised above shapes health and ill-health perception. It equally defines a people's world-view, which translates to personal and collective experiences on health issues. Isiugo-Abanihe (1994) and Mechanic (1978) placed premium on culture than on biological differences in morbidity, fertility and mortality. For instance, they did not associate women's life expectancy (in developed countries) to biological factors alone but suggested that other influences like culture shapes behavioural patterns in health seeking as strong determinants of longevity. Erinoshio (2006) and Jegede (1998) saw the interplay between culture and healthcare consumption, especially when patients present complaints over adherence to physicians' recommendations. To them, differences in the epidemiological origin of diseases and treatment given out are due to cultural understanding of the disease and the etiological forces. Zola (1975) saw the relevance of culture in presenting symptom as a dominant factor which influences perception of certain conditions as symptoms. And invariably, treatment of such 'symptoms' would be determined by the culture that informed the presentation in the first instance. This is because women with little or no opportunity for decision-making are not opportuned to utilise modern health care services and aids (Jegede, 2010; 1998). Women, in this respect, are constrained from taking decisions that may not be in line with their husbands' wish, and since the husband is the head of the household, his approval and commitment in whatever maternal decision to be taken is very crucial to her health-seeking behaviour. Therefore, the

study of individuals in the society carries with it a perceptive understanding of many features of socio-cultural cum environmental factors, such as household power structure, poverty, illiteracy, governmental policies, level of education, ignorance and income. And these may act at the same time as determinants of health-seeking behaviour of infertile women in particular and other health issues in general. Apart from the roles invidiously play by the culture, beliefs and religion on infertility and the acceptability of ART, there is the need for the family support in taking decision to use the modality or not.

2.1.7 Family Support, Household Structure and Decision Making on ART treatment

Apart from culture which is one of the factors that determine health-seeking behaviour of women with infertility concerning the use of ART, there is also interplay of power within the matrimonial set up that has implications for the health care of infertile persons. The political process and procedure in this sense undermines the rights of women to take decisions on matters that concern them, even, matters on reproductive issues (Gage & Njoku, 1994). Yet, there is a palpable sense of complacency within the generality of the society in spite of its negative influence on the maternal health of women. This process alone has been identified as one of the factors leading to low utilization of health services in the Nigerian society and poor health communication between husband and wife (Erinosho & Osotimehin, 1996 and Arkutu, 1995).

In a study by the Prevention of Maternal Mortality Network (PMMN) in 1992 which covers Nigeria, Ghana and Sierra-Leone, it was discovered that the patriarchal family system has an overbearing implication on the health of women and therefore, impinging precariously on their health care consumption. This is because women are made to be subjects and subordinates to their men within the family. The gender-determined hierarchy-of-superiority adversely affects

the extent to which women can make independent decisions relating to health care consumption (Arkutu, 1995 and Harrison, 1997). Part of the gendered nature of this type contribute in no small measure to the infertility experiences which can be traced to the tendency for infertility to be blamed on women, even when male infertility is a factor in approximately half of all cases (Dudgeon and Inhorn, 2004).

Adedimeji (1998) opines that the most profound societal influence on an individual's sexuality is from prescribed gender roles, that is prescription in norms, values and customs, which dictate the behaviour, power and responsibilities of men and women. Gender roles and maternal health care consumption are inseparable; therefore, these roles serve as constraints to maternal health including infertility treatment. The debate on gender as a factor in addressing issues surrounding infertility is controversial. Infertility is the term health care practitioners and other members of society use for women who are unable to become pregnant (Shriver, 2000), but this is rarely used for a man who cannot induce or bring about a conception after a year of regular and unprotected sexual intercourse with his wife. However, for better understanding and holistic care, infertility issues and gender discourse of infertility are best understood from both male and female angles. More recent studies (Frank, 2008; Adegbola, 2007 and Anate 2006) postulate that either the man or woman or both of them can be infertile.

The experience of infertility is also paramount to examinations of ARTs (Inhorn and van Balen 2002). Infertility is often a devastating condition for the women, especially in social settings that are pro-natalist and patriarchic (Adesiyani *et al* 2011 and Inhorn, 2008). Studies have shown that at a global level, women shoulder the majority of the burdens of infertility and may be subjected to divorce or abandonment, ostracism, emotional or physical abuse, and

psychological problems, among other forms of suffering (Olugbenga, Adebimpe, Olanrewaju, Babatunde & Oke, 2014; Inhorn & van Balen 2002). However, researchers have also recognized that research on infertility experiences has suffered from a significant gender bias with most anthropological research especially focusing on women and very little consideration for men's infertility experiences (Inhorn & van Balen 2002).

However, the term infertility is commonly used to describe those who are of normal childbearing age - that is, the ages between menarche and menopause but who are unable to have children after several unprotected sexual intercourse. This period is also referred to as fecundity period. Fecundity is strictly the physiological ability to have children. Demographers however, disagree with this description. This is because infertility, to them, is the absence of live born children rather than the term sterility which refers to the physiological status underlying childlessness (Frank, 2008). In whichever of disciplinary matrix one is looking at it, there is gender division underscoring the interpretation of infertility and ART treatment. Strictly, conception or pregnancy that terminate in foetal loss - either by spontaneous or induced abortion or stillbirth - is not considered meaningful to fertility in that it has not contributed to population or fertility. Thus, the occurrence of foetal loss is not discernable demographically (Frank, 2008). Therefore, in categorizing infertility as different from fertility, infertility is the shortfall in live-born children, whether or not pregnancy occurred. Fertility refers to live-births only or successful pregnancy outcome.

In the case of couples where the woman has never been pregnant, the diagnosis would be primary infertility. But, if the woman is able to achieve a pregnancy but experiences recurring miscarriages - the diagnosis is called sub-fertility. Secondary infertility is, however, noted to be

if the woman has been pregnant in the past and has terminated the pregnancy or carried it to term, but she is now unable either to become pregnant again or to maintain a viable pregnancy. In all of these instances, the male partner's social status is placed above his medical status, thus, he is not a factor in determining whether a couple is considered to have primary or secondary infertility (Frank, 2008). This experience cuts across almost all societies in sub-Saharan African countries, including Nigeria. This alone is a collateral norm which causes women who are infertile to feel as though they are deviating from social norms (Germov, 1997). This is because the norm specifies that motherhood is a product of womanhood but translation from womanhood to motherhood is unattainable without at least a living child. Motherhood in the African context enables the woman to be allocated her rightful portion from her husband's properties/estate in case the man dies before the wife (Okonofua, et al., 1997). Also, it acts as status symbol in that it accentuates the woman's status among her peers in the society (Wildge, 2001). From this background, Hamzat (2001) evaluated childlessness thus:

...indeed children are very critical in African culture because a childless marriage is often viewed in (our) cultural settings as an incomplete marriage.... It is not (indeed) strange in our culture when a couple is not forthcoming in producing children years after marriage that you find relations suggesting to the husband to take a new wife, even when none of the relations knows if the problem is from the wife or not. Generally it is often assumed that the fault is from the women, which may not necessarily be the case (Daily Champion on Net 28/02/2008).

There is the question of who is to blame for childlessness, the husband or the wife? However, it is a common fact that relatives put pressure on the wife for couple's inability to have children (sometimes arising from misdirected anger). Indeed, in some societies as recalled by Richards (2002) the wife is called a greedy person for refusing to bear children for her husband. This is

because by that description, any wife who is childless in these societies is self centred, stingy and cruel because she is only interested in excluding others from benefiting from her husband's wealth (Richards, 2002). This accordingly is injurious to the household structure and family cohesion.

Thus, the question of who is to blame depends on the moving social pendulum. This is because, culturally, men are not usually accused of infertility. But often, the women bear the burden more than the men. The wife in this case may be accused of witchcraft and therefore be called a witch among other names invented to stigmatize her especially when she has not cultivated the necessary social support systems with the husband's kin, neighbours and significant others (Savage, 1996). Inability to cultivate this social network and utilize such to stimulate positive support is an indication of character flaw. The flaw may be malicious behaviour and lacunae in her personal attributes and in her relationship to others (Richards, 2002 and Savage, 1996). Women who are, however, more educated and are of high social status but are infertile may not court these networks or groups for their daily existence and sustenance. But they can still be blamed or derided on the basis of assumed or real past sexual behaviour (Sandelowski & de-Lacey, 2002). From whatever perspective one looks at the issue, the woman is vulnerable. This circumstance places heavy social burden, pressures and strain on the woman to have children.

Thus, efforts to address this often lead them to engage in health-seeking behaviour which follows sometimes contradictory logic and scientific explanation (Richards, 2002). The burden consequently leads women to take risks to achieve successful pregnancy at the expense of their well being, dignity, cultural relevance and even that of the offspring. However, Daniluk (2001: p.5-6) cautioned on this position that:

...it would be inaccurate and misleading, however, to think of infertility as only a medical condition. It is a social condition. In a world where most women and men have been socialized to believe that they will one day become parents, a world where the ability to procreate is highly valued, being infertile carries a considerable set of implications. ...within the fertile world it can be very isolating and painful to be living as an infertile person or couple.

Blaming the female partner is thus biologically inadmissible particularly, when it is understood as it is the case in Nigeria that in nearly 30 percent of cases, the cause is attributed to the male although, in another 30 percent the cause is attributed to the female while another 30 percent could be attributed to both sexes. However, in 10 percent of the cases, there is no categorical exactitude that the woman or man is to be blamed (Anate, 2006). Coming to terms with the woman's daily existence in such areas as conjugal relations, community services, kinship patronage, motherhood functions and other social/gender identities including her corresponding family support, community acceptance and security of her status as a wife (Oppong & Abu, 1987), how her husband, the significant others and the society in general react to and treat her when pregnancy fails to come after a year of regular and uninterrupted sexual intercourse is basically a product of her background. The woman/wife sometimes faces greater health risks when indeed she is fertile but inadvertently being treated for her husband's inability to father a child. Again, the very nature of reproductive biology makes treatment for infertility in men very difficult. Studies indeed have shown that male-focused treatments such as surgery of the blood vessels in the scrotum and low-tech treatments (e.g. hormonal therapy, bio-chemical therapy and intrauterine insemination) have relatively low success rates (Inhorn & Van Balen, 2002).

According to Inhorn & Van Balen (2002) the questions are: "do men and women suffer physically, somatically, and socially the same way?" Are effective treatment options including the

ARTs available for the infertile? And do such forms of infertility treatment receive institutional support from the state/government?” Indeed, can infertility be considered as part of national and global efforts to promote family planning and women reproductive health? Or, is it seen as an individual’s problem and a “luxury disease” that deserves less or no government support? To answer these questions, some radical feminist writers such as Ratch (1980) in Ritzer, (2008) euphemistically referred to ART as “techno-patriarchs” where gender inequality looms large and conspiracy in the practice of modern western bio-medicine is tantamount to the female holding the short end of the reproductive stick in the treatment of infertility.

To these writers, ART is described as the “glorification” of traditional motherhood and women who choose the use of ART to fulfill motherhood are often described as having “false consciousness” or regarded as “cultural dupes” (Sandelowski & de-Lacey, 2002). This is because in absolute cultural description, the woman is still regarded as infertile due to her inability to procreate or conceive naturally. Infertility *per-se* is a distressing and traumatic experience leading to decreased levels of personal well being for the couple concerned. However, women’s well being is rather precarious, as they are more affected than their husbands in most parts of the world with a particular emphasis on sub-Saharan Africa. This, at the same time, turns the women into social outcasts in the family where they are supposed to be stakeholders. Inhorn et al (2002 p. 8) asserts that:

...involuntary childlessness may also have important social consequences, especially for women. One’s expectations and sense of personal identity are over turned; the prospect of a life without children (and in turn grandchildren) may lead to depression and marital turmoil; the quest for hi-tech medical interventions may lead to financial ruin, bodily harm and lack of reproductive success.

The assertion can thus be divided into the basic elements of life, that is, economic sustainability, family propagation, social perpetuity of the kinship structures, power desire, and affording the ancestral memories. Infertility can be categorised as non-medical problem however, but within the context of its interpretation in SSA, its issues are now medically defined in terms of illness, disorders or syndrome. Thus, it is viewed as a condition warranting medical attention and possibly manipulation through technological intervention (Germov, 1997). Nonetheless, technologies that help in conception do not cure infertility but circumvent it through scientific manipulation in order to achieve pregnancy and on live birth (Anleu, 1997). Manipulation in this context is sometime on collision course with religion or the belief system. Working from this premise, the issue would be further illuminated through theoretical perspectives below to explain deep seated structural issues as related to infertility and adoption of assisted reproductive technology in the quest to seek for its treatment.

While the foregoing represents a more or less general understanding in Nigerian society, studies have examined the low utilization of formal health services *vis-a-vis* health of infertile women as consequences of women's lack of autonomy in decision making (Adegbola, 2007 and Jejeebhoy, 1998). Household power structure alone may act as an inhibition or hindrance to redressing unmet reproductive needs among women in Nigeria and Africa at large. This, especially, has made infertility or women's health in Africa a matter of great concern. In which every conceivable method like ART would be of immense utility at end if proper harness to bring about the desired result of having one's children. But this, is not without constraint from socio-cultural factors like income.

2.1.9 ART Utilisation and Level of Income

There is a disparity between the health care utilization in developed countries and developing countries. The concept of wellness has become explicitly multidimensional; it is now defined in terms of income and other human development indices. Disparities also exist in terms of access to treatment for infertility (Franklin 2011; Inhorn & Birenbaum-Carmeli 2008). Effective and affordable fertility treatment and access to ART is often non-existent in those areas of the world with the highest levels of infertility, and although many Western countries subsidize infertility treatment, restrictive eligibility criteria still impede access for many infertile persons (Franklin 2011; Inhorn and Birenbaum-Carmeli 2008; Inhorn and Patrizio 2012).

Apart from income as a direct measure of quality of life, people's living conditions including health, habitat and environment are important indices of poverty (Tella, 2014; Nigeria Demographic and Health Survey-NDHS, 2003 and Akin- Aina, 1990). In considering this disparity, there is the need to look at the broader picture of the allocation of the total national budget in developing countries. Most developing countries spend 5% of their gross national product on health care and the largest part thereof is private money (Pennings, 2008 and World Health Organisation (WHO), 2007). The WHO in the recent past reported a strong relationship between aggregate poor health status, poverty and underdevelopment (Edewor, 2002). Available evidence consistently points to this relationship, that is the poorest health condition is found in the poorest nations of the world. Therefore, the wealth of nation(s), and of specific groups and individuals, or otherwise, in most cases would be a major determinant of their health seeking behaviour and in particular the nature of their health status.

In Nigeria as a whole, less than 4 percent of women of child-bearing age receive medical attention with less than 30 percent receiving post partum health care due to low income (USAID, on Africa in Edewor, 2002). This is not all that surprising because as at the middle of 2002, Africa's population stood at 840 million, and half of this population lives on less than 65 cents a day (Edewor, 2002). On the strength of this argument, African countries' average annual population growth rate of 2.5 percent is targeted by the world Health Organization (WHO) in the Millennium Development Goal (MDG) at reducing poverty level in sub-Saharan African countries by 50 percent by the year 2015. However, SSA countries will need 7 percent growth annually to meet up with MDG target to move to level of sustainability instead of less than one percent rate in gross domestic product (GDP) as presently is the case (The Nation, 2012).

Most developing countries are struggling to provide a minimum level of care with inefficient infrastructures (Ademiluyi *et al*, 2009). They are confronted with immense problems of poverty and deprivation of the most basic goods like clean drinking water and food, which also affect the general health of the population (Jamisson *et al*, 2006). The question then becomes whether governments should not spend their money trying to resolve these problems rather than embarking on expensive high-technology interventions for non-life threatening conditions like infertility. If this starting point is accepted, the provision of high technology for infertility care therefore implies that already underfunded and essential programmes like maternal and child care will receive even less money.

Furthermore, the inability to pay for health care and other basic needs is due more to corruption, misplaced priority and mismanagement of funds by the political elites than to the lack of resources. Therefore, allocating additional funds to health care would considerably

improve the global health situation, especially in the developing countries. However, the ambiguous status of infertility in terms of institutional support puts it in a disadvantaged position when different needs are ranked. Infertility is not life threatening and is not even considered as a disease by many people (van Ballen *et al*, 2002). This means when put on the scale of preference, it loses against almost any other life saving health-related service. This is confirmed by the current and most frequently used method for ranking diseases, i.e. Quality Adjusted Life Year (QALY) and its mirror concept Disability Adjusted Life Years (DALY) - The DALY is a measurement technique to assess the overall burden of a disease. It includes both the time lost due to premature death (mortality) and the time lived with a disability/morbidity (Pennings, 2008). One does not need much imagination to see that combining both quality of life and length of life in one single number is difficult and it definitely exposes the blight in the health sector of almost all developing countries including Nigeria.

Understanding of women's income and health care consumption in Nigeria and almost every other place in sub-Saharan Africa is rather enmeshed in deprivation with several methods of sourcing for funding wrapped in informality as many of the women are not in paid occupation. Although few are working in the formal or organized sectors, the preponderance of them is in the informal and unorganized sectors (Oluwanisola, 1998). Proportional to men's income in all those sectors, women's real income is noted to be lower due to factors connected with low educational status, poverty, ignorance, marital status, illiteracy and culture (Orubuloye & Ajakaiye, 2002).

Stressing this point further, women who are in formal employment often prefer jobs that allow them to engage in the reproduction without hindrance. And this affects the individual woman's attitude towards her socio-biological roles, goal attainments and career developments.

Plutzer (1988) noted the antagonism between women's satisfaction in the workplace (formal) and family life (i.e. conjugal and reproductive). That is, women that show commitment to career development are possibly those who are dissatisfied with their marital/family life. Therefore, they seek for status mobility in their work life and other social strata to gain satisfaction which otherwise they could not have at home. Although not all career women are dissatisfied with their family life, this is not to suggest that all is well at the home front due to certain conjugal and maternal roles that suffer neglect in lieu of career development (Alliyu, 2004). Generally, reproductive roles among women of various strata and status are reported to show inverse relationship with income (Aluko, 2008). The relationship of income with women's low status is brought into limelight because of its contributions to effects of inadequate dietary or defective nutritional intake and maternal death. From the foregoing, mothers in high socio-economic status, especially with high-income are proportionately living a healthy life than those in lower category. In case of ill-health or infertility, such are well positioned to obtain necessary intervention if the need arises, including ART in case of infertility. It has been argued that maternal health and infertility services have potentially critical roles to play in the improvement of reproductive health (WHO, 2003). Particularly, this would become attainable if there is great improvement in the income of individual women and that of the society in general. Income in this respect becomes a necessity and the yardstick for health-seeking behaviour and also a determinant of the nature of health utilization. This is suggesting that if this yardstick is properly harnessed and with a sense of equity in income and wealth distribution and appropriateness in health care consumption, infertility among other health discontinuities and its high-technology intervention would be brought under acceptable levels for everybody in need. However, this is

not the case in Nigeria. Low income is synonymous with non-sustainable health care delivery system in all ramifications in Nigeria and elsewhere in SSA countries. The sum total of this is that, in a way, naturally the level of one's income would determine and affect where one lives, what one eats, and this would equally determine the pattern of health seeking behaviour. This is because, principally, income is the determinant of health care coverage and health care utilization of any society.

In developing countries as demonstrated above, in relation to maternal health care and in particular to health care delivery system of women in general, women are having limited, unequal access to resources including technology. Therefore, women bear the brunt of low income more when compared to men. In poor countries, due to unsustainable income, fewer women receive health care service (Jegade, 2010 and Orubuloye *et al*, 2002). Apart from this, one other factor that may contribute to women's low income and which have direct impact on their health is low level of education. Literacy level in Nigeria is standing at 61 and 39 percent for male and female respectively (NDHS, 2003; Orubuloye *et al*, 2002 and Edewor, 2002). Income as a function of education enhances women social mobility. It also reposes confidence in women, including the pregnant ones and acts as a determinant of their health seeking behaviour (Aluko, 2008). Women are facing maternal death and morbidity due to factors of poverty, depreciated real income (or nothing at all) and poor socio-economic development. These factors with income as the arrowhead are seriously militating against women's health seeking behaviour including financial access to bio-technology devices like ART. A poorly nourished mother stands the risk of obstetrics and gynaecology complications such as infertility, foetal loss, low birth weight (for the babies) when pregnancy occurs and maternal mortality for the mother (Anate, 2006). Apart from

income with its invidious hands directing infertile women healthcare consumption, the relationship between the patient and physician also has effect on ART acceptability.

2.1.10 Relationship Between Patient and Physician

Infertility and ART pose challenges not just for patients alone but also for fertility specialists including general practitioners, gynaecologists and others who are providing care for people with fertility problem. The belief that the physician and patient relationship is fundamentally reciprocal does not hold true all the time (Maguire, 2010; Bloor & Horobin, 1975 and Freidson, 1975). The physician may be viewed as superior to the patient because the physician has the knowledge and credentials and most often the one on ground. The relationship can also be complicated by the patient's suffering and limited ability or exposure to relieve or explain to the doctor her/his own side of health matter. This is potentially injurious to effective communication that engenders proper health care utilization resulting in a state of desperation and dependency on the part of health care seekers. Often, the interaction is shaped by their differing social roles and different needs (Maguire, 2010).

In different societies, periods, and cultures, different values may be assigned different priorities as in the case of health care utilization of infertile persons. The physician/patient relationship, therefore, can be analysed from the perspective of ethical concerns, in terms of how well the goals of maleficence, beneficence, autonomy and justice are achieved. The analysis would possibly reveal certain elements that may act as catalyst to conflict and which may not allow the infertile person to follow the prescriptions to the letter or adapt to regimen of patient roles strictly. The source(s) of the conflict may be understood further from the assumptions held by the caregivers: that sick persons should use their own judgment as when it is appropriate to

seek medical advice but on the other hand patients are later expected to defer to the doctor's judgment when undergoing medical treatment (Bloor & Horobin, 1975).

Often the conflicting expectations place the patient in a double-bind situation. However, the quality of the patient – physician relationship is important to both parties. The better the relationship in terms of mutual respect, knowledge, trust, shared values and perspectives about disease and life, and time available, the better will be the amount and quality of information about the patient's disease transferred in both directions, enhancing accuracy of diagnosis and increasing the patient's knowledge about the disease. On the contrary, where such a relationship is poor the physician's ability to make a full assessment is compromised and the patient is more likely to distrust the diagnosis and proposed treatment, in this case infertility (en.wikipedia.org/wiki/Doctor-patient relationship; 2010)

Maguire (2010) citing the work of Stewart and Roter (2001) describes the doctor/patient relationship as having four patterns: paternalistic, consumeristic, default and mutuality. The paternalistic approach is typified by doctor-centred style. It relies on closed questions designed to elicit yes or no answers. The doctor will tend to use a disease-centred model and be focused on reaching a diagnosis rather than the patient's unique experience of illness. The consumeristic pattern holds that the patient knows exactly what she/he wants and forces the doctor into a patient-centred approach. The default pattern is a situation where the patient centred fails and the doctor is trying to relinquish control but the patient is unwilling to accept it and it results into an impasse. The fourth pattern is a situation where the doctor uses open questions to encourage the patients to talk about their complaints. The approach relies on taking time to listen and trying to understand the patient's point of view. Apart from doctor/patient dilemma above, infertility and

ART can also be understood with overarching model and/or theoretical framework as going to be demonstrated below:

2.2 THEORETICAL FRAMEWORK

Innovation Adoption Theory and Health Belief Model were employed as guide to explaining further the influences of social and cultural factors on health seeking behaviour of persons living with infertility.

2.2.1 Innovation Adoption Theory

The origins and history of the Innovation Adoption Theory can be associated with different disciplines and time – especially with the rapid growth of technology (Todaro & Smith, 2012). Its influence can be seen in such disciplines as anthropology, sociology, rural sociology, agriculture, education, industrial and medical sociology researches (Rogers, 1962, 1983 & 2003). Rogers innovations theory which he sometime calls diffusion of new technology theory is the most appropriate for investigating the adoption of technology and whether the adoption of Assisted Reproductive Technology (ART) is low or fast among the Ijebu infertile persons. In fact, much diffusion research involves technological innovations. So, Roger usually uses the word “technology” and “innovation” as synonyms (Sahin, 2006). For Rogers, technology is a design for instrumental action that reduces the uncertainty in the cause-effect relationships involved in achieving a desired outcome. The centrality of innovation theory is what Roger (2003) calls the diffusion of innovations of new technology at different stages of the product life span. For Rogers (2003), adoption is a decision to utilise an innovation as the best course of action available or not to adopt an innovation. According to Rogers (1995), all individuals who

are exposed to a particular innovation must make a decision about whether to accept or reject the innovation (ASME, 2005). For some, the decision is instantaneous, but for others, the process is long, requiring deeper investigation of the innovation and its predicted outcomes. Rogers explains diffusion as the process in which an innovation is communicated through certain channels over time among the members of a social system (Sahin, 2006). As explained, innovation, communication channels, time, and social system are the four key components of the diffusion of innovations.

The model shows patterns of consumer adoption at each of the various stages during a product's life cycle by focusing on different characteristics of each adopter categories in terms of socioeconomic status, communication (behaviour), personality and values. The adoption theory underlines the importance of differentiating the need to convince the innovators and adopters, especially the early adopters to first make an innovation successful.

Rogers defines an adopter category as a classification of individuals within a social system on the basis of innovativeness, while innovation is an idea, practice or object that is perceived as new by an individual or society – either an entirely new product or modification of the existing one. Adoption is usually measured by the length of time required for a certain percentage of the members of a social system to adopt an innovation. The rate of adoption is defined as: the relative speed with which members of a social system adopt an innovation. The rates of adoption for innovations are determined by an individual's adopter category. Rogers shows that the diffusion in a social system follows an S-Curve in which the adoption of a technology begins with slow change and followed by rapid change and ends in slow change as the product matures or new technologies emerge. In this context, adoption is deemed to go

through stages in which a technology is selected for use by an individual or an organization as the initial stage and the final stage would be when the technology is replaced with new ones.

People adopt technological innovations at different times and different rates. And there are varying rates of adoption to distinguish different phases in the diffusion process in order to allow practitioners to assess such things as the life of a new product or service and the application of the correct set of marketing activities at the appropriate time. Within the rate of adoption, there is a point at which an innovation reaches critical stage (Todaro & Smith, 2012). This is a point in time within the adoption curve that more individuals have adopted an innovation in order that the continued adoption of the innovation is self-sustaining. In describing how an innovation reaches critical or acceptability stage, Rogers (2003) outlines several strategies in order to help an innovation reach this stage. These strategies are: having an innovation adopted by a highly respected individual within a social network, creating an instinctive desire for a specific innovation, injecting an innovation into a group of individuals who would readily use an innovation, and providing positive reactions which would be of benefit for early adopters of an innovation. In extrapolating these strategies to make a case for ART acceptability in Ijebu and elsewhere in Nigeria, there may be need to introduce it first to the elites, the educated ones and religious leaders with large followers. These leaders are charismatic with ability to convince their followers to adopt the modality.

The adoption process tracked through the diffusion curve is a decision-making process in which an individual passes from the initial knowledge of an innovation to forming an attitude toward the innovation to a decision to adopt it, then to its implementation and the use of the new idea, and finally to the confirmation of this decision. However, there are different factors which

influence or help an individual's decision-making in the adoption of innovations which Rogers calls intrinsic characteristics (Cain & Mittmann, 2002). The first factor is the relative advantage of the new one over the previous one(s). The second is compatibility, that is, the level of compatibility that an innovation has to be assimilated into an individual's life. The third is the complexity of an innovation as a significant factor whether it is adopted by an individual or not. For example, an individual will not likely adopt a technology if the innovation is too difficult to use. The fourth characteristic is called trialability, that is, a period that determines how easily an innovation may be adopted. For instance if a user has a hard time using an innovation, the individual will be less likely to adopt it. The final characteristic is a period called observability; this is the extent that an innovation is visible to others. An innovation that is more visible and accessible will drive communication among the individual's peers and personal networks and will in turn create more reactions.

To make the model actionable, Rogers introduces innovativeness - the degree to which an individual adopts the new innovation - relatively earlier than other members in a social system depended on certain elements inherent in the adoption of innovation. These include: Communication channels, time, and rate of adoption, social system and type of innovation. Communication channels show the routes by which messages get from one individual to another or from one group to the other. Rogers (2003) describes the innovation-decision process as an information-seeking and information-processing activity, where an individual is motivated to reduce uncertainty about the advantages and disadvantages of an innovation. For Rogers (2003), the innovation-decision process involves five steps: The innovation-decision process starts with the knowledge stage, then, persuasion, decision, implementation, and confirmation.

Knowledge stage entails awareness-knowledge, how-to-knowledge, and principles-knowledge. Awareness-knowledge represents the knowledge of the innovation's existence. In this step, an individual learns about the existence of innovation and seeks information about the innovation. During this phase, the individual attempts to determine what the innovation is and how and why it works (Rogers, 2003). This type of knowledge can motivate the individual to learn more about the innovation and, eventually, to adopt it. Also, it may encourage an individual to learn about other two types of knowledge. How-to-knowledge contains information about how to use an innovation correctly. If would-be users do not have knowledge of how to use it correctly the technology would not be of any use – for instance if it is not used at an expected level- Assisted Reproductive Technology may not serve the ultimate means of reaching the goal of conception. Rogers (2003) saw this knowledge as an essential variable in the innovation-decision process. To increase the adoption chance of an innovation, an individual should have a sufficient level of how-to-knowledge prior to the trial of this innovation. Thus, this knowledge becomes more critical for relatively complex innovations (ASME, 2006). Principles-knowledge: this knowledge includes the functioning principles describing how and why an innovation works. An innovation can be adopted without this knowledge, but the misuse of the innovation may cause its discontinuance.

The persuasion stage or step occurs when the individual is not clear about how the new product works, or has a negative attitude toward the innovation. The degree of uncertainty about the innovation's functioning and workability and the social reinforcement from significant others (colleagues, peers, etc.) affects the individual's opinions and beliefs about the innovation (Sahin, 2006). The persuasion stage is thus more of affectivity- (or feeling-)- centered. This is against

the knowledge stage which is cognitive- (or knowing-) centered. The individual shapes his or her attitude after he or she knows about the innovation, so the persuasion stage follows the knowledge stage in the innovation-decision process. Thus, the individual is involved more sensitively with the innovation at the persuasion stage.

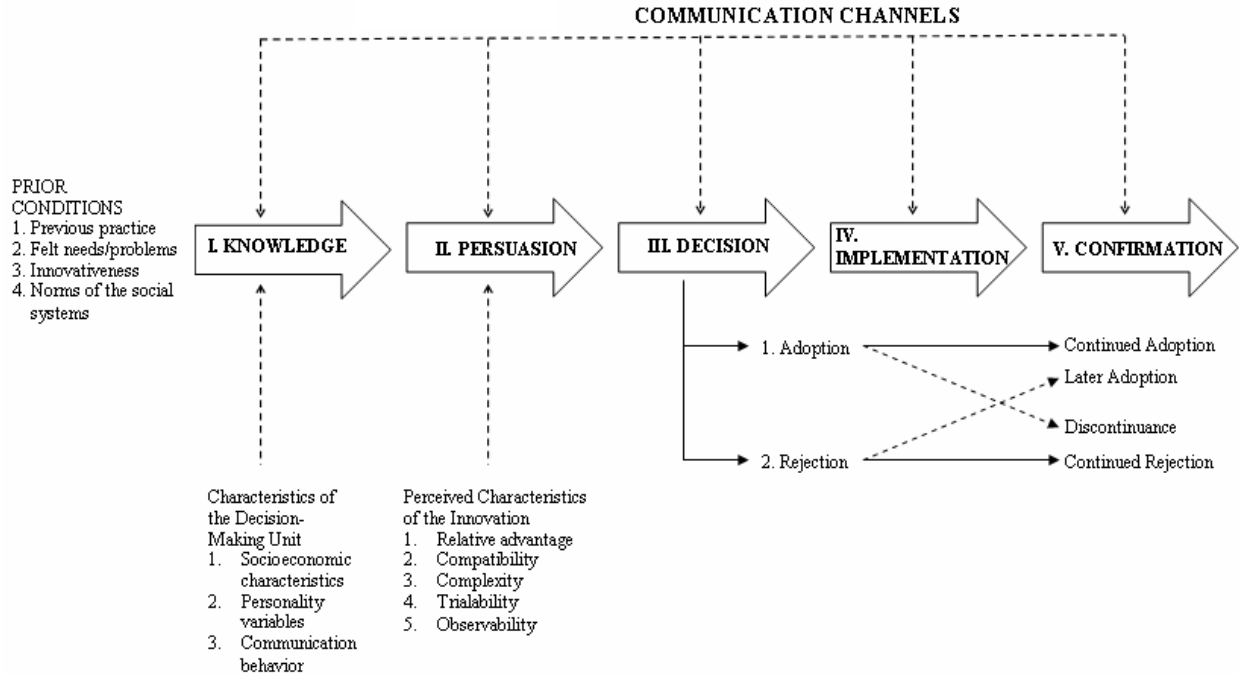
The Decision Stage is when an adopter takes a far-reaching decision to adopt the innovation or reject it. Adoption in this sense refers to full use of an innovation and rejection means rejection of an innovation at all (Sahin, 2006 and Rogers, 2003). However, if an innovation has a partial trial basis, it is usually adopted more quickly, since most individuals first want to try the innovation in their own situation and then come to an adoption decision if need be. Rogers has pointed out two types of rejection: *active rejection* and *passive rejection*. In an active rejection situation, an individual tries an innovation and thinks about adopting it, but later he or she decides not to adopt it. A *discontinuance* decision, which is to reject an innovation, after adopting it earlier may be considered as an active type of rejection. In a passive rejection (or non-adoption) position, the individual does not think about adopting the innovation at all (Sahin, 2006). In any case, however, the implementation stage follows the decision stage.

At the implementation stage, an innovation is put into practice. Reinvention usually happens at the implementation stage, so it is an important part of this stage. Reinvention is the extent to which an innovation is changed or modified by user(s) in the process of its adoption and implementation (Rogers, 2000). Also, Rogers further explains the difference between invention and innovation; invention is the process by which a new idea is discovered or created and the adoption of an innovation is the process of using an existing idea. Rogers further

discusses that the more reinvention takes place, the more rapidly an innovation is adopted and becomes institutionalized (Sahin, 2006).

Confirmation Stage, which can also be referred to as stage of seeking for validation from others is when an individual end-user looks for support for his or her decision, to make sure that he/she has taken the right decision to use the innovation. Accordingly, if the validation turns out not as expected, or if the individual is exposed to conflicting messages about the innovation, the decision to adopt the innovation can be reversed. Or, in the alternative the individual may stay away from these messages and seeks supportive messages that confirm his or her decision. This last option to stay with the innovation is often the last straw which keeps the ART adopters going. Thus, this attitude becomes more crucial and the necessary stimulus at the confirmation stage. Sahin (2006) opines that discontinuance may occur during this stage in two ways. First, the individual rejects the innovation to adopt a better innovation replacing it. This type of discontinuance decision is called *replacement discontinuance*. The other type of discontinuance decision is *disenchantment discontinuance*. In the latter, the individual rejects the innovation because he or she is not satisfied with its performance. Another reason for this type of discontinuance decision may be that the innovation does not meet the needs of the individual. So, it does not provide a perceived relative advantage, which is the first attribute of innovations and affects the rate of adoption. These stages typically follow each other in a time-ordered manner. This process is shown in Figure 2.1.

Figure 2.1:



Adapted from Sahin, 2006: Detailed review of related studies based on Rogers' diffusion of innovations theory and educational technology.

In all of this sequence of events to adoption of new technology, there is the need to be curious on the time, which is very critical to the adoption of a new technology or the existing one. Time indicates the length of time required to pass through the innovation decision process and rate of adoption. This is the relative speed with which an innovation is adopted by members of a social system. A social system is defined as a set of interrelated units of society that are engaged in joint efforts to solving or accomplishing a common goal. Based on these considerations, three types of innovation decision have been identified in considering adoption of innovation. They are optional innovation decisions, collective innovation decisions, and authority innovation decisions. Optional innovation decision is the decision made by an individual who is in some way distinguished from others in a social system. Collective innovation decision is a decision made collectively by all individuals of a social system while authority innovation decision is the

decision made for the entire social system by few individuals in positions of influence or power – that is, where the opinion leaders or government come in as a strong factor in adoption of ART. Two factors determine what particular decision to be taken; whether the decision is made freely and implemented voluntarily and who made the decision to adopt the method. This is where the husband/wife support becomes highly imperative for the infertile woman/man, especially in terms of finance and other social supports. This has allowed Rogers to distinguish five groups of adopters as ideal types, that is, the innovators, early adopters, early majority, late majority and the laggards.

Innovators are the first individuals to adopt an innovation. Innovators are venturesome and educated, have multiple sources of information and show greater propensity to take risks. They appreciate technology for its own sake and are motivated by the idea of being a change agent in their reference group. They are willing to tolerate initial problems that may accompany new products or service and are willing to make shift solutions to such problems. Innovators are willing to take risks, younger in age, have the highest social class, have great financial lucidity, very social and have the closest contact to scientific sources and interaction with other innovators. Risk tolerance is accommodated in case the adopted technology ultimately fails. The financial resources of this group help them to absorb the failures (Rogers, 1962 & 1983)

Early Adopters are the second fastest category of individuals who adopt an innovation. They are the social leaders, popular and educated. These individuals have the highest degree of leadership with respected opinions among the other adopter categories. Early adopters are typically younger in age, have a higher social status, have more financial lucidity, advanced education, and are more socially forward than late adopters. However, they are more discrete in

adoption choices than innovators. They make judicious choice of adoption which will help them to maintain central communication position among others (Rogers, 1962, 1983 & 2003)

The early majority: the individuals in this category adopt an innovation after a varying degree of time. They are deliberate and have many informal social contacts. This time of adoption is significantly longer than the innovators and early adopters. Early Majority tend to be slower in the adoption process, have above average social status, contact with early adopters, and seldom hold positions of opinion leadership in a system (Rogers, 1962 & 1983). The late majority are the individuals who will adopt an innovation just like average members of the society. They are skeptical traditional and of lower socio-economic status. These individuals approach an innovation with a high degree of skepticism and after the majority of society has adopted the innovation. Late Majority are typically skeptical about an innovation, have below average social status, very little financial lucidity, in contact with others in late majority and early majority, very little opinion leadership.

Laggards are the last to adopt an innovation. Laggards are technology skeptics who want only to maintain the status quo. They tend not to believe that technology can enhance productivity (that is those who embrace ART reluctantly) and are likely to block new technology purchases. Unlike some of the previous categories, individuals in this category cannot be swayed by the opinion of the experts/leaders. These individuals typically have an aversion to change agents and tend to be advanced in age. Laggards typically tend to be focused on “traditions”, have lowest social status, lowest financial fluidity and oldest of all other adopters. They maintain contact with only family and close friends but very little or not to opinion leadership.

In spite of Innovation Adoption Theory's insightful analysis on how an innovation can be adopted over the course of one's life, there is little emphasis on the individual's (infertile person's) perception of the health implications of infertility and belief in the efficacy of medical/technological intervention. Therefore, to address these loopholes, the Health Belief Model (HBM) is incorporated to explain the lacuna.

2.2.2 Health Belief Model

The Health Belief Model (HBM) was developed by researchers at the United States of America- (USA's) Public Health Service in the 1950s. It was inspired by a study of why people sought X-ray examinations for tuberculosis (Becker, 1974)). It relates largely to the cognitive factors predisposing a person to health behaviour and ability to predict the sick person (e.g. infertile person's) decision to utilize a mode of treatment (in this circumstance, assisted reproductive technology - ART). It attempts to explain and predict a given health-related behaviour from certain patterns of belief about the recommended health behaviour and the health problems that the behaviour was intended to prevent or control. The HBM incorporates a component of the behaviour and the individual's perception of the health problem and motivation to act in a particular way (Jegade, 1995; Igun, 1992 and Rosentock, 1978). The model therefore is based on the argument that a person will take health-related action (for instance, adopt medication to treat infertility, use condom to prevent sexual transmitted diseases, etc.), if that person (1) feels that a negative health condition (e.g. infertility), can be avoided; (2) has positive expectation that by taking a recommended action (e.g. ART) they will avoid a negative health condition (in this respect, infertility), and (3) believes that they can successfully take a recommended health condition.

The value of the model lies in its ability to predict compliance, determine peoples' health seeking behaviour and health maintenance patterns and help to predict user's behavioural pattern in choosing between means/methods and ends/goals. However, Hegna (2010) admonishes that for HBM to predict whether an infertile person would use modern technologies (ART) or not, there is the need to incorporate Normative Beliefs variable of Reasoned Action Model (RAM) and Possible Selves of Markus' Working Concept (p. 3815). This, then, would put the health problem (infertility) being examined as dependent variable and the model (HBM) as independent or predictor variable.

The HBM is interactive as each step influences the others and is based on three fundamental dimensions: the individual's readiness to comply with a recommended action, based on perception of "threat", the motivating and enabling forces that determine what the individual will do and the compliance behaviour that would be exhibited (Glanz, Lewis, & Rimer, 1997). Readiness is contingent on three sets of related variables: one, belief in vulnerability to illness for preventive behaviour and estimation of the degree of threat (perception of consequences, which could be severe, serious in both physical and social dimensions); two, motives to reduce the threat with related goals for good health, and three, a belief that compliance will reduce the threat and it will not cost more, and will lead to good health. (Though, infertility is not a disease, but, one can still view care within these three sets of related variables). A person believes that his health is in jeopardy and the person must believe that he can have the disease yet not feel the symptoms. This constellation of beliefs was later generally referred to as "belief in susceptibility". The person perceives the "potential seriousness" of the condition in terms of pain or discomfort, time lost from work, economic difficulties, stigma or other outcomes. On

assessing the circumstances, the person believes that benefits stemming from the recommended behaviour outweigh the costs and inconvenience.

Note that this set of beliefs is not equivalent to actual rewards and barriers (or, reinforcing factors). In the health belief model, these are "perceived" or "anticipated" benefits and costs (predisposing factors). The person receives a "cue to action" or a precipitating force that makes the person feel the need to take action. Arising from the foregoing, HBM can be further modified into two broad headings; health-seeking behaviour and decision-making process. For a person to remain healthy, he/she must make decisions and act upon them. Decision depends on human nature, which is often informed by culture and the environment. Others are biology and pattern of health seeking behaviour. An infertile person, for instance, would make a healthy decisions, if she believes that she is susceptible to both social and biology impairment and the degree of susceptibility may be, either severe or mild. Susceptibility is at three levels: that is high, medium and low susceptibility (Strecher & Rosenstock, 1997 and Becker, Radius & Rosentock, 1978). It is possible for someone to feel highly susceptible to health problems, but his/her willingness to seek healthcare appropriately is an important factor which will predispose the person to take action. The action an individual will take is contingent on how one perceives the severity of such health problem(s) (Jegade, 1995). One may probably not take action unless he/she believes that the behaviour will result in serious physiological and/or social impairment. This probably explains all efforts being employed by those suffering from infertility to get solutions, including ART.

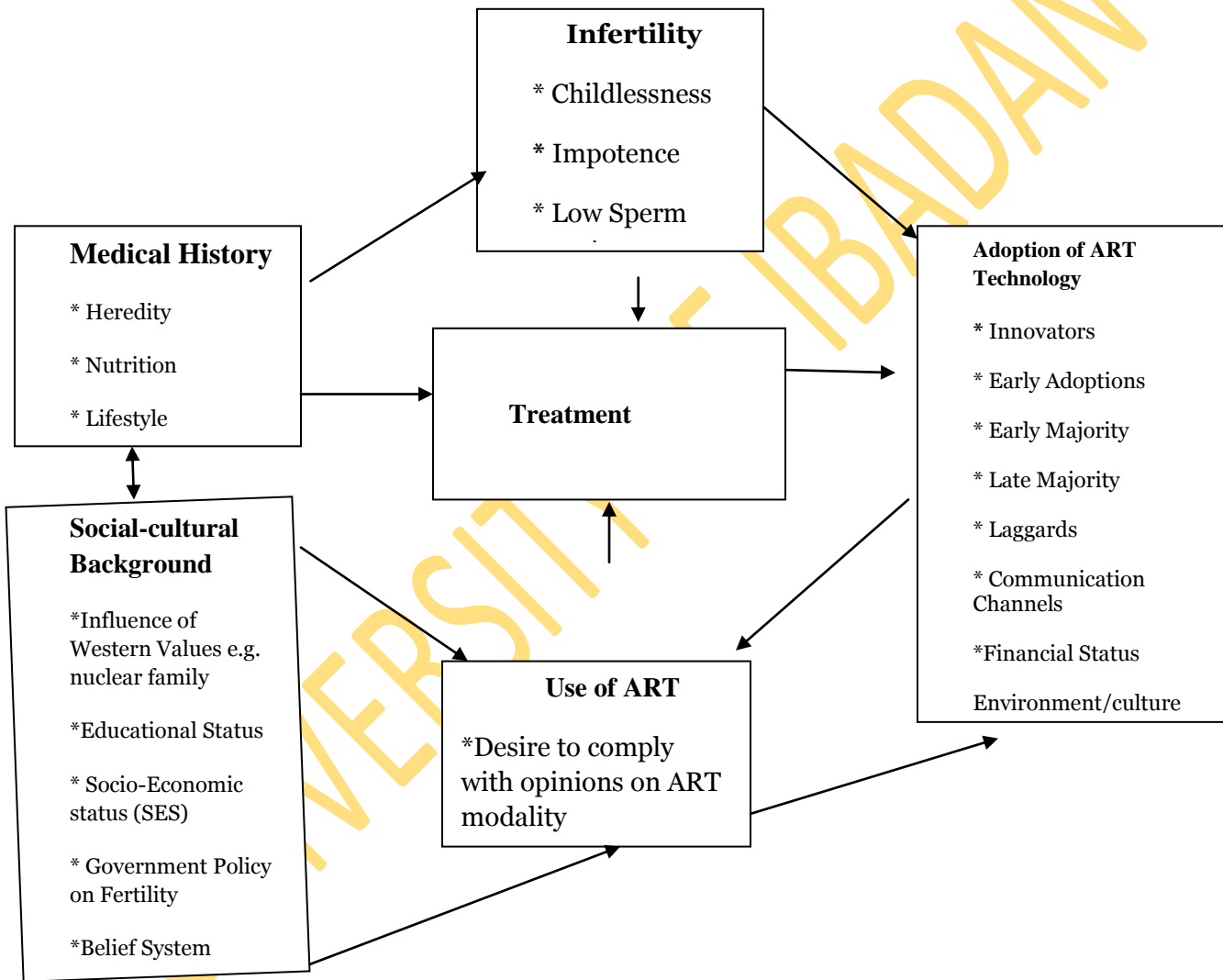
The process of taking action or not (or take a late action) depends on certain factors, irrespective of the level of susceptibility. Such factors have been identified and classified into

two categories: one, personal dispositional factors, such as socio-demographic variables like age, sex and marital status. Two, enabling factors, such as income, place of residence, occupation, belief system (Brieger, 2002). Infertile persons that are highly placed in terms of income and occupation status may likely take early action and very promptly embrace ART against those in the low echelon of the social ladder.

Though infertility is not a disease, but care for it can be viewed within three sets of related variables. However, the model leaves much still to be explained of the enabling factors which are reinforcing one's behaviour. These factors become increasingly important when the model is used to explain and predict more complex lifestyles or health behaviour that need to be maintained over a period of time, such as infertility and ART modality with a long period of treatment in some cases. The model, however, overly simplifies representation of a complex reality in that the model is not predictive about the unintended personal and public consequences. Innovation is often not a free process but a development within certain value orientations and a part of larger historical setting with its idiosyncrasies. Public consequences such as cultural lag and social opprobrium that may be experienced in case of infertile persons who used ART to conceive, for example, may be the effects of the innovation and its adoption. There also may be its spin-off effects on the users in terms of social and financial costs including time duration. However, the conceptual framework and subsequent methodology are intended to address these gaps.

2.3. CONCEPTUAL FRAMEWORK

FIG 2.2 THE ACCEPTANCE OF ASSISTED REPRODUCTIVE TECHNOLOGY



The conceptual framework lays emphasis on the prevailing norms, values and customs, which dictate gender roles and responsibilities on infertility and the adoption of ARTs as remedy.

Therefore, these roles may be serving as constraints or compliments to assisted reproductive technologies adopters as an intervention for conception. This may either be early or later. Some may not even utilize the modality. The perspective also is an outcome of the theory and models above which opine that action taken or to be taken on infertility is predicated on the premise that a person's intention to perform a particular action can be predicted from a combined effect of the person's attitude, social factors and subjective norms or societal demands concerning the action and societal responses to the action taken or to be taken.

2.4 HYPOTHESES

Based on the objectives of the study, review of literature and theoretical framework the following hypotheses were formulated for further probing of the subject matter:

1. Perception of what is infertility would reinforce ART modality acceptability
2. Awareness and knowledge of ART intervention will affect its acceptability
3. Perception of ART intervention will significantly affect its acceptability
4. Attitude of people towards ART intervention will significantly affect its acceptability.
5. Social, cultural and demographic variables (age, religion, and gender, duration of marriage, family support, residential area and education) of individual would affect the acceptability of ART.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The research design, instruments and method of data collection and management are explained in this chapter.

3.1 Study Area

Ijebu is one of the sub-ethnic groups of the Yoruba speaking people of south-western Nigeria. The people are located in the tropics and they represent eight percent of the total Yoruba population. Ijebu division of Ogun State occupies a total landmass of 5,690.02sq kilometres with estimated population of one million, nine thousand, eight hundred and fourteen. This represents 35 percent of the total land of Ogun State. The people inhabit six out of the twenty Local Government Areas (LGAs) of Ogun State. Ijebu dialect of the Yoruba language is spoken predominantly, in addition to English language. Ijebu is the home for people from all walks of life. Demographic evidence shows that a greater proportion of the inhabitants, about 55.51 percent live in urban areas in such places like Ijebu-Ode, the provincial headquarters, Ijebu-Igbo, Ijebu-Oru, Ago-Iwoye, Ogbere, Iwopin, Odogbolu and Atan. The rest 44.49 percent are in the rural settlements. The division is rich in agricultural products. Other commercial activities equally take place in the state.

Territorially, with the exception of Ogun Water Side Local Government that has fresh water swamp forest, the place enjoys predominantly rainforest vegetation through all seasons.

Oyo, Ondo and Osun States Ondo are in northern part of the division, and it is bounded in the South by Lagos and the Atlantic Ocean. Oyo, Osun and Ondo States cover the eastern parts of the area and in the West, the Ijebu is bounded again by Lagos State and Atlantic Ocean (Appendix vi). In terms of relief, the area is generally of low land but not below 120m. The low land is suitable for agricultural practices. The average temperature of the area is given as 30°C constant (Onakomaiya, Oyesiku & Jegede, 1992). The annual mean rainfall is between 2000mm and 2600mm with two peak periods in June and September.

The Ijebu people mostly engage in agricultural production like lumbering, horticulture, fishery and agro-allied industries. There are, however, pockets of commercial activities here and there, due to the presence of a public owned College of Education (now University of Education) in Ijagun, Ijebu-Ode with another public University in Ago-Iwoye – Olabisi Onabanjo University. There are few manufacturing industries in Ijebu-Ode, Ijebu-Igbo and Iwopin (Ijebu Water Side). In terms of natural resources, the Ijebus are rich in such resources like luxuriant forest vegetation, good sandy beaches, large limestone deposits, tar sand deposit, and glare sand, clay, kaolin, feldspar, Mica, phosphate and bitumen. They also involved in agricultural production like cocoa, oil palm, maize, cassava, rice, yam, cocoa yams, fruits, vegetable, kola nut, and others. The Ijebu people mostly engage in agricultural production like lumbering, horticulture, fishery and agro-allied industries. The whole of Ijebu province is homogeneous. The people speak the same dialect, a variant of the Yoruba language. And they all recognise the Awujale of Ijebu Ode as the head or the first among the kings. Also, Ijebu Ode is recognised as the headquarters of all Ijebus.

Ijebu historical accounts are traced to three migrative expeditions. One account has it that the Ijebu migrated from Ile-Ife, the cradle of Yoruba race or Benin and were led respectively by Olu-Iwa, Arisu and Ogborogan (Obanta). However, twelve sectors in Ijebu-Ode, especially, trace their descendants to different epochs who came to Ijebu-Ode before Obanta. Two other sectors claimed Obanta as their progenitor, while five trace their descendants to Olu-Iwa, Arisu and Ogborogan (Obanta). Some, however, trace their progenitors to identified or unidentified early settlers before the migrants came. There were other rulers who joined other towns like Ijebu-Igbo, Ijebu-Oru, Ago-Iwoye and Ijebu-Ife. They all share compelling similarity with Ife's historical antecedents and still hold allegiance to Ile-Ife in certain areas, especially the belief system.

The belief system in this area is characterised by monotheism, that is, belief in one Supreme God. However, methods of worshipping God are very diverse. Apart from Christianity and Islamic religions that are given prominence and far spreading, even, into the villages, the Ijebu also believe in traditional religions. A number of objects of worship are found in these religions with various gods in cases of traditional religions as intermediaries, with Jesus Christ and Mohammed serving as intermediaries for Christians and Moslems respectively. The intermediaries in traditional religion are called *Irunmole or Orisa*. The traditional gods are many and they are sometimes called *Igba-Irunmole* (that is Irunmole that are two hundred). These gods include *Esu, Obanta, Osun, Yemule, Obirin Ojowu, Oluwaye, Oluweri, Olomitutu*, etc. These gods are male and female types.

The genderisation of gods in Ijebu tells of their belief in the health of different individuals, including the fertility of women. This also directs decision-making and health

seeking behaviour. It is not surprising that the religious celebrations and festivals are hardly distinguishable from the secular life styles of people. These festivals and celebrations, especially victuals, affect significantly fertility and pregnant matters; the outcomes and other postnatal issues. The victuals involve incantation, invocation sacrifices and prayers. Specially trained diviners, witches, sorcerers and magicians are helping in one way or the other to perform these victuals.

Fertility, like any other religious issue in Ijebu-land is held as very important and sacrosanct and all hands are always on deck to see the outcome. Again, one other religious factor is the veneration of the ancestors, believing this to be the link between the living and the departed members of the family. There is widespread belief that the ancestors sometimes choose to come back into the lineage as a new born baby. This belief in particular explicates of importance attached to pregnancy. This belief in ancestors dictates names given to the perceived returnees like *Okusende* (the dead has returned), *Okude* (the dead has come), *Yetunde*- (the departed mother has returned), and *Babatunde* (the departed father has returned). The religious aspect also involves their closeness to natural things created by God, such as herbs, leaves, roots, birds, animals, water and other cosmos materials that can be used to prevent early or premature labour and delivery. They are also using these materials for the health of the mothers, the pregnancy and the babies.

One other area of similarity is marriage. Marriage system in the study area is not different from other Yoruba settlements with division between the monogamous and polygamous types. The monogamous type is influenced by Western culture and the incursion of Christianity into Africa. One man, one wife custom is also making in-roads into other areas of religion, especially

Islam due to economic exigency, which is dictating that one needs to be frugal with little and limited resources. Though, there is a slight difference in the villages, polygynous relationship is still very common. Men marry to many wives to increase their population and to have help on their farms. This notion reflects in their attitude to family control and health seeking behaviour to maternal health issues including infertility. To them, they have heard about family planning methods, but are not willing to start practising this because they want many children.

There is another practice in this area that cannot be overlooked: this is what can be called “serial marriage” with a woman marrying different men in succession. This entails one woman moving from one man to another man and so it is not uncommon for a woman to have a child or two for different men. This is not because the previous husband is dead, but it is just a vogue noticeable in the towns but spreading into the countryside (Alliyu, 2004 and Edewor, 2001).

This practice is different from polygynous type because the woman in question marries a man at a given period, and later separates from him, and goes to marry another person without any formal process of divorce from the former. This, again, would have adverse effects on the health seeking behaviour of the woman in question because pregnancy and/or infertility care is hardly the responsibility of the woman alone, but of the husband, the kins and the in-laws. For instance, one of the husbands may prefer orthodox method while subsequent one(s) may opt for traditional choice. This, however, depends on where one resides. Residential patterns can be divided into two distinct types, one, the modern type and the compound-like with discrete fenced areas. This is because the compound accommodates some family members, including their wives and children. In these types, brothers and male members of the family live together in the

compound with their wives. The wives are categorised hierarchically with descriptive prefixes like *Iyale* the eldest wife, *Iyale aarin* the one in the middle, and the *Iyawo*: the junior wife. This type is very common in Odogbolu, Ijebu-Igbo, Ago-Iwoye and the rural areas. Rural area housing/residential pattern may not necessarily be fenced. The other type is the modern housing pattern which is a single unit of a bungalow, one-storey building with flat-like demarcation or just any upstairs with about eight rooms in both ground floor and upstairs. Examples abound in Ijebu-Ode and Government Reserved Areas (GRAs). The pattern of living common with this arrangement is the nuclear family system. One common factor that joins the two types is the practice of extended family with the eldest male as the head or *Baale*. The compound again shares her boundary with other compounds with several of these compounds or housing units forming a quarter or *Itun* and is headed by *Olori-Itun* (the head of a quarter). When *Ituns* are combined together they become a political ward with a head or high chief or a *Baale* presiding. For example, in Ijebu-Igbo, there are eleven of such big areas each with a head, who is answerable to the Orimolusi- the first Oba among all Obas in Ijebu-Igbo. A village is, however, headed by the *Baale* (a chief), who is responsible to the King/Oba of the supervising town. Extended family is a common practice in the villages while nuclear ones intermixing with extended family are the practices in the towns/urban areas.

3.2 Research Design

The research design for this study was the combination of descriptive and cross sectional design. Relatively cross sectional design was found appropriate because of its utility in collecting quantitative data with questionnaire within a short time. The adoption of this type involved the use of survey method. It also described the methods adopted in terms of quantifiable and

qualitative techniques to collect and analyse data. The survey method was complemented with qualitative research method by using in-depth interview on purposively selected opinion leaders, health workers including Traditional Birth Attendants (TBAs) and the religious leaders. Key Informant interviews - KIIs) were on the ART clients and the specialists. Quantitative method is made up of structured questionnaire (Appendix I); which are of both open and close ended questions designed to elicit responses on the perception of people on ART and Qualitative method is made up of In-depth Interview (IDIs) and Key Informant interviews – KIIs(Appendix II & III).

3.3 Study Population

The study population comprised male and female adults aged 18 to 60 and 15 to 49 years respectively among the people of Ijebu division of Ogun State.

3.4 Sample Size

Sample size was determined with the adoption of the following formula: $n = Z^2 pq / d^2$. n represents the maximum sample size, z is the normal deviation, p stands for prevalence of infertility, $q = 1 - p$ and d is the precision of the study alpha at 5 %.(Oyetunde & Ofi, 2010)

Where $Z = 1.96$, $q = 0.42$ and $d = 0.05$. $n = 374$ per LGA

Respondents = 748, Percentage attrition 10% = 87, Total respondent = 835

3.5 Sampling Techniques

3.5.1 Selection of Local Government Areas

Ijebu division of Ogun State has a total of six Local Government Areas (LGAs), that is, Ijebu Ode, Odogbolu, Ijebu North, Ijebu North East, Ijebu East and Ogun Waterside. The two urban

LGAs (Ijebu North and Ijebu Ode) were purposively selected because they are the only urban areas where specialist hospitals are situated. This is presented in Table 2.

Table 3:1 Selected LGAs by their nature

	Local Government Areas	Nature	Remark
1	Ijebu Ode	Urban	Selected
2	Odogbolu	Rural	Not Selected
3	Ijebu North East	Rural	Not selected
4	Ijebu North	Urban	Selected
5	Ijebu East	Rural	Not Selected
6	Ogun Water Side	Rural	Not Selected

3.5.2 Selection Of Households

Total Enumerated Areas (EAs) in Ijebu Ode was 618, while there were 1265 in Ijebu North, households numbered 39345 were in Ijebu-ode .while Ijebu North had 61722. The following formula was adopted in the selection of EAs

Selection of EAs

$n = Z^2 pq / d^2$ n represents the maximum sample size, z is the normal deviation, p stands for prevalence of infertility, $q = 1 - p$ and d is the precision of the study alpha at 5 %. (Oyetunde & Ofi, 2010) Where $Z = 1.96$, $q = 0.42$ and $d = 0.05$. $n = 374$

Number of EAs selected was 374 from each LGA. A simple random method of selection was adopted in the selection of the 374 EAs.

Selection of Households

There were 17215 households in the selected EAs for Ijebu Ode, while in Ijebu North, 23674 households were in the EAs. A purposive selection of 10% representation was done from each EA resulting into 1721 households in Ijebu Ode and 2367 in Ijebu North.

The following formula was adopted in the selection of respondents among the HHs.

$$n = \frac{Z^2 \times p \times q \times N}{Z^2 \times p \times q + (N-1) e^2}$$

Where,

N = sample size, P = proportion of success for the indicator, q = 1-pz = standard normal variation at a given level of significance (z= 1.96 at levels of confidence), N= Population size, e = Precision rate or amount of admissible error in the estimate.

A total of 1677 households were selected, i.e. (894 households in Ijebu North and 783 in Ijebu Ode). In every 10 households, 5 were selected through systematic sampling at interval of 2. As a result of this, out of the 894 HHs in Ijebu North, 445 were selected, while 390 were selected from 783 in Ijebu Ode. In all, a total of 835 were selected for the study. In a situation where no member of a household was available due to death, migration, travel, etc the next household was included for the study. In any compound where there were more than one household, a balloting technique was adopted in the selection of a respondent among the HH, either male or female head of household

3.5.3 Selection of IDI Respondents

The selection of key informants, that is, service providers- four in number- in the study was by purposive sampling because they are known experts in the field with notable wealth of experience which they have acquired over a period of time of rendering assistance to infertile persons. Twenty respondents who are mainly adults of reproductive ages and above formed the nucleus of the In-depth interviews to understand the perception of the public on assisted reproductive

technologies, and opinion leaders, clergy men/women, retired nurses and traditional birth attendants (TBAs). But only ten - six female and four male - that were currently receiving ART treatment were selected for key informant interviews (KIIs). That is the interview with infertile women and men was mainly for those on consultation and/or treatment for ART from the medical practitioner(s). The medical practitioners introduced the researcher and his research assistant(s) to the clients and informed the respondents about the purpose of the study. Some were also selected through snowballing method in which the doctors or significant others were contacted to describe them to the researcher.

In the course of interviews, the researcher and/or his research assistants took down notes of observations and particular statements of respondents. These notes were later used after transcription and they later formed part of the data and basis of data interpretation.

3.6 Research Instruments

3.6.1 In-Depth Interviews (IDIs)

The in-depth interview was a major source of data collection among the category of respondents on ART and opinion leaders. Information was elicited among adult male and female respondents who are of the ages ranging from 18 to 60 and 15 to 49 years respectively. Questions on their understanding of infertility, perceptions about causes, consequences, coping mechanisms and societal interpretation of ART intervention were discussed. Others were cultural challenges to ART and stigmatisation. Their responses were recorded in audiotape cassettes, transcribed and typed.

3.6.2 Key Informant Interviews (KIIs)

Ten KIIs were conducted with those who are currently into ART intervention and four medical doctors who are specialists on ART in the selected two local government areas. Information that were elicited among respondents included issues on perceptions and understanding of infertility, perceptions about causes, consequences, coping mechanisms and treatment seeking patterns of persons experiencing infertility and societal interpretation of ART. Others were cultural challenges to ART and stigmatisation. Their responses were recorded in audiotape cassettes, transcribed and typed.

3.6.3 Structured Interview (Questionnaire)

Information on socio-demographic characteristics of respondents' sexual and reproductive health behaviour and practices, fertility experiences, perceptions and attitudes towards causes, problems, coping mechanisms, attitudes and dispositions of family members and in-laws, treatment and prevention of infertility were captured through the SI. This technique was used to complement the IDIs and other methods adopted.

3.7 Reliability of the Research Instrument(s)

The reliability of the research instruments was based on the respondents' responses to the question items of the interviews and questionnaires used for the study to ensure that the research instruments measure what it purported to measure. An empirical evidence of indicators used in the research instrument had 0.72 as its reliability coefficient after the administration of the instrument with two weeks interval with a representative sample of 40 respondents selected from Sagamu Local Government of Ogun state.

3.8 Validity of the Research Instrument

The validity of the research instrument was based on the analysis of the responses generated from the in-depth and key informant interviews (IDIs and KIIs) conducted among the respondents. To ensure face and content validity of the instrument, a drafted copy of the instrument was submitted to the supervisor of the study and three other sociology experts in the Department of Sociology for their comments on the suitability and clarity of the items contained in the instrument. Items with less than 70% agreement by the experts were either eliminated or restructured.

3.9 Method of Data Collection

Data collection started from in-depth interview and KIIs, then the structured interview. The in-depth interviews, KIIs and structured interview were conducted by the researcher and one research assistant. This is necessary to have a firsthand experience of the situation on the ground. Three research assistants were recruited and trained. All of them were first degrees holders. The assistants were selected based on their particular understanding of the subject matter and the cultural and geographical mapping of Ijebu. The essence of the training was to intimate them with the purpose of the study and how to select and delineate their survey population. They were made to go through the questionnaire with the researcher who encouraged them to raise questions, or point to any ambiguous question. All these were done and the areas that were not properly understood were clarified. Apart from this, there was translation of the instrument from English to Yoruba and from Yoruba to English. This is to capture respondents' deep understanding of the specific way the subject matter was addressed in Yoruba. The assistants were recruited from Ijebu

communities. This was predicated on the fact that they would be able to work in a terrain they are familiar with.

3.10 Data Management

The quantitative and qualitative data collected were processed, cleaned and sorted to make them more meaningful and amenable for answering the research questions. The data were edited for accuracy, completeness, clarity, legibility and consistency. The completed and edited quantitative instruments were tracked by using tracking sheets to ensure that all cleaned instruments were accounted for. Data were transferred to Statistical Package for Social Science (SPSS) version 14.0. SPSS for further processing and analysis. Qualitative data, on the other hand, were recorded in audio – recorder and each recorded material were labelled according to the category of the respondents. Each recorded interview was transcribed and/or translated if Yoruba language was used. Note taking during the interviews was also used to fill any missing gap during the sessions of interview. The transcribed interviews were cross checked and errors in transcription corrected before analysis.

3.11 Data Analysis

The qualitative data were collected through tapes and note taking. The data were later transcribed, translated, typed and stored in electronic form and analysed by the use of manual content analysis. Interview scripts were read and codes were assigned to classify information based on research questions and objectives. In addition, field notes were used to complement and ensure consistency and non-alteration of context specific interpretation and meaning of findings. Some aspects of discussions were reported verbatim to draw out important insight on the discussion. The

quantitative data were collected on house hold bases. The descriptive and inferential statistics on the collected data provided information such as frequency, simple percentage and pearson moment correlation method was used as a statistical tool. Data for the study were analysed with the use of simple percentage and chi-square statistical methods. Qualitative data responses were transcribed by the research assistants and content analysis was used to analyse the data.

Table 3.2. Matrix Showing the Instrument for Data Collection and Measurement of Specific Objectives of the Study.

Research Instrument	Objective 1	Objective 2	Objective 3	Objective 4	Data Analysis
Questionnaire	X	X	X	X	Chi Square
IDI	X	X	X	X	Content Analysis
KII	X	X	X	X	Content Analysis

3.12 Ethical Considerations

The principles of ethics governing research on human beings were observed strictly in this study. Along the key research ethics are: benefit, risk, justice, non-maleficence, confidentiality of data, beneficence, and translation of protocol, voluntariness, alternativeness to participation and due inducement. In this regard, the researcher applied for and got ethical approval (UI/UCH EC No NHREC/05/01/2008a) for this study from the Institute for Advanced Medical Research and Training (IAMRAT) Review Committee, University College Hospital, (UCH) Ibadan (appendix v).

Confidentiality of Data: Respondents were not required to write neither their names nor home addresses. Data were kept strictly for the study in the custody of the researcher.

Beneficence: The study would contribute to knowledge on causes and treatment of infertility in the area; hence, it would assist policy makers at formulating policies that would improve maternal health and actualisation of the Millennium Development Goals (MDGs) in the area.

Translation of Protocol: Consent forms, questionnaires and purpose of the study were translated into the local languages of the respondents.

Non-Mal-efficiencies: Infertile women were made to respond to some questions at a time not convenient for them due to hyper-sensitivity of the issue involved among the locals within the area of study.

Voluntariness: Respondents and discussants were informed about the main purpose of the study and their freedom to withdraw participations if and when deemed fit.

Alternativeness to Participation: Any respondent who chose not to participate in the study was not in any way penalised or prevented from any benefit or health care treatment in their respective care centres.

Due inducement: No compensation in any form was given to the participants. The purpose of the research was explained to prospective respondents and they were selected for the study after they had given their consent to participate.

CHAPTER FOUR

4.0. DATA PRESENTATION, INTERPRETATION AND DISCUSSION

Data were made up of both qualitative and quantitative types. Qualitative data were used to gather information on the infertile persons coupled with data from experts and opinion leaders on the subject matter and quantitative data were used mainly to gather information on public perception of infertility and the use of ART. Socio-demographic characteristic of respondents are divided into two tables to enable one to explain social and demographic characteristics of respondents thematically to accommodate variables such as residence, nature and duration of marriage, etc. as these have implications on acceptability of ART.

TABLE 4:1 Demographic Characteristics of Respondents

Group	Demographic	Frequency	Percent
Sex	Male	444	60.7
	Female	288	39.3
	Total	732	100.0
Age	20-24years	71	9.7
	25-29years	147	20.1
	30-34years	84	11.5
	35-39years	102	13.9
	40-44years	289	39.5
	Above 45years	39	5.3
	Total	732	100.0
Marital Status	Single	42	5.7
	Married	313	42.8
	Separated	363	49.6
	Divorced	14	1.9
	Total	732	100.0
Educational Level	No formal Education	43	5.9
	Primary Education	85	11.6
	Secondary Education	169	23.1
	Higher Education	435	59.4
	Total	732	100.0
Occupational Status	Farming	37	5.1
	Trading	233	31.8
	Civil Service	226	30.9
	Craft / Artisan	221	30.2
	Others	15	2.0
	Total	732	100.0

Demographic characteristics are significant in situating, explaining and understanding patterns and structure of associations existing in society and how these relationships may influence the outcome of social relations. From table 1, male and female respondents were 60.7% and 39.3% respectively. Male respondents were in majority because males head households in patriarchal societies with few exceptions, where a woman heads it, it may be due to the death of the husband or may be in case of separation from the husband. Thus, there is a high tendency to appreciate effort by all means possible on infertility including utilization of ART to have offsprings that would succeed the men, as it is customary of men to head households. The age distribution of respondents indicates that respondents were distributed within age ranges of 20-24 years - 9.70%, 25-29 - 20.1% and 30-34 - 11.3%. Others were those of ages 35-39, 40-44 and 45 and above stood at 13.9%, 39.5% and 5.3% respectively. Having majority of the respondents within the ages of 25 – 40 years and above, helped to demonstrate that in the South- western Nigeria, there is a particular emphasis placed on maturity in age before going into marital relationship (Isiugo-Abanihe, 2003). Age at marriage is noted to be one of the proximate factors underscoring fertility and procreation activities in Nigerian society which also influences the rate of ART utilization.

Marital status has shown that single 5.7%, married 42.8% divorced 1.9% and separated 49.0%. However, married couples who are living with infertility are likely to accept ART utilization than other marital categories. The table equally presents the distribution of respondents by educational qualifications. 5.9% of the respondents had no formal education, 11.6% of the respondents had primary education, and 23.0% had secondary education, and 59.6% read beyond secondary school level and 5.9% recorded against the non- formal category.

This is because education stimulates individual economic independence, decision-making and liberal thought towards new innovations, including ART and its acceptability (Obayan, 2003; Wills, 2000 and Tettegah, Babu & Lestor, 1982). Occupation of the respondents reveals that farmers were 5.1%, while 31.8% were business men/women and 30.2% were artisans. Others were civil/public servants 30.9% and sundry workers including security personnel, clergy men/women, herbalists/traditional birth attendants (TBAs) retired civil/public servants, and so on were 2%. This profile is not unexpected, as macro, small and medium scales enterprises thrive along the civil/public services works in Ijebu as a whole. However, it can be inferred that the nature of occupation of the respondents may determine their preference for ART utilization and acceptability. Thus, civil servants and business men/women, due to their exposure, are likely to have more acceptability and utilization of ART than others. Other social variables are situated below in table 4.2

TABLE 4:2 Social characteristics of respondents

Group	Demographic	Frequency	Percent
Religion	Muslim	261	35.7
	Christian	463	63.3
	Traditional	8	1.1
	Total	732	100.0
Christian Denomination	Protestant	155	21.2
	Catholic	82	11.2
	Pentecostal	226	30.9
	Total	463	63.3
Marriage Duration	Less than 5 years	19	2.6
	5 - 9 years	147	20.1
	10 - 14 years	198	27.0
	15 - 19 years	191	26.1
	20 - 24 years	23	3.1
	Above 24 years	154	21.0
	Total	732	100.0
Income Level	N18,000 or less	486	66.4
	N19,000 - N23,000	74	10.1
	N24,000 - N28,000	76	10.4
	N29,000 - N33,000	40	5.5
	N34,000 - N38,000	20	2.7
	N39,000 - N43,000	42	5.7
	N44,000 - N48,000	18	2.5
	N49,000 and Above	11	1.5
	Not Regular	5	.70
	Total	732	100.0
Residence Duration	Less than 5 years	249	34.0
	5 - 9 years	170	23.2
	10 - 14 years	148	20.2
	15 - 19 years	125	17.1
	20 years and Above	40	5.5
	Total	732	100.0
Ethnic group of Husband and wife	Yoruba/Yoruba	427	58.3
	Yoruba/Edo	139	19.0
	Igbo/Igbo	61	8.3
	Benue/Yoruba	33	4.5
	Hausa/Hausa	33	4.5
	Igbo/Yoruba	39	5.3
	Total	732	100.0

Accordingly religion is highlighted thus: 35.7% of the respondents were Muslims 63.3% were Christians. However, Christian respondents were further divided along the line of affiliations or sects; such as Catholic, 11.2%, Protestant, 21.2% and Pentecostal 30.9% respectively; but only

1.1% was traditional worshippers. This shows that majority of the respondents within the sample size or respondents were Christians. However, the preponderance of Muslims is attributed to early contacts with Muslim traders from the Northern regions coming through Ilorin, and then, Ibadan (Falola & Adediran, 1986). The percentage of the traditional believers can be explained with what Ogunba (1973) in Akintan, (2001) describes as resilience of traditional religion and the belief system among the Ijebu people which is noted to be a major plank for cultural stability and closeness of people to traditions. Christian respondents of 63.3% were further divided into Protestant, Catholic and Pentecostal denominations. The results showed that Protestants were 21.2%, while Catholics and Pentecostals were 11.2% and 30.9% respectively. Religious belief is understood to be a major plank for the acceptance of ART and other innovations.

The analysis of distribution of respondents by length/duration of marriage for married couples as presented in above shows that majority of the respondents had been married and staying together fairly enough to understand the intricacies of marital issues, especially the one bordering on infertility as recorded on the table: Less than 5 years of marriage were 2.6%, 5-9 years were 20.1%, 10-14 years were 27%, 15-19 years were 26% , 20-24 years 3.1% and 25 years and above were 21%. Duration of marriage in Ijebu communities and elsewhere in South-West Nigeria without successful conception is a determinant of the type of solution(s) including ART to be sought for. The distribution of respondents by monthly income can be gleaned from the table, indicating that majority of the respondents earning N18, 000 or less as indicated by 66.4% while others, were N19,000 - N23,000, N24,000 - N28,000, N29,000 - N33,000, N34,000 - N38,000, N39,000 - N43,000 and N44,000 - N48,000 were 10.1%, 10.4%, 5.5%, 2.7%, and 2.5% respectively. While the rest, that is, N49, 000 and above were 1.5% and not regular income

was 0.7%. By and large, income, in Ijebu and other places in the South-western Nigeria depends on the salary and wages paid to the civil/public servants. From this group, the multiplier effects percolate to other segments of the society. However, the outcomes, in all ramifications reflect the general tendency of income distribution in Nigeria, where majority are noted to be living below one dollar (1dollar) per day. As indicated above, income status of individuals in general, determines to a great extent response to orthodox medical care.

Residence duration of the respondents is seen on the table that more than a quarter of the respondents 34% were less than five years, followed by 5 – 9 years who were 23.2%, 10 – 14years, 20.2%, 15 – 19years, 17.1% and 20 years and above were 5.5%. Duration or length of residence in Ijebu areas like any of the South Western villages, towns and cities may be as a result of newly married couples, who move out of their parents' houses to a new location. It may also be patterned along occupation mobility, that is, the shift or migration may be due to new job or market found in a place. Duration of residence in a place is a major determinant of health seeking behaviour and access to hospital facilities.

Data also show that more than half 427(58.3%) of the respondents were Yoruba/Yoruba couples. This is followed by Yoruba/Edo 139 (19.0%), Igbo/Igbo, 61(8.3%), Yoruba/Igbo, 39 (5.3%), Yoruba/Benue, 33(4.5%) and Hausa/Hausa, 33(4.5%). In choosing marriage partners in Nigeria, there are a number of factors to be considered. These factors include parental instruction to children to choose marital partner from their own ethnic group (this explains the preponderance of Yoruba/Yoruba couples on the table). The effort is to keep inheritance within the family locality as there is the fear that one may lose his/her property (including the children) in case of death if married from “outside”. Another factor is the fear of infertility as certain areas

are considered to be inherently more prone to infertility than others (Oladeinde, 2009; Umezulike & Efetie, 2004; Savage, 1996 and Frank, 1987).

Qualitative data showed that 40% of the respondents fell within the age group of 51 to 60 years. Those above 61 years of age constituted only 30%, whereas those between the ages of 41 to 50 were 20% and those between 30-40 years amounted only to 10%. Others are community leaders, professional healthcare personnel, etc. The discretion in the selection of respondents in this regards is to elicit responses from the opinion leaders with adequate information on infertility and ART modality. This is because infertility issue borders on sexuality and its discourse shrouds in privacy and secrecy. To emphasise the foregoing, the selection shows that only 15% of the respondents were single mothers, 35.0% were married, 15% were divorcee, while 35% were separated from their spouses as at the time of the study. Marital status is noted to be synonymous with motherhood: the status associated with maturity, wisdom and respectability in Ijebu and other communities in Yoruba, South-West Nigeria. Marriage, however, without children is regarded as a curse and the infertile ones are often stigmatised and derided as liability who is not contributing significantly to the society. And the unmarried person's views on marital or maternal issues are discountenanced and therefore unacceptable. To be without a husband or a wife, when one is of age is frowned at and no respect is accorded such a person (Akintan, 2001). Regarding the forms of marriage by the respondents, 20.0% were married in the traditional way, 25% had traditional/registry marriage, while 30% chose Christian/registry marriage and 25% had Islamic/ *Nikkai* marriage. The foregoing type of marriage is followed by religious persuasion of individual respondents; Christians were 50.0%, Muslims 35.0% and traditionalists were 15.0%.

Data also revealed that 45.0% of the respondents have either primary or secondary school leaving certificate, 15% have OND/NCE certificate, and 20.0% respondents have first degree (B.A, B.Sc., HND, etc.) and second degree (M.A., M.Sc, etc). However, 20.0% did not complete school certificate. The educational backgrounds of the respondents in all, showed that majority of respondents were educated to provide meaningful opinion/answers to the research topic. On the occupational status of the respondents 35% of them were civil/public servants including teachers, nurses, etc, 15.0% were farmers – among who were retired civil/public servants, Traditional Birth Attendants - TBAs, Chiefs, etc. While, 25.0% of the respondents were traders and 35.0% were artisans (included in this category were tailors, hairdressing, etc). Occupational status is often used as yardstick to measure one's social economic status - SES and means of socio-economic mobility in the society. Many of them were low income earners with medium monthly income of N45, 000.00 – 60,000.00. The level of income as reflected above goes to confirm the general profile as obtained in the quantitative survey (Table, 4.3). SES is one of proximate determinants of healthcare consumption in sub-Saharan Africa (Orubuloye & Ajakaiye, 2003 and Walker, 2001) including acceptability of ART. Regarding the type of residence, 40.0% of the respondents adduced that they live in a room and a parlour, 20% asserted that they reside in flat of either two or three bedrooms, 15.0% stayed in a self-contain and 15.0% lived in just a room apartment, while 10.0% were made to do with any other apartments.

The respondents were made to answer questions such as value attached to children – to elicit responses on peoples' knowledge, awareness and acceptability of ART intervention on infertility, cultural interpretation of infertility, attitude towards infertility and ART intervention, social and cultural challenges of having children through assisted reproductive technology, etc.

Examine people’s perception of infertility and motherhood.

TABLE 4.3:1 DO you know what infertility is?

Gender	Response	Observed	Expected	Residual	Chi-Square	P
MALE	Yes	129	69	60	79.211	<0.05
	No	28	69	41		
	I don’t know	61	69	8		
	No response	58	69	11		
FEMALE	Yes	211	114	97	124.158	<0.05
	No	49	114	65		
	I don’t know	96	114	18		
	No response	100	114	14		

Pearson Chi-Square = 79.211; 124.158, df = 3, Sig. (2-sided) = 0.000

The table above presents chi-square analysis showing the perception of respondents on what is infertility. The result shows that there is a significant evidence to show that both male and female respondents know what infertility is with chi-square value of 79.211 for male and 124.158 for female with the probability of 0.000. To probe the understanding further, the respondents were asked that how many months a couple was supposed to have expected to have conception before, one now alludes to infertility in table 4.3.2

TABLE 4.3.2 How many months do you think a couple should wait before one can say they are infertile?

Gender	Response	Observed	Expected	Residual	Chi-Square	P
MALE	0-12 months	15	55.2	40.2	167.623	<0.05
	13-24 months 26-36 months	59	55.2	3.8		
	25-36 months	135	55.2	79.8		
	36 months or more	46	55.2	9.2		
	I don't know	21	55.2	34.2		
FEMALE	0-12 months	27	91.2	64.2	275.8	<0.05
	13-24 months 26-36 months	91	91.2	0.2		
	25-36 months	224	91.2	132.8		
	36 months or more	80	91.2	11.2		
	I don't know	34	91.2	57.2		

Pearson Chi-Square = 167.6213; 275.8, df = 3, Sig. (2-sided) = 0.000

The table 4.3.2 above presents chi-square analysis showing the perception of respondents on the number of months they think a couple can wait before they can be infertile. The result of the analysis showed that there is a significant evidence to show that both male and female respondents indicated that a couple could be referred to as infertile when they stay for at least 2 years or more as evidence with chi-square value of 167.6213 for male and 275.8 for female under the probability of 0.000. However, the qualitative data agreed with the above which asked

how long do you think an infertile couple should wait to achieve fertility before going to seek for further solution?

Seventy eight percent (78.0%) of the respondents suggested that they should wait for at least 2 years, 12% said 5 years, 5% said 4 years or more. The general opinion is that ART should be the last resort; the reasons for this are not far to seek. One, it is too costly, and it may not be effective like the natural conception, therefore, may not be reliable. Also, it is believed to be in contradiction and affront to God's creative power. However, for those that have resorted to ART intervention, there are a variety of reasons that can contribute to this decision. It may be pressure from in-laws, society's expectation and desire to be a mother, etc. However, in spite of this, respondents on IDIs said that nobody should be blamed for infertility problem as the occurrence is of God.

Respondents did not blame husband and/or wife. This is because it is only God who gives children. Women or couples who are experiencing a disproportionately high rate of infertility may be due to spiritual attack, preternatural or mystical/mysterious factors, lack of access to health care, health education, etc. Infertility in this respect may not be unconnected with high rates of STIs and lower rates of treatment and possibly higher exposure to industrial wastes, occupational/work place toxins and other carcinogenic substances:- like particles from refineries, pesticides, salons, dry cleaning effluent, etc.

This opinion confirmed one of the studies on infertility and environment in which infertile women were 27 times more likely to have handled herbicides in the two years prior to attempting pregnancy than women who were fertile (Ashiru, 2008). According to the Collaboration on Health and the Environment, infertility can be caused by genetic or

environmental factors, combinations of the two, or endocrine or immune system disorders. It can be caused in the womb, in which case genetic instructions are impacted by factors such as a mutation, a chemical problem, or an imbalance in hormones and the impact is not seen until the individual tries to procreate; or can be caused in adulthood (O' Fallon, 2005 and van Ballen and Inhorn, 2002). The responses above were probed further with the question on if the respondents have known somebody who was infertile before or presently as indicated in table 4.3.3.

TABLE 4.3.3: Do you know of anybody who is infertile or having problem to conceive?

Gender	Response	Observed	Expected	Residual	Chi-Square	P
MALE	Yes	157	92	65	71.75	<0.05
	No	71	92	21		
	I don't know	48	92	44		
FEMALE	Yes	254	152	102	106.47	<0.05
	No	118	152	24		
	I don't know	84	152	68		

Pearson Chi-Square = 71.75; 106.47, df = 2, Sig. (2-sided) = 0.000

The table 4.3.3: above presents chi-square analysis showing the perception of respondents on whether they know of anybody who is infertile or having problem to conceive. The result of the analysis showed that there is a significant evidence to show that both the male and female respondents had cause to know of someone who was infertile or who had problem to conceive. Thus, there was evidence from chi-square value of 71.75 for male perception and 106.47 for female perception under the probability of 0.000. To further discern on the respondents understanding of infertility, questions were asked on how many type of infertility they know of in the table 4.3.4

Table 4.3.4: How many type of infertility do you know?

Gender	Response	Observed	Expected	Residual	Chi-square	P
MALE	One	100	69.0	31	40.96	<0.05
	Two	79	69.0	10		
	Three	27	69.0	42		
	I don't know	70	69.0	1		
FEMALE	One	170	114	56	74.29	<0.05
	Two	131	114	17		
	Three	43	114	71		
	I don't know	112	114	2.0		

Pearson Chi-Square = 40.96; 74.29, df = 3, Sig. (2-sided) = 0.000

The table 4.3.4 above with chi-square analysis showing the understanding of respondents on the type of infertility they know. The result of the analysis showed that there is a significant evidence to show that both male and female respondents know between one and two type of infertility with chi-square value of 40.96 for male and 74.90 for female under the probability of 0.000. To buttress the above responses the respondents were asked on what are the causes of infertility in table 4.3.5

4.3.5: Causes of Infertility

Gender	Response	Observed	Expected	Residual	Chi-Square	P
MALE	Promiscuity	48	55.2	7.2	43.60	<0.05
	Abortion	51	55.2	4.2		
	Infection	46	55.2	7.2		
	Spiritual	32	55.2	23.2		
	I don't know	97	55.2	41.8		
FEMALE	Promiscuity	72	91.2	19.2	77.96	<0.05
	Abortion	90	91.2	1.2		
	Infection	77	91.2	14.2		
	Spiritual	54	91.2	37.2		
	I don't know	163	91.2	71.8		

Pearson Chi-Square = 43.6; 77.96, df = 4, Sig. (2-sided) = 0.000

The table 4.3.5 above presents chi-square analysis showing the perception of respondents on the causes of infertility. The result of the analysis showed that there is a significant evidence to show that both male and female respondents knew what may cause infertility as majority indicated that abortion, promiscuity and infection as the main causes of infertility with chi-square value of 43.6 for male and 77.96 for female under the probability of 0.000. However, the respondents were asked if infertility is curable in Table 4.3.6

TABLE 4.3.6: Do you think infertility is curable?

Gender	Response	Observed	Expected	Residual	Chi-Square	P
MALE	Yes	231	92	139	315.06	<0.05
	No	21	92	71		
	I don't know	24	92	58		
FEMALE	Yes	378	152	226	504.68	<0.05
	No	32	152	120		
	I don't know	45	152	106		

Pearson Chi-Square = 315.06; 504.687, df = 2, Sig. (2-sided) = 0.000

The table 4.3.6 above presents chi-square analysis showing the perception of respondents on whether they think infertility is curable or not. The result of the analysis showed that there is a significant evidence to show that both male and female respondents indicated that infertility is curable. This was revealed from chi-square value of 315.06 for male and 504.68 for female under the probability of 0.000. However, qualitative data to some extent corroborate the analyses above with what the respondents perceived as infertility and what is its cause:

Perception of the respondents on Infertility: Causes of Infertility/Childlessness

Respondents did not blame husband and/or wife for infertility. This is because it is only God who gives children. However, all the key informants said that in the past, society hardly

mentioned or referred to a man as infertile, the focus of the inability of a couple to have children has always been placed squarely on the female partners. This is because of the patriarchal norm which places the man as a rare breed and the woman as a second fiddle. This norm is changing now because, medically, there are proofs of infertility among men (Okonofua, 2002; Adegbola, 2007; Inhorn & Birenbaum-Carmeti, 2008 and Oladokun, Arulogun, Oladokun, et al, 2009). The respondents also were of the opinion that people living with infertility (PLWI) who are experiencing a disproportionately high rate of infertility may be due to spiritual attack or mystical/mysterious factors, lack of access to health care, health education, etc.

This perception contradicts the opinion of O' Fallon (2005) and van Ballen & Inhorn (2002) who noted that infertility can be caused by genetic, endocrine or immune system disorders. It can be caused in the womb, in which genetic instructions are impacted by factors such as a mutation, a chemical problem, or an imbalance in hormones or environmental factors or combinations of the two or more of these. There was consensus, however, as to the causes of infertility among interviewed ART specialists and ART seekers (Clients). According to 40% of the clients, infertility may be as a result of spiritual attack from the enemies. But 60% of the clients and the doctors said it may be as a result of disruption in the biological set up - that is, one or more of the organic parts of the body responsible for reproduction are malfunctioning or defective. The specialists were in agreement that this can be corrected through surgical operation or medication to stimulate or correct the defective cells, in case the problem was as a result of bad cells. However, the non-specific diseases are those that may be attributed to environmental factors. For instance, sexually transmitted diseases or infections (STDs) are largely the cause, as a result of indiscriminate or illicit sex; sexual permissiveness. This in many cases can be

injurious to the womb and result in infertility. Infertility is not a welcome phenomenon among Ijebu people because value is attached to children and motherhood.

Infertility in the context of values attached to motherhood and birth of children

All the respondents affirmed that any woman who is a mother is highly celebrated. Majority of the respondents said children are highly valued as their arrival to the community is highly celebrated. Apart from this, people are happy when they have new babies. The woman without any child may be castigated and sent out of her matrimonial home. When, on the other hand, there are arguments involving this category of women and other women who are having children, they are mocked by their fellow women as explained by one of the respondents. Above all, children in Yoruba are important to keep the wife in her matrimonial home, that is, the one with children is the legitimate owner of the husband “*Olomo lo loko*”. The respondents stated, “*Bi ina ba ku, afi eru boju, bi ogede ba ku afi omo re ropo*” that is “when fire is put out, it is survived by ash, when banana plant dies, it replaces itself with its sucker”.

Generally, children are highly valued and celebrated, irrespective of the gender. The essence of motherhood is to be able to produce and give birth to younger ones. Major points raised through the IDIs indicate that: *Omo niyi omo ni eye. Arijo ariyo ni omo je fun idile kokan. Ayo gbogbo eniyan ni, nigbati awon alaboyun ba bi ni were. Nitori wipe, Olorun lo ko yo ninu ewu omo bibi. Awon t’obi, angbadura ki agan won fi inu soyun, ki won fi ehin gbo omo pon. Ki Oluwa mu itiju kuro ninu aye won. Nitori wipe kose mani ni omo*

Child brings honour and respect. The arrival of a child to any family comes with joy and celebration. And when a pregnant woman delivers safely, all the community would be in joyous mood, because it was God that granted her safety from the danger of pregnancy. We also use the auspicious time to pray for the infertile ones that their wombs shall open and conceive and that

God should take away from them the shame. Children are a must for any family (IDIs, June, 2011)

The woman who has a positive pregnancy outcome is highly celebrated. There is an erroneous belief in Ijebu that infertility is only of the woman. The woman may be castigated and sent out of her matrimonial home. When on the other hand, there are arguments involving this category of women and other women who are having children, they are mocked by their fellow women as explained by one of the respondents, Madam Subaru:

The infertile ones are roundly pilloried whenever they are in arguments with others, especially their contemporaries or co-wives. In case they are in polygynous type, they may also be the subject of ridicule whenever they asked someone else's children to run errands for them (IDI June, 2011).

Traditionally, it becomes imperative to note that the essence of motherhood is to be able to produce and give birth to younger ones and nurture them to succeed the parents. The results from six tables and analyses above including the qualitative data show that the respondents, both male and female, understood what infertility is, motherhood connotes and the importance of children. Thus, the responses culminated to what are the options for treatments available to the sufferers as revealed in the second objective in the next objective and tables on the awareness of ART.

Level of Awareness of ART in Ijebu

TABLE 4.4.1: Do you think infertility is curable?

Gender	Response	Observed	Expected	Residual	Chi-Square	P
MALE	Yes	227	69	158	493.68	<0.05
	No	7	69	62		
	Not all cases	39	69	30		
	No response	3	69	66		
FEMALE	Yes	368	91.2	276.8	1075.95	<0.05
	No	16	91.2	75.2		
	Not all cases	63	91.2	28.2		
	No response	8	91.2	90.2		

Pearson Chi-Square = 493.68; 1075.95, df = 3, Sig. (2-sided) = 0.000

The table 4.4.1 above presents chi-square analysis showing the level of awareness on whether respondents think infertility is curable or not. The result of the analysis shows that there is a significant evidence to show that both male and female respondents know that infertility is curable as showed with chi-square value of 493.68 for male and 1075 for female under the probability of 0.000; however female respondents were more aware that infertility is curable than the male counterparts. Again, respondents were asked for the exact cure or treatment they were aware of. Their responses were reflected in table 4.3.8.

TABLE 4.4.2: What type of cure are you aware of?

Gender	Response	Observed	Expected	Residual	Chi-Square	P
MALE	Prayer	223	69	164	552.12	<0.05
	TBAs	18	69	51		
	Orthodox	4	69	85		
	ART	21	69	48		
FEMALE	Prayer	384	91.2	270	855.39	<0.05
	TBAs	25	91.2	89		
	Orthodox	11	91.2	103		
	ART	36	91.2	78		

Pearson Chi-Square = 552.12; 855.39, df = 3, Sig. (2-sided) = 0.000

The table above presents chi-square analysis showing the level of awareness on the type of cure or treatment the respondents were aware of. The result of the analysis reveal that there is significant evidence to show that both male and female respondents said infertility can be cured or treated with prayer as showed in the chi-square value of 552.12 for male and 855.39 for female under the probability of 0.000. This further indicated that female were more aware that prayer can be used to prevent or treat infertility than the male counterpart. Only about 8% of male and 8% of female respondents indicated that ART could be one of the solutions or treatment for infertility. However, the dimension of awareness of ART was further probed to know the range, which is low, medium and high with Table 4.4.4 below.

TABLE 4.4.3: Level of awareness of ART

Gender	Response	Observed	Expected	Residual	Chi-Square	P
MALE	Low	201	92	109	211.37	<0.05
	Medium	66	92	26		
	High	9	92	83		
FEMALE	Low	330	152	178	334.78	<0.05
	Medium	104	152	48		
	High	22	152	130		

Pearson Chi-Square = 211.37; 334.78, df = 2, Sig. (2-sided) = 0.000

The table 4.4.3 above shows that there is a significant evidence to prove that both male and female respondents have low level of awareness of ART modality as a device to redress the problem of infertility. In other words, ART is not well known as a treatment option for infertility with chi-square vale of 211.37 and 334.78 for male and female respectively. Subsequently in the table 4.4.4 below on knowledge of ART, it revealed the extent of their knowledge of ART when

the respondents were asked specifically on their opinion on ART. Apart from lack of access to the method among other issues, awareness of ART and acceptability according to the respondents on qualitative data may be a factor of the type of marriage contracted. It is more likely that those in monogamy may accept ART without much ado than those in the polygynous type.

Majority of respondents said that they have heard about ART but they are not certain of how it functions because of its technicality. Some even said even if they want to advise infertile members of the society to patronise the method, they do not know where to direct them to. Some added that they have heard about ART on internet and news from radio and television. Understanding of respondents towards ART indicates that people who would patronise ART modality may be those who are enjoying matrimonial harmony. For instance, those who are in monogamous union, in which couples have almost all things in common and take decisions together on several issues. This is unlike those in a polygynous union; an infertile wife among other wives of the same husband may suffer alone, because the husband may be too far socially from her to share her burden with her, because he has other wives to attend to. The decision to use ART in this circumstance may not be appealing to the husband in particular.

The most important motivation for acceptance of ART treatment among the respondents was to increase their chances of conceiving and bearing children like other women. Childbirth enhances stability at home and it lends security to the marital relationship. Children symbolize prosperity, happiness and future of the kinship. Unlike Ægirsvej, Hemminki and Lindenberg's (2006) study on the duration of infertility and commencement of ART treatment, where distinction was made between those studies asking infertile patients about their motivations and

expectations before they attend treatment and service-evaluation studies where patients rated their evaluation either during or after treatment in terms of successful outcome or otherwise.

There was consensus on the causes of infertility among interviewed ART specialists and ART seekers/users (Clients). According to four or 40% of clients, infertility may be spiritual attack from the enemies. But 60% of the clients and the doctors said it may be as a result of disruption in the biological set up - that is, one or more of the organic parts of the body responsible for reproduction are malfunctioning or defective. In this case, it may be corrected through surgical operation or medication to stimulate or correct the defective cells, in case the problem was as a result of bad cells. However, the non-specific diseases are those that may be attributed to environmental factors. For instance, sexually transmitted diseases or infection (STD) are largely the cause as a result of indiscriminate or illicit sex; sexual permissiveness or ignorance may be induced by certain environmental factors, which in many cases can be fatal to the womb and result into infertility. It may also result in unwanted pregnancy in which its termination or abortion may prove to be disastrous to the individual(s) future fertility process. Other causes may not be unconnected with nutritional deficiency. People may be ignorant that the type of food one eats goes a long way to be of tremendous fodder for sustained fertility period. One of the specialists suggested the symbiotic relationship between the environment and reproductive outcome, which may be asymmetric or symmetric; it all depends on the type of pressure(s) being exerted on the people by the prevailing environment. Environment is noted to be all inclusive of physical, social, technological, cultural, etc. In short, the environment determines the types of health facilities that will be available to health seekers, such as infertility treatment, vaccination, immunization, surgery, etc. Similarly, according to the key informants, in

the time past, society hardly mentioned or referred to a man as infertile, the focus of inability of couple to have children has always been placed squarely on the female partners. This was because of the patriarchal norms, which place the man, as a rare breed and the woman as a second fiddle. These norms are changing now, because medically, there are proofs of infertility among men (Oladokun, Arulogun, Oladokun, *et al*, 2009; Adegbola, 2007; Okonofua, 2002; Koster-Oyekan, 1999).

Furthermore, there are particular values attached to having biological child/children by individuals in the society. The general perception is that childless persons are not experienced in the things of life. There is a deep sense of understanding of social intricacies among couples with children than those without children. This understanding cannot even be brought about or understood with the adoption of children, in case a childless couple goes out to adopt a child. This explains why adoption is not popular in this society (Oladokun *et al*, 2009). Surrogate mothering is, however, not encouraged either, because it is understood that infertile people, sometimes do engage in this method to “procure” children in a bid to relieve themselves of the trauma and stigma associated with childlessness. But surrogacy does not take away the stigma, because once the real source of the children is discovered or revealed, the issues surrounding infertility would be further heightened. This is also explaining why people are not too keen in accepting ART, because, to an average person whatever comes out of the manipulation is not an outcome of natural sexual conception. This is why those who have elected to go for this method often keep it secret. Keeping it confidential helps to do the damage control on social and psychological growth of the children through ART modality. To one of the specialists, those that have had children before but are unable to have more as they want are not always keen in

following ART regimen strictly. Rate of drop-out is very high among them, if at all they commence the treatment. In addition, infertile women and men are not patronizing ART because of strong influence religion is having on the people. To an average person, a conception considered unnatural is against God, and very sinful. This response is in confirmation of Pope John Paul's description of ART as a collision with God (Dasaolu, 2004). Other anti-ART writers follow this line of thought; that is, anything short of natural conception is against God (Akintan, 2001). Similarly, patronage of this method is also very low due to poor enlightenment by all the necessary institutions such as Ministries of Health across the country, etc. Because of lack of exposure on the part of people regarding the use of ART, the rate of its acceptability is rather low. Therefore, there is a gap between ART modality and its supposed users. Consequently, it is easy to fill this gap with fable, lies and mischief about the usefulness of the modality (Jegade *et al*, 2010).

Finally, there was consensus that, the intervention is still not available to the general populace because, the cost is rather on the high side for an average Nigerian. The clients on ART treatment confirmed this, as they claimed that ART as a means of conception is costly. Apart from the financial implications, there are also complains of time spent on the treatment, which may be longer than expected for conception and equally demanding in all ramifications including psychological. Sometime, the failure rate may be the reason for low or nil patronage. On the whole, 41.4% of the respondents were sampled from rural/sub-urban local government area and 58.6% were sampled from urban areas. This is a general pattern of settlement in Ijebu and other settlements in Yoruba, South-Western Nigeria.

TABLE 4.4.4 What is your opinion about ART?

Gender	Response	Observed	Expected	Residual	Chi-square	P
MALE	It is very Good	31	55.2	24.2	56.54	<0.05
	It is not natural	78	55.2	22.5		
	It is too costly	42	55.2	13.2		
	The children through that cannot be accepted by the society	33	55.2	22.2		
	I have no opinion	92	55.2	36.8		
FEMALE	It is very Good	50	91.2	41.2	704.86	<0.05
	It is not natural	116	91.2	24.8		
	It is too costly	75	91.2	16.2		
	The children through that cannot be accepted by the society	51	91.2	40.2		
	I have no opinion	164	91.2	72.8		

Pearson Chi-Square = (56.24; 704.86), df = 4, Sig. (2-sided) = 0.000

The table 4.4.4 above presents chi-square analysis showing the knowledge of respondents on ART. The result of the analysis showed that there is a significant evidence to show that both the male and female respondents said that it is not natural and that anyone who may accept to use it may pay dearly for it. According to the respondents the device is too costly with chi-square value of 56.24 for male and 704.86 for female under the probability of 0.000. However, knowledge was ranked as low, medium and high in table 4.3. 11 below:

TABLE 4.4.5: Knowledge about ART

Gender	Response	Observed	Expected	Residual	Chi-Square	P
MALE	Low	112	92	20	28.78	<0.05
	Medium	114	92	22		
	High	50	92	42		
FEMALE	Low	180	152	28	46.11	<0.05
	Medium	192	152	40		
	High	84	152	56		

Pearson Chi-Square = (28.78; 46.11), df = 2, Sig. (2-sided) = 0.000

The table above shows knowledge of ART modality as a treatment option for infertility to the respondents, both male and female was very low with chi-square value of 28.783 and 46.105 for male and female respectively. To know the extent of their knowledge of ART as a means to bring about conception, such question like can art be effective in combating infertility in both male and female? Their responses are presented in the table below:

TABLE 4.4.6: Can ART be effective in combating infertility in both male and female?

Gender	Response	Observed	Expected	Residual	Chi-square	P
MALE	Yes	166	92	74	91.04	<0.05
	No	64	92	28		
	I don't know	48	92	46		
FEMALE	Yes	275	152	123	152.06	<0.05
	No	105	152	47		
	I don't know	75	152	76		

Pearson Chi-Square = 91.04; 152.06, df = 2, Sig. (2-sided) = 0.000

The table above presents a chi-square analysis showing the level of awareness on whether ART is effective in combating infertility among couples or not. The result of the analysis shows that there is a significant evidence to conclude that the respondents know that ART can be effective

in combating infertility in couples with a chi-square value of 91.04 for male and 152.06 for female under the probability of 0.000. In other words, female respondents were more aware that ART is effective to combat infertility in couple than the male counterparts. The result as presented thus was further probed with a non-parametric chi-square analysis of responses on why they think ART may not be effective or the right choice for infertility problem.

TABLE 4.4.7: Why do you think ART cannot be effective in combating infertility in both male and female?

Gender	Response	Observed	Expected	Residual	Chi-Square	P
MALE	It is not natural	28	55.2	27.2	161.57	<0.05
	Children through it tend to lack blood tie	33	55.2	22.2		
	It is against our culture	44	55.2	11.2		
	It is against my religion	139	55.2	83.8		
	I just don't like it	32	55.2	23.2		
FEMALE	It is not natural	30	91.2	61.2	343.58	<0.05
	Children through it tend to lack blood tie	49	91.2	42.2		
	It is against our culture	74	91.2	17.2		
	It is against my religion	247	91.2	155.8		
	I just don't like it	56	91.2	35.2		

Pearson Chi-Square = 91.04; 152.06, df = 2, Sig. (2-sided) = 0.000

The table above presents a non-parametric chi-square analysis showing the level of awareness on the reason why the respondents think that ART cannot be effective in combating infertility among couples who are suffering from infertility. The result of the analysis shows that there is a significant evidence to conclude that both the male and female respondents indicated that ART cannot be effective in combating infertility in couples because it is against their religion, with chi-square value of 161.97 for male awareness and 343.58 for female awareness under the probability of 0.000. This further indicated that there may be more to the responses in table 4.3.12 than the responses that ART may be effective. Such salient issues as enumerated above

are religion and biases against the modality. Ironically, females were more vociferous in saying that ART cannot be effective in combating infertility in couples than the male counterparts because it against their religion

TABLE 4.4.8: Do you think infertile person should be allowed to use the method?

Gender	Response	Observed	Expected	Residual	Chi-square	P
MALE	Yes	155	92	63	64.97	<0.05
	No	57	92	35		
	I don't know	64	92	28		
FEMALE	Yes	253	152	101	102.12	<0.05
	No	91	152	61		
	I don't know	112	152	40		

Pearson Chi-Square = 64.97; 102.12, df = 2, Sig. (2-sided) = 0.000

The table above presents a chi-square analysis showing respondents' responses on whether they - the infertile persons should be allowed to use the method (ART) or not. The result of the analysis showed that there is a significant evidence to show that both male and female respondents indicated that infertile persons should be allowed to use ART. This was evident with chi-square value of 64.97 for male and 102.12 for female under the probability of 0.000. This further indicated that female were more knowledgeable about ART than the male counterparts. However, the knowledge was further probed with the age of respondents.

Table 4.4.9: Distribution of the respondents on the issues to be considered very important in undertaking ART by the age of respondents

		In the undertaking ART, what are the issues you considered imperative?					
		The position of the child in the family/ Society	The social cost	Financial cost	Time for treatment	Accessibility of the method	Total
Age	20 - 24 years	7(1.0%)	4(0.5%)	28(3.8%)	8(1.1%)	24(3.3%)	71(9.7%)
	25 - 29 years	35(4.8%)	7(1.0%)	50 (6.8%)	15 (2.0%)	40 (5.5%)	147(20.1%)
	30 - 34 years	21(2.9%)	7 (1.0%)	18 (2.5%)	9(1.2%)	29(4.0%)	84 (11.5%)
	35 - 39 years	13(1.8%)	5(0.7%)	48(6.6%)	7(1.0%)	29(4.0%)	102 (13.9%)
	40 - 44 years	50(6.8%)	18(2.5%)	101(13.8%)	32(4.4%)	88(12.0%)	289(39.5%)
	Above 45 years	4(0.5%)	2(0.3%)	16(2.2%)	3(0.4%)	14(1.9%)	39(5.3%)
Total		130 (17.8%)	43(5.9%)	261(35.7%)	74(10.1%)	224(30.6%)	732(100%)

Pearson Chi-Square = 24.812; df = 20; Sig. (2-sided) = .209

The results in table reveal that the age of the respondents was not significant in their responses on the knowledge of Assisted Reproductive Technology (ART) ($\chi^2 = 24.812$; $df = 20$; $N = 732$, $P > 0.05$). This showed that there was no strong relationship between knowledge of ART and age of the respondents. Of 71(9.7%) respondents whose ages 20 – 24, 7 (1.0%) had doubts over what would be the position of the child through ART, while 4(0.5%) of the respondents hinged their responses on the ART modality procurement on the social cost in form of stigmatisation of the child through ART. While this category of respondents 28(3.8%) alluded to financial cost as being prohibitive, only 8(1.1%) also alluded to the time spent in term of attendance and treatment and 24(3.3%) were of the view that its accessibility in terms of procurement and the care centre were not

discernable. Out of the respondents whose ages were 25 – 29 years, 147(20.1%), 35 (4.8%) said the child through ART may have status problem among his/her family members or society at large, while 7(1.0%) of the respondents hinged their responses on the ART modality procurement on the social cost in form of stigmatization of the child through ART. Also in this category of respondents 50(6.8%) alluded to financial cost as being prohibitive, while only 15(2.0%) alluded to the time spent in term of attendance and treatment in the care centre and 40(5.5%) were of the view that ART accessibility in terms of procurement and the care centre were not discernable. Among respondents between 30 – 34 years, out of 84 respondents, 21 (2.9%) said the child through ART may have status problem among his/her family members or society at large, while 7(1.0%) of the respondents hinged their responses on the ART modality procurement on the social cost in form of stigmatization of the child through ART. Also in this category of respondents 18(2.5%) alluded to financial cost as being prohibitive, while only 9(1.2%) alluded to the time spent in term of attendance and treatment in the care centre and 29(4.0%) were of the view that ART accessibility in terms of procurement and the care centre were not discernable. Also out of those who have stayed between 35 – 39 years, 102(13.9%) respondents 13 (1.8%) said the child through ART may have status problem among his/her family members or society at large, while 5(0.7%) of the respondents hinged their responses on the ART modality procurement on the social cost in form of stigmatization of the child through ART. Also in this category of respondents 48(6.6%) alluded to financial cost as being prohibitive. While only

7(1.0%) alluded to the time spent in term of attendance and treatment in the care centre and 29(4.0%) were of the view that ART accessibility in terms of procurement and the care centre were not discernable. Of those who were between 40 - 44 years out of 289(39.5%), 50 (6.8%) were of the view that any child through ART may be subjected to unequal status among his/her family members or society at large, while 18(2.5%) of the respondents stated that there may be social cost awaiting any child through the ART modality in form of stigmatization. Also in this category of respondents, 101(13.8%) alluded to financial cost as being prohibitive. While only 32(4.4%) alluded to the time spent in term of attendance and treatment in the care centre and 88(12.0%) were of the view that ART accessibility in terms of procurement and the care centre were not discernable. Similarly those who were between 45 and above years out of 39(5.3%), 4(0.5%) were of the view that any child through ART may be subjected to unequal status among his/her family members or society at large, while 2(0.3%) of the respondents stated that there may be social cost awaiting any child through the ART modality in form of stigmatization. Also, this category of respondents 16(2.2%) alluded to financial cost as being prohibitive. While only 3(0.4%) alluded to the time spent in term of attendance and treatment in the care centre and 14(1.9%) were of the view that ART accessibility in terms of procurement and the care centre were not discernable. In all, only 17.8% had reservation for the child through ART modality and what should be the position of the child among the family members and the society at large. While only 5.90% harped their responses on the social cost. Thirty five percent

alluded to the financial cost underlying ART procurement, while, 10.1% cautioned on the time spent in the course of the treatment. Finally 30.6% believed that there is no discernable access to ART modality in regarding care centre and the availability of the modality.

Table 4.4.10: Distribution of the respondents on the issues to be considered very important in undertaking ART by Sex of Respondents

		In the undertaking ART, what are the issues you considered imperative?					
		The position of the child in the family/ Society	The social cost	Financial cost	Time for treatment	Accessibility of the method	Total
Sex of respondent	Male	80(10.9%)	25(3.4%)	158(21.6%)	52(7.1%)	129(17.6%)	444(60.7%)
	Female	50(6.8%)	18(2.5%)	103(14.1%)	22(3.0%)	95(13.0%)	288(39.3%)
Total		130(17.8%)	43(5.9%)	261(35.7%)	74(10.1%)	224(30.6%)	732(100.0%)

Pearson Chi-Square = 3.907; df = 4; Sig. (2-sided) = .419

The results in table reveal knowledge of the respondents about ART and sex of the respondents have no significant relationship, that is, there was no significant difference in the sex of respondents regarding the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 3.907$, $df = 4$; $N = 732$, $P < 0.05$) and knowledge acquired about it over time. This showed that acceptance of ART has no gender connotation in terms of knowledge about ART. Out of 130(17.8%) respondents concerning the position of the child in the society and or family, the results showed that more male respondents (80)(10.9%) said that the position of the child in the family would be contested as against the female respondents (50)(6.8%). Also, out of 43(5.9%), more men, 25(3.4%) as against female 18(2.5%) believed that ART acceptability is a factor of social or cultural interpretation given to the process of conception of the child. Out of all the respondents 261(35.7%) on

financial cost, men who were more than half 158(21.6%) said that acceptance of ART is conditioned on the financial cost as against the female respondents (14.1%) that PLWI should consider financial implication to consider. Out of all the respondents 71(10.1%) on financial cost, men 52(7.1%) said that acceptance of ART is conditioned on the time spent on the treatment as against the female respondents 22 (3%). Out of all the respondents 224(30.6%) on accessibility of the method and hospital, more than half of the men, 129(17.6%) said that acceptance of ART is conditioned on accessibility as against the female respondents 95(13%).

Table 4.4.11: Distribution of the respondents on the issues to be considered very important in undertaking ART by Educational Qualification

		In the undertaking ART, what are the issues you considered imperative?					
		The position of the child in the society/family	The social cost	Financial cost	Time for treatment	Accessibility of the method	Total
Educational Qualification	No formal Education	6(0.8%)	3(0.4%)	12(1.6%)	6(0.8%)	16(2.2%)	43(5.9%)
	Primary Education	12(1.6%)	5(0.7%)	32(4.4%)	9(1.2%)	27(3.7%)	85(11.6%)
	Secondary Education	26(3.6%)	9(1.2%)	65(8.9%)	20(2.7%)	49(6.7%)	169(23.1%)
	Higher Education	86(11.7%)	26(3.6%)	152(20.8%)	39(5.3%)	132(18.0%)	435(59.4%)
Total		130(17.8%)	43(5.9%)	261(35.6%)	74(10.1%)	224(30.6%)	732 (100.0)

Pearson Chi-Square = 6.461; df = 12; Sig. (2-sided) = .891

The results in table reveal knowledge of the respondents about ART and the level of the respondents have no significant relationship, that is, there was no significant difference in the educational level of respondents and the knowledge of Assisted

Reproductive Technology (ART) ($\chi^2 = 6.461$, $df = 12$; $N = 732$, $P < 0.05$). This showed that acceptance of ART has no significant relationship with the knowledge of ART. Out of the 130(17.8%) respondents on the position of the child in the society and/ or family, the results showed that respondents with no education 6(0.8%), with primary school 12(1.6%), secondary 26(3.6%) and higher education 86(11.7%) respectively said that the position of the child is not properly secured in the family. Out of 43(5.9%) respondents on the position of the social cost, the results showed that respondents with no education (0.4%), with primary school 5(0.7%), secondary 9(1.2%) and higher education 26(3.6%) respectively believed that ART acceptability is a factor of social or cultural interpretation given to the process of conception of the child. Also of all the respondents out of 261(35.7%) respondents on financial cost, the results showed that respondents with no education 12(1.6%), with primary school 32(4.4%), secondary 65(8.9%) and higher education 152(20.8%) respectively believed that ART acceptability is a factor of financial position or income of PLWI. Out of all the respondents, 74(10.1%) on time spent on the treatment, the results showed that respondents with no education 6(0.8%), with primary school 9(1.2%), secondary 20(2.7%) and higher education 39(5.3%) respectively believed that ART acceptability is a factor of time spent on the treatment by PLWI and of all the respondents 224(30.6%) on time spent on the treatment, the results showed that respondents with no education 16(2.2%), with primary school 27(3.7%), secondary 49(6.7%) and higher education 132(18%)

respectively said ART acceptability is a factor of access to the care centre and the modality by PLWI.

Table 4.4.12: Distribution of the respondents on the issues to be considered very important in undertaking ART by Religion

		In the undertaking ART, what are the issues you considered imperative?					Total
Religion		The position of the child in the society/family	The social cost	Financial cost	Time for treatment	Accessibility of the method	
	Muslim	46 (6.3%)	14(1.9%)	88(12.0%)	29(4.0%)	84(11.5%)	261(35.7%)
	Christian	81(11.1%)	29(4.0%)	169(23.1%)	45(6.1%)	139(19.0%)	463(63.3%)
	Traditional	3(0.40%)	-	4(0.5%)	-	1(0.1%)	8(1.1%)
Total		130(17.8%)	43(5.9%)	261(35.7%)	74(10.1%)	224(30.6%)	732(100.0)

Pearson Chi-Square = 5.570; df = 8; Sig. (2-sided) = .695

The results in table reveal that in all of the strata of religious beliefs of the respondents, the data showed that knowledge of ART has no significant relationship with the religious practice ($\chi^2 = 5.570$, $df = 8$; $N = 732$, $P < 0.05$). However, religious persuasion and dogma of individual respondents on ART has significant relationship on the knowledge of the modality. This showed that knowledge of ART will differ by religion background. Out of 130(17.8%) respondents on the position of the child in the society and/or family, the results showed that Muslim, Christian and Traditional believers as respondents were 46(6.3%), 81(11.1%), and 3(0.4%) respectively who said that the position of the child is not properly secured in the family. While out of 43(5.9%) respondents on the position of the social cost, the results showed that Muslims 14(1.9%), Christians 29(4%) and traditional believers 3(0.4%) were differed in their opinions, as more than half of the respondents who were Christians said that any child through the modality will go through social opprobrium because of social and/or cultural interpretation given to the process of conception of the child. Also of all the respondents out of 261(35.7%) Christians 169(23.1%), Muslims 88(12%), and traditional 4(0.5%) respondents on financial

cost, respectively, believed that ART acceptability is a factor of financial position or income of PLWI. While out of all the respondents, 74(10.1%) on time spent on the treatment the results showed that all the respondents, Muslims 29(4%), Christians 45(6.10%) and traditional believers respectively believed that ART acceptability is a factor of time spent on the treatment by PLWI. Though Christian respondents were also more than others categories on the time spent in the course of treatment. Out of all the respondents, 224(30.6%) access to the modality and the specialist health care centres, that is, Christians 139(19%), 84(11.5%) and traditional believers respectively said ART acceptability is a factor of access to the care centre and the modality by PLWI.

Table 4.4.13: Distribution of the respondents on the issues to be considered very important in undertaking ART by the Denomination of the Christians

		In the undertaking ART, what are the issues you considered imperative?					
		The position of the child in the society/family	The social cost	Financial cost	Time for treatment	Accessibility of the method	Total
If Christian, what is your affiliation	Protestant	32 (6.9%)	12(2.6%)	47(10.2%)	17 (3.7%)	47(10.2%)	155(33.5%)
	Catholic	10(2.2%)	6(1.3%)	46(9.9%)	10(2.2%)	10 (2.2%)	82(17.7%)
	Pentecostal	39(8.4%)	11(2.4%)	76(16.4%)	18(3.9%)	82(17.7%)	226(48.8%)
Total		81(17.5%)	29(6.3%)	169(36.5%)	45(9.7%)	139(30.0%)	463(100.0%)

Pearson Chi-Square = 10.463; df = 2; Sig. = 0.05

The results in table reveal that there was significant difference in the Christian affiliation of respondents and the knowledge of Assisted Reproductive Technology (ART) ($\chi^2 = 10.463$, $df = 2$; $N = 732$, $P < 0.05$), that is, there was significant relationship between one Christian affiliation and knowledge of ART. 75(16.2%) agreed to have heard about ART intervention before, Pentecostal 25(5.4%),

Protestant 29(6.3%) and Catholic adherents 21(4.50%). Similarly out of 388(83.8%) who said “no”, Pentecostal adherents were 201(43.4%), Protestants 126(27.2%) and Catholics 61(13.2%). In both responses, Catholics seemed to have little knowledge of the modality.

Table 4.4.14: Distribution of the respondents on the issues to be considered very important in undertaking ART By Income

		I In the undertaking ART, what are the issues you considered imperative?					Total
		The position of the child in the society/family	The social cost	Financial cost	Time for treatment	Accessibility of the method	
Income	Less than N19,000	89(12.0%)	28(3.8%)	150(20.6%)	46(6.1%)	133(18.2%)	446(61%)
	N19,000 - N24,000	8(1.1%)	2(0.3%)	29(4.0%)	11(1.5%)	24(3.3%)	74(10.1%)
	N25,000 - N29,000	14(1.9%)	6(0.8%)	27(3.7%)	6(0.8%)	23(3.1%)	76(10.4%)
	N30,000 - N34,000	8(1.1%)	2(0.3%)	17(2.3%)	4(0.5%)	9(1.2%)	40(5.5%)
	N35,000 - N39,000	3(0.4%)	1(0.1%)	7(1.0%)	1(0.1%)	8(1.1%)	20(2.7%)
	N40,000 - N44,000	4(0.5%)	3(0.4%)	19(2.6%)	4(0.5%)	12(1.6%)	42(5.7%)
	N45,000 - N49,000	1(0.1%)	0(0.0%)	6(0.8%)	1(0.1%)	10(1.4%)	18(2.5%)
	N50,000 and Above	2(0.3%)	1(0.1%)	3(0.4%)	1(0.1%)	4(0.5%)	11(1.5%)
	Not Regular	1(0.1%)	0(0.0%)	3(0.4%)	0(0.0%)	1(0.1%)	5(0.7%)
Total		130(17.8%)	43(5.9%)	261(35.7%)	74(10.1%)	224(30.6%)	732(100.0)

$$\chi^2 = 42.328, df = 4; N = 732, P < 0.05$$

The results in table reveal the knowledge of respondents about ART and the level of income of the respondents have no significant relationship ($\chi^2 = 42.328, df = 44; N = 732, P < 0.05$), that is, there was no significant relationship in the income of

respondents and the knowledge of Assisted Reproductive Technology (ART). Out of 130(17.8%) respondents on the position of the child in the family and society, who were earning less than five thousand naira, across all the categories, the results showed that the position of the child in the family or society would be very critical to his/her existence. Also across all the categories, respondents earning ten to fourteen thousand 120(16.4%) believed the social cost would equally affect the child's position. This was also true with the respondents 117(23.1%), who earned 15 – 19 thousands. The earning capacity of those respondents within the income of 20 to 24 thousand did not depart from the conclusion of the above respondents. Even those whose incomes were substantially high due to their level of education have little or no knowledge of ART modality.

Table 4.4.15: Distribution of the respondents on the issues to be considered very important in undertaking ART by Occupational Status

		I In the undertaking ART, what are the issues you considered imperative?					
		The position of the child in the family Society	The social cost	Financial cost	Time for treatment	Accessibility of the method	Total
Occupational Status	Farming	2(0.3%)	5(0.7%)	14(1.9%)	4(0.5%)	12(1.6%)	37(5.1%)
	Trading	44(6.0%)	12(1.6%)	77(10.5%)	23(3.1%)	77(10.5%)	233(31.8%)
	Civil Service	35(4.8%)	12(1.6%)	86(11.7%)	27(3.7%)	66(9.0%)	226(30.9%)
	Craft / Artisan	47(6.4%)	14(1.9%)	79(10.8%)	17(2.3%)	64(8.7%)	221(30.2%)
	Others	2(0.3%)		5(0.7%)	3(0.4%)	5(0.7%)	15(2.0%)
Total		130(17.8%)	43(5.9%)	261(35.7%)	74(10.1%)	224(30.6%)	732(100.0%)

Pearson Chi-Square = 15.934; df = 16; Sig. (2-sided) = .458

The results in table reveal that the respondents occupation and knowledge of the ART have no significant relationship ($\chi^2 = 15.934$, $df = 16$; $N = 732$, $P < 0.05$), that is, there was no significant relationship in the occupation of respondents and the knowledge of Assisted Reproductive Technology (ART). Out of 130 (17.8%) respondents on the position of the child in the family and society, farmers 2 (0.3%), Business people/Traders 44 (6%), Civil Servants 34 (4.8%), Artisans 47(6.4%), and other occupation categories 2(0.3%) were of the opinion that any child born through ART stands no chance in the society. Also, across all the categories of respondents on the social cost of ART 43(5.9%) the respondents believed that the social cost in terms of stigmatisation would equally affect the child's position. This was also with the same respondents on financial cost and time spent in the treatment centre 261(35.7%) and 74(10.9%) respectively: the argument was that the financial costs far outweigh its (ART) desirability. Even on the accessibility of the method in terms of procurement and the location of the health centre, there was unanimity of opinion that the method is farfetched. Even those whose were educated have little or no knowledge of ART modality.

Table 4.4.16: Distribution of the respondents on the issues to be considered very important in undertaking ART by Residence Duration

		In the undertaking ART, what are the issues you considered imperative?					Total
		The position of the child in the family/Society	The social cost	Financial cost	Time for treatment	Accessibility of the method	
Residence Duration	Less than 5 years	46(6.3%)	12(1.6%)	100(13.7%)	25(3.4%)	66(9.0%)	249(34.0%)
	5 - 9 years	28(3.8%)	17(2.3%)	53(7.2%)	15(2.0%)	57	170
						7.80%	23.20%
	10 - 14 years	23 (3.1%)	7(1.0%)	50(6.8%)	19(2.6%)	49(6.7%)	148(20.2%)
	15 - 19 years	21(2.9%)	5(0.7%)	46(6.3%)	9(1.2%)	44(6.00%)	125(17.1%)
20 years and Above	12(1.6%)	2(0.3%)	12(1.6%)	6(0.8%)	8(1.1%)	40(5.5%)	
Total		130(17.8%)	43(5.9%)	261(35.7%)	74(10.1%)	224(30.6%)	732(100.0%)

Pearson Chi-Square = 21.372; df = 16; Sig. (2-sided) = .165

The results in table reveal that the respondents length of residence and knowledge of the ART have no significant relationship ($\chi^2 = 21.372$, $df = 16$; $N = 732$, $P < 0.05$), that is, there was no significant relationship in the length of residence of respondents and the knowledge of Assisted Reproductive Technology (ART). Out of 130(17.8%) respondents on the position of the child in the family and society, less than five years 46 (6.3%), 5-9 length of years, 28(3.1%), 10-14 duration, 23(3.1%), 15-19, 21(2.9%), and those of 20 years and above 12(1.6%) had little knowledge of ART as all of the respondents, with exception of those, who were less than five years in the locality, that children through ART modality may not be accepted in the society/family. Even with this, only (6.1%) of the total respondent is in this

category believed otherwise. Also, across all others categories of variables, social and financial cost, time spent in the cost of treatment and access to the method; responses were similar with the position of the category of respondents on the child's position in the family or society above.

Table 4.4.17: Distribution of the respondents on the issues to be considered very important when undertaking ART by Marriage Duration

		In the undertaking ART, what are the issues you considered imperative?					
		The position of the child in the society/family	The social cost	Financial cost	Time for treatment	Accessibility of the method	Total
Marriage Duration	Less than 5 years	4(0.5%)	2(0.3%)	7(1.0%)	1(0.1%)	5(0.7%)	19(2.6%)
	5 - 9 years	29(4.0%)	7(1.0%)	47(6.4%)	19(2.6%)	45(6.1%)	147(20.1%)
	10 - 14 years	36(4.9%)	12(1.6%)	70(9.6%)	16(2.2%)	64(8.7%)	198(27.0%)
	15 - 19 years	30(4.1%)	12(1.6%)	74(10.1%)	22(3.0%)	53(7.2%)	191(26.1%)
	20 - 24 years	2(0.3%)	1(0.1%)	11(1.5%)	3(0.4%)	6(0.8%)	23(3.1%)
	Above 24 years	29(4.0%)	9(1.2%)	52(7.1%)	13(1.8%)	51(7.0%)	154(21.0%)
Total		130 (17.8%)	43(5.9%)	261(35.7%)	74(10.1%)	224(30.6%)	732(100.0%)

Pearson Chi-Square = 10.113; df = 20; Sig. (2-sided) = .966

The results in table reveal that the respondents length of marriage and knowledge about ART have no significant relationship ($\chi^2 = 10.113$, $df = 20$; $N = 732$, $P < 0.05$), that is, there was no significant relationship in the length of marriage of the respondents and the knowledge of Assisted Reproductive Technology (ART). Out of 130(17.8%) respondents on the position of the child in the family and society, less than five years 4(0.5%), 5-9 length of years, 29(4%), 10-14 duration, 36(4.9%), 15-

19, 30(4.1%), and those of 20-24 years and 24 above 2(0.3%) and 29(4%) respectively had little knowledge of ART as all of the respondents, concurred that the position of children through ART modality may not be accepted in the society/family. Although those who were less than five and those who were between ages 20 to 24 categories believed otherwise. Also, across all others categories of variables, social and financial cost, time spent in the cost of treatment and access to the method; responses were similar with the position of the category of respondents on the child's position in the family or society.

Table 4.4.18: Cross tabulation of the issues to be considered very important when undertaking ART by Marital Status

		In undertaking ART treatment, what are the issues you considered to be very important?					
		The position of the child in the family/Society	The social cost	Financial cost	Time for treatment	Accessibility of the method	Total
Marital Status	Single	20(2.7%)	2(0.3%)	12(1.6%)	2(0.3%)	6(0.8%)	42(5.7%)
	Married	51(7.0%)	15(2.0%)	125(17.1%)	32(4.4%)	90(12.3%)	313(42.8%)
	Divorced	5(0.7%)	2(0.3%)	1(0.1%)	2(0.3%)	4(0.5%)	14(1.9%)
	Separated	54(7.4%)	24(3.3%)	123(16.8%)	38(5.20%)	124(16.9%)	363(49.6%)
Total		130(17.8%)	43(5.9%)	261(35.7%)	74(10%)	224(30.6%)	732(100.0%)

Pearson Chi-Square = 41.154; df = 12; Sig. (2-sided) = .000

The results in table reveal that the respondents' length of marriage and knowledge about ART have no significant relationship ($\chi^2 = 41.154$, $df = 12$; $N = 732$, $P < 0.05$), that is, there was significant relationship in the marital status of the

respondents and the knowledge of Assisted Reproductive Technology (ART). Out of 130(17.8%) respondents on the position of the child in the family and society, the single 20(2.70%), married 51(7.0%), divorced 5(0.7%) and separated 54 (7.4%), respectively concurred that the position of children through ART modality may not be an issue in considering the acceptance of the children in the society/family. Although, in view of its (ART) huge financial commitment, out of 261 respondents, married 125(17.1%) and separated 123(16.8%) posited that the financial input may be a task that may jeopardize ART patronage. Also, across all other categories of variables, social cost, time spent in the cost of treatment and access to the method; responses were similar to the position of the categories of respondents on the child's position in the family or society and financial cost.

Issues considered as very imperative in undertaking ART treatment were the questions adopted to know if people have knowledge of ART. This stemmed from the fact that the certainty of knowledge of ART would be understood from what one considers very imperative in the considerations of ART by PLWI. Therefore, acceptance of the modality would be couched on the understanding that it is imperative and possibly with little or no consequences. With the exceptions of Tables 18 - Christian denominations (the Catholics, Protestants and Pentecostal adherents) ($\chi^2 = 10.463$, $df = 2$; $N = 732$, $P < 0.05$) and 23 for marital status ($\chi^2 = 41.154$, $df = 12$; $N = 732$, $P < 0.05$), respectively that were significant, that is, respondents' marital status and Christianity were strong factors in the knowledge of ART. Other factors, such as age, sex, education, religion (that is, Muslims, Christianity and traditional religion adherents), income, residence duration and marital duration were not significant.

The data on In-depth Interviews on awareness, knowledge and acceptability of art however, revealed that people have knowledge of ART, but the knowledge is not deep on how and where it can be procured. Knowledge of the array of technologies currently in use, reasons for use, challenge and social impacts on women and children are important starting points for understanding of ART from the point of views of the respondents. Participants' knowledge was measured by asking them to define infertility and ART. They were also made to define incidence and prevalence of infertility and options open to infertile people in accepting ART modality. Majority of respondents believed that incidence of infertility is on the increase, but not yet in epidemic proportion.

Majority of the respondents have the knowledge of ART and aware of how it can be procured. But they were however, of the opinion that giving birth to children through the use of ART can never be compared with natural gift of children from God through natural sexual intercourse. These new technologies are believed to have transformed the way people view reproduction and sexual activity. The challenge or implication of ART on children is that it contradicts the normal way that God ordained reproduction, which is through sexual intercourse between a man and a woman. The thinking is that children through ART may not be strong compared to the ones who are conceived naturally. Also ART intervention is very costly and too elitist as surmised by Mr. Jaiyesimi:

Test tube baby is like a manufactured child. The process can make God to be angry. And can make the clienteles to incur serious debt. In any case, it is only the rich elites and educated that can patronise such device (IDI, June, 2011)

The qualitative data further revealed that low academic qualifications are hindering their ability to access necessary information on ART and few ones on electronic media are noted to be for the elites as the language used in the dissemination is noted to be incomprehensible by an average person. As noted, main sources of information on infertility in most cases are health workers, friends, print and electronic media. This is due to lack of necessary education to sensitize the sufferers on how to go about it. The respondents equally asserted that children through the use of ART can never be compared with natural gift of children from God which is through natural sexual intercourse. The thinking is that children through ART may not be strong compared to the ones conceived naturally. Lack of knowledge or little understanding of the workings of ART is further captured thus, as the responses of two respondents interviewed for IDIs, a woman and a male nurse indicated. They spoke on the knowledge of ART in terms of survival of the child or children. The apprehension was captured thus: that generally, in comparing children through ART to other children through natural conception, there may be reason to be skeptical because it is among general assumptions that baby through this method may not be very healthy ones, as pointed out by an anonymous respondent:

I don't think people really understand the use of ART because some still fear that the child might not survive, this is apart from the money that they may need to spend to be pregnant. ART might be of help to those seeking for the fruit of womb if they really understand its workability and if the child would survive (IDI June – July, 2011).

An anonymous male TBA who also doubled as an orthodox Nurse was categorical:

...I don't know much about ART, but I think it will be costly and time consuming. The child would not behave normally the way he/she ought to behave and the baby through such method would be expensive to maintain. Too expensive and the probability that

the child through such method will grow old is 20 percent probability (IDI June – July, 2011)

The two responses above captured in totality lack basic knowledge of ART. The TBA, who also doubled as a nurse was even emphatic; to her, children born through ART are noted to have infant health problems, like, low birth weight, premature birth, high rate of caesarean deliveries, infant death and congenital disabilities. ART children could have a 25 – 60 percent higher incidence of congenital disabilities and illness. This is against one to three percent of natural birth. However, Dr. O. a specialist believes that there is no difference between natural method and ART:

The success rate of IVF is always a 30/40 just like the natural process, because if ten sound couples met on a cycle, there is probability that only average of 3 of the women will get pregnant (I mean natural conjugal relationship). But the successful children through ART method grow normally like any child who was born through natural birth. In the case of the IUI, the success rate is 18. However, the IVF service in this country is still evolving, we lack specialized personnel compared to other countries (KII Nov, 2011).

The doctor’s submission is further probed extensively by the extent of respondents’ knowledge of couples who have utilized ART for the purpose of conception:

Table 4.4.19: Distribution of the respondents on extent to which they know of couples who used ART by Occupational Status

		Do you know couples who used ART?		Total
		Yes	No	
Occupational Status	Farming	10(1.4%)	27(3.7%)	37(5.1%)
	Trading	35(4.8%)	198(27.0%)	233(31.8%)
	Civil Service	40(5.5%)	186(25.4%)	226(30.9%)
	Craft / Artisan	37(5.1%)	184(25.1%)	221(30.20%)
	Others	5(0.7%)	10(1.4%)	15(2.0%)
Total		127(17.3%)	605(82.7%)	732(100%)

Pearson Chi-Square = 6.046; df = 4; Sig. (2-sided) = .196

The results in table reveal that the occupation of the respondents was not significant in their responses on the awareness of Assisted Reproductive Technology (ART) ($\chi^2 = 6.046$; $df = 4$; $N = 732$, $P > 0.05$). This showed that there was no strong relationship between awareness of ART and the occupation of the respondents. Out of the respondents who were farmers, only 10 (1.4%) had heard of CLWI who had used ART modality, while 27 (3.7%) of the respondents have not heard or seen anybody who had used ART modality before. Out of the respondents who were traders only 35(4.8%) had heard of it before, while 198(27.0%) did know of anybody or heard about it before. Out of the civil servants only 40(5.5%) were aware of it, while, 184(25.1%) did not hear anything about ART before. Out of those who in craft/Artistry and others were 42(5.8%) that have heard of the modality or seen someone who had used ART before. More than a quarter of the respondents 194(26.5%) never seen or heard of it before. In all, only paltry number of respondents of 17.3% had come across those who have used ART modality to redress the problem of infertility before, as against 82.7% who were ignorant of the modality. It connotes, therefore, that ignorance of ART cuts across all segments of occupational types.

Table 4.4.20: Distribution of the respondents on if they know of couples who used ART by residence duration

		Do you know couples who used ART?		Total
		Yes	No	
Residence Duration	Less than 5 years	49(6.7%)	200(27.3%)	249(34.0%)
	5 - 9 years	24(3.3%)	146(19.9%)	170(23.2%)
	10 - 14 years	28(3.8%)	120 (16.4%)	148(20.2%)
	15 - 19 years	18(2.5%)	107(14.6%)	125(17.1%)
	20 years and Above	8(1.1%)	32(4.4%)	40(5.5%)
Total		127(17.3%)	605(82.7%)	732(100.0%)

Pearson Chi-Square = 3.389; df = 4; Sig. (2-sided) = .495

The results in table reveal that the length of residence in a particular environment of the respondents was not significant in their responses on the awareness of Assisted Reproductive Technology (ART) ($\chi^2 = 3.389$; $df = 4$; $N = 732$, $P > 0.05$). This showed that there was no strong relationship between awareness of ART and duration of residence of the respondents. Out of the respondents who had stayed for less than five years 49 (6.7%) of them were aware of ART, while 200 (27.3%) of the respondents have not heard about the ART modality. Out of the respondents who have stayed for upward of 5 – 9 years only 24(3.3%) have heard about CLWI who have used the modality, while, about a quarter 146(19.9%) were not aware of it. Out of the respondents who have stayed between 10 – 14 years, only 28(3.8%) had seen CLWI who used the modality for the purpose of conception. 120(16.4%) did not hear anything about it. Also out of those who have stayed between 15 – 19 years, only 18(2.5%) had seen or heard of CLWI who had used the modality before. 107(14.6%) did not hear of such modality. Out of those who have

stayed between 20 years and above only 8(1.1%) had seen someone, or heard of the use of the modality before, while, 32(4.4%) have not heard anything about it before. In all, only 17.3% heard of ART modality before, in which PLWI were helped to be become pregnant as against 82.7% who did not hear about the modality at all. It connotes, therefore, that where one lives has no relationship with ART knowledge as only few people were knowledgeable of ART among all the residents.

Table 4.4.21: Distribution of the respondents on extent to which they know of couples who used ART by marriage Duration

		Do you know couples who used ART?		Total
		Yes	No	
Marriage Duration	Less than 5 years	4 (0.5%)	15(2.0%)	19(2.6%)
	5 - 9 years	30 (4.1%)	117(16.0%)	147(20.1%)
	10 - 14 years	28(3.8%)	170(23.2%)	198(27.0%)
	15 - 19 years	40(5.5%)	151(20.6%)	191(26.1%)
	20 - 24 years	6 (0.8%)	17(2.3%)	23(3.1%)
	Above 24 years	19(2.6%)	135(18.4%)	154(21.0%)
Total		127(17.3%)	605(82.7%)	732(100.0%)

Pearson Chi-Square = 8.203; df = 5; Sig. (2-sided) = .145

The results in table reveal that the length of marriage of the respondents was not significant in their responses on awareness of Assisted Reproductive Technology (ART) ($\chi^2 = 8.203$; $df = 5$; $N = 732$, $P > 0.05$). This showed that there was no strong relationship between awareness of ART and duration of marriage of the respondents. Out of the respondents who had married for less than five years 4 (0.5%) were aware of ART, while 15 (27.3%) of the respondents were not aware. Out of the respondents who have married for upward of 5 – 9 years only 30(4.1%) were aware of ART, while about a quarter 117(16%) did not know anything about it. Out of those who

have married between 10 – 14 years only 28(3.8%) were aware of it, while more than a 170(23.2%) did not know anything about it. Out of the respondents who have married between 15 – 19 years, only 40(5.5%) were of it, while 151(20.6%) did not know anything about the modality. Out of those who have married between 20 years and above, only 20(3.4%) were aware of it, while 152(20.7%) know nothing of such. In all, only 17.3% had seen or heard of CLWI who had used ART modality to redress the problem of infertility as against 82.7% who did not know of the modality. It connotes, therefore, that how long one has been in marital union has no relationship with ART knowledge, as only few married respondents were aware of ART among others.

Table 4.4.22: Distribution of the respondents on the extent to which they know of couples who used ART by Marital Status

		Do you know couples who used ART?		Total
		Yes	No	
Marital Status	Single	4 (0.5%)	38(5.2%)	42(5.7%)
	Married	67(9.2%)	246(33.6%)	313(42.8%)
	Divorced	3(0.4%)	11(1.5%)	14(1.9%)
	Separated	53 (7.2%)	310 (42.3%)	363(49.6%)
Total		127(17.3%)	605(82.7%)	732 (100.0%)

Pearson Chi-Square = 7.460; df = 3; Sig. (2-sided) = .059

The results in table reveal that the marital status of the respondents was not significant in their responses on the awareness of Assisted Reproductive Technology (ART) ($\chi^2 = 7.460$; $df = 3$; $N = 732$, $P > 0.05$). This showed that there was no strong relationship between awareness of ART and marital status of the respondents. Out of the respondents who were single, 42, only 4(0.5%) were aware of ART, while the rest 38(5.2%) were ignorant of the modality. Out of the married respondents, out of 313, only 67(9.2%) were aware of ART modality, while 3(0.4%), out of 14

respondents among the divorcees claimed to have seen or heard CLWI who had used ART before, and the rest 11(1.5%) were not. Out of 363 respondents who were separated from their spouses, only 53(7.2%) had heard about ART modality before, while more than half 310(42.3%) of them had not heard of it. In all, only 17.3% were aware of ART modality to redress the problem of infertility as against 82.7% who had not heard of the modality before. It connotes, therefore how long one has been in marital union has no relationship with awareness of ART usage, as only few people were aware of ART among all the married respondents.

The extent to which respondents know couples who used ART among other questions was adopted to know if people have heard about the modality, as awareness obviously will be the prelude to its acceptability. But from the tables above on awareness, it was revealed that awareness of ART is very low. As age, sex, education, religion, income, length/duration of residency and marital duration were not significant factors in the awareness of ART. Responses to IDIs and KIIs set of questions on awareness and ART also revealed that awareness of ART is a concern as majority of respondents said that they have heard about the method but they are not certain of how it functions because of its technicality. Some respondents said if they want to advise infertile members of the society to patronise the method, they do not know where to direct them to. Some added that they have heard about ART on internet and news from radio and television. As one respondent to IDIs opined:

... well, I cannot really say much about ART but I think culturally it is only God who provides children for couples and not through the use of technologies. I will say culturally I disagree with the use of ART because as a cultured person, this notion about acting God negates the totality of what we stand for (IDI June - July).

ART is noted to be a new innovation in Nigeria. Therefore awareness, knowledge and acceptability are still a matter of conjecture, ignorance and or misinformation. Particularly, the knowledge about it is still shrouded in religious interpretations. All these are what a specialist called social and psychological costs. As the specialist submitted:

I think people are aware of the existence of ART intervention. It is a simple device to get men or women fertile. Our concern should be who the mother is, when another woman donates eggs or who the father is, when another man donates sperm. Here the social and psychological costs come in terms of the inability of the man or woman to conceive naturally. A lot of time is wasted and high rate of failure is known to be due to these costs. The financial cost has been explained to involve huge amount of money with low success rate. ART is techniques of getting men or women fertile either through in-vitro fertilization or surrogacy. Surrogacy is when a woman does not have eggs or have bad eggs and eggs are donated to her by another woman, or, when a man's sperm is low or flat to impregnate a woman, so a donor would be sought to donate sperm for the wife's eggs. Nothing absolutely is bad on IVF but there may be ethical issues with surrogacy. I think you sociologists should consider the issue of surrogate not the in-vitro, rather than if the people are aware of the methods or not (Dr A. KII Nov, 2011).

The statement above is further assessed by the respondents' attitude to ART and those that elect to utilize` the modality for pregnancy or otherwise by men who are unable to impregnate a woman. To know the extent of awareness and knowledge of ART between male and female respondents there was the need to cross- tabulate knowledge and awareness in the table 4.3.28 that follows:

Table 4.4.23: Cross tabulation between level of awareness and knowledge of ARTS

Gender	Response	knowledge about ART			Chi-square	P
		Low	Medium	High		
MALE	Low	104	75	22	48.85	<0.05
	Medium	8	35	23		
	High	0	4	5		
FEMALE	Low	160	146	24	108.79	<0.05
	Medium	18	39	47		
	High	2	7	13		

Pearson Chi-Square = 48.85; 108.79, df = 2, Sig. (2-sided) = 0.000

The table above shows that there is a significant proof that males have a low level of awareness and knowledge of ART in Ijebu area than females with a chi-square value of 48.858(P<0.05) at 4 degree of freedom. The female respondents like the males have a low knowledge and awareness with a chi-square value of 108.794(P<0.05) at 4 degrees of freedom. In juxtaposing male and female levels of awareness with the level of knowledge, the female respondents were far ahead of the male respondent.

Measure of the attitude of respondents towards ART utilization

Table 4.5.1: Distribution of Respondents by their attitude to ART by Age

		What is your opinion of ART?					Total
		It is very good	It is not natural	It is too costly	The children through that cannot be accepted	I have no opinion	
Age	20 - 24 years	10(1.40%)	16(2.2%)	20(2.7%)	00(0%)	25(3.4%)	71(9.7%)
	25 - 29 years	38(5.2%)	33(4.5%)	28(3.8%)	6(0.8%)	42(5.7%)	147(20.1%)
	30 - 34 years	14(1.9%)	16(2.2%)	9(1.2%)	1(0.1%)	44(6.0%)	84(11.5%)
	35 - 39 years	26(3.6%)	19(2.6%)	20 (2.7%)	4(0.5%)	33(4.5%)	102(13.9%)
	40 - 44 years	59(8.1%)	66(9.0%)	55(7.5%)	4(0.5%)	105(14.3%)	289(39.5%)
	Above 45 years	9(1.2%)	7(1.0%)	7(1.0%)	1(0.1%)	15(2.0%)	39(5.3%)
Total		156(21.3%)	157(21.4%)	139(19.0%)	16(2.2%)	264(36.1%)	732(100.0%)

Pearson Chi-Square = 28.023; df = 20; Sig. (2-sided) = .109

The results in table reveal that the age of the respondents was not significant in their responses concerning the perception of Assisted Reproductive Technology (ART) ($\chi^2 = 28.023$; $df = 20$; $N = 732$, $P > 0.05$). This showed that there was no strong relationship between Perception of ART and age of the respondents, that is, there is no relationship between the age of the respondents and their perception of ART intervention to redress the infertility problem. Across all ages, while,

264(36.1%) had no opinion about it, 157(21.4%) said it is not natural. While 139(19.0%) believed that the modality is too costly and only 16 (2.2%) said that the children through the process would not be accepted to the generality of the society. However, about a quarter of the respondents 156 (21.3%) perceived that ART intervention is very good.

Table 4.5.2: Distribution of Respondents by their Opinion of ART by Sex of Respondents

		What is your opinion of ART?					
		It is very good	It is not natural	It is too costly	The children through that cannot be accepted	I have no opinion	Total
Sex of respondent	Male	84(11.5%)	98(13.4%)	86(11.7%)	11(1.5%)	165(22.5%)	444(60.7%)
	Female	72(9.8%)	59(8.1%)	53(7.2%)	5(0.7%)	99(13.5%)	288(39.3%)
Total		156(21.3%)	157(21.4%)	139(19.0%)	16(2.2%)	264(36.1%)	732(100.0%)

Pearson Chi-Square = 4.138; df = 4; Sig. (2-sided) = .388

The results in table reveal that perception of ART by the respondents is not gender bias, that is, there was no significant difference in the sex of respondents regarding the perception of Assisted Reproductive Technology (ART) ($\chi^2 = 4.138$, $df = 4$; $N = 732$, $P < 0.05$). This showed that acceptance of ART has no gender connotation in terms of perception. Out of 156 (21.3%) respondents on the question of ART's suitability, 84 (11.50%) males, and 72 (9.80%) females said it is very good. While out of 157 (21.40%) males 98 (13.40%) and females 59 (8.10%) respectively alluded to the fact that it is not natural and from the total respondents of 139 (19.0%), males 86 (11.70%) and females 53 (7.20%) said that it is too costly. Eleven (1.50%) males and 5 (0.70%) females out of 16(2.2%) total number of respondents posited that children

through the modality cannot be accepted in the society. However, more than one quarter 264(36.1%) of the respondents had no opinion about ART.

Table 4.5.3: Distribution of Respondents by their Opinion of ART by Educational Qualification(s)

		What is your opinion of ART?					
		It is very good	It is not natural	It is too costly	The children through that cannot be accepted	I have no opinion	Total
Educational Qualification	No formal Education	5(0.7%)	7(1.0%)	12(1.6%)	00(0%)	19(2.6%)	43(5.9%)
	Primary Education	17(2.3%)	14(1.9%)	21(2.9%)	2(0.3%)	31(4.2%)	85(11.6%)
	Secondary Education	35(4.8%)	38(5.2%)	29(4.0%)	4(0.5%)	63(8.6%)	169(23.1%)
	Higher Education	99(13.5%)	98(13.4%)	77(10.5%)	10(1.4%)	151(20.6%)	435(59.4%)
Total		156(21.3%)	157(21.4%)	139(19.0%)	16(2.2%)	264(36.1%)	732(100.0%)

Pearson Chi-Square = 10.279^a; df = 12; Sig. (2-sided) = .592

The results in table reveal that, in juxtaposing respondents' perception of ART with their educational status, there is no significant relationship, that is, there was no significant difference in the educational level of respondents and perception or opinion on Assisted Reproductive Technology (ART) ($\chi^2 = 10.279$, $df = 12$; $N = 732$, $P < 0.05$). This showed that acceptance of ART has no significant relationship with its perception by the respondents. Out of 156(21.30%) respondents who said that ART is very good; respondents with no education 5(0.70%), with primary school 17(2.30%), secondary 35(4.80%) and higher education 99(13.50%) respectively considered ART desirable. 157 (21.40%) of the respondents believed that the modality is not natural. The distribution according to qualifications showed that

only 7(1.0%) were without formal education, 14 (1.9%), were with primary school, 38(5.2%) had secondary education and higher education 98(13.4%) respectively. Across all the respondents on the status of the children through ART or those who said that the children through ART cannot be accepted in the society, only 16(2.2%) of the respondents said the society would frown at the children. However, 139(19.0%) of the respondents posited that the modality is too costly. But more than a quarter 264(36.1%) of the respondents had no opinion on ART.

Table 4.5.4: Distribution of Respondents by their Opinion of ART By Religion

		What is your opinion of ART?					
		It is very good	It is not natural	It is too costly	The children through that cannot be accepted	I have no opinion	Total
Religion	Muslim	46(6.3%)	64(8.7%)	63(8.6%)	5(0.7%)	83(11.30%)	261(35.7%)
	Christian	110(15.0%)	88(12.0%)	74(10.1%)	11(1.5%)	180(24.6%)	463(63.3%)
	Traditional	00(0%)	5(0.7%)	2(0.3%)	00(0%)	1(0.1%)	8(1.1%)
Total		156(21.3%)	157(21.4%)	139(19.0%)	16(2.2%)	264(36.1%)	732(100.0%)

Pearson Chi-Square = 23.293; df = 8; Sig. (2-sided) = .003

The results in table reveal that the religion of the respondents was significant in the respondents' perception of ART ($\chi^2 = 23.293$; $df = 8$; $N = 732$, $P < 0.05$). This showed that there was strong relationship between how people perceive ART modality and the religious belief of the individual respondents. Out of Muslims 261(35.7%) respondents only 46 (6.3%) said that the modality is very good. And out of 463(63.3%) Christian respondents 110(15.0%) said that ART is very good for the purpose of conception. But none among the total number of traditional believers

supported the notion that the modality is very good. Again, of Muslims 261(35.7%) respondents only 64 (8.7%) said that the modality is not natural, while out of 463(63.3%) Christian respondents 88(12.0%) said that ART is a natural method of conception. More than half of traditional believers also said that ART is not natural. 63 (8.6%) Muslims, 74(10.1%) Christians and 2(0.3%) traditional worshipers posited respectively that ART is too costly. Five (0.7%) of the Muslims respondents, 11(1.5%) of the Christians and none of the traditional worshipers said that children through ART would not be accepted in the society. However, across all the categories of respondents, 264 (36.1%) more than a quarter of total number of the respondents had no opinion on ART.

Table 4.5.5: Distribution of Respondents By Their Opinion of ART by Christian Denominations

		What is your opinion of ART?					Total
		It is very good	It is not natural	It is too costly	The children through that cannot be accepted	I have no opinion	
If Christian, what is your affiliation	Protestant	45(9.7%)	30(6.5%)	22(4.8%)	6 (1.3%)	52 (11.2%)	155(33.5%)
	Catholic	33(7.1%)	12(2.6%)	16(3.5%)	0	21(4.5%)	82(17.7%)
	Pentecostal	32(6.9%)	46(9.9%)	36(7.8%)	5(1.1%)	107(23.1%)	226(48.8%)
Total		110(23.8%)	88(19.0%)	74(16.0%)	11(2.4%)	180(38.9%)	463(100.0%)

Pearson Chi-Square = 5.989; df = 6; p > .05

The results in table reveal that there was significant difference between the Christian denominations or affiliation of respondents and opinion about Assisted Reproductive Technology (ART) ($\chi^2 = 5.989$, $df = 6$; $N = 732$, $p > .05$), that is, there was significant relationship between one Christian affiliation and the other on their opinion of ART. Out of

155(33.5%) Protestant respondents 45(9.7) agreed that ART is very good, while out of 82(17.7) Catholic only 33(7.1%) agreed that ART is very good and out of 226(48.8%) Pentecostals, only 32(6.9%) agreed that ART is very good. With little differences, all the respondents agreed that the use of ART is not natural and very costly too.

Table 4.5.6: Distribution of Respondents by their Opinion of ART by Income

		What is your opinion of ART?					Total
		It is very good	It is not natural	It is too costly	The children through that cannot be accepted	I have no opinion	
Income	Less than N19,000	100(13.7%)	89(9.2%)	34(4.7%)	11(1.5%)	142(22.4%)	446(61.0%)
	N19,000 - N24,000	20(2.7%)	15(2.0%)	12(1.6%)	00(0%)	27(3.7%)	74(10.1%)
	N25,000 - N29,000	11(1.5%)	18(2.5%)	17(2.3%)	2(0.3%)	28(3.8%)	76(10.4%)
	N30,000 - N34,000	7(1.0%)	13(1.8%)	6(0.8%)	2(0.3%)	12(1.6%)	40(5.5%)
	N35,000 - N39,000	4(0.5%)	7(1.0%)	2(0.3%)	0(0%)	7(1.0%)	20(2.7%)
	N40,000 - N44,000	10(1.4%)	9(1.2%)	9(1.2%)	0(0%)	14(1.9%)	42(5.7%)
	N45,000 - N49,000	0	2(0.3%)	6(0.8%)	0(0%)	10(1.4%)	18(2.5%)
	N50,000 and Above	4(0.5%)	3(0.4%)	3(0.4%)	1(0.1%)	0(0%)	11(1.5%)
	Not Regular	0(0%)	1(0.1%)	2(0.3%)	0(0%)	2(0.3%)	5(0.7%)
Total		156(21.3%)	157(21.4%)	139(19.0%)	16(2.2%)	264(36.1%)	732(100.0%)

Pearson Chi-Square = 52.004; df = 4; Sig. (2-sided) = .190

The results in table reveal that perception of the respondents on ART is not a function of the status of their income ($\chi^2 = 52.004$, df = 4; N = 732, P > 0.05).

This showed that the level of income was not a strong determinant of perception of ART. Respondents earning less than N10, 000 who were 160 (21.9%), N10, 000 - N19, 000(117/16.3%) and N20, 000 - N24, 000(74/10.1%) were in the categories of respondents who said ART is very good. The responses of others were inconsequential. Indeed the total number of respondents with no opinion which was more than a quarter of total responses brings into a focus, the fact that income status or the respondents' financial placement has not contributed to perception of ART.

Table 4.5.7: Distribution of Respondents by their Opinion of ART by Occupational Status

		What is your opinion of ART?					Total
		It is very good	It is not natural	It is too costly	The children through that cannot be accepted	I have no opinion	
Occupational Status	Farming	9(1.2%)	7(1.0%)	8(1.1%)	0	13(1.8%)	37(5.1%)
	Trading	43(5.9%)	56(7.7%)	48(6.6%)	3(0.4%)	83(11.3%)	233(31.8%)
	Civil Service	51(7.0%)	51(7.0%)	39(5.3%)	8(1.1%)	77(10.5%)	226(30.9%)
	Craft / Artisan	49(6.7%)	40(5.5%)	43(5.9%)	5(0.7%)	84(11.5%)	221(30.2%)
	Others	4(0.5%)	3(0.4%)	1(0.1%)	0	7(1.0%)	15(2.0%)
Total		156(21.3%)	157(21.4%)	139(19.0%)	16(2.2%)	264(36.1%)	732(100.0%)

Pearson Chi-Square = 10.538; df = 16; Sig. (2-sided) = .837

The results in table reveal that perception of ART modality by the respondents' occupational status has no significant relationship ($\chi^2 = 10.538$, $df = 16$; $N = 732$, $P < 0.05$), that is, there was no significant relationship between the occupation of respondents and their perception of Assisted Reproductive Technology (ART). Out of 156 (21.3%) respondents' perception on the desirability of the method, farmers

9(1.20%), Business people/Traders 43(5.9%), Civil Servants 51(7.0%), Artisans 49(6.7%), and other occupation categories 4(0.5%) were of the opinion that ART is very good. Also, across all the categories of respondents on whether the method could be regarded as natural or otherwise 157(21.4%) the respondents believed that the method is not natural. 139 (19.0%) of the respondents across all the occupation statuses posited that the method is too costly. This was also the view of the same respondents on whether the children through ART can be accepted in the society, all the 16 (2.2%) respondents across all the occupations said the children cannot be accepted in the society. But, respondents with no opinion were 264(36.1%). This again pointed to the fact that there is a low perception of ART among the respondents.

Table 4.5.8: Distribution of Respondents by their Opinion of ART by Residence Duration

		What is your opinion of ART?					
		It is very good	It is not natural	It is too costly	The children through that cannot be accepted	I have no opinion	Total
Residence Duration	Less than 5 years	54(7.4%)	51(7.0%)	52(7.1%)	5(0.7%)	87(11.9%)	249(34.0%)
	5 - 9 years	30(4.1%)	39(5.3%)	30(4.1%)	4(0.5%)	67(9.2%)	170(23.2%)
	10 - 14 years	36(4.9%)	33(4.5%)	26(3.6%)	2(0.3%)	51(7.0%)	148(20.2%)
	15 - 19 years	28(3.8%)	26(3.6%)	24(3.3%)	4(0.5%)	43(5.9%)	125(17.1%)
	20 years and Above	8(1.1%)	8(1.1%)	7(1.0%)	1(0.1%)	16(2.2%)	40(5.5%)
Total		156(21.3%)	157(21.4%)	139(19.0%)	16(2.2%)	264(36.1%)	732(100.0%)

Pearson Chi-Square = 5.182; df = 16; Sig. (2-sided) = .995

The results in table revealed that the respondents' length of residence and perception of ART have no significant relationship ($\chi^2 = 5.182$, $df = 16$; $N = 732$, $P < 0.05$), that is, there was no significant relationship between the length of residence of respondents and their perception of Assisted Reproductive Technology (ART). Out of 156(21.30%) respondents on the desirability of the method, less than five years 54(7.4%), 5-9 length of years, 30(4.1%), 10-14 duration, 36(4.90%), 15-19, 28(3.8%), and those of 20 years and above 8(1.10%) opined that ART is very good. While 157(21.40%) of the respondents made the argument that the method is not natural, less than five years 51(7.0%), 5-9 length of years, 39(5.3%), 10-14 duration, 33(4.5%), 15-19, 26(3.6%), and those of 20 years and above 8(1.1%) opined that ART is not natural. Also, across all other categories of respondents 16 (2.2%) opined that the method is too costly, while, more than a quarter of the respondents were neither here nor there, as they did not have any opinion.

Table 4.5.9: Distribution of Respondents by their Opinion of ART by Marriage Duration

		What is your opinion of ART?					Total
		It is very good	It is not natural	It is too costly	The children through Art cannot be accepted	I have no opinion	
Marriage Duration	Less than 5 years	3(0.4%)	3(0.4%)	7(1.0%)	0(0%)	6(0.8%)	19(2.6%)
	5 - 9 years	30(4.1%)	35(4.8%)	31(4.2%)	5(0.7%)	46(6.3%)	147(20.1%)
	10 - 14 years	44(6.0%)	37(5.1%)	35(4.8%)	4(0.5%)	78(10.7%)	198(27.0%)
	15 - 19 years	41(5.6%)	47(6.4%)	38(5.2%)	3(0.4%)	62(8.5%)	191(26.10%)
	20 - 24 years	9(1.2%)	7(1.0%)	3(0.4%)	0(0%)	4(0.5%)	23(3.1%)
	Above 24 years	29(4.0%)	28(3.8%)	25(3.4%)	4(0.5%)	68(9.3%)	154(21.0%)
Total		156(21.3%)	157(21.4%)	139(19.0%)	16(2.2%)	264(36.1%)	732(100.0%)

Pearson Chi-Square = 22.742; df = 20; Sig. (2-sided) = .302

The results in table reveal that the respondents length of marriage and perception of ART have no significant relationship ($\chi^2 = 22.742$, $df = 20$; $N = 732$, $P < 0.05$), that is, there was no significant relationship between the length of marriage of the respondents and their perception of Assisted Reproductive Technology (ART). Out of 156 (21.3%) respondents on the desirability of the method, less than five years 3(.4%), 5-9 length of years of marriage, 30 (4.1%), 10-14 duration, 44(6.0%), 15-19, 47(5.6%), 20 – 24, 7 (1.2%) and above 24 years, 29(4.0%) opined that ART is very good. While 157(21.4%) of the respondents on the argument that the method is not natural, less than five years 3(0.4%), 5-9 duration of marriage, 35(4.8%), 10-14 duration, 37(5.1%), 15-19, 47(6.4%), and those of 20 - 24 years were 7(1.0%) and above 24 years 28(3.8%) opined that ART is not natural. Also, across all other categories of respondents 16 (2.2%) opined that the method is too costly, while more than a quarter of the respondents were without any opinion.

Table 4. 5.10: Distribution of Respondents by their Opinion of ART by Marital Status

		What is your opinion of ART?					Total
		It is very good	It is not natural	It is too costly	The children through that cannot be accepted	I have no opinion	
Marital Status	Single	2(0.3%)	12(1.6%)	8(1.1%)	0(0%)	20(2.7%)	42(5.7%)
	Married	71(9.7%)	75(10.2%)	59(8.1%)	11(1.5%)	97(13.3%)	313(42.8%)
	Divorced	5(0.7%)	0(0%)	5(0.7%)	1(0.1%)	3(0.4%)	14(1.9%)
	Separated	78(10.7%)	70(9.6%)	67(9.2%)	4(0.5%)	144(19.7%)	363(49.6%)
Total		156(21.3%)	157(21.4%)	139(19.0%)	16(2.2%)	264(36.1%)	732(100.0%)

Pearson Chi-Square = 27.772; df = 12; Sig. (2-sided) = .006

The results in table reveal that the respondents' marital status and perception of ART have significant relationship ($\chi^2 = 27.772$, $df = 12$; $N = 732$, $P < 0.05$), that is, there was significant relationship between the marital status of the respondents and how the respondents perceived Assisted Reproductive Technology (ART). Out of 156(21.3%) respondents on the desirability of the ART for mitigating the problem of infertility; the single 2(0.3%), married 71(9.7%), divorced 5(0.7%) and separated 78 (10.7%), respectively concurred that ART modality is very good. Out of 157(21.4%) respondents on the naturalness of ART for mitigating the problem of infertility, the single 12(1.6%), married 75(10.2%), separated, 70 (9.6%) and (0%) for the divorcee respondents opined that ART modality is not natural. Also, across all other categories of respondents 16 (2.2%) opined that the method is too costly, while more than a quarter of the respondents were without any opinion.

Perception of the respondents on ART was elicited on the questions which bordered on their opinions on the desirability of the method, the mode of conception, cost implication, societal possible reaction to the children conceived through ART method and no opinion. These issues about which responses were elicited from the respondents were the planks upon which the respondents' perceptions were couched. With the exception of religion – all religions, including the traditional one ($\chi^2 = 23.293$; $df = 8$; $N = 732$, $P < 0.05$), marital status ($\chi^2 = 27.772$, $df = 12$; $N = 732$, $P < 0.05$) on Tables 4.27 and 4.32 respectively that were significant on the perception of ART, that is, respondents' marital status and religion were strong factors which helped the respondents to form their opinion on ART. Other factors of age, sex, educational

status, income, occupational status, residence duration and marital duration were not significant and therefore, not strong enough for people to form their opinions on ART.

Data on In-depth Interviews, however, revealed that seventy-eight percent (78.0%) of the respondents were of the opinion that the CLWI should wait for at least 2 years, 12% said 5 years, and 5% said 4 years or more before considering other method(s). The general opinion is that ART should be the last resort. But they were of the opinion that the new technologies - ART are believed to have transformed the way people view reproduction and sexual activity. They all submitted, however, that ART intervention is too elitist. The reasons for this according to them are not farfetched. One, it is too costly, not natural and that it may not be sustainable and effective like the natural conception and therefore, may not be reliable. Also, the respondents were of the opinion that the intervention is in contradiction and affront to God creative power. The challenge or implication of ART on children is that it contradicts the normal way that God ordained reproduction, which is through sexual intercourse between a man and a woman. To the respondents, the children through this method may not be in the perfect will of God for CLWI, and therefore, may not be liked by the generality of the people.

The qualitative data is presented first; attitude may have deep seated meaning when individual opinion on certain issue is taken into consideration. Accordingly respondents defined infertility as the inability to conceive after two years of properly timed and unprotected intercourse.

Attitude to primary infertility and secondary type is not the same. A person with secondary infertility who may be with one child at least is not considered childless. Respondents submitted that *olomo kan ti kuro ni egbe agan. O ti kuro ninu kilo bi*, that is, “someone with one child is no more a contemporary of a childless one”. With one child the fellow has crossed the border of bareness. But those who are unable to carry pregnancy to term are still respected and sympathised with, than those who are not experiencing conception, because there is the hope of a successful pregnancy outcome. Primary infertility, however, is viewed with disdain. People suffering from infertility on their part may, sometimes, react negatively to their situation of infertility which may lead to psychological problems, because they are apprehensive of stigmatisation or what the significant others and the general public are saying - that they are yet to experience motherhood. Sometimes, people sympathize with infertile persons but in most cases people react negatively too.

To know more of respondents’ attitude to ART modality: ART is not favourable disposed to due to a number of social, cultural and ethical challenges. For example those ones who are that patronising ART or other methods for conception, apart from natural type are regarded less human being and the children through this method are equally regarded inferior to the one through natural conception. The respondents were categorical on this: *omo lebu sebu, omo inu igo*. Children through test tube are not strong. Majority of the respondents were also of the

opinion that ART may be condoned among the elites who are into monogamous marriage and the issue would be a top secret between the husband and wife, but definitely not among the polygynous types, where the secret cannot be kept for so long. This is because the woman would be derided and the child may be denied inheritance.

The general attitude to infertility in this area goes beyond “being infertile” It is only when one is buried by a child or children that people can say that the fellow is a mother or father. The summary of the IDIs in this respect is stated thus:

It is when someone is survived by his/her children at his/her demise, that one can say he/she is a successful parent. However, there is a difference between one who had children but who lost them because of death and the one who has never had one before. But nobody prays for any of these circumstances (June, 2011)

In all, the respondents believe that those who are infertile need to be cared for. A woman who has a child has presented a picture of herself or that of her husband (*eni to ba bi'mo o ya foto ara re sile*). In summary, most of the respondents were of the opinion that the reaction or attitude to infertility should be in two forms (a) Predestined by God (b) Punishment for character flaw or ungodly behaviours on the part of infertile persons. Those who subscribe to predestination are always sympathetic to infertile persons. The qualitative data also showed that men's attitude to infertility in the first instance is that men hardly subscribe to the use of ART because they believe that they cannot be infertile in as much as there is erection. Therefore, there is no need to go for infertility treatment. More so, majority of the respondents have the attitude that infertility is beyond human understanding and therefore, the issue should be left for God. The summary of IDIs and KIIs reveal this succinctly:

The solution to infertility lies with God. Nobody should be blamed whenever it happens in any family ...infertility is a disease/sickness which may be as a result of male low sperm count or female inability to conceive. Infertility may also be as a result of destiny or curse placed on somebody due to one offence or misdeed. (IDIs July – August 2011).

The understanding in this regard was exemplified by the husband to one of the female clients who goes to the clinic with his wife. He affirmed:

Infertility is when a couple could not give birth to children within the periods of nine months or one year and beyond. My attitude initially was to wait and see what would happen eventually. Not until a friend told us about this solution (ART). I vehemently refused it in the first instance. But with a lot of persuasion from my wife I decided to give it a trial. However, we have been facing infertility for more than three years now, but, ours is the “secondary infertility” because my wife had been pregnant twice before, but she could not carry the pregnancy to term (KII, Nov., 2012).

On the contrary, one of the specialists asserted:

... but hardly do they(the men) want to agree with the diagnosis of being an infertile person . Because in our society men cannot be infertile, inasmuch he is still having erection. But to impregnate a woman goes beyond more than mere intercourse. Medically, men have been found to be infertile. But, socially this is not the case. Society is yet to agree with this (Dr. D .KII, Nov., 2011).

Another specialist among the IDIs respondents corroborated the above and noted the bias against the women. She said:

... a woman was coming for fertility treatment for about a year or so, to no avail. Then her mate (i.e. the second wife) from the same husband started coming for the same fertility treatment, also to no avail. It was in one of our reviews that we resolved to ask the

husband of these women to come for just a chat. He came and it went beyond a chat. He was the one who is infertile not the women.

Credence was laid on the above, as corroborated by the husband to Client A:

Infertility leads to social exclusion for women, even, within our families. Naturally as a human being when one is expected to have children and cannot, we feel rejected. Anyway, we have been coping through prayer. ART is a means of help that God has allowed. It is a new technology to erase shame. We are embracing the method, with hope that God will allow it to work for us.

Despite the hope on ART raised by the client's attitude to ART in whatever form it is not encouraging to those who may want to accept it as a solution to infertility. This is corroborated by the quantitative data below:

Table 4.6.1: Distribution of Respondents on can ART be effective in the Treatment of Infertility by Age

		Do you think that ART can be effective?			Total
		Yes	No	I don't know	
Age	20 - 24 years	32(4.4%)	10(1.4%)	29(4.0%)	71(9.7%)
	25 - 29 years	76(10.4%)	22(3.0%)	49(6.7%)	147(20.1%)
	30 - 34 years	28(3.8%)	14(1.9%)	42(5.7%)	84(11.5%)
	35 - 39 years	45(6.1%)	19(2.6%)	38(5.2%)	102(13.9%)
	40 - 44 years	134(18.3%)	47(6.4%)	108(14.8%)	289(39.5%)
	Above 45 years	13(1.8%)	9(1.2%)	17(2.3%)	39(5.3%)
Total		328(44.8%)	121(16.5%)	283(38.7%)	732(100.0%)

Pearson Chi-Square = 11.494, df = 10; Sig. (2-sided) = .320

The results in table reveal that there was no significant relationship in the ages of respondents and their attitude to Assisted Reproductive Technology (ART) ($\chi^2 = 11.494$, $df = 10$; $N = 732$, $P > 0.05$). It is, however, noted that as the respondents were growing in age, there was an improved attitude to the use of ART as evidenced

from the table which showed that as the respondents are growing older in age, there was indication of a matured disposition or attitude to ART in redressing the problem of infertility. But in all of the age categories, there was no positive relationship between ages of the respondents and attitude to ART. Of the respondents, 328(44.80%) who showed positive attitude to the use of ART; 20-24 were 32 (4.40%) while 25-29 were 76 (10.40%) and 30-34 were 28 (3.80%). While the rest, 35-39, 40-44 and above 40 years were 45(6.10%), 134(18.30%) and 13(1.80%) respectively. Those with a negative disposition towards ART across all the ages were 121 (16.5%). But, 283 (38.7%) or more than a quarter of respondents were neither here nor there in their attitude to ART as they said they do not know.

Table 4.6.2: Distribution of Respondents on can ART be effective in the Treatment of Infertility by Sex

		Do you think that ART can be effective?			Total
		Yes	No	I don't know	
Sex of respondent	Male	194(26.5%)	80(10.9%)	170(23.2%)	444(60.7%)
	Female	134(18.3%)	41(5.6%)	113(15.4%)	288(39.3%)
Total		328(44.8%)	121(16.5%)	283(38.7%)	732(100.0%)

Pearson Chi-Square = 1.865; df = 2; Sig. (2-sided) = .394

The results in table reveal that the sex of the respondents was not significant on their responses to the questions on attitude to Assisted Reproductive Technology (ART). ($\chi^2 = 1.865$; df = 2; N = 732, P > 0.05). This showed that there was no strong relationship between attitude to ART and the sex of the respondents. Out of male respondents 444 (60.7%) only 194 (26.5%) have positive disposition to CLWI who had used or wanted to use ART modality, while 80(10.9%) of them said no and

170 (23.2%) were indifferent. Out of the female respondents 288 (39.3%) 134 (18.3%) were favourably disposed to the use of ART and 41 (5.6%) said no. And 113 (15.4%) were indifferent. The total percentage (38.7%) of " I don't know" respondents which was more than a quarter of total number of the respondents revealed that apart from attitudinal factors that predispose acceptance of ART, awareness of ART modality to redress the problem of infertility is still very poor. It connotes, therefore, that only few people have a positive attitude to ART modality for the purpose of conception.

Table 4.6.3: Distribution of Respondents on can ART be effective in the Treatment of Infertility by Educational Qualification

		Do you think that ART can be effective?			Total
		Yes	No	I don't know	
Educational Qualification	No formal Education	17(2.3%)	9(1.2%)	17(2.3%)	43(5.9%)
	Primary Education	39(5.3%)	15(2.0%)	31(4.2%)	85(11.6%)
	Secondary Education	75(10.2%)	26(3.6%)	68(9.3%)	169(23.1%)
	Higher Education	197(26.9%)	71(9.7%)	167(22.8%)	435(59.4%)
Total		328(44.8%)	121(16.5%)	283(38.7%)	732(100.0%)

Pearson Chi-Square = 1.262; df = 6; Sig. (2-sided) = .974

The results in table reveal that the education qualification of the respondents was not significant to their responses to the questions on attitude to Assisted Reproductive Technology (ART) ($\chi^2 = 1.262$; df = 6; N = 732, P > 0.05). This showed that there was no strong relationship between attitude to ART and the qualification of the individual respondents. However, disposition to ART was proportional to the qualification of the respondents. The more one moves in

educational level, the more one has positive attitude to ART modality in redressing the infertility problem. Out of all the respondents with positive attitude to ART, no formal education, was only 17 (2.3%), primary education 39 (5.3%), secondary education 75 (10.0%) and respondents on higher education were 197 (26.9%). while across all the educational level, those 121 (16.5%) who said no were equally proportion to the level of education. However, those 283 (38.7%) who were indifferent were more than a quarter of the total respondents.

Table 4.6.4: Distribution of Respondents on can ART be effective in the Treatment of Infertility by Religion

		Do you think that ART can be effective?			Total
		Yes	No	I don't know	
Religion	Muslim	125(17.1%)	34(4.6%)	102(13.9%)	261(35.7%)
	Christian	201(27.5%)	86(11.7%)	176(24.0%)	463(63.3%)
	Traditional	2(0.3%)	1(0.1%)	5(0.7%)	8(1.1%)
Total		328(44.8%)	121(16.5%)	283(38.7%)	732(100.0%)

Pearson Chi-Square = 5.881; df = 4; Sig. (2-sided) = .208

The results in table reveal that the religion of the respondents was not significant in their responses to the question on attitude to Assisted Reproductive Technology (ART) ($\chi^2 = 5.881$; df = 4; N = 732, P > 0.05). This showed that there was no strong relationship between attitude to ART and the religious belief of the individual respondents. Out of 328(44.8%) respondents who were favourably disposed to ART, Christians 201 (27.5%) attitude to ART is noted to supersede that of Muslims 125 (17.1%), while that of traditional adherents 2(0.3%) were infinitesimally lower than the two of them. Also, out of 121(16.5%) respondents which said no, Christians

86(11.7%) were equally more than the Muslims 34(4.60%), while the traditional believer was just (0.1%). But preponderance of the respondents 283 (37.7%) were indifferent in their attitude to ART intervention on infertility issues. It connotes, therefore, that only few respondents were favourably disposed to ART among all religion adherents.

Table 4.6.5: Distribution of Respondents on can ART be effective in the Treatment of Infertility by Christian Affiliation

		Do you think that ART can be effective?			Total
		Yes	No	I don't know	
If Christian, what is your affiliation	Protestant	65(14.0%)	30(6.5%)	60(13.0%)	155(33.5%)
	Catholic	46(9.9%)	6(1.3%)	30(6.5%)	82(17.7%)
	Pentecostal	90(19.4%)	50(10.8%)	86(18.6%)	226(48.8%)
Total		201(43.4%)	86(18.6%)	176(38.0%)	463(100.0%)

Pearson Chi-Square = 7.202; df = 8; Sig. (2-sided) = 2.73

The results in table reveal that there was significant difference between the Christian denominations or affiliation of respondents and attitude to Assisted Reproductive Technology (ART) ($\chi^2 = 7.202$, $df = 8$; $N = 732$, $P > 0.05$). That is, there was significant relationship between one Christian affiliation and attitude on ART. Out of 155 (33.5%) Protestant respondents 65(14.0%) had positive attitude to ART than 30 (6.5%) who said no. While out of 82 (17.7%) Catholics, only 46 (9.9%) showed positive attitude rather than only 6 (1.3%) who were not favourably disposed towards the modality and out of 226 (48.8%) of Pentecostals, persuasion, only 90 (19.4%) displayed positive attitude towards ART rather than 50(10.8%). In all, (43.4%) of Christians' respondents (18.6%) of no respondents; had positive attitude towards ART, such that, they were agreement that ART was very effective in treating infertility.

Table 4.6.6: Distribution of Respondents on can ART be effective in the Treatment of Infertility by Income?

		Do you think that ART can be effective?			Total
		Yes	No	I don't know	
Income	Less than N10,000	86(10.5%)	17(2.3%)	66(7.0%)	160(21.9%)
	N10,000 - N14,000	50(6.8%)	24(3.3%)	43(5.9%)	117(16.0%)
	N15,000 - N19,000	70(9.6%)	29(4.0%)	70(9.6%)	169(23.1%)
	N20,000 - N24,000	39(5.3%)	11(1.5%)	24(3.3%)	74(10.1%)
	N25,000 - N29,000	29(4.0%)	13(1.8%)	34(4.6%)	76(10.4%)
	N30,000 - N34,000	17(2.3%)	9(1.2%)	14(1.9%)	40(5.5%)
	N35,000 - N39,000	7(1.0%)	4(0.5%)	9(1.2%)	20(2.7%)
	N40,000 - N44,000	24(3.3%)	6(0.8%)	12(1.6%)	42(5.7%)
	N45,000 - N49,000	7(1.0%)	4(0.5%)	7(1.0%)	18(2.5%)
	N50,000 and Above	5(0.7%)	3(0.4%)	3(0.4%)	11(1.5%)
	Not Regular	3(0.4%)	1(0.1%)	1(0.1%)	5(0.7%)
Total		328(44.8%)	121(16.5%)	283(38.7%)	732(100.0%)

Pearson Chi-Square = 19.595; df = 22; Sig. (2-sided) = .608

The results in table reveal that income of the respondents was not significant in their responses to the question on attitude to Assisted Reproductive Technology Assisted Reproductive Technology (ART) ($\chi^2 = 19.595$; $df = 22$; $N = 732$, $P > 0.05$). This showed that there was no strong relationship between attitude to ART and the level of income of the respondents. Out of almost half of the respondents 328(44.8%) who had positive attitude to ART, only those who were earning from N5,000 - N9,000; N10,000 - N14,000 and N15,000 - N19,000; that is 60 (8.2%), 50 (6.8%) and 70 (9.6%) respectively, which was about the quarter 180 (24.6%) of the respondents showed great disposition to the use of ART with the rest having insignificant disposition to the use of ART. The category of the income earners

across all the strata of the respondents who had negative attitude to the use of ART were 121(16.5%). It connotes, therefore, that only a negligible percentage of the respondents showed a positive attitude to ART, irrespective of respondents' income status.

Table 4.6.7: Distribution of Respondents on can ART be effective in the Treatment of Infertility by Occupational Status

		Do you think that ART can be effective?			Total
		Yes	No	I don't know	
Occupational Status	Farming	17(2.3%)	7(1.0%)	13(1.8%)	37(5.1%)
	Trading	108(14.8%)	26(3.6%)	99(13.5%)	233(31.8%)
	Civil Service	100(13.7%)	35(4.8%)	91(12.4%)	226(30.9%)
	Craft / Artisan	96(13.1%)	49(6.7%)	76(10.4%)	221(30.2%)
	Others	7(1.0%)	4(0.5%)	4(0.5%)	15(2.0%)
Total		328(44.8%)	121(16.5%)	283(38.7%)	732(100.0%)

Pearson Chi-Square = 12.540; df = 8; Sig. (2-sided) = .129

The results in table reveal that the occupation of the respondents was not significant in their responses to the question on attitude to Assisted Reproductive Technology (ART) ($\chi^2 = 12.540$; **df = 8**; $N = 732$, $P > 0.05$). This showed that there was no strong relationship between attitude to ART and the occupation of the respondents. Out of all the respondents, 328 (44.8%) who had positive attitude to ART, farmers were 17 (2.3%), traders 108 (14.8%), civil/public 100 (13.7%), craft/artisan 96 (13.1%) and others 7 (1.0%) respectively. Across all the category of respondents, negative disposition or attitude to ART was 121 (16.5%) in all. But, almost half of the respondents 283 (38.7%) were indifferent. It connotes therefore, that, only a negligible percentage of the respondents showed a positive attitude to ART irrespective of respondents' occupational status.

Table 4.6.8: Distribution of Respondents on can ART be effective in the Treatment of Infertility by Marital Status

		Do you think that ART can be effective?			Total
		Yes	No	I don't know	
Marital Status	Single	12(1.6%)	8(1.1%)	22(3.0%)	42(5.7%)
	Married	155(21.2%)	51(7.0%)	107(14.6%)	313(42.8%)
	Divorced	4(0.5%)	2(0.3%)	8(1.1%)	14(1.9%)
	Separated	157(21.4%)	60(8.2%)	146(19.9%)	363(49.6%)
Total		328(44.8%)	121(16.5%)	283(38.7%)	732(100.0%)

Pearson Chi-Square = 10.389; df = 6; Sig. (2-sided) = .109

The results in table reveal that the marital status of the respondents was not significant in their responses on the awareness of Assisted Reproductive Technology (ART) ($\chi^2 = 10.389$; $df = 6$; $N = 732$, $P > 0.05$). This showed that there was no strong relationship between attitude to ART and the marital status of the respondents. Out of 328 (44.8%) respondents who had positive attitude to ART; those who had been married for less than five years 8 (1.1%) while 71 (9.7%), 84 (11.5%) and 97 (13.3%) were 5-9, 10-14 and 15-19 years of marriage respectively. The other categories 57 (7.8%) were 20 years and above years of marriage. While 121 (16.5%) of the respondents had negative attitude to ART, almost a majority of the respondents 283(38.7%) across all the strata of the ages were indifferent to the use of ART to deal with infertility.

Table 4.6.9: Distribution of Respondents on can ART be effective in the Treatment of Infertility by Marriage Duration

		Do you think that ART can be effective?			Total
		Yes	No	I don't know	
Marriage Duration	Less than 5 years	8(1.1%)	5(0.7%)	6(0.8%)	19(2.6%)
	5 - 9 years	71(9.7%)	17(2.3%)	59(8.1%)	147(20.1%)
	10 - 14 years	84(11.5%)	35(4.8%)	79(10.8%)	198(27.0%)
	15 - 19 years	97(13.3%)	30(4.1%)	64(8.7%)	191(26.1%)
	20 - 24 years	11(1.5%)	8(1.1%)	4(0.5%)	23(3.1%)
	Above 24 years	57(7.8%)	26(3.6%)	71(9.7%)	154(21.0%)
Total		328(44.8%)	121(16.5%)	283(38.7%)	732(100.0%)

Pearson Chi-Square = 19.134; df = 10; Sig. (2-sided) = .039

The results in table reveal that the length of marriage of the respondents was not significant in their responses on awareness of Assisted Reproductive Technology (ART) ($\chi^2 = 19.134$; $df = 10$; $N = 732$, $P > 0.05$). This showed that there was no strong relationship between attitude to ART, and duration of marriage of the respondents. Out of 328 (44.80%) respondents who had positive attitude to ART; those who had been married for less than five years 8 (1.10%) while 71 (9.70%), 84(11.50%) and 97(13.30%) were 5-9, 10-14 and 15-19 years of marriage respectively. Another category 57(7.80%) was 20 years and above years of marriage. 121 (16.50%) of the respondents had a negative attitude to ART. Almost the majority of the respondents 283(38.70%) across all the strata of the ages were indifferent to the use of ART to cure infertility.

Table 4.6.10: Distribution of Respondents on can ART be effective in the Treatment of Infertility by Residence Duration

		Do you think that ART can be effective?			Total
		Yes	No	I don't know	
Residence Duration	Less than 5 years	119(16.3%)	38(5.2%)	92(12.6%)	249(34.0%)
	5 - 9 years	66(9.0%)	32(4.4%)	72(9.8%)	170(23.2%)
	10 - 14 years	65(8.9%)	24(3.3%)	59(8.1%)	148(20.2%)
	15 - 19 years	57(7.8%)	19(2.6%)	49(6.7%)	125(17.1%)
	20 years and Above	21(2.9%)	8(1.1%)	11(1.5%)	40(5.5%)
Total		328(44.8%)	121(16.5%)	283(38.7%)	732(100.0%)

Pearson Chi-Square = 5.785; df = 8; Sig. (2-sided) = .671

The results in table reveal that the length of residence in a particular environment of the respondents was not significant to their attitude to Assisted Reproductive Technology (ART) ($\chi^2 = 5.785$; $df = 8$; $N = 732$, $P > 0.05$). This showed that there was no strong relationship between attitude to ART and duration/length of residence of the respondents. Out of 328 (44.80%) respondents who had positive attitude to ART; those who had stayed for less than five years 119 (16.30%) while 66 (9.00%), 65 (8.90%) and 57(7.80%) were 5-9, 10-14 and 15-19 years of residence respectively. Others were 20 years and above, with only 21(2.90%) years of residence, while 121 (16.5%) of the respondents had negative attitude to ART. Almost a majority of the respondents 283 (38.7%) across all the strata of the ages were indifferent to the use of ART to heal infertility.

The attitude of the respondents to ART was elicited from the questions such as can ART be effective in combating infertility and can ART be effective in treating infertility? The questions were to know the respondents' disposition to ART, as an intervention to redress infertility and attitude or reaction to the children conceived through ART method. Responses on attitude were elicited from the respondents to situate people's attitude within socio-economic factors as the planks upon which the respondents' responses were couched. Age, sex, educational status, income, occupational status, marital status, marital duration, residence duration were not significant and therefore, not strong enough for people to form any attitude to the use of ART to combat or redress infertility. However, years or length of marriage changed the dynamics of their attitude towards infertility. As length of years of marriage increases, so the attitude to ART shows improvement. The change in attitude was proportional to the duration or length of marriage. The older the respondents become in marriage the more they manifest positive attitude or disposition towards ART. In other words, health-seeking behaviour of an infertile person would possibly be an outcome or factor of the duration of marriage. This again was corroborated by the qualitative data as presented below: As one of the clients- who preferred to be anonymous- undergoing ART surmised:

Not many people want to go this way at all. But when the reproductive period is thinning out for us and no any alternative we (the husband and wife) decided to give it a trail. We are exposed to a lot of ridicules you cannot walk shoulder-high in the midst of colleagues and friends. One is inadequate. The view is that they may want to ask who the father or the mother of the baby is, if sperm or egg is gotten from another man or woman is even a big

clause in the whole thing. Because one is not sure that the process of conception will not leak eventually (KII, Nov., 2011).

As noted by Dr. O., majority of his clients are those who are already old in their marriage: those who are about six years and above in their marriage.

... patronage is often based on sentimental belief that natural conception is still possible. In any case, the status of the children through the modality is of great concern. To an average man, he wants to see his children as a direct offspring. Nothing more, nothing less... people would still not patronize ART as often as necessary because of the belief in socio-cultural issues; for instance, who is the father or who in the mother syndrome: people still believe that with God all things are possible – we believe that also – but with long period of waiting, the woman is aging, the eggs are deteriorating further and the woman organically is weak and by the time they now say, let go the ART way, the success rate becomes rather too low, therefore, success rate is rather unbecoming (KII, Nov., 2011).

Furthermore, to buttress the assertion above, from the records of 176 attendees in the fertility clinic section of one of the General Hospitals in the study area, the average age is 32.6 years. This further helps to shed more light, according to ART specialists in this area, that people are strongly and perhaps socially inhibited to patronize the method because of what they describe as societal reaction. One is not surprised, therefore, to see that infertile persons would rather accept the method only as a last resort. Data on In-depth Interviews further reveal that respondents understood what infertility is about and the intricacies of patronizing ART or any other method apart from the natural type due to a number of social, cultural and ethical challenges. For example, those people who are patronising ART or other methods for conception, apart from the natural type are regarded as less human beings and the children through this method are equally regarded as inferior to the ones born through the natural conception. Majority of the respondents were also of the opinion that ART may be condoned

among the elite who are into monogamous marriage and the issue would be a top secret between the husband and the wife, but definitely not among the polygamists, where the secret cannot be kept for so long. This is because the woman would be derided and the child may be denied inheritance.

Measure the level of utilization patterns of ART.

Table 4.7.1: Distribution of Respondents on the Extent to which a Couple Living with Infertility (CLWI) should go to have Children by Age

		To what extent do you think a couple should go to have children?				Total
		No effort should be spared	Wait for God's time	Adopt children from relatives	seek ART intervention	
Age	20 - 24 years	17(2.3%)	41(5.6%)	6(0.8%)	7(1.0%)	71(9.7%)
	25 - 29 years	25(3.4%)	98(13.4%)	7(1.0%)	17(2.3%)	147(20.1%)
	30 - 34 years	10(1.4%)	65(8.9%)	3(0.4%)	6(0.8%)	84(11.5%)
	35 - 39 years	21(2.9%)	67(9.2%)	2(0.3%)	12(1.6%)	102(13.9%)
	40 - 44 years	57(7.8%)	188(25.7%)	14(1.9%)	30(4.1%)	289(39.5%)
	Above 45 years	10(1.4%)	23(3.1%)	0(0.0%)	6(0.8%)	39(5.3%)
Total		140(19.1%)	482(65.8%)	32(4.4%)	78(10.7%)	732(100%)

Pearson Chi-Square = 15.429; df = 15; Sig. (2-sided) = .421

The results in Table 4.7.1 reveal that there was no significant difference in the ages of respondents and the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 15.429$, $df = 15$; $N = 732$, $P > 0.05$). Though there was evidence from the table which showed that as the respondents are growing old in age, there was indication that a matured disposition to ART in redressing the problem of infertility was

noted. But in all of the age categories, there was no positive relationship between ages of the respondents and acceptance of ART. Out of the respondents between the ages of 20-24 only 71 (1%) responded that person living with infertility should seek ART as against 30 (4.1%) among those of ages 40 – 44 years. However, at 45 years and above hope on ART was just (0.8%). But, preponderance of the respondents 0 (65.9%) advocated that people living with Infertility - PLWI should wait for God's time.

Acceptability of ART from the responses as gleaned from the table and graph indicated that the extent to which Couples Living with Infertility (CLWI) should go to have children is not altogether a function of age. But looking at the categories of the questions, such as, to what extent do you think CLWI should go to have children? Those within the ages of 20-24 and 25-29 altogether were 42 (6.7%) and 40-44 also were 57 (7.8%), who responded that no effort should be spared to have children. There was evidence from the table which showed that as the respondents are growing older, there was indication that a matured disposition to ART in redressing the problem of infertility was noted.

Table 4.7.2: Distribution of Respondents on the extent to which a couple living with Infertility (CLWI) should go to have Children by Sex of the respondents

		To what extent do you think a couple should go to have children?				
		No effort should be spared	Wait for God's time	Adopt children from relatives	seek ART intervention	Total
Sex of respondent	Male	75(10.2%)	311(42.5%)	12(1.6%)	46(6.3%)	444(60.7%)
	Female	65(8.9%)	171(23.4%)	20(2.7%)	32(4.4%)	288(39.3%)
Total		140(19.1%)	482(65.8%)	32(4.4%)	78(10.7%)	732(100%)

$$\chi^2 = 13.247, df = 3; N = 732, P < 0.05$$

The results in table 4.7.2 reveal that there was a significant difference in the sex of respondents regarding the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 13.247$, $df = 3$; $N = 732$, $P < 0.05$). This showed that acceptance of ART has gender connotation. The results showed that more male respondents 46 (6.3%) preferred ART as against the female respondents 32 (4.4%). The result showed that male respondents 75 (10.2%) as against female 65 (8.9%) respondents, said that no effort should be spared in seeking for infertility solution. However, more male respondents 311 (42.5%) as against female respondents said that CLWI should wait for God's time; but, only 12 (1.6%) male respondents as against 20 (2.7%) women suggested that CLWI should adopt children from relatives.

Table 4.7.3: Distribution of Respondents on the extent to which a Couple Living with Infertility (CLWI) should go to have Children by Educational Qualification

		To what extent do you think a couple should go to have children?				Total
		No effort should be spared	Wait for God's time	Adopt children from relatives	seek ART intervention	
Educational Qualification	No formal Education	6(0.8%)	31(4.2%)	0(0.0%)	6(0.8%)	43(5.9%)
	Primary Education	14(1.9%)	58(7.9%)	2(0.3%)	11(1.5%)	85(11.6%)
	Secondary Education	34(4.6%)	115(15.7%)	6(0.8%)	14(1.9%)	169(23.1%)
	Higher Education	86(11.7%)	278(38.0%)	24(3.3%)	47(6.4%)	435(59.4%)
Total		140(19.1%)	482(65.8%)	32(4.4%)	78(10.7%)	732(100%)

Pearson Chi-Square = 7.793; df = 9; Sig. (2-sided) = .555

The results in table 4.7.3 reveal that the level of education attained by the respondents was not significant in their responses regarding the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 7.793$, $df = 9$; $N = 732$; $P > 0.05$). This showed that the level of education was not a strong determinant of ART acceptability. Though, as the respondents move higher educationally, there was a tendency to be liberal towards ART. As respondents from no formal education had 0.8%, followed by primary education 1.5%, then, secondary had 1.9% and higher education was 6.4%. It connotes that as one acquires more formal education, there is a tendency to become more liberal towards ART and its acceptability in redressing the problem of infertility.

Table 4.7.4: Distribution of Respondents on the extent to which a Couple Living with Infertility (CLWI) should go to have Children by Income

		To what extent do you think a couple should go to have children?				
		No effort should be spared	Wait for God's time	Adopt children from relatives	seek ART intervention	Total
Income	Less than N19,000	75(10.2%)	299(40.9%)	22(3.0%)	30(6.8%)	446(61.0%)
	N19,000 - N24,000	17(2.3%)	42(5.7%)	3(0.4%)	12(1.6%)	74(10.1%)
	N25,000 - N29,000	16(2.2%)	53(7.2%)	3(0.4%)	4(0.5%)	76(10.4%)
	N30,000 - N34,000	8(1.1%)	25(3.4%)	2(0.3%)	5(0.7%)	40(5.5%)
	N35,000 - N39,000	7(1.0%)	10(1.4%)	1(0.1%)	2(0.3%)	20(2.7%)
	N40,000 - N44,000	12(1.6%)	27(3.7%)	1(0.1%)	2(0.3%)	42(5.7%)
	N45,000 - N49,000	3(0.4%)	14(1.90%)	0(0%)	1(0.1%)	18(2.5%)
	N50,000 and Above	2(0.3%)	8(1.1%)	0(0%)	1(0.1%)	11(1.5%)
	Not Regular	0(0%)	4(0.5%)	0(0%)	1(0.1%)	5(0.7%)
Total		140(19.1%)	482(65.8%)	32(4.4%)	78(10.7%)	732(100.0%)

Pearson Chi-Square = 29.201; df = 4; Sig. (2-sided) = .657

The results in Table 4.7.4 revealed that the income of the respondents was not significant in their responses regarding the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 29.201$, $df = 33$; $N = 732$, $P > 0.05$). This showed that the level of income was not a strong determinant of ART acceptability. Out of 140(19.10%) respondents, respondents said that no effort should be spared in the course of looking for a solution to infertility. This is rather insignificant, that is, from those who were earning less than 5000 naira 4 (0.50%) to those earning above 45000 naira per month 3 (0.40%). Again, out of the total number of respondents, only 78 (10.70%) suggested that CLWI should seek ART intervention. Again, only an insignificant number 32 (4.40%) advised that CLWI should adopt children rather than accept to use ART. However, majority of the respondents 482 (65.80%) counselled CLWI to wait for God's time. It connotes, therefore, that income status is not a strong factor to ART acceptability in redressing the problem of infertility.

Table 4.7. 5: Distribution of Respondents on the extent to which a Couple Living with Infertility (CLWI) should go to have Children by the Occupational Status

		To what extent do you think a couple should go to have children?				Total
		No effort should be spared	Wait for God's time	Adopt children from relatives	seek ART intervention	
Occupational Status	Farming	5(0.7%)	25(3.4%)	2(0.3%)	5(0.7%)	37(5.1%)
	Business / Trading	48(6.6%)	158(21.6%)	6(0.8%)	21(2.9%)	233(31.8%)
	Civil Service	43(5.9%)	145(19.8%)	11(1.5%)	27(3.7%)	226(30.9%)
	Craft / Artisan	40(5.5%)	146(19.9%)	11(1.5%)	24(3.3%)	221(30.2%)
	Others	4(0.5%)	8(1.1%)	2(0.3%)	1(0.1%)	15(2.0%)
Total		140(19.1%)	482(65.8%)	32(4.4%)	78(10.7%)	732(100.0%)

Pearson Chi-Square = 8.391; df = 12; Sig. (2-sided) = .754

The results in Table 4.7.5 revealed that the respondents' occupation was not significant in their responses to acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 8.391$, $df = 12$; $N = 732$, $P > 0.05$). This showed that the level or the type of occupation was not a strong determinant of ART acceptability. Respondents from Farmers, (0.7%), Traders, (2.9%), Civil Servants, (3.7%) and Artisans, (3.3%), all supported the use of ART for conception. It connotes that the types of occupation one does has no strong relationship with ART acceptance in redressing the problem of infertility.

Acceptability of ART is not a function of income, education and occupation. As revealed from Tables 4.4.5, the respondents did not attribute acceptance of ART to income /financial status, education and occupation of all the respondents, as only (10.7%) of the respondents suggested ART as a viable option. Above nineteen percent (19.1%) of the respondents advised that infertile persons should go to every length to have conception. However, more than half (65.8%) of the respondents believed that CLWI should wait for God's time. Therefore, the extent to which a Couple Living with Infertility (CLWI) could go to have children is not altogether a function of income, education and occupation; however, as the respondents acquire more formal education, their disposition to acceptability becomes more positive and significant .

Ethnographic data did not depart from these findings as it showed that as couples living with infertility are becoming old and having the knowledge of ART, they may be favourably disposed to accept the modality for infertility treatment. According to Dr. A

The patronage is low because of financial undertaking and lack of education. The patronage is low but definitely not on religion ground. No, not on religion bias but on lack of money as even those who knew about it could not afford the price. Again, the success rate is very low about 3 of 10 of ART users may be successful, i.e. 30% success rate is obtained in spite of huge capital outlay (KIIs with Dr. A).

One of the female clients had this to say on the financial cost:

... the cost of the treatment is too expensive. The first one we had was N1.2million without success, the second was N900, 000, and we are able to undertake it because we are into our own private business. Also the success rate is very low (KII with a female client)

A male client corroborated the foregoing response

...I know of several ones. (i.e. ART). I have been introduced to a lot of these, but, the financial implication of the ART is high and also because it is against my religion (KII with a male client).

A female client submitted, in support of the above:

...Infertility leads to several expenses. We have spent a lot and are still exposed to all kinds of abuse and insult from friends, family and co-workers on the ground of infertility (female client).

Another key informant said that:

ART is a very expensive treatment to embark on. I know of a couple who has done it for more than three times without success and it is almost making them poor. Some people are not aware of it, and those who knew about it could not afford the high cost. It is often with low success rate (Dr. O. KII. Nov. 2011)

One of the clients put the matter so gravely; when she narrated that they (herself and her husband) have tried ART twice and failed. But they are on the third trial. The first one was one million and five hundred thousand naira (N1.5million), the second time gulped one million and three hundred naira (N1.3million). The current one which they are now using has taken about nine hundred thousand naira (N900, 000). And yet they are still spending. As she puts it:

We have spent a lot on this method and are still exposed to all kinds of insult amongst friends, extended family members and co-workers. One's prayer is that the present one succeeds.

There is this concern among those that have chosen to use ART; aside the huge amount of money being spent to procure the modality, failure rate is noted to be high especially among the older clients. This was the opinion of one of the specialists:

As I have said earlier, it involves huge amount of money. Most people cannot afford it. Even the one in Lagos is very expensive. The result might come out with failure some times. The social factor like stigmatization is not the case, because it is always a secret thing, which is legally binding. It is a personal issue, no difference between the children through the method and the natural ones. Even the couple may like the child than the ones conceived in the natural way (KIIs with Dr. O).

On a general note, not many people can afford the cost. The majority who had formal education could not afford it either because so many of these people are civil or public servants. From IDIs responses, in spite of joy of motherhood derivable from having one's own biological child, the cost may be huge for average individuals who may want to patronise ART modality. This factor predisposed the utilization pattern of ART. Apart from this, there are other socio- cultural and demographical factors that may act as determinants of ART acceptability. These include distance, income, occupation, belief systems, family and others

Examine Social, Cultural and Demographical factors Influencing the acceptability of ART

Table 4.8.1: Distribution of respondents on the extent to which a couple living with infertility (CLWI) should go to have Children by Residence Durations

		To what extent do you think a couple should go to have children?				
		No effort should be spared	Wait for God's time	Adopt children from relatives	Seek ART intervention	Total
Residence Duration	Less than 5 years	49(6.7%)	162(22.1%)	14(1.9%)	24(3.3%)	249(34.0%)
	5 - 9 years	36(4.9%)	111(15.2%)	5(0.7%)	18(2.5%)	170(23.2%)
	10 - 14 years	31(4.2%)	94(12.8%)	4(0.5%)	19(2.6%)	148(20.2%)
	15 - 19 years	16(2.2%)	93(12.7%)	3(0.4%)	13(1.8%)	125(17.1%)
	20 years and Above	8(1.1%)	22(3.0%)	6(0.8%)	4(0.5%)	40(5.5%)
Total		140(19.1%)	482(65.8%)	32(4.4%)	78(10.7%)	732(100.0%)

Pearson Chi-Square = 20.564 df = 12; Sig. (2-sided) = .057

The results in table 4.8.1 reveal that the length of residence of the respondents was not significant in their responses regarding the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 20.564$, $df = 12$; $N = 732$, $P > 0.05$). This showed that the length of residence was not a strong determinant of ART acceptability. Only an insignificant number of respondents from less than 5 years of residence, followed by (3.3%), 5-9, (2.5%), 10-14, (2.5%) and 15 years and above, (1.8%) advocated for ART acceptability respectively. It connotes therefore that environment or where one resides has no influence on ART acceptability in redressing the problem of infertility.

Where one resides, however, as revealed by the ethnographic data is a strong determinant of acceptance of ART modality in case of infertility. The outcome of

long distance, poor communication, lack of infrastructural amenities, low or restrained accessibility and utilisation of modern health care, drastically reduce patronage of health care consumption, as one of the IDIs further revealed that:

Distance plays a very negative role in our maternal health care period, because there is no ideal hospital for specific maternal health problem like infertility and specialized treatment like ART. Even our pregnant women do have deliveries in the village. Though after the delivery, they do go for post-natal care in the town (IDIs from June - July 2011).

But a Matron in a government maternity in this area did not see any reason why people should complain of distance if it is for the good of the patient:

Distance should not really be an excuse when one is going to hospital, especially, on any maternal matters. If you really want better health care you will not mind the distance. (IDIs from June – August, 2011).

On the availability of ART centre(s) in Ijebu, Dr. A. observed that the service is not well grounded:

We do not have full fledged ART centre here in Ijebu. We do refer those who could afford it to where they have full complement of the method, like Lagos. Unfortunately they don't come back to tell us, either they are successful or not.

Dr. O. corroborated the observation made above:

To prevent infertility, there should be a lot of campaign about the diseases, the treatment and care centres including ART should be introduced in the tertiary hospitals which will drastically reduce the cost. The rate is very low here. In the whole of Ogun State, there is no centre where ART is done. But there are centre in Lagos, Port-Harcourt and Abuja. Some people are not aware of it and those who knew about it could not afford the high cost with low success rate. ART is a very expensive treatment to embark on.

Government should provide a lot of fund for research, training and treatment. They should subsidize the setting up, treatment and training.

The clients/infertile persons, however, said that there are two ART centres presently in the whole of Ijebu which they are patronising for treatment. All the two are situated in Ijebu Ode with the one in Ijebu Igbo helping in what is called stimulation. The clients are not sure if the centres have full complement of ART expertise like those ones in Lagos, Abuja and Port-Harcourt. But they believed these are not adequate for the teeming number of infertile people who are desirous of their service. Thus one of the specialists advocates:

Government should provide or create awareness on ART. Adequate information should be passed across to people concerning its usefulness. Creating more ART centres where people can go for treatment would be a major way forward (KII with Dr. A, Nov. 2011).

Table 4.8.2: Distribution of Respondents on the extent to which a Couple Living with Infertility (CLWI) should go to have Children Marriage Duration

		To what extent do you think a couple should go to have children?				
		No effort should be spared	Wait for God's time	Adopt children from relatives	Seek ART intervention	Total
Marriage Duration	Less than 5 years	3(0.4%)	12(1.6%)	3(0.4%)	1(0.1%)	19(2.6%)
	5 - 9 years	30(4.1%)	90(12.3%)	8(1.1%)	19(2.6%)	147(20.1%)
	10 - 14 years	35(4.8%)	139(19.0%)	6(0.8%)	18(2.5%)	198(27.0%)
	15 - 19 years	40(5.5%)	118(16.1%)	10(1.4%)	23(3.1%)	191(26.1%)
	20 - 24 years	7(1.0%)	13(1.8%)	0(0%)	3(0.4%)	23(3.1%)
	Above 24 years	25(3.4%)	110(15.0%)	5(0.7%)	14(1.9%)	154(21.0%)
Total		140(19.1%)	482(65.8%)	32(4.4%)	78(10.7%)	732(100.0%)

Pearson Chi-Square = 16.725; df = 4; Sig. (2-sided) = .336

The results in table 4.8.2 reveal that the level of duration of marriage of the respondents was not significant in their responses to the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 16.725$, $df = 4$; $N = 732$, $P > 0.05$). This showed that the length of marriage is not a determinant factor of ART acceptability. The Respondents of 5 – 14 and 15 – 19 years duration/length of marriage of combined percentage of only (8.2%) supported ART to alleviate infertility problem. Only (0.1%) among the respondents of less than 5 years, supported the modality for conception. From 20 years and above, only a small number (2.3%) supported ART modality. It connotes, therefore, that marital duration was not a factor in acceptance of ART modality.

Table 4.8.3: Distribution of Respondents on the extent to which a Couple Living with Infertility (CLWI) should go to have Children according to Marital Status

		To what extent do you think a couple should go to have children?				
		No effort should be spared	Wait for God's time	Adopt children from relatives	seek ART intervention	Total
Marital Status	Single	10(1.4%)	28(3.8%)	4(0.5%)	0(0%)	42(5.7%)
	Married	74(10.1%)	184(25.1%)	12(1.6%)	43(5.9%)	313(42.8%)
	Divorced	4(0.5%)	9(1.2%)	0(0%)	1(0.1%)	14(1.9%)
	Separated	52(7.1%)	261(35.7%)	16(2.2%)	34(4.6%)	363(49.6%)
Total		140(19.1%)	482(65.8%)	32(4.4%)	78(10.7%)	732(100.0%)

Pearson Chi-Square = 24.612; df = 9; Sig. (2-sided) = .003

The results in table 4.8.3 reveal that there was a significant relationship in the distribution of respondents acceptability of ART by marital status ($\chi^2 = 24.612$, df = 9, N = 732; P < 0.05)

Table 4.8.4: Distribution of Respondents on the extent to which a Couple Living with Infertility (CLWI) should go to have Children by Religion

		To what extent do you think a couple should go to have children				
		No effort should be spared	Wait for God's time	Adopt children from relatives	Seek ART intervention	Total
Religion	Muslim	56(7.7%)	156(21.3%)	18(2.5%)	31(4.2%)	261(35.7%)
	Christian	80(10.9%)	323(44.1%)	14(1.9%)	46(1.9%)	463(63.3%)
	Traditional	4(0.5%)	3(0.4%)	0(0%)	1(0.1%)	8(1.1%)
Total		140(19.1%)	482(65.8%)	32(4.4%)	78(10.7%)	732(100.0%)

Pearson Chi-Square = 15.769; df = 6; Sig. (2-sided) = .015

The results in table 4.8.4 revealed that there was no significant relationship in the distribution of respondents acceptability of ART by religious persuasions ($\chi^2 = 15.769$, df = 6, N = 732; P > 0.05). This showed that acceptability of ART will

differ only by religious background. Of all the respondents who were Muslims, only 31 (4.2%) advocated ART, while, 46 (6.3%) Christians concurred with the use of ART. (0.1%) Traditionalists supported the use of ART. This percentage 140 (19.1%) is in contradiction of their suggestion earlier on where 140 (19.1%) said that no effort should be spared to resolve infertility problem, However, majority of the Christians 323 (44.1%), Muslims 156 (21.3%), and (0.4%) of the traditionalists aligned with the notion that God's time is the best. It connotes that acceptability of ART is not a function of belief systems, as majority counselled the CLWI to wait on God for a solution rather than patronizing ART.

The data revealed that acceptance of ART could not be attributed to religious status. Out of all the categories of the respondents on religion, only (19.10%) of the total number of respondents, irrespective of their religious backgrounds, advised that infertile persons should go to any length to have conception. While on the other hand, Muslim respondents were 56 (7.70%) and Christians stood at 80 (10.90%). However, only 46 (9.90%) of the respondents suggested ART as a viable option. But (65.80%) of the respondents believed in God's time. In breaking down the Christian respondents to denominations, out of 463 respondents, only 80 (17.30%) responded that no effort should be spared with Pentecostals having 35 (7.60%), Protestants, 32 (6.90%) and Catholics coming last with only 13 (2.80%). Out of these numbers only 46 (9.90%) suggested ART as the option. Again, the Catholics were the least with only (2.4%) out of the total 46 (%) respondents who suggested

ART. Preponderance of Christians 323 (69.8%) counselled CLWI to wait for God's time.

Table 4.8.5: Distribution of Respondents on the extent to which a Couple Living with Infertility (CLWI) should go to have Children by Christian Denomination

		To what extent do you think a couple should go to have children?				Total
		No effort should be spared	Wait for God's time	Adopt children from relatives	Seek ART intervention	
If Christian, what is your affiliation	Protestant	32(6.9%)	103(22.2%)	3(0.6%)	17(3.7%)	155(33.5%)
	Catholic	13(2.8%)	54(11.7%)	4(0.9%)	11(2.4%)	82(17.7%)
	Pentecostal	35(7.6%)	166(35.9%)	7(1.5%)	18(3.9%)	226(48.8%)
Total		80(17.3%)	323(69.8%)	14(3.0%)	46(9.9%)	463(100.0%)

Pearson Chi-Square = 5.989; df = 6; p > .05

The results in table 4.8.5 revealed that there was significant difference in the Christian affiliation of respondents and the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 5.989$, $df = 6$; $N = 732$, $P > .05$). In other words, there was significant relationship between the respondents' affiliation and acceptance of ART. Out of 80 (17.3%) who responded that no effort should be spared to have children, Pentecostal, Protestant and Catholic adherents were (7.6%), (6.9%) and (2.8%) percents respectively. Similarly, out of 323 (69.8%) who believed that CLWI should wait for God's time, Pentecostal adherents were 166 (69.8%), Protestants 103 (22.2%) and Catholics 54 (11.7%). While, out of 46 respondents, only 11 (2.40%) of Catholics saw the need for CLWI to seek ART intervention as against 17 (3.7%) and 18 (3.90%) of Protestants and Pentecostals faithful respectively. The extent to

which Couples Living with Infertility (CLWI) should go to have children is not altogether a function of religion. Ethnographic data corroborated the above with few exceptions.

The summary of IDIs age and acceptability of ART indicates a general assumption among the respondents that those who are still young in their marriage would want to wait and hope on natural conception than embark on ART. But as the marital union is becoming old, partners may become more anxious to have conception, thus, recourse to ART is not totally ruled out. But, around this period, it is not uncommon that the action may be a belated one. Similarly as they are aging progressively, further interest in ART becomes unsustainable. Participants in IDIs were also of the view that age at which one is starting reproductive life very crucial to acceptability and adoption of ART. It is a general opinion that those that are fairly old may likely seek alternatives to natural conception than those that are still young. As one of the IDIs revealed on this subject matter:

...aging is the most basic cause of infertility. Women are less likely to become pregnant as they become older. Success rate of fertility treatments, ART inclusive, decrease with age (IDIs June-Nov., 2011).

Patronage or utilization of ART is often relegated to the last resort, when all methods or approaches to become pregnant have failed. This explains the failure rate as reported by one of the specialists. Rate of failure of the method is reported to be high around this time. Those that are closer to their menopause may not want to use the method as reflected by Dr. O.

Yes, I have treated so many before but presently I have five patients. Their ages range from 28 to 41 or 42 years. As I have said many would not want to come for this method on time, because of its cultural and ethical connotations. Some prefer to go to church to

pray than to come for this type of medical intervention. They may be thinking that God does not permit it. This is why the rate of failure may be overwhelming. Am not saying those that commence treatment early enough may not suffer wastage. But they hardly come on time (KIIs, Dec. 2011).

Another specialist corroborated the above assertion:

...people believe that with God all things are possible – we believe that also – but with long period of waiting, the woman is aging, the eggs are deteriorating further and the woman is becoming organically weak by days; by the time she now says, “let me go for ART”, the success rate becomes rather too lean, therefore, success rate is rather reduced due to insistence on the natural conception (KII with Dr. K)

This was corroborated by Client E who claimed that he and his wife could not patronize ART on time because of the strong attachment to the idea or dogma that one is not a fulfilled person when one is unable to have natural conception and the idea that one could not have natural conception attracts a lot of innuendoes and stigmatisation. Generally, the whole idea may be an offshoot of religious belief, cultural norms and values, especially attached to blood relations. The client was very particular of what people will say:

... we are apprehensive of public ridicule we may go through if it leaks out, until we travelled out. We have spent so much money on the thing, including medical treatment and gone through series of fasting and prayers; but I could not bring myself up to face anything that is not natural. We trusted God for everything. We are exposed to a lot of ridicules you cannot walk shoulder-high in the midst of colleagues and friends. One is inadequate. The view is that they may want to ask who is the father or the mother of the baby if sperm or egg is got from another man or woman. This was before we travelled out... (KII, Nov.2011).

The conclusion was in tandem with the submission below as evinced by a 55 year old man whose responses were captured thus:

... culturally, it is wrong to patronize any alternative that negates God's position in human undertakings. It is God who provides children for couples and not through the use of technologies. Anybody who engages in that is not in tune with our culture. People should wait for God and go for medical check-up because there is nothing like barrenness (IDI June, 2011).

Therefore, with strong support from ethnographic data, acceptability of ART is a function of age. In other words, the ethnographic data indicate or reveal that age is a strong factor for consideration before the adoption of ART to alleviate the challenge by infertility. In other words, according to the respondents, as infertile persons are becoming old and have the knowledge about ART, they would accept it, but as they are reaching menopause they may be dissuaded from using it. Religion was a strong factor in the acceptability of ART as a modality of mitigating the problem of infertility. Religion was also noted to affect waiting period before infertile person would resolve to accept ART as revealed below. Again, acceptability of ART on the religious platform is also based on affiliation or sect within Christianity. This was revealed through the in-depth interviews with waiting mothers, clerics / or medical practitioners:

I have heard of several methods. I have been introduced to a lot of these methods, but I have not succumbed to patronize any of these ART methods because it is against my religion. Also, I could not use this modality due to its financial implication. I understood that the cost of the ART is high and also not reliable (IDI with an infertile woman).

A Catholic priest emphasized the foregoing and corroborated the statement thus:

... there is a serious ethical issue involved. Get this right, it is not that Catholics forbid care of infertile people, far from that, but we frown at conception through a method that is not natural because it involved practice not in agreement with our doctrine. Secondly, the church would have been comfortable with ART but because many doctors like to fertilize and replant as many eggs as possible, this is

to make room for wastage. If in the process more than one or two eggs transform into viable foetus, which is not unlikely, a choice must be made as to whether to remove some of the foetuses from the womb. This is medically called selective reduction or in a plain language abortion which is not acceptable to the Catholics. Church has serious aversion to that. But we encourage adoption and other coping methods (IDI June, 2011).

A Pentecostal clergy man/pastor in one of the Pentecostal sects did not outrightly contradict this, but to some extent, differed from the above:

... infertility as I have inferred is not a welcome development to any couple at all. The church shares this sentiment. This is the reason why we have a special day every week to intercede for all our women who are trusting God for the fruit of womb. Be that as it may, we do encourage them to go for medical checkup and encourage them to confess their past sins. Sometime, infertility is as a result of sin, this we do tell people to abstain from – which probably involved past abortion, as we do not tolerate people taking lives of others. Abortions are tantamount to killing and encouraging them to live holy life henceforth. Test tube baby or ART is not encouraged, but the church doctrine seems quiet on it, therefore one cannot say the church forbids it. The church is silent on this (IDI June, 2011).

On the contrary, an in-depth interview with a TBA/ Ifa priest, he puts the issue this way:

Procreation is very sacred to God. Plenty children are indeed blessing from Him. Indeed they are evidence of God's favour. To my personal view, I do not believe in the ART or any conception that is not natural. People should stop playing God. People should wait for God's time and learn to be consistent with medical check-up in the orthodox hospital or traditional ones. I have implicit belief that there is nothing like bareness... (IDIs July 2011).

ART and infertility treatment have a special place in Islam. According to an Islamic scholar, ART is not totally acceptable to the Muslims. Islam is against ART. Though Islam encourages advancement of knowledge, it is not to be detrimental to one's relationship with God. Since marriage is a contract between the wife and husband, therefore during the span of their marriage there should not be a third party or intruder into the marital functions of sex and procreation. This means that a third party donor is not acceptable, whether he or she is providing sperm, eggs, embryos, or an uterus. The use of a third party is tantamount to *zina*, or adultery. Also the establishment of sperm banks with semen also acts as a threat to the existence of the family. As it is believed to pollute humankind and races in all ramifications. This should be prevented. He further said:

Though Quran expressly states through our leader (Mohammed) that, one should continually be seeking for knowledge from the day one is born till he/she goes to grave, but, God cautioned us that when it comes to matter of creation and existence we should leave that to Him. He alone has power of creation. Similarly Islam revolves round the protection of lineage and race, the more reason that Muslim is forbidden from having children outside marriage. Needless to say therefore that those children through ART are products of third party, who therefore is the father or mother? Adoption of a child from an illegitimate form of medically assisted conception is not allowed. The child who results from a forbidden method belongs to the mother who delivered him/her. He or she is considered to be a laqid, or an illegitimate child. However, when the sperm and the eggs are donated by husband and wife there may not be any problem of bearing a bastard, only that people may also misuse this procedure, because it involved a third party – the doctor who manipulates this can misplace the trust given to him. Anything can happen in the process (Anonymous Islamic Scholar, Feb., 2012)

Apart from religious belief, income, education and occupation noted above are major determinants of health-seeking behaviour of individuals including those who are living with

infertility, there are other socio-cultural matters to contend with, such as decision-making between husband and wife at home and family support during treatment period.

Decision-making between the couple and acceptability of ART

Table 4.8.6: Distribution of Respondents on who bears the Responsibility in course of Treatment of Infertility by Age

		In treating infertility, who should bear responsibility?					Total
		Husband	Wife	Both	Government	I don't know	
Age	20 - 24 years	9 (1.2%)	8 (1.1%)	47 (6.4%)	2 (0.3%)	5 (0.7%)	71(9.70%)
	25 - 29 years	37(5.1%)	8(1.1%)	99 (13.5%)	2(0.3%)	1(0.1%)	147(20.1%)
	30 - 34 years	16(2.2%)	11(1.5%)	56(7.7%)	1(0.1%)	0(0%)	84(11.5%)
	35 - 39 years	12(1.6%)	12(1.6%)	75(10.2%)	1(0.1%)	2 (0.3%)	102(13.9%)
	40 - 44 years	59(8.1%)	32(4.4%)	189(25.8%)	3(0.4%)	6(0.8%)	289(39.5%)
	Above 45 years	5(0.7%)	7(1.0%)	27 (3.7%)	0(0%)	0(0%)	39(5.3%)
Total		138(18.9%)	78(10.7%)	493(67.3%)	9(1.2%)	14(1.9%)	732(100.0%)

Pearson Chi-Square $\chi^2 = 30.957$; df = 20; Sig. (2-sided) = .056

The results in table 4.8.6 reveal that there was no significant relationship in the ages of respondents and decision-making on the use of Assisted Reproductive Technology (ART) ($\chi^2 = 30.957$; df = 20; N = 732, P > 0.05). However, there was evidence from the table that as the respondents are growing older in age, there was a matured disposition to ART in redressing the problem of infertility. In all, there was a strong evidence that joint responsibility underscores decision-making across all age categories. Out of all the ages 493 (67.3%) in this category: 20 – 24 (4/6.4%), 25 – 29 99 (13.5%), 30 – 34 56 (7.7%), 35 – 39 75 (10.2%), 40 – 44 189 (25.8%), 40 and above 27(3.7%). But in all of the age categories, there was no

positive relationship between ages of the respondents and decision-making on the acceptance of ART. Acceptability of ART, from the responses above shows that decision-making among the Couple Living with Infertility (CLWI) as submitted by the respondents was not altogether a function of age.

Table 4.8.7: Distribution of respondents on who bears the responsibility in course of treatment of infertility by Sex

		In treating infertility, who should bear responsibility					Total
		Husband	Wife	Both	Government	I don't know	
Sex of respondent	Male	78(10.7%)	50(6.8%)	304(41.5%)	4(0.5%)	8(1.1%)	444(60.7%)
	Female	60(8.2%)	28(3.8%)	189(25.8%)	5(0.7%)	6(0.8%)	288(39.3%)
Total		138(18.9%)	78(10.7%)	493(67.3%)	9(1.2%)	14(1.9%)	732(100.0%)

Pearson Chi-Square $\chi^2 = 2.650$; df = 4; Sig. (2-sided) = .618

The results in Table 4.8.7 reveal that there was no significant relationship between the male and female respondents in the decision-making on the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 2.650$; df = 4; N = 732, P > 0.05). This showed that acceptance of ART has no gender connotation. The results showed that out of 138 (18.9%) for responsibility on the part of husband, 78 (10.7%) male said the responsibility for decision making fell on the husband, while 60 (8.2%) female agreed with them. Even, only 28 (3.8%) females respondents as against 50 (6.8%) males who said the wife was responsible for decision-making in respect of ART treatment. However, to an extent, joint responsibility between the husband and wife on infertility treatment was the practice as more than a half 493 (67.3%) said the responsibility is borne by the CLWI. Male 304 (41.5%) respondents said the

decision is a joint responsibility and 189 (25.8%) female respondents agreed with them.

Table 4.8.8: Distribution of Respondents on who bears the Responsibility in course of Treatment of Infertility by Educational Qualification

		In treating infertility, who should bear the responsibility?					Total
		Husband	Wife	Both	Government	I don't know	
Educational Qualification	No formal Education	11(1.5%)	4(0.5%)	28(3.8%)	0(0%)	0(0%)	43(5.9%)
	Primary Education	16(2.2%)	13(1.8%)	54(7.4%)	1(0.1%)	1(0.1%)	85(11.6%)
	Secondary Education	33(4.5%)	13(1.8%)	118(16.1%)	4(0.5%)	1(0.1%)	169(23.1%)
	Higher Education	78(10.7%)	48(6.6%)	293(40.0%)	4(0.5%)	12(1.6%)	435(59.4%)
Total		138(18.9%)	78(10.7)	493(67.3%)	9(1.2%)	14 (1.9%)	732(100.0%)

Pearson Chi-Square $\chi^2 = 11.762$; df = 12; Sig. (2-sided) = .465

The results in Table 4.8.8 reveal that the educational qualification of the respondents was not significant in their responses on decision-making regarding Assisted Reproductive Technology (ART) ($\chi^2 = 11.762$; df = 12; N = 732, P > 0.05). This showed that there was no strong relationship between the level of respondents' education qualification and acceptability of ART. However, decision-making to resort to ART was proportional to the educational qualification of the respondents. The more one moves up educationally, the more it becomes apparent that decision on ART modality would be made jointly. Out of 493 (67.3%) respondents with higher qualifications were 293 (40.0%), while, those with secondary were 118 (16.3%), primary, were 54 (7.4%) and no formal education stood at 28 (3.8%). However, 138 (18.9%) respondents,

deferred to husband in decision making, than 78 (10.7%) respondents who submitted that the wife make decision on the acceptance of ART. It connotes, therefore, that the level of education is a strong factor in the awareness of ART modality to help PLWI.

Table 4.8.9: Distribution of Respondents on who bears the Responsibility in course of Treatment of Infertility by Religion

		In treating infertility, who should bear responsibility?					
		Husband	Wife	Both	Govt	I don't know	Total
Religion	Muslim	42(5.7%)	23(3.1%)	178(24.3%)	6(0.8%)	12(1.6%)	261(35.7%)
	Christian	95(13.0%)	53(7.2%)	310(42.3%)	3(0.4%)	2(0.3%)	463(63.3%)
	Traditional	1(0.1%)	2(0.3%)	5(0.7%)	0(0%)	0(0%)	8(1.1%)
Total		138(18.9%)	78(10.7%)	493(67.3%)	9(1.2%)	14(1.9%)	732(100.0%)

Pearson Chi-Square $\chi^2 = 23.722$; df = 8; Sig. (2-sided) = .003

The results in table above reveal that there was significant relationship in the distribution of respondents decision-making concerning ART by religious persuasions ($\chi^2 = 23.722$; df = 8, N = 732; P > 0.05). This showed that the use of ART will differ only by religious background. Out of Christian respondents 463 (63.3%), 310 (42.3%) said decision on ART should be jointly taken. While 95 (13.0%) believed that it is only the husband that should make the decision, 53 (7.2%) gave decision-making to the wife. Out of 261 (35.7%) respondents who were Muslims, 42 (5.7%) said that men make the decision on the use of ART, while, 23 (3.1%) said that the wife makes the decision; but 178 (24.3%) submitted that the

decision-making is shared between the husband and wife. Meanwhile, 5 (0.7%), 2 (0.3%) 1 (0.1%) of traditionalists said that the decision should be taken by husband only and wife alone respectively. Data obtained revealed that the decision to use ART has a significant relationship with the respondents' religious denomination.

Table 4.8.10: Distribution of Respondents on who bears the Responsibility in course of Treatment of Infertility by Income

		In treating infertility, who should bear the responsibility?					Total
		Husband	Wife	Both	Government	I don't know	
Income	Less than N19,000	94(12.8%)	49(6.7%)	286(39.1%)	7(0.9%)	10(1.4%)	446(61.0%)
	N19,000 - N24,000	13(1.8%)	8(1.1%)	51(7.0%)	0(0.0%)	2(0.3%)	74(10.1%)
	N25,000 - N29,000	11(1.5%)	8(1.1%)	57(7.8%)	0(0.0%)	0(0.0%)	76(10.4%)
	N30,000 - N34,000	6(0.8%)	3(0.4%)	31(4.2%)	0(0.0%)	0(0.0%)	40(5.5%)
	N35,000 - N39,000	2(0.3%)	3(0.4%)	15(2.0%)	0(0.0%)	0(0.0%)	20(2.7%)
	N40,000 - N44,000	8(1.1%)	3(0.4%)	28(3.8%)	1(0.1%)	2(0.3%)	42(5.7%)
	N45,000 - N49,000	0(0.0%)	2(0.3%)	16(0.0%)	0(0.0%)	0(0.0%)	18(2.5%)
	N50,000 and Above	3(0.4%)	1(0.1%)	7(1.0%)	0(0.0%)	0(0.0%)	11(1.5%)
	Not Regular	1(0.1%)	1(0.1%)	2(0.3%)	1(0.1%)	0(0.0%)	5(0.7%)
Total		138(18.9%)	78(10.7%)	493(67.3%)	9(1.2%)	14(1.9%)	732(100%)

Pearson Chi-Square $\chi^2 = 53.327$; df = 4; Sig. (2-sided) = .158

The results in table above reveal that income of the respondents was not significant concerning their responses to decision-making on infertility treatment and acceptance of Assisted Reproductive Technology (ART) ($\chi^2 = 53.327$; df = 4; N = 732, P > 0.05). This showed that the

level of income was not a strong determinant on decision-making on ART acceptability. Preponderance of respondents 493 (67.30%) submitted that both husband and wife should take the joint decision on infertility matter and the use of ART. It connotes therefore that the income level is not a strong factor on decision-making and the use of ART.

Table 4.8.11: Distribution of Respondents on who bears the responsibility in course of treatment of Infertility by occupational Status

		In treating infertility, who should bear the responsibility?					Total
		Husband	Wife	Both	Govt	I don't know	
Occupational Status	Farming	5(0.7%)	3(0.4%)	29(4.0%)	0(4.0%)	0(0.0%)	37(5.1%)
	Trading	52(7.1%)	26(3.6%)	147(20.1%)	3(0.4%)	5(0.7%)	233(31.8%)
	Civil Service	37(5.1%)	24(3.3%)	159(21.7%)	1(0.1%)	5(0.7%)	226(30.9%)
	Craft / Artisan	40(5.5%)	23(3.1%)	149(20.4%)	5(0.7%)	4(0.5%)	221(30.2%)
	Others	4(0.5%)	2(0.3%)	9(1.2%)	0(0.0%)	0(0.0%)	15(2.0%)
Total		38(18.9%)	78(10.7%)	493(67.3%)	9(1.2%)	14(1.9%)	732(100%)

Pearson Chi-Square $\chi^2 = 10.329$; df = 16; Sig. (2-sided) = .849

The results in table above reveal that the respondents' occupation was not significant to their responses towards decision-making on the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 10.329^a$; df = 16; N = 732, P > 0.05). This showed that the level or status of respondents' occupation was not a strong determinant on decision-making. Out of all the respondents, 138 (18.9%) said husbands should be the ones making the decision on ART 78 (10.7%), others said the wives should have the role; while 493 (67.3%), or more than half of the respondents submitted that both husband and wife should jointly make the decision on ART. It connotes that the type of occupation one does has no strong relationship with decision-making on ART.

Table 4.8.12: Distribution of Respondents on who bears the Responsibility in course of Treatment of Infertility by Marriage Duration

		In treating infertility, who should bear responsibility?					
		Husband	Wife	Both	Govt	I don't know	Total
Marriage Duration	Less than 5 years	2(0.3%)	2(0.3%)	12(1.6%)	2(0.3%)	1(0.1%)	19(2.6%)
	5 - 9 years	25(3.4%)	12(1.6%)	103(14.1%)	2(0.3%)	5(0.7%)	147(20.1%)
	10 - 14 years	41(5.6%)	21(2.9%)	134(18.3%)	2(0.3%)	0(0.0%)	198(27%)
	15 - 19 years	39(5.3%)	24(3.3%)	118(16.1%)	2(0.3%)	8(1.1%)	191(26.1%)
	20 - 24 years	7(1.0%)	0(0.0%)	16(2.2%)	0(0.0%)	0(0.0%)	23(3.1%)
	Above 24 years	24(3.3%)	19(2.6%)	110(15.0%)	1(0.1%)	0(0.0%)	154(21%)
Total		138(18.9%)	78(10.7%)	493(67.3%)	9(1.2%)	14(1.9%)	732(100%)

Pearson Chi-Square $\chi^2 = 39.320$; df = 20; Sig. (2-sided) = .006

The results in table above reveal that the level of duration of marriage of the respondents was significant in their responses to decision-making on Assisted Reproductive Technology (ART) ($\chi^2 = 39.320$; df = 20; N = 732, P > 0.05). This showed that the length of marriage is a determinant factor on decision-making on ART acceptability. Out of 19 (2.6%) respondents in less than 5 years category, 2 (0.3%) said husband should take responsibility on decision-making, likewise, the wife. While 12 (1.6%) submitted that both husband and wife should take joint decision. Also, out of 103 (14.1%) in 5 – 9 category, gave decision-making to the husband 25 (3.40%), while the wives were only 12 (1.6%), but decision-making by both husband and wife 103 (14.10%) was higher than the former. Those in 10 – 14 years category were not different in disposition on who should make the decision, husband 41 (5.6%), wife 21 (2.9%) and both were

134 (18.30%) respectively. Furthermore, those in the category of 15 – 19 years were 39 (5.3%), 24 (3.3%) and 118 (16.1%) for husband, wife and both respectively.

Table 4.8.13: Distribution of Respondents on who bears the Responsibility in course of Treatment of Infertility by Marital Status

		In treating infertility, who should bear the responsibility?					Total
		Husband	Wife	Both	Govt	I don't know	
Marital Status	Single	16(2.2%)	2(.3%)	24(3.3%)	0(.0%)	0(.0%)	42(5.7%)
	Married	49(6.7%)	33(4.5%)	224(30.6%)	3(0.4%)	4(0.5%)	313(42.8%)
	Divorced	1(0.1%)	1(0.1%)	12(1.6%)	0(0.0%)	0(0.0%)	14(1.9%)
	Separated	72(9.8%)	42(5.7%)	233(31.8%)	6(0.8%)	10(1.4%)	363(49.6%)
Total		138(18.9%)	78(10.7%)	493(67.3%)	9(1.2%)	14(1.9%)	732(100%)

Pearson Chi-Square $\chi^2 = 20.168$; df = 12; Sig. (2-sided) = .064

The results in table above reveal that the marital status of the respondents was not significant in their responses to decision-making on Assisted Reproductive Technology (ART) ($\chi^2 = 20.168$; df = 12; N = 732, P > 0.05). This showed that marital status was not a determinant factor on decision-making on ART modality. Across all the categories of respondents, 138 (18.9%) believed that the husband should make the decision while 78 (10.7%) suggested the wife and 493 (67.3%) submitted that the decision-making should be the function of both husband and wife.

Table 4.8.14: Distribution of Respondents on who bears the Responsibility in course of Treatment of Infertility by Residence Duration

		In treating infertility, who should bear the responsibility?					Total	
		Husband	Wife	Both	Government	I don't know		
Residence Duration	Less than 5 years	50	28	165	1	5	249	
		6.80%	3.80%	22.50%	0.10%	0.70%	34.00%	
	5 - 9 years	34	18	112	2	4	170	
		4.60%	2.50%	15.30%	0.30%	0.50%	23.20%	
	10 - 14 years	24	19	103	2	0	148	
		3.30%	2.60%	14.10%	0.30%	0.00%	20.20%	
	15 - 19 years	23	8	89	2	3	125	
		3.10%	1.10%	12.20%	0.30%	0.40%	17.10%	
	20 years and Above	7	5	24	2	2	40	
		1.00%	0.70%	3.30%	0.30%	0.30%	5.50%	
	Total		138	78	493	9	14	732
			18.90%	10.70%	67.30%	1.20%	1.90%	100.00 %

Pearson Chi-Square $\chi^2 = 16.054$; df = 16; Sig. (2-sided) = .449

The results in table above reveal that the length of residence in a particular environment of the respondents was not significant to the decision-making on Assisted Reproductive Technology (ART) ($\chi^2 = 16.054^a$; df = 16; N = 732, P > 0.05). This showed that there was no strong relationship between residence duration and decision-making. Out of 732 respondents across all the categories of years of residence, 138 (18.90%) said the husband should make the decision, while 78 (10.70%) gave this role to the wife. However, they said decision on the use of ART should be a joint affair. It connotes, therefore, that the year(s) of residence has no relationship with decision-making on the use of ART.

Table 4.8.15: Distribution of Respondents on who bears the Responsibility in course of Treatment of Infertility by If Christian, what is your Affiliation?

		In treating infertility, who should bear the responsibility?					
		Husband	Wife	Both	Government	I don't know	Total
If Christian, what is your affiliation?	Protestant	23	23	109	0	0	155
		5.00%	5.00%	23.50%	0.00%	0.00%	33.50%
	Catholic	13	7	62	0	0	82
		2.80%	1.50%	13.40%	0.00%	0.00%	17.70%
	Pentecostal	59	23	139	3	2	226
		12.70%	5.00%	30.00%	0.60%	0.40%	48.80%
Total		95	53	310	3	2	463
		20.50%	11.40%	67.00%	0.60%	0.40%	100.00%

Pearson Chi-Square $\chi^2 = 16.655$; df = 8; Sig. (2-sided) = .034

Table above reveal that there was no significant relationship between the church affiliation of respondents and decision-making concerning ART acceptability ($\chi^2 = 16.655$; df = 8; N = 732, P > .05). In other words, there was no significant relationship between the respondents' affiliation and acceptance of ART. However, out of 310(67.0%) respondents, Pentecostal 139 (30%) said in taking decision, both husband and wife should be responsible, only 62 (13.4%) and 109 (23.5%) Catholics and Protestants respectively said the couple should take decision together. Ethnographic data corroborated the above with few exceptions.

There were responses on decision-making as elicited from the clients, opinion leaders and others on the qualitative data. Decision-making was noted to be the

prerogative of the husband. In accepting ART as a treatment modality for infertility, there are factors of who should take the decision and who should be responsible for the payment, this is noted to polarize the husband and wife. Often, the wife waits for the husband to initiate the method of treatment and bears responsibility for the payment. A woman client said that:

... I heard about ART from my fertility doctor (gynecologist). After about two years of stimulation to become pregnant, but all to no avail. I did not know how to bring up the issue with my husband. The more I tried the more I became fearful to tell him. One, it involved so much and time, according to the doctor. Two, ART is a sensitive issue to be initiated by the wife because of our societal norms that forbid such flippancy from the wife. ... I eventually got over the problem through the help of the doctor who helped to discuss the matter with my husband (Client D)

Responses to maternal or pregnancy care like other marital issues in Ijebuland and elsewhere in south western Nigeria is conditioned by the contexts and dictate of culture, social, economic and other environmental factors. These factors include patriarchy system which situates women lower than men in hierarchy, poverty or poor income, low education, low socio-economic-status (SES) and ignorance. To corroborate this, one of the other clients also said that:

...It was my husband who came home to inform me of it (ART). He said he read about it, in one of the dailies. I pretended as if my doctor had not said a similar thing to me. We both consulted the specialist at my husband's discretion. I love it that way, in that; it saved me the stress of confrontation with my husband. It is better that way. This is of the fact that he is not going to foot the bill alone.

Health-seeking behaviour follows established pathways in south western Nigeria, with major determinants, such as the roles of the family, social networks/significant others revolving round

the husband/head of the family as the apex or submit of authority. The husbands dictate where the wife should go for health-care. Women's status affects their health in many ways because status is the outcome of economic, social and cultural placements in the society. Women's status in a broader term is the importance given to women, the value and recognition attached to their roles and duties in comparison with men as would be seen in the table on family support and acceptability of ART

TABLE 4.8.16: Distribution of Respondents on what is the Responsibility of the in-law and the Significant others by Age

		What is the responsibility of the in-law/ significant others?				Total
		Give emotional support	Ask the man to marry another woman	The infertile woman should be driven away	others, specify	
Age	20 - 24 years	47	12	7	5	71
		6.40%	1.60%	1.00%	0.70%	9.70%
	25 - 29 years	112	24	4	7	147
		15.30%	3.30%	0.50%	1.00%	20.10%
	30 - 34 years	59	15	5	5	84
		8.10%	2.00%	0.70%	0.70%	11.50%
	35 - 39 years	74	19	6	3	102
		10.10%	2.60%	0.80%	0.40%	13.90%
	40 - 44 years	212	48	16	13	289
		29.00%	6.60%	2.20%	1.80%	39.50%
	Above 45 years	28	7	3	1	39
		3.80%	1.00%	0.40%	0.10%	5.30%
Total		532	125	41	34	732
		72.70%	17.10%	5.60%	4.60%	100.00%

Pearson Chi-Square $\chi^2 = 8.050$; df = 15; Sig. (2-sided) = .922

The results in table above reveal that there was no significant relationship in the ages of respondents and their responses on the support given to CLWI and the use

of Assisted Reproductive Technology (ART) ($\chi^2 = 8.050$; $df = 15$; $N = 732$, $P > 0.05$). However, there was evidence from the table that as the respondents were growing older in age, there was a matured disposition to people with the problem of infertility; more than two-third 532 (72.7%) of the respondents said that CLWI should be given emotional support. Out of all the ages in this category: 20 – 24 47(6.4%), 25 – 29 112 (15.3%), 30 – 34 59(8.1%), 35 – 39 74 (10.1%), 40 – 44 212(29%), 40 and above 28 (3.8%). But in ages across all other variables, there was no positive relationship between ages of the respondents and family support on the acceptance of ART. The responses above show that altogether family and significant others’ support and acceptability of ART. are not a function of age.

Table 4.8.17: Distribution of Respondents on what is the Responsibility of the in-law and the Significant others by Sex?

		What is the responsibility of the in-law/ significant others?				
		Give emotional support	Ask the man to marry another woman	The infertile woman should be driven away	Others	Total
Sex of respondent	Male	329(44.9%)	70(9.6%)	22(3%)	23(3.1%)	444(60.7%)
	Female	203(27.7%)	55(7.5%)	19(2.6%)	11(1.5%)	288(39.3%)
Total		532(72.7%)	125(17.1%)	41(5.6%)	34(4.6%)	732(100%)

Pearson Chi-Square $\chi^2 = 2.987$; $df = 3$; Sig. (2-sided) = .394

The result of the analysis ($\chi^2 = 2.987$; $df = 3$; $N = 732$, $P > 0.05$) presented in table above shows that for the CLWI to accept the use of ART, there is need for support and cooperation of the family members and a significant others. For example, out of the 732 interviews, about a half male 329 (44.9%) and female 203 (27.7%) respondents believed that there is need for the family

to support CLWI in the use of ART. The influence of family support on the use of ART in curing infertility is very important. An examination of the tables above shows that in all cases husband factors, family support and roles of significant others' influence the accessibility of ART modality as an intervention to resolve infertility problem.

Table4.8.18: Distribution of Respondents on what is the Responsibility of the in-law and the Significant others by Educational Qualification

		What is the responsibility of the in-law/significant others?				Total
		Give emotional support	Ask the man to marry another woman	The infertile woman should be driven away	others, specify	
Educational Qualification	No formal Education	29(4.0%)	10(1.4%)	2(0.3%)	2(0.3%)	43(5.9%)
	Primary Education	63(8.6%)	12(1.6%)	5(0.7%)	5(0.7%)	85(11.6%)
	Secondary Education	130(17.8%)	20(2.7%)	11(1.5%)	8(1.1%)	169(23.1%)
	Higher Education	310(42.3%)	83(11.3%)	23(3.1%)	19(2.6%)	435(59.4%)
Total		532(72.7%)	125(17.1%)	41(5.6%)	34(4.6%)	732(100%)

Pearson Chi-Square $\chi^2 = 6.626$; df = 9; Sig. (2-sided) = .676

The results in table above reveal that the education, qualifications of the respondents were not significant in their support for CLWI in the course of Assisted Reproductive Technology (ART) ($\chi^2 = 6.626$; df = 9; N = 732, P > 0.05). This showed that there was no strong relationship between family and significant other supports for the CLWI in the course of ART and the qualifications of the individual respondents. However, across all the categories of qualifications, in responses to emotional support, 532 (72.7%) said that there is need for emotional support.

Only a few 41 (5.6%) suggested that the infertile wife should be sent away, while 125 (17.1%) suggested the need for her husband to marry another woman.

Table 4.8.19: Distribution of Respondents on what is the Responsibility of the in-law and the Significant others by Religion

		What is the responsibility of the in-law and the significant others?				Total
		Give emotional support	Ask the man to marry another woman	The infertile woman should be driven away	others	
Religion	Muslim	181(24.7%)	48(6.6%)	16(2.2%)	16(2.2%)	261(35.7%)
	Christian	348(47.5%)	73(10.0%)	24(3.3%)	18(2.5%)	463(63.3%)
	Traditional	3(0.4%)	4(0.5%)	1(0.1%)	0(0.0%)	8(1.1%)
Total		532(72.7%)	125(17.1%)	41(5.6%)	34(4.6%)	732(100%)

Pearson Chi-Square $\chi^2 = 11.098$; df = 6; Sig. (2-sided) = .085

The results in table above reveal that there was no significant relationship in the distribution of respondents other the responsibility of family and significant others on ART modality by religious persuasions ($\chi^2 = 11.098$; df = 6; N = 732; P > 0.05). This showed that family responsibility towards CLWI in the course of ART treatment will differ only by religious background. Out of all the respondents who were Muslims, 181 (24.7%), Christians, 348(47.5%) and traditionalists, 3(0.40%) respectively advocated for the need of emotional support for CLWI who are on ART treatment

Table 4.8.20: Distribution of Respondents on what is the Responsibility of the in-law and the Significant others by Income?

		What is the responsibility of the in-law and the significant others				Total
		Give emotional support	Ask the man to marry another woman	The infertile woman should be driven away	others, specify	
Income	Less than N19,000	327(44.9%)	77(10.4%)	21(2.8%)	20(2.7%)	446(59.2%)
	N19,000 - N24,000	55(7.5%)	8(1.1%)	6(0.8%)	5(0.7%)	74(10.1%)
	N25,000 - N29,000	56(7.7%)	11(1.5%)	6(0.8%)	3(0.4%)	76(10.4%)
	N30,000 - N34,000	30(4.1%)	6(0.8%)	3(0.4%)	1(0.1%)	40(5.5%)
	N35,000 - N39,000	14(1.9%)	5(0.7%)	1(0.1%)	0(0.0%)	20(2.7%)
	N40,000 - N44,000	22(3.0%)	13(1.8%)	2(0.3%)	5(0.7%)	42(5.7%)
	N45,000 - N49,000	17(2.3%)	1(0.1%)	0(0.0%)	0(0.0%)	18(2.5%)
	N50,000 and Above	7(1.0%)	3(0.4%)	1(0.1%)	0(0.0%)	11(1.5%)
	Not Regular	2(0.3%)	2(0.3%)	1(0.1%)	0(0.0%)	5(0.7%)
Total		532(72.7%)	125(17.1%)	41(5.6%)	34(4.6%)	32(100%)

Pearson Chi-Square $\chi^2 = 41.437$; df = 4; Sig. (2-sided) = .003

The results in table above reveal that the income of the respondents was significant in relation to their responses regarding the responsibility of the family and significant others towards the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 41.437$, df = 4; N = 732, P > 0.05). This showed that the level of

income was a strong determinant of support which CLWI could get from the family members on ART acceptability. Predominance of respondents 532 (72.7%) across all the categories of income earners, however, show that family and significant others should give emotional support.

Table 4.8.21: Distribution of Respondents on what is the Responsibility of the in-law and Significant others by Occupational Status

		What is the responsibility of the in-law and significant others?				Total
		Give emotional support	Ask the man to marry another woman	The infertile woman should be driven away	others, specify	
Occupational Status	Farming	27(3.7%)	5(0.7%)	2(0.3%)	3(0.4%)	37(5.1%)
	Trading	179(24.5%)	30(4.1%)	15(2.0%)	9(1.2%)	233(31.8%)
	Civil Service	154(21.0%)	49(6.7%)	12(1.6%)	11(1.5%)	226(30.9%)
	Craft / Artisan	160(21.9%)	39(5.3%)	11(1.5%)	11(1.5%)	221(30.2%)
	Others	12(1.6%)	2(0.3%)	1(0.1%)	0(0.0%)	15(2.0%)
Total		532(72.7%)	125(17.1%)	41(5.6%)	34(4.6%)	732(100%)

Pearson Chi-Square $\chi^2 = 9.507$; df = 12; Sig. (2-sided) = .659

The result in table above reveal that the respondents' occupation was not significant in their responses as whether family should support CLWI or not on the acceptability of Assisted Reproductive Technology (ART) ($\chi^2 = 9.507$; df = 12; N = 732, P > 0.05). This showed that the level or status of respondents' occupation was not a strong determinant of support for CLWI in the course of infertility treatment through ART modality. Majority of the respondents, 532 (72.7%) across all occupational levels said that in the course of infertility treatment or ART modality, family members should give emotional support.

Table 4.8.22 Distribution of Respondents on what is the Responsibility of the in-law and Significant others by Marriage Duration

		What is the responsibility of the in-law and significant				Total
		Give emotional support	Ask the man to marry another woman	The infertile woman should be driven away	others, specify	
Marriage Duration	Less than 5 years	16(2.2%)	2(0.3%)	1(0.1%)	0(0.0%)	19(2.6%)
	5 - 9 years	100(13.7%)	29(4.0%)	8(1.1%)	10(1.4%)	147(20.1%)
	10 - 14 years	148(20.2%)	31(4.2%)	11(1.5%)	8(1.1%)	198(27.0%)
	15 - 19 years	137(18.7%)	35(4.8%)	11(1.5%)	8(1.1%)	191(26.1%)
	20 - 24 years	18(2.5%)	2(0.3%)	1(0.1%)	2(0.3%)	23(3.1%)
	Above 24 years	113(15.4%)	26(3.6%)	9(1.2%)	6(0.8%)	154(21%)
Total		532(72.7%)	125(17.1%)	41(5.6%)	34(4.6%)	732(100%)

Pearson Chi-Square $\chi^2 = 7.171$; df = 15; Sig. (2-sided) = .953

The results in table above reveal that the level of duration of marriage of the respondents was not significant in their responses to render support CLWI on Assisted Reproductive Technology (ART) ($\chi^2 = 7.171$; df = 15; N = 732, P > 0.05). This showed that the length of marriage is not a determinant factor on the responsibility of the family and significant others on ART acceptability; however, out of 732 respondents, 532 (75.7%) advocated for emotional support during infertility and ART treatment. The foregoing statement was contradicted by four out of five female clients. As one female respondent reacted:

Hay! People don't care or want to know what happen, or, why one is infertile. No. People always react negatively. Personally I receive insults from members of the family. At times members of the family and community try to show love. Their displeasure often out weights their display of love. But, I have taken it all with faith in my maker to give me my own children at right time (KII with a female client. Nov. 2011).

The responses of the client shows lack of support and encouragement from the family and significant others. This reflects the agony, trepidation and loneliness which an infertile person wallowing in on daily basis. As one of the clients' husbands put lack of family support succinctly thus:

My family almost practically drove my wife away. Insinuating that, she has bewitched me. When one or two of them whom I thought I could share thoughts with heard about the efforts we were making to have babies, especially the money we had spent which was in millions. Their initial reaction encouraged us, only for them to turn the whole family lose on me. I have since put them in their place. This is not without a cost. We hardly see or talk now (KII. Nov., 2011).

Another one responded thus:

Some pity us while some react negatively because they believe they do not have the experience or have never felt the pain of not bearing children. A time I feel the world should come to an end (KII with a female client. Nov. 2011)

Yet, another one said this:

Few years ago in our house, I was trying to caution a boy who was misbehaving. Unfortunately when the other woman heard me reprimanding the boy, she said “**eni ti ko ni iru eni, kole mo iyi eni**” (one cannot appreciate what one does not possess). This statement killed me internally.

A female client has this to say on family support:

...infertility leads to social exclusion even within our families. Naturally as a human being when one is expected to have children and cannot, I feel rejected. Anyway, I have been coping through prayers. ART is a long awaited intervention, a means of help that God has allowed. It is a new technology to erase shame. It is my prayer that God would use it to take away shame from me.

How does the husband's family, the significant others and the society in general react to and treat persons living with infertility(PLWI) when pregnancy fails to come after a year of regular

and uninterrupted sexual intercourse, it is basically a product of the societal background and prevailing culture. In coming to terms with the infertile woman's daily existence in such areas as motherhood functions, conjugal relations, community services, kinship patronage, and other social/gender identities including her corresponding family support, community acceptance and security of her status as a wife shows critical social exclusion from the public in general and family members specifically.

4.3 DISCUSSION OF THE FINDINGS

Awareness, Knowledge and Attitude to infertility and Assisted Reproductive Technology

Acceptability of new technology according to Rogers (1983) is a function of awareness and/or information at the disposal of would-be users. Prior to acceptance of ART, provider(s), donors and users must be aware of its social, cultural and ethical implications; the health care facilities in which this modality can be procured must be conspicuous, accessible and cost effective to the public. Knowledge about ART modality as a treatment modality or a way out of infertility problem is limited among the populace and a lot of misconceptions and myths are prevalent in the society. These misconceptions and myths are not necessarily an outcome of empirical findings, but as a result of ignorance and the prevailing culture. These findings confirm the studies in Okija, South Eastern and Osogbo, south western Nigeria by Okwelogu, *et al* (2012) and Olugbenga *et al*, (2014) respectively, in which awareness of ART was found to be very low. The cultural perspective of assisted reproductive technologies is unfavourable to its acceptability, which has resulted in poor utilization or non- use at all. Therefore, any measure without a measure of appeasement to these cultural elements may not succeed. These beliefs are still prevalent among the people in Ijebu, especially, those with lower educational status, or, non-education at all. Therefore, health seeking for infertility care is often associated with supernatural

forces and therefore its cure must also be within the invincible power or supernaturalism. Recourse to supernatural interpretation of infertility is working against genuine attempts on with ART usage as a treatment option for infertility.

Correct knowledge of ART was found to be limited amongst the respondents. Only 156 (21.40%) out of 732 respondents correctly identified what ART is all about and agreed that it is good for resolving infertility challenges. Given the option, even those who said it is very good, more than half of these respondents would still not use it for any reason. Whilst only a negligible percentage said it would be too costly, 157 (21.40%) said it is not natural and therefore, not acceptable. Very many of the respondents were indifferent, as they had no option at all. Their indifference could be attributed to the paucity of information among the populace. Male respondents 98 (13.40%) in particular were categorical that the method is not natural and female respondents were 59 (8.10%) also in agreement with their male counterparts. Muslims 64 (8.70%), Christians 88(12.0) and traditional worshipers 5(0.70%) respectively said ART is not natural. The category of respondents who were indifferent was quite overwhelming. This could be attributed to lack of awareness and proper dissemination of information on Assisted Reproductive Technology as an alternative treatment. Therefore, in Ijebu area , ART for infertility treatment remains far from the populace.

In the contexts of biological, social and cultural factors, it is important to know what infertility entails. That is, people should have adequate knowledge about infertility and available treatment options. Equally true is that there is need to be aware of what would be the public attitude to the chosen treatment option, for instance, ART. It is imperative too, to be aware and have adequate knowledge of working of ART before persons who are living with infertility

(PLWI) can accept to utilise it. Acceptance is also a determinant of timely medical care as it is noted that old age is antithetical to its success. This is the reason why failure rate is rampant at old age. Furthermore, there is need to prepare for people or attitude of nonusers which bordered on peoples' misconceptions or prejudice of such interventions. For instance, acceptability of ART, according to Jegede *et al* (2010), Wildge (2008) and Pennings (2008) is a function of awareness and knowledge of its existence. Nigeria, as in many developing countries, beside her patriarchal norms, is also a pro-natalist Nation, where infertility is not regarded as a general reproductive health problem and, therefore, does not deserve a collective attention from governments in the first instance, donor agencies, nongovernmental organisations and so on. But it is regarded as an individual problem with scanty or nil collective attention paid to it. This is because of government disposition to infertility, and therefore, ART intervention, as a means to conception is not a paramount maternal health issue to the government. Infertility treatment therefore, is not part of the reproductive health services in terms of both policy guide from government and acceptability on the part of general public. International Conference on Population and Development (ICPD) programme of action declares that reproductive health should include prevention and appropriate treatment of infertility (ICPD, 1994 and Wilgde, 2008).

Poor awareness and knowledge are, therefore, outcomes of the onslaught from culture, government indifference and ideology that are skewed in favour of population control. There is no effort on the part of government to promote the use of ART, among educated people on its desirability and to support people living with infertility to utilize it. Majority of the respondents on IDI, for instance, said that they have heard about ART but they are not certain on how it

functions because of its technicality. Some added that they have heard about ART on the internet and news from radio and television but they are not conscious of where specialist healthcare facilities are located. Therefore, one of the important challenges among PLWI, especially the women face is how to get information and how to procure it. Where these are possible, there is need to know how to manage the infertility through bio-technological intervention in relationship with their spouses, especially the husband, if the user was a woman and significant others. There is, therefore, the need for the PLWI to learn to cope with innuendoes, derision and stigmatisation, as different social strata and religious dogma do not support infertility and the use of ART intervention. In relative terms, there is no adequate awareness among the populace about ART. This was noted by Jegede *et al* (2010) as lack of knowledge about ART is a major issue affecting how they are perceived by the participants. Knowledge is power, where this is lacking, cultural beliefs and religious injunctions tend to fill the gap. Due to the fact that ART is relatively new in Nigeria many people are not aware of it as a measure for alleviating infertility problem.

In other words knowledge and awareness of an innovation have an influence on how people perceive such innovation. Perception, therefore, as a measure of ART acceptability has to do with the reaction of people to its development. Perception of social facts in any society is underscored by social and cultural norms and values of such particular society (Corin, 1995). Infertility rates are rising and demand for reproductive technologies has over the years rose up. But people's perception of these technologies is also taking different shades of opinions – from logical opposition to illogical denunciation. However, in spite of emphasis placed on children, opinions differ on assisted infertility treatment as revealed through opinions which emerged from

the respondents. The woman is usually blamed for her family's inability to have biological children and this would necessitate the infertile ones to undergo series of tests. In some instances the man hesitates to get tested. In spite of this, perception from the respondents was not based on gender disparity between male and female as men 84 (11.50%) and women 72 (9.80%) perceived that ART is good for handling infertility issues. However, perception improves with the level of education as those with higher education 99 (13.50%) were more than secondary education 35 (4.80%), primary education 17 (2.30%) and non-formal education 5(0.70%) respectively. Religion is also noted to aid perception as Christians 110 (15.00%), Muslims 46 (6.30%) and traditional worshipers perceived ART to be very good. Ironically, more Christians 180 (24.60%) as against the Muslims 83 (11.30%) perceived ART as not ideal as they could not profer any opinion on the modality.

The unanimity against ART alternative is not about rejection of infertile person, but the unnatural method of conception; but does society have a right to scrutinize what went under microscopic manipulations. Where do we draw the line? This concern became more worrisome and captured perceptively better in a report which was dubbed "fertility clinic fraud" in which a British ART specialist (Wiesner 1943 - 1962) fathered 600 out of 1500 babies born in his clinic successfully within 19 years. The DNA tests conducted on 18 people conceived at the clinic between 1943 and 1962 showed that two thirds of them were fathered by Wiesner. Extrapolating this to the rest of the children conceived at the clinic for this period suggested that Wiesner would have fathered 600 babies, if the total number was 1500.

On ethical grounds, it has been suggested that the same sperm donor should not be used to create so many children because of the risk that two of the offsprings will unwittingly meet and

start a family of their own This may cause serious genetic problems in their children, especially if there is a history of congenital disease(s) running in the family of the donor. It shows, therefore, that there is palpable apprehension that child/children through ART may not be accepted as against the ones from natural conception which are more recognised than those from ART which is/are considered unnatural. One can deduce, therefore, that there is a significant influence of cultural and ethical factors which serve as yardstick in measuring people's perception on the preference for the use of ART. Ethnographic data on culture and individual perception did not depart from this conclusion. There are therefore, cultural issues to contend with in Ijebu area, which at same time are working in contradiction to acceptability of ART.

It is not a strange thing in Ijebu, South-Western Nigeria, that when a couple is not forthcoming in having children years after marriage, that relations and significant others begin to suggest to the couple to find solution to their problem, but the use of ART is hardly or never mentioned. In extreme cases the family may suggest to the husband to take a new wife (Anate, 2006). This is even when none of the relations knows the source of the problem or who is infertile between the wife and the husband. Generally, it is often assumed that the fault is from the woman. This may not necessarily be the case. Again in the allocation of resources within patriarchal family, there is an emphasis on blood relations because property cannot be given to a child or children outside the family (Daniluk, 2001). Motherhood is the major plank in Ijebu societies on which wives use to enable them to be allocated their rightful portion from their husbands' property/estates in case the husband dies before the wife (Okonofua, *et al*, 1997). Also, it acts as a status symbol for the women, to stand high among her peers in the society, the wife must be a mother as well . The response above agrees with the general religious

environment, where religion and culture are inseparable. There is hardly any line of demarcation between culture and religion in all Nigerian societies, especially in Ijebu area, South West Nigeria where the knowledge of God and type of religion and how to worship God are interwoven with what is obtainable within the environment (Akintan, 2001). Every culture is believed to have its set of customs and folklore with a close association with religion for the relief and care of infertility and other social and spiritual problems (Inhorn & van Balen (2002).

A specialist on Assisted Reproductive Technology, however, disagreed on this opinion as he sees no corresponding relationship between culture and acceptability of ART. His justification, however, is about the perception towards the method which is purely social. To him, concern on maternity or paternity of the child through ART is not limited to Ijebu area or Nigeria alone but all over other developing countries. This was also the position Pennings (2008) took, as he admitted that whenever one mentions the provision of infertility treatment, it is always met instantly with almost total rejection. Respondents circumspective caution on ART is not only based on perception, but also as an outcome of attitude to its use.

Attitude was measured by respondents' opinion on the effectiveness or otherwise of ART in the treatment of infertility. The result of the analysis on attitude shows that out of the 444 (60.70%) male respondents, only 194 (26.50%) were of the opinion that infertile persons should embrace ART for infertility treatment, while out of 288 (39.30%) female respondents, only 134 (18.30%) suggested that infertile persons should embrace ART for infertility treatment. Majority of the respondents counselled infertile persons to wait on God. However, educational level of the respondents was the pivot upon which their attitude revolved. As respondents attain higher level of education, so they have a positive attitude towards ART. Out of 328 (44.30%) respondents,

197 (26.70%) who were with higher certificate, followed by secondary education 75(10.2) and primary and no formal education standing at 39 (5.30%) and 17 (2.30%) respectively. Christian respondents 201(27.5) were more favourably disposed to ART than the Muslims 125 (17.10%) and then, traditional 2 (0.30%) showed a positive attitude to the use of ART respectively. It is, however, noted that as the respondents were growing with age, there was an improved attitude to the use of ART as evidenced from the results of the analysis which showed that as the respondents are growing older in age, there was indication that a matured disposition or attitude to ART in redressing the problem of infertility grows positively. But in all the age categories, there was no positive relationship between ages of the respondents and attitude to ART.

Ethnographic data shows that attitude of the respondents to infertility was in two forms: (a) predestined by God and (b) punishment for character flaws or ungodly behaviours on the part of infertile persons. These forms predispose people's schools of thought about ART also. If one is destined to have children or not, nothing can be done to change this ordained condition, and if it is punishment for past deeds, nobody can do anything about this also. In the two circumstances, nobody can help God. Again, attitude to infertility is that it is only when one is survived by a child or children that people can say that the fellow is a mother or a father – "*eni ti omo sin, lo bimo*".

In corollary, those whose children died before them without surviving their parents are by and large childless. They are regarded as being the same with those that have none at all. The attitude of people to primary and secondary infertility types is not the same. Persons with secondary infertility who may be with one child at least, are not considered childless. Respondents submitted that "*olomo kan ti kuro ni egbe agan, o ti kuro ninu kilo bi*", that is,

someone with one child is no more a contemporary of infertile persons/childless one. With one child, the fellow has crossed the border of bareness. But those who are unable to carry pregnancy to term are still respected and sympathised with than those who are not experiencing conception, because there is hope for them to have successful pregnancy outcome someday. But those in the category of primary infertility, however, are viewed with disdain, as they are called “*ako aja*” - male dog. People who are unable to have children are always reacting negatively because of the pain of isolation they are subjected to, by their extended families, especially the family members of the husband who are expecting their son to have his own children. From the foregoing, it can be deduced that there are two opinions, those who empathise with infertile persons and those who are antagonistic and unsympathetic of their condition. The line thinned out on what their attitude towards ART should be. Majority were of the opinion that it is not natural and that children through this method may not survive the parents. “*Eni ti omo sin lo bimo*” – It is only when parents are survived by their child/children that they can categorically be called proud parents. Attitude to infertility and ART treatment is not without demographical, social and cultural values and interpretation.

Acceptability of ART intervention in resolving the problem of infertility among the Ijebus comes with an array of social, cultural and demographic factors, such as patriarchal norms, value attached to motherhood, age, gender, educational status, etc. Socio-cultural factors depict two components, social and cultural. Social factors are such variables like education, economy, politics, religion and family while culture involves traditions, customs, values, norms, beliefs and practices (Nwokocha, 2004). Socio-cultural factors inherently become challenging in the sense that they are manmade variables and are thereby controlled by the extent to which the

society would conform to their over-bearing control, guidance and dictate. All these acts are catalysts for ART acceptability or non-acceptability. In other words, acceptability of ART, and subsequently its adoption are contextually influenced by the prevailing socio-cultural and demographical factors. Therefore, acceptability of an innovation in the treatment of infertility, especially ART, is not value-free; it is laden with existing social and cultural factors.

The foregoing is corroborated with In-depth interviews (IDIs) conducted among respondents from June to December, 2010. As the summary of all the variables, in which responses were sought among the respondents on the value attached to children and what infertility is all about revealed that there is a high value attached to motherhood, before a woman could be called a mother, such a woman must have given birth to a child or children and undertaken the care of child/children. Also, before a woman is called a mother as a result of her marriage, such a woman would have a “good stand” in her husband’s house. “Good stand” in this respect means a woman with children. All the family members would love her. Her ability to have children for the husband would stimulate the husband’s love to the wife and increase his propensity to be generous to her from time to time. This “good stand” would bring recognition, prosperity, joy and happiness to her. Apart from general respect for mothers, that is, those ones who are bearing children, such women are also believed to have “good standing” among the husbands’ family members. In other words, the ones without children are standing precariously on no “ground”. “Good standing” among the ijebu people is about cultural referencing, making allusions to knowledge and experiences that are shared by this particular cultural group, where children among other possessions serve as collateral for prosperity or status symbol of being

responsible in the society. Inability to have children is regarded as a monumental failure. Such a woman who is unable to have children cannot aspire to hold any position in the society.

This world view informs infertile persons' treatment seeking behaviour and propels them to search for interventions and treatment in different places. But there is an equal unanimity of responses among these respondents against ART, as a way of helping men and women out of infertility as the data revealed. Culture plays an important role in the widely shared concept of disease and illness, diagnosis and treatment in Ijebu, South-West Nigeria. As it is not out of place to attribute infertility to natural, supernatural and mystical/mysterious factors and treatment seeking behaviour also would revolve round these factors. The foregoing gives insight into the label of "not cultured" to those ones patronising ART, as most of the respondents believed that ART conception modality is not fitted into any of established pathways of treatment known to them.

Some people have a different understanding of infertility as it were. Some see it as a natural occurrence, and with necessary prayers and patience the person living with infertility can be fertile. Some people view it as a supernatural issue where evil hands are noted to be the causative agents and some of the sufferers feel rather fatalistic about it, as they have thus resigned to fate and assumed that nothing could happen again. In explaining health seeking behaviour in this regard, the first is the pathway to health care consumption, which describes the steps, the process from the recognition of symptoms to the use of particular health facilities. This method specifically attempts to identify a sequence of steps and looks at social and cultural factors of disease causation, which affects the sequence of patronage in the care centre. Dominant among these factors are the roles which religious belief, education, social networks/

significant others and cultural norms would play. Infertility, in the strict medical sense, is not a disease; however, it is a health problem with very definite psychological, emotional, physiological and socio-cultural implications. Infertility is viewed with disdain as infertile persons are derided and stigmatised against; however, adoption of ART as a modality to correct this reproductive discontinuity is equally not wholesome accepted. This is a dilemma. However, few of the respondents did not see any problem with its acceptability, to these ones, it is a way out of the stigma of infertility, but, a basic understanding of ART and how to go about it is lacking. This is posing a problem to its acceptability. Due to the fact that ART is relatively new in Nigeria, many people are not aware of it as a measure for alleviating infertility problem. Lack of knowledge about ART is a major issue affecting how they are perceived by the participants. According to Jegede and Fayemiwo (2010) knowledge in this respect is power, where this is lacking cultural beliefs and religious injunctions tend to fill the gap. Roger's work in 1983 on adoption of innovation(s) anticipated the above findings: His work conceptualised a model showing patterns of consumer adoption at each of the various stages during a product's life cycle by focusing on different characteristics of each adopter in terms, of socio-economic status, communication (behaviour), personality and values. The adopter categories are the early adopters, late adopters, early drop outs and non-adopters. The adoption of ART in this context in Ijebu area underlines the importance of the need to convince the innovators, early adopters and later adopters to first make an innovation acceptable and adoptable before forming an opinion on whether it is successful or otherwise. In other words, ART is at its early stage in this society and therefore, there is a scanty knowledge about it. As noted by Rogers: (1983) "adoption is usually measured by the length of time required for a certain percentage of the members of a social

system to adopt an innovation”. The rate of adoption is defined as “ the relative speed with which members of a social system adopt an innovation”. The rates of adoption for innovations are determined by an individual’s adopter category. The same for the diffusion of the innovation - the diffusion in a social system follows an S-Curve in which the adoption of a technology begins with a slow change and followed by a rapid change and ends in a slow change as the product matures or new technologies emerge

There are underlined factors which informed these categories of adopters, among which are awareness, education/knowledge, cost of new innovation, availability, etc. From the Key Informants Interview for the ART specialists and clients, as presented in the data, the foregoing can be interpreted that the adoption speed is low within this environment in comparison with Lagos, Nigeria. This goes to confirm that patronage in hospital may be generally low if the facility is far to the health consumers (Orubuloye and Ajakaiye, 2003; Jegede, 2010) Similarly, health seeking behaviour is a function of a set of determinant factors, like level of education, distance or travel time to care centre, etc.

Culture, gender role performance and acceptability of ART are intrinsically linked together. Therefore, there is a significant relationship between gender role and acceptance of ART. Gender roles and maternal health are inseparable. The significance of involuntary infertility is often constructed on gender basis, especially in a patriarchal society and gender roles play a major factor in constituting the social meaning of infertility and type of treatment opted for. These roles may act as constraints or determine health seeking behaviour of women/wives than the men/husbands. However, the result obtained from the quantitative data reveals that gender factor has no influence on the acceptability of ART. But this is not in

consonance with ethnographic results. From the ethnographic data, 80 percent of the respondents on IDIs and all respondents (100%) in KIIs knew about infertility and its trend across gender; that it could be the wife or the husband who is having the challenge and that the challenge either way has its disruptive tendency in the family. But they equally agreed that wives share the blame than the husbands. Rejection or ostracism of an infertile person is a commonplace occurrence in patriarchal societies for anyone who is unable to have children. Not surprising, therefore, the problem of infertility in Nigeria and elsewhere in developing countries revolves frequently round the women as men are never blamed for such an abridgment in the reproductive process. To put emphasis on this, out of the five couples who were clients and agreed to be interviewed at the period of this work, only one male attributed their (i.e. himself and his wife) inability to have children to both of them. Even at that, it was the wife who first started infertility clinic before the husband commenced treatment. The husband claimed that it never occurred to him initially that a man could be infertile, especially when one can still have sexual intercourse with his wife. In a study by the Prevention of Maternal Mortality Network (PMMN) in 1992, which covered Nigeria, Ghana and Sierra-Leone (Harrison, 1997), it was discovered that the patriarchal family system was impinging precariously on the health of women. This is because women are made to be subjects and subordinates to their men within the family. The type of gender-determined hierarchy of superiority affects adversely the extent to which women could make independent decisions on the cases of healthcare consumption (Arkutu, 1995; Harrison, 1997).

Discussion on infertility and treatment in Ijebu, South-West Nigeria is gendered and often based on patriarchal norms with active support from religious dogma and persuasion. The foundation of every human society is anchored on religion. All religions are based on doctrines

that underscore godliness and what is morally right and proper for the faithful or the adherents. Religiously, the sanctity of family and marriage is held very high and no illegitimacy or child outside the confines of marriage is accepted to all religions. Though the challenges of infertility among sufferers are incontrovertibly very painful, regardless of one's belief system; whether the sufferer is a Muslim, Christian or traditional worshiper, it is painful to be faced with this unmet reproductive desire or inability to have offspring. Religion is regarded as the bastion of hope to offset any challenge. All religious types or sects see to it that they do everything possible to take care of their infertile members. Religious belief in Nigeria is noted to be a major determinant of the type or status of marriage. That is, when to be married, the relationship between the spouses and decision on health care consumption; all are embedded in the religious dictates. Surrogate mothering is, however, not encouraged either, because it is understood that infertile people, sometime do engage in this method to 'procure' children in a bid to relieve themselves of the trauma and stigma associated with childlessness. But surrogacy does not take away the stigma, because once the real source of the children is discovered or revealed, the issues surrounding infertility would be further heightened. This also explains why people are not too keen in accepting ART, because, for an average person, whatever comes out of the manipulation is not an outcome of natural sexual conception. This is why those who have elected to go for this method often keep it secret.

However, not all religious practitioners subscribe to ART modality. Even among the Christian believers, Catholics view of ART is different from protestant's and Pentecostal's. The views range from total rejection by the Catholics to moderate opinion of the protestants/Pentecostals. For example, the Catholic faith does not feel comfortable with

procedures like in-vitro fertilisation as revealed by the data presented. To them, multiple eggs may lead to multiple fetuses which may lead to abortion. Abortion is regarded as a sin to God. The Roman Catholic Church opposes all kinds of ART because, just as with contraception, it separates the procreative means of the marriage (conjugal) act from its intended end. Pope Benedict XVI has publicly re-emphasised the Catholic Church's opposition to vitro fertilisation (IVF), saying it replaces love between a husband and wife (Wikipedia, 02-10-2012). There are other reasons while the Vatican through Pope Pius (1956) defined artificial fecundity as immoral and illegal, because it affects human lives by separating procreation and normal sexual function (Jegade & Fayemiwo, 2010). Procreation and sexual relationship of husband and wife are ordained by God, therefore, should not be circumvented by technology.

Similarly, the Catholic Church condemns children outside marriage because children through ART modalities such as IVF, surrogacy, and the like, which involved manipulation in the laboratory is not accepted. This is because of involvement of third party in the process of procreation. Techniques involving only the married couple (homologous artificial insemination and fertilization) are perhaps less reprehensible, yet remain morally unacceptable. They dissociate the sexual act from the procreative act. The act which brings the child into existence is no longer an act by which two persons give themselves to one another, but one that entrusts the life and identity of the embryo into the power of doctors and biologists and establishes the domination of technology over the origin and destiny of the human person. Such a relationship of domination is in itself contrary to the dignity and equality that must be common to parents and children.

The Protestant and Pentecostal position as indicated in the data is borne out of their historical facts, as a spinoff effect of Enlightenment Epoch in Western Europe and North America with Britain and United States of America (Rossides, 1978) as the arrow-heads respectively. Belief system in contexts of western societies is a product of liberalism and scientific interpretation on which their concept of fertility, disease and other reproductive matters are based; in which man is the centre/or super creature with limitless and perfect ability to know and do all things. Hence science and technology including bio-technological ones like ART and their outcomes are imperative to demonstrate human inimitable perfection and ability to do all. The epoch brought about liberal democracy with emphasis on egalitarianism and respect for human rights and civilization with great emphasis on formal education, industrialisation and modernisation. The basic thought in liberalism is that interfering in procreation affairs or suggestion on what should be done or not to be done by two consented adults on marital issues amounts to il-liberal interference with the persons and their choices.

Liberal perspectives on procreative autonomy are, therefore, anchored on two distinct positions on procreative autonomy. The “repro-libertarian” approach which opposes regulations on reproductive decisions and ART, unless they can be shown to be a threat or harm to others or, society at large. Secondly, restrictions to the use of ART in any form would constitute unequal treatment of those who cannot conceive through sexual intercourse. Repro-libertarianism is grounded in the values of individual equality and autonomy (Dworkin 1993 and Germov, 2000). Repro-libertarians have been concerned to show that assumptions about the inherent wrongness or harmfulness of ART are not justified. In particular, they have argued

that conservative opposition to cloning, genetic selection, surrogacy, and the like is based on undefended traditionalism and religious bigotry (Harris 1998 and Dasaolu, 2004).

The church or any religion is a product of its environment and therefore, not immune to socio-cultural developments and changes. Therefore, Protestant/Pentecostal silence on ART may not be unconnected with the milieu of their origin and not necessarily conspiracy against infertile persons as pro-natalist campaigners may want people to believe (Pennings, 2008). On the one hand, before traditionally, infertility or any misfortune is believed to be an evidence of God's disfavour as a result of sin. All the religious practices including traditional ones hold this view tenaciously. This view is juxtaposed with the proportion of punishment meted out by God or His emissary to any offender. To Ijebu people, no evil can manifest if there is no harbinger or reason(s). Sin, therefore is the forerunner of infertility. If infertility is as a result of sin, adoption of ART on the other hand is an affront to God. It amounts to double-edged sin which may further exacerbate retribution from God. People have the attitude that they are negating their religious injunctions when they opt for ART modality.

Islamic faith is noted to be critical of ART as seen in the data. In Islamic religion; ethical and cultural opinions are often divided between **Sunni** and **Shi'a** streams of adherents. Even though the two agree that IVF and similar technologies are permissible as long as they do not involve any form of third-party in terms of donation (of sperm, eggs, embryos, or uteruses). However, regarding third-party donation, there is a debate between the Sunni and Shi'a. The Sunni community, following the Al-Azhar fatwa, does not allow third-party donations. The Shi'a through its patron Ayatollah Khamenei (1999) declared to all Shi'a Muslims, that Islam permits the use of third-party donors(Wikipedia, 10/2/2012) with reservations and caution. There are areas

of agreement between the two schools and the convergence can be summarised thus; artificial insemination with the husband's semen is allowed, and the resulting child is the legal offspring of the couple and In vitro fertilization (IVF) of an egg from the wife with the sperm of her husband and the transfer of the fertilized egg back to the uterus of the wife is allowed, provided that the procedure is indicated for a medical reason and is carried out by an expert and trusted physician.

Similarly an excess number of embryos can be preserved by cryopreservation. The frozen embryos are the property of the couple alone and may be transferred to the same wife in a successive cycle, but only during the duration of the marriage contract. Embryo donation by a third party is prohibited. Other the procedure is in the area of selective abortion as a result of multiple foetuses which is only allowed if the prospect of carrying the pregnancy to viability is very small. It is also allowed if the health or life of the mother is in jeopardy. All forms of surrogacy are forbidden. Finally, the physician who must be an expert is the only qualified person to practise medically assisted conception in all its permitted varieties. If he performs any of the forbidden techniques, he is guilty, his earnings are forbidden, and he must be stopped from his morally illicit practice. For instance, if the marriage contract has come to an end because of divorce or death of the husband, medically assisted conception cannot be performed on the ex-wife even if the sperm comes from the former or the late husband. With support from ethnographic results of interviews with clerics of all religious persuasions there is a relationship between acceptability of ART and religion. Religion, as a factor moves the pendulum of society in relationship to infertility treatment and dictates the direction of ART acceptability. However, whether to accept to use ART or not, is also a factor of how long the

marriage has been in existence. There is correlation between the duration of marriage on the acceptability of ART.

Data reveal that acceptability of ART modality is a function of time or duration of marriage. This is because years after marriage, couples who are going through the treatment said that they reluctantly accepted to patronize the modality after all efforts have failed. All the clients interviewed were unanimous that ART should be the last resort. This should be after one has tried natural conception without success. While recourse may be made to ART at a later date in marriage, the problem of infertility whenever it is noticed earlier in marriage should, in the first instance, be subjected to all manners of efforts ranging from prayers, local herbs, and the like but not bio-technological devices. Until when this cannot redeem the situation, then, attempts would be focused on the fertility clinic to redress infertility problem generally. These findings are consistent with van Ballen and Inhorn (2002) and O' Fallon (2005) studies of some western societies, in which duration of marital union before the couple could be regarded as infertile is noted to be 12 months of unprotected and consistent sexual intercourse between the couple. However, the demographic understandings of five years and above have greatly undermined one traditional understanding of infertility duration. This contradiction between western and non-western interpretation influences the duration of marriage and infertility treatment from orthodox health facility. The contradiction also points to delay in commencement of interventions, such as ART. Adebola's (2007) finding explains this further and juxtaposes this with indigenous belief and conceptualization of infertility. Indigenous conceptualization of infertility stipulates that duration is much lower than medical and

demographic conceptualization for a woman to achieve pregnancy. Hence infertile respondents set early, usually from three months to six months to find solution to their infertility.

This shows that as people are growing old, probably apprehensive of the consequences of age on reproductive process on the part of PLWI and have the knowledge about ART they may show an understanding to its acceptability and easily accept it; in order not to jeopardize the chance of having children. To further explain this ART acceptability is related to the length or duration of waiting to become pregnant. This, however, confirms the qualitative results in which PLWI, in spite of early detection of infertility would still want to consult with every methods possible for pregnancy but ART. Recourse to ART comes very late in the marriage or not at all. This again, may not be unconnected with what Rogers (1983) describes as inaccessibility of a new innovation. To Rogers, an innovation that is more visible and accessible will drive communication among the individual's peers and personal networks and will in turn create more positive reactions. However, the degree to which an individual adopts the new innovation relatively earlier than other members in a social system depends on certain elements inherent in the adoption of innovation. They include: communication channels, time, and rate of adoption, social system and type of innovation.

Social system, in application of the Ecology Model further explains and gives clues to the causes and effects of infertility. For instance, three dimensions of this model can be identified as reasons for acceptability of ART or otherwise, despite the fact that it is desirable for conception: the individuals (as the ones who are suffering from infertility) and behaviour they would exhibit to overcome the problem and the physical environment (acting as a determinant factor).

The individual disposition to or belief in healthcare intervention, as argued in Health Belief Model (HBM) is based on three fundamental dimensions: the individual's readiness to comply with a recommended action, based on perception of "threat", the motivating and enabling forces that determine what the individual will do and the compliance behaviour that would be exhibited (Glanz, Lewis, & Rimer, 1997). Readiness is also contingent on three sets of related variables: one, belief in vulnerability to illness for preventive behaviour and estimation of the degree of threat (perception of consequences, which could be severe, serious in both physical and social dimensions) two, motives to reduce the threat with related goals for good health, and three, a belief that compliance will reduce the threat and it will not cost more and will lead to good health. (Though, infertility is not a disease, but, one can still view care within these three sets of related variables). Acceptability or otherwise among those whose marriage is old depends on the level of income.

Generally, reproductive matters including ART among women of various strata and status are reported to show inverse relationship with income. The relationship of income with women's or men's low status is brought into a limelight because of its contribution to lack of reproductive education, inadequate dietary procedure or defective nutritional intake and death. At the micro level of individual consumer(s), ART, including in- vitro fertilization, egg donation, and surrogacy, present complex issues for women /men's reproductive autonomy. For low-income women/men or couples because assisted reproductive technologies may be out of reach financially for majority of intending users. At the same time, ART treatment option raises questions about long term impacts on women/men's health; security of work, if in paid

employment, all these are potential issues that may prevent prospective ART users in accepting the option for infertility treatment.

Inability to accept ART because of cost implication is typically of those categories of people Rogers (1983) calls the late majority. Late majority are skeptical and traditional and of lower socio-economic status. They are typically skeptical about an innovation. These individuals approach an innovation with a high degree of skepticism and they will rather wait for when the generality or majority of the society has adopted the innovation before adopting it. In this sense, the price would have ebbed to what majority could pay. However, individual infertile person income would have been a non-issue if infertility is placed within the broad purview of public health in Nigeria and elsewhere in SSA. Public health is defined as the illness which affects the public as well as all activities that the public undertakes to influence its health status (Feldman-Savelsberg, 2002).

In other words, public health is the meeting ground which defines the relationship that is among all the structures of society; especially culture, family, politics and medicine. The argument of all inclusiveness of reproductive health matters, including infertility treatment is justified because the role of wife, notion of motherhood and mothering in Africa are all embedded in the culture. For instance, children to African women and men too are the reasons for living; without children, therefore, an infertile person is culturally demeaning. It is only by making public health all encompassing and culturally inclusive that would take infertility treatment away from micro level of individual infertile person or family to a macro-societal pedestal. Suffice it to say that non-inclusion of infertility treatment into the public health policies falls short of culture which is one of the strong reasons for non-acceptability of ART

treatment. This is because the cost of infertility treatment is beyond what the majority of sufferers can undertake. Responsibility for treatment and decision-making on the use of ART is also a contending factor in the acceptability of the modality.

Discussion on gender and decision-making is often based on patriarchal norms in Ijebuland as in other South Western societies of Nigeria. There is an inter-play of power within the matrimonial set-up that has implication(s) for decision making in all spheres of life including health-seeking behaviour of the wife/woman, as majority of Nigerian women have been nurtured to believe that they have unequal status with men both at home and in the larger society (Olutayo, 1996). Household power structure often acts as an inhibition or hindrance to redressing unmet reproductive needs among women in Nigeria and Africa at large (Samba, 1999). The acceptance of ART from participants' responses is noted to be an onslaught to the unidirectional authority of the husband in the family set-up where the husband holds the ace in decision-making on virtually everything at home. This is noted among the educated ones, where the woman enjoys relative high socio-economic status. Unmet reproductive needs as surmised by Mukhopadhyay and Garimella (1998) in India corroborates Samba's findings. In the study on reproductive choice, it reveals that the high rate of maternal morbidity, apart from inadequate services and supplies, there was almost total absence of male support or sensitivity towards female health problems. As regards the burden of infertility in patriarchal societies, women carry this alone (Inhorm, 2002 and Anate, 2006).

Leaving the woman alone without support from the husband in taking the decision to facilitate timely health seeking in the appropriate healthcare centre has been traced to be one of the factors leading to low utilisation of health services in our society and poor health

communication between husband and wife and poor acceptability of family planning policy including other maternal health matters (Bahata *et al*, 1995; Arkutu, 1995; Erinoshio *et al*, 1996; Isiugo-Abanihe, 1996; Jegede, 2010). It has, however, been discovered that the consequences of women's lack of autonomy or husband and wife taking decision together is acting as a catalyst to poor reproductive health (including infertility treatment). Decision making about the use of ART is rather a critical one. The process of taking the decision is hamstrung with socio-cultural norms as highlighted in Health Belief Model (HBM), the process of taking action or not (or take a late action) depends on certain factors irrespective of the level of susceptibility of inherent social or biological consequences of that particular ailment. Such factors have been identified and classified into two categories: one, personal dispositional factors, such as socio-demographic variables like age, sex and marital status. Two, enabling factors, such as income, place of residence, occupation, belief system (Brieger, 2002). Infertile persons with high SES – that is those that are highly placed in terms of income and occupational status may likely take early action and very promptly too to accept ART against those in the low echelon of the social ladder who would have to depend on their husbands.

Apart from culture which is one of the factors that determine health-seeking behaviour of infertile women, there is also an interplay of power within the matrimonial set-up that has implication(s) for the health-care of infertile women. Male dominance has deep religious and socio-cultural roots in Nigerian societies. This is in spite of the middle class and educated feministic awareness and strong activism among women. The specialists were, however, of the opinion that because of issues involved; such as counselling, for husband and wife, cost implication, time and duration of the treatment that it may take the woman away from other

matrimonial functions. It is necessary for the husband and wife to take the decision together with the husband initiating the topic. This becomes more imperative as evidenced from infertility studies which suggested that the social nesting between husband and wife is expedient to offset emotional or stress being experienced before and during treatment by the woman or man (Frank, 2008). The experience or health behaviour may be different for couples that used Assisted Reproductive Technologies (ART) to conceive because they do not share with others their pregnancy and parenthood experiences at the same degree as parents with natural conception do as it is common among those with natural conception (Wildge, 2000). The result of the analysis on family support shows that for the wife to adopt the use of ART, there is need for support and cooperation of the husband, and by extension, the family members.

A close examination of the analysis family support on ART critically shows that, in all cases, family support influences the acceptability of ART modality as an intervention to redress infertility problem. Similarly, ethnographic data shows a significant evidence to conclude that family support is necessary for the use of ART. The patriarchal nature of the family existing in Ijebu communities and other societies of South-West Nigeria does not permit individual family to act alone. This is irrespective of the type of marriage. Marriage in this context is regarded as a deep seated relationship among families, rather than between two individuals who consented to marry each other, therefore, marital relationship between couples in Ijebuland or any South Western society of Nigeria anchor on the dictates of the families.

As shown from this survey, there is a need for a strong social relationship to exist between the CLWI, especially the woman, her relations and significant others before any meaningful action can be taken in terms of healthcare consumption. This was demonstrated from

the survey, especially the ethnography, which was of the strong opinion that unfettered acceptability can only be achieved with strong support from relations. Family and significant others' support is necessary for the couple to offset the emotional problem often associated with ART treatment in terms of ethical and social issues involved. This was noted by Chigbo (2011): that the medicalisation of infertility has unwittingly led to a disregard for the emotional responses that couples experience, which include distress, loss of control, stigmatization and a disruption in the developmental trajectory of adulthood,... even couples undertaking IVF face considerable stress.

Emotionally, response by family members to infertile persons, especially during the period of ART treatment may be imperative for success to be achieved. However, as noted by Roseneil and Budgeon (2004), the question of how people organise their personal lives, loving and caring for each other in the contexts of social, cultural and economic change has led to individualisation of issues and strategies to accomplish set goals, including health matters. To the duo, family collective norms of addressing familiar issues are becoming individually centred. Thus family, in this context, the large patri-kins oversight roles and functions on individual family at most, is now rendered as a gratuitous meddlesomeness. This invariably has relegated family function in the family to the background in the 21st century. To be sure, however, womanhood is about the interrelatedness of a network of close-knit family support. Motherhood has deeper social roots in Ijebu, South-Western Nigeria to the extent that the social, cultural and psychological consequences of childlessness are often very severe.

In interpreting the above concerns as expressed by the clients, there is a discernable conclusion to be drawn: “fertility defines womanhood and womanhood is defined by a woman’s

capacity to mother children” This is very similar to Wildge’s (2000) observation in India that issues surrounding pregnancy, childbirth and motherhood are very complex in all societies. As such there is a huge stigma attached to being infertile or childless with negative implications for the infertile, especially, the woman. The inability to have children leads to stigmatisation, psychological trauma, innuendoes and rejection. Not surprising, the problem of infertility is frequently mentioned in a subtle way, by pointing at the infertile family, especially the husband indirectly to the children of their contemporaries or junior ones whose children are now in the schools among other social categories perceived to be what a childless couple may be lacking.

In evaluating the context in which the parent who forbade the infertile woman to desist from admonition of her son, however, is to suggest that parents usually have decision-making rights over most areas of their child's life and rights to exclude others from making such decisions. As long as parents fulfill requirements to nourish, educate, and provide healthcare for their children, they may make decisions over how and what their child eats, dresses, plays, studies, and with whom he or she interacts with. This is especially true among the educated elites and nuclear or homogenous families across almost all societies. However, parents among the less educated folks, who incidentally are in a large majority of the citizenry, generally, are oftentimes with no alternative, subsume discipline, corrections and instructions of their children under the general supervisory disposition of family members and significant others. As it is a common saying in Yorubaland that two persons, biologically gave birth to a child but several individuals (social parents) would contribute to his/her general upbringing including necessary discipline. But the abusive reaction, one may guess was still within predictable innuendoes against infertile person, whom society derides as not contributing to the family well-being. Infertility or

barrenness is regarded as a curse. Infertile persons, especially the woman, often receive insults and are under constant pressure and face innuendoes during disputes or strife. A woman is not only expected to be a reproducer of children but also to contribute to the productive labour. The childless woman is considered inauspicious and feels unworthy and unwanted among other women (Wilge, 2000). A childless woman not only faces problems with in-laws because of her childlessness but also in her marriage. The relationship between husband and wife is sometimes strained; there are few men who would be supportive of their wife if she had an infertility problem.

The success or not of the method, depends on the support given to the family in all ramifications. While the infertile woman is denied this support in most cases, the male counterpart, that is the infertile husband, is noted to receive adequate support from the family including his wife. In other words, women that conceived through ART perceived higher levels of emotional and instrumental support from their less intimate nuclear family members and much less from their friends than mothers that conceived naturally; and compared to men that impregnated their wife naturally, men that went through ART are perceived to receive more support from intimate/ nuclear family members than from less intimate members. But if the husband has the problem, the wife, (including intimate family members) are mostly supportive and even try to cover up (especially the wife) and take the blame. This is to protect and preserve the integrity of the husband and the family value in general.

Women suffer particularly in cases of reproductive failure, which is not unexpected, because of the trauma of a non-supportive family; sufferer of infertility in this sense may pass through untold agony and loneliness. There are differences and similarities on how infertile

women in developed countries and developing ones bear the stigma of infertility and support from the family. The responses of the clients as presented in the data, contradicts findings from American Society for Reproductive Medicine (ASRM, 2011) on ART, in which men, as against women, consistently reported poorer perception of psychosocial support from family. Women showed a decrease in perceived support, especially from friends, in cases of failure rather than the family. In any case, both reported less support from significant others if they had previously already undergone ART treatments. Men might feel excluded from the treatment because of the greater attention to women in developed countries, leading to feelings of isolation from friends and partners. These psychological risk factors underline the usefulness of social and psychological support for these couples, especially in cases of prolonged infertility.

Acceptability of ART as a treatment option for infertility therefore, hinges on particular factors such as socio- cultural and environmental ones; or what the Ecological Model comprehensively addressed as problems of public health. In which health is considered a social fact, and therefore, success of any health intervention (including ART) is hinged on a harmonious relationship existing between the health consumer(s) and his/her social environment. This highlights the interaction and integration of biological, behavioural, environmental and social determinants, as well as the influence of significant persons and organisations (that is, family, friends, peers, workplace, etc), and public policies all of which together help individuals to make choices concerning their health (Craven & Hirnle, 2007). In case of infertility, among the factors that can contribute to both latent and active failures are cultural (such as belief, patriarchal norm, etc), occupational, income, religious, and educational factors. Others are environment (in terms of residence, ethnicity, etc.), public perception of the method of

intervention and the will to adhere to medical regime, even if the duration would take a longer period before fertility can be achieved. Often, the antagonism highlighted above between health consumers and their social environment or the process of health consumption as described by Erinsho and Osotimehin (1996), alone has been traced to be one of the factors leading to low utilization of health services in our society and poor health communication between husband and wife in particular. Apart from family support, there is also the need for access to healthcare centres.

Women's access to health service goes hand in hand with health seeking behaviour in a given period. Access is conditional on availability of service. The proximity of service and health provider(s) to client(s) would go a long way to encourage patronage. Accessibility, however, is considered as one of the maternal problems in Nigeria. From National Reproductive Health Policy and Strategy Information (NRHP & S, 2001), it is noted that the high rate of maternal mortality is often associated with long distance or long travel to health facility locations and low level of access to, and utilization of quality reproductive health. It is noted that out of 101,041 communities in Nigeria, only 14,474 or 14.3 percent have access to any form of modern health facility with only an insignificant number connected with the means of communication (Orubuloye & Ajakaiye, 2002). Apart from long distance, poor transportation, bad roads, unavailability of means of communication are also linked to the problem of accessibility (Snow & Okonofua 1997). The most successful health services would be the one that is of minimal discomfort in terms of location, accessibility, availability and cost effectiveness. The findings above support Caldwell's (1992) submission on the necessity of making available health facilities to the generality of the citizenry at a very avoidable rate and very low cost or free to all.

Access should equally be made simple, very close and universal for effective maternal health. The availability of these infrastructures are what Caldwell (1992) called “routes to low mortality”. As the ethnographic data pointed out, there is paucity of health facilities to undertake this specialised infertility treatment.

UNIVERSITY OF IBADAN

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

The main objective of the study was to investigate people's perception of infertility and attitude towards ART intervention in the treatment of infertility in Ijebu division of Ogun State in the South-Western Nigeria. It sets out to understand the contextual meanings of infertility and ART in relationship with prevailing social, cultural and demographic factors which underline the acceptance of the modality. It specifically examined influences of gender, religion, age, education, occupation and income. Others are family support, duration of marriage, status of the child through ART, decision-making at home and distance to care centres on the perception, attitude, awareness, knowledge on the acceptability of assisted reproductive technology (ART). Based on these objectives, the following explanations represent the summary of major findings of the study.

Awareness, Knowledge and Attitude to Infertility/Childlessness and ART

Respondents did not blame husband and/or wife for infertility. This is because it is only God who gives children. However, all the key informants said that in the time past, society hardly mentioned or referred to man as infertile, the focus of the inability of a couple to have children has always been placed squarely on the female partners. This is because of the patriarchal norm, which places the man, as a rare breed and the woman as a second fiddle. This norm is changing now, medically, there are proofs of infertility among men (Okonofua, 2002; Adegbola, 2007; Inhorn & Birenbaum-Carmeti, 2008 and Oladokun, Arulogun, Oladokun, et al, 2009). The respondents also were of opinion that peoples living with infertility (PLWI) who are

experiencing a disproportionately high rate of infertility may be due to spiritual attack, preternatural or mystical/mysterious factors, lack of access to health care, health education, etc.

This perception contradicts the opinion of O' Fallon (2005) and van Ballen & Inhorn (2002) who noted that infertility can be caused by genetic, endocrine or immune system disorders. It can be caused in the womb, in which genetic instructions are impacted by factors such as a mutation, a chemical problem, or an imbalance in hormones or environmental factors or combinations of the two or more of these. There was consensus, however, as to the causes of infertility among interviewed ART specialists and ART seekers (Clients). According to 40% of the clients, infertility may be as a result of spiritual attack from the enemies. But 60% of the clients and the doctors said it may be as a result of disruption in the biological set up - that is, one or more of the organic parts of the body responsible for reproduction are malfunctioning or defective. The specialists were in agreement that this can be corrected through surgical operation or medication to stimulate or correct the defective cells, in case the problem was as a result of bad cells. However, the non-specific diseases are those that may be attributed to environmental factors. For instance, sexually transmitted diseases or infection (STD) are largely the cause, as a result of indiscriminate or illicit sex; sexual permissiveness. This in many cases can be injurious to the womb and result in infertility. Infertility is not a welcome phenomenon in Ijebu, there is value attached to children and motherhood.

Acceptability of new technology according to Roger (1983) is a function of information at disposal of would-be users. Prior to acceptance of ART, provider(s), donor, and the user must be aware of its social, cultural and ethical implications and health care facilities in which this modality could be procured must be conspicuous, accessible and cost effective to the public. Knowledge about

ART modality as a way out of infertility is limited among the populace and a lot of misconceptions and myths are prevalent in the society. The cultural perspective about assisted reproductive technologies is unfavourable to its acceptability, which has resulted in its reduced utilisation or non use at all. Culturally, beliefs in evil forces and supernatural powers are believed to be the cause of infertility. These beliefs are still prevalent amongst people, especially those with lower level of education. Therefore, health seeking behaviour for infertility care is often associated with supernatural forces and its cure must also be associated with supernatural. Recourse to supernatural interpretation of infertility vitiates genuine attempts on ART usage among other treatment options

How People Perceive Infertility and ART Treatment

In resource allocation within patriarchal family, there is emphasis on blood relations because property cannot be given to a child or children outside the family, even if that child is adopted (Daniluk 2001). Motherhood in the African context enables the woman to be allocated her rightful portion from her husband's property/estate in case the man dies before the wife. The result shows that there is a significant influence of culture on the preference for the use of ARTs. The result presented shows that child/children through natural conception are more respected than those from ART which is considered unnatural. In addition to the survey results, the ethnographic data on culture and individual perception did not depart from this. There are therefore, cultural issues to contend with in Ijebu for ART to be accepted.

People's Attitude to ART Intervention in Ijebu

People who are unable to have children are always reacting negatively because of pain of isolation they are subjected to by the family, especially the family members of the husband who are

expecting their son to have his own children. An infertile person also exhibits negative attitudinal behaviour in reacting to people's opinion.

Educational Qualification and Preference for the Use of ART

The result reveals that education has no significant influence on the acceptability of ART. While this may be the fact gleaned from the chi-square, additional data from ethnographic literature revealed that, almost all the respondents knew about infertility trend across educational levels and strata. They equally understood its disruptive tendency in the family as the summary of IDIs revealed.

Gender and Preference for the Use of ART

Gender role and maternal health are inseparable; therefore, these roles often, act as constraints to maternal health of women. Male respondents preferred ART compared to their female counterparts. While quantitative data did not point specifically to positive relationship, ethnographic data show that gender is a determinant factor for the acceptability of ART. The result reveals that gender division has influence on the acceptability of ART.

Age and Preference for the Use of ART

Respondents were of the view that age at which one is starting reproductive function is very crucial to acceptability and adoption of ART. The general opinion is that those that are fairly old, may likely seek alternative to natural conception than those that are still young. The chi-square value of 1.60 and whose probability is close to one show that age is not a determinant factor in the use of ART. The result reveals that age has no influence in the adoption of ART. But with support from ethnographic data, age acts as a strong determinant of adoption of ART to alleviate the challenges pose by infertility.

Religion and Preference for the Use of ART

The challenges of infertility among the sufferers are incontrovertibly very painful, regardless of one's belief system. Whether the sufferer is a Muslim, a Christian or a traditional worshiper, it is painful to be faced with this unmet reproductive desire or inability to have offspring. All religious types or sects will do everything possible to take care of their infertile members. However, not all religious practitioners subscribe to ART modality. Even among the Christian believers, Catholic's view on the use of ART is different from Protestant's and Pentecostal's. For example, Catholic faith does not feel comfortable with the procedures like in-vitro fertilization and are not in support of ART. Therefore, the result on religion shows that there is a statistical evidence to conclude that religion significantly influences the preference for the use of ART. The results of interviews with clerics of all religious persuasions also support this. Therefore, there is a relationship between acceptability of ART and religion.

Duration of Marriage on the Preference for the Use of ART

Data revealed that acceptability of ART modality is a function of time or duration of marriage. This is because years after marriage, couples who are going through the treatment said that they reluctantly accepted to patronize the modality after all efforts have failed. All the clients interviewed were unanimous that ART should be the last resort. The result of the analysis above shows that duration of infertility influences the preference for the use of ART. This shows that as respondents are growing old, they are becoming apprehensive of consequences of age on reproduction process and have the knowledge about ART they will suggest to the CLWI to accept it.

Time and Income Correlates in Preference for the Use of ART

The result of the analysis above shows that social cost, the position of the child through ART, time of treatment and financial factors influence significantly the use of ART among couples in the study area. But despite this fact, duration of infertility still dictates the preference for the use of ARTs. This shows that as people are aware, and becoming old and have the knowledge about ART, they will easily accept to use it.

Household Decision-Making and its Effect on the Acceptability of ART

Discussion on gender and decision making is often based on patriarchal norms in Ijebu. There is an inter-play of power within the matrimonial set up that has implication(s) for decision-making in all the spheres of life including health-seeking behaviour of the wife/woman, as majority of Nigerian women have been nurtured to believe that they have unequal status with men both at home and the larger society. The result of the analysis shows that for the wife to adopt the use of ART there is need for support and cooperation of the husband and by extension the family members. For example, out of the 732 respondents, about 73% believed that there is need for the husbands and family members to support the CLWI or having infertility challenges, especially, to give emotional support for the use of ART.

Family Support in the Acceptability of ART

Generally as shown from the survey, there is need for strong social relationship to exist between the infertile couple, especially the woman and significant others. This was demonstrated by the respondents from the responses elicited from them when 45 % were of the strong opinion that unfettered acceptability can only be achieved with strong support from relations. Family and significant others' support is necessary for the couple to offset the emotional problem often

associated with ART treatment in terms of ethical and social issues involved. The result shows that the influence of family support on the use of ART in curing infertility is very significant. A close examination of the analysis critically shows that, in all cases, family support would influence the acceptability or adoption of ART modality as an intervention to resolve infertility problem. Similarly, ethnographic data shows that there is a significant evidence to conclude that family support is necessary for the use of ART.

The Extent of where one resides (Location) as it Influences the Acceptability of ART as a Method for Treating Infertility

Men/Women's access to health service determines the health-seeking behaviour in given societies. Access is conditional on availability of service. The proximity of service to client(s) and health provider(s) would go a long way to encourage patronage. The result shows that there are hospitals in the locality that are using the method. Others averred that the hospitals are not accessible. But the ethnographic data pointed otherwise, in that, there is paucity of health facilities to undertake this specialised infertility treatment. The results were not unconnected with what clients attributed to lack of information and understanding of ART method.

5.2 CONCLUSION

The significance of involuntary infertility is socially constructed and gender issues play a major role in constituting the social meaning of infertility. Infertility has always existed, but its discussion is often culture-bound. Infertility uncomfortably implies sexuality, as babies are made through sexual intercourse. Thus, when a couple remains childless, the issue of sexual discontinuity or inability comes to the fore, especially for the man whose inability is interpreted within the context of patriarchy and the woman's status of inequality is further highlighted. All with attendant social,

cultural and psychological problems, bruising the man's ego and making the woman to live with stigma. Solutions of different types ranging from traditional methods, faith-based solutions and reliance on modern medicine and technologies, such as assisted reproductive technology (ART) have equally been proffered to resolve this unmet reproductive desire of couples across the world.

ART modality includes any reproductive techniques involving a third party, for instance a sperm donor. This is a method used to achieve pregnancy by artificial or partially artificial means. This includes all fertility treatments in which birth eggs from a woman's ovaries, combining them with sperm in the laboratory and returning them to the woman's body or donated to another woman. This intervention, however, is encumbered with social, cultural, demographic and environmental factors. On the other hand, analysis of health policy commitment for information and/or education, services, management and motivation for acceptance of bio-technology innovation shows many gaps which needed to be filled. For instance, ART acceptability in this area is very poor, due to limited understanding or poor knowledge of the modality.

Therefore, there are contradictions in the understanding, perception and responses towards infertility and ART intervention among the institutions and structures of a society. While infertility is generally an unacceptable phenomenon, ART, on the other hand, to mitigate the problem is socio-culturally viewed with suspicion and neglect. This is noted to pose challenges to infertility management through ART with social and cultural factors as its Achilles' heel. Most arguments against the provision of infertility treatments – ART are justified primarily as an affront to God, therefore, negates religious belief of pre-eminence of God in every sphere of human endeavours, violation of individual right of privacy and default to supremacy of kinship structure where emphasis on birth and inheritance rights is placed on consanguine relationship. On the contrary however, the

unfavourable responses to infertility treatment in terms of budgetary allocation and general investment to reduce the cost of ART, especially by the government and society at large has more to do with poor economic base and unwholesome state of infrastructural amenities than social and ethical factors. Effort, therefore, should be geared towards prevention of infertility than managing it through ART which is not within the reach of majority of infertile sub-population who are in need of it.

5.3 Recommendations

Historically, infertility is viewed within patriarchal scope where it is considered “a woman’s disease” and solutions to it, have not been value free within the purview of gender sentiment with women alone as object to be derided for reproductive inability among couple. It is only of recent that the importance of male factor is taken more than cursory attention medically and bio-technologically from the stakeholders – government, non-governmental organizations and societies at large. The mistaken notion that infertility has gender connotation has equally prevented holistic diagnosis and suitable interventions. In other words, helping infertile couples in anti-natal and patriarchal social settings like Ijebu, South-Western Nigeria, where infertile individuals, especially women may suffer more because of their reproductive challenges has never been viewed as of high priority in population and health discussions and policies. As a result, infertility in Nigeria and other developing countries has been understudied and neglected within the primary health policy foci.

The scholarly conspiracy on the plight of the infertile people and desires for assisted reproductive technology (ART) in Nigeria and elsewhere in the developing countries mirrors the established ideological bias of policy-makers against proper integration of infertility into the general health policy. The ideological bias on its own cannot be separated from the established social structure

which underlines the social and cultural factors against the acceptability of ART. There are a number of life cycle events which may not be linked directly to infertility but have profound influence on the acceptance of ART modality in this society. In this respect, there is need for re-examination of the health policy and specifically the social structure that supervenes or acting as platform for the policy, in order to incorporate the sub population of infertile people. Similarly, institutional arrangements for effective health planning and sustained health policy need to be reprioritized to accommodate all health issues needed as support reduction of infertility and acceptance of ART modality.

Following from the above, there are other specific recommendations to be addressed:

1. Childbearing and motherhood are highly valued goal among members of the study population. Persons experiencing infertility and members of the society at large are not only looking forward to conception and become a mother, but also the production of live baby. There is need for a broad implementation of family planning programmes and other population policies to cater for the requirements of those who are in need of regulating births and those in need of assistance with conception and childbirth. The divergent views existing in the society between pro-natalist and anti-natalist extremes on the needs to control population need to be moderated, as overpopulation is believed to act as catalyst to environmental degradation, unemployment, poor formal education and other forms of social problem. But the situation in Nigeria and other Sub-Saharan Africa (SSA) countries goes deeper than this reductionist argument.

It is believed that wealth of these countries is noted to skew precariously in favour of few elites to the detriments of others, the large majority. The manifestation of social problems is often as a result of injustice perpetrated in resource allocation and poor state of infrastructure. Not necessarily as a result of over-population. In this regard, there is the need to understand the

various meanings and interpretations of infertility in order to adopt more efficient prevention and treatment measures. This is because assisting individuals and couples with infertility problem has not received commensurate attention from government, non-governmental organisations (NGOs) and donor agencies unlike attention given to family planning and immunization. There is therefore the need to re-engineer the existing family planning working paper and implementation to accommodate those with infertility challenge as already noted that lack of enthusiasm on the part of the populace to embrace family planning policy in developing countries is because of the fear of infertility (Isiugo-Abanihe, 1994). If this is done, government attention would also be on ART as part of a holistic approach to family planning.

2. Assisted reproductive techniques as at present, are not within the reach of the majority. Majority of respondents experiencing infertility lamented the huge cost of procuring ART treatment, as most persons experiencing infertility also complain of loss of human-hours. Infertility treatment is noted by the specialists interviewed to induce poverty because of loss of human-hours, heavy financial responsibility and other social cost among affected persons. There is therefore, the need to subsidise infertility treatment
- 3 The study underscores the need to assist persons experiencing infertility by overcoming the burden of the cost of accessing and receiving treatment. Majority of respondents experiencing infertility lamented the huge cost of procuring ART treatment. Most persons experiencing infertility also complained about the loss of human-hours. There is, therefore, the need to subsidise infertility treatment. The health policies of private and public organizations can also be redesigned to cater for the needs of workers that experience infertility problems. The mandate of the National Health Insurance Scheme (NHIS) should be expanded to address the needs of

persons and couples seeking infertility treatment. Also, the participating NGOs and the private sector should be encouraged in subsidising infertility treatment.

4. There is need to train more specialists on the use of ART and intensify capacity building of other adjunct service providers. Because the study found out that there is a limited number of medical practitioners that specialised in the treatment and management of infertility with the aid of ART within Ijebu societies, compared with the large number of patients. This makes ART acceptability very difficult for many prospective clients to have timely access to treatment. Those that can endure the waiting period are made to pay exorbitantly because of oligopolistic tendency of few specialists who are presently in the practice. Therefore, it is important to increase the training capacity of tertiary health care institutions to train more medical practitioners, especially gynaecologists in general and ART specialists specifically.
5. Similarly, patriarchal structure of the society that abhors women's freedom and decision-making, which is creating a gulf between women's desire for independent health seeking behaviour (HSB) and decision-making to patronize the healthcare modes/modality of their choice. This invariably is making the prospective users of ART to have aversion for the method - as this is regarded as un-masculine/unmanly. These suffocating norms and values need to be re-addressed.
6. On the heels of these norms and values is the emasculating lack of support for the infertile woman seeking a solution and the general apathy for infertility treatment and abhorrence for her, if she dares to accept the ART modality, it is important for the National Orientation Agency (NOA) and public health intervention sections of the Ministries of Health to initiate attitudinal and behavioural changes (ABCC) among men and other members of the society to address these anti-women cultures in general and ART intervention specifically.

7. In the same vein, reproductive health technology experts should initiate collaborative efforts that bring the innovation and development of new treatment procedures to public knowledge, in order to disabuse the minds of people of the assumed cultural and ethical fear. This will go a long way to reduce the burden of infertility treatment on women and even men.
8. Similar effort, as above, should be made to liberate the people from the grip of religion. The spiritual dimension has been found to play a vital role in the treatment and management of infertility and help to reinforce societal norms of fidelity of marriage even in the face of societal stigma and rejection of infertile persons. There is danger however, in abandoning infertile members of society to their problem due to religious sentiments when all attempts to treat infertility fail - that ART is an affront to God. Sensitization programmes should be encouraged in all media outfits using the policy-makers and public health experts to work in conjunction with Faith-Based Organizations that treat infertile persons to ensure that they make early referrals and seek early medical diagnosis and unhindered treatment. The spiritual organizations also serve as efficient shelters for persons experiencing infertility to reduce and possibly overcome the burden and anxiety of infertility.
9. Underscoring all these initiatives is the need for more emphasis on formal education for all, as there is observed a reversal of gains made in education in the past due to overall economic malaise presently ravaging the country. It is essential to put in place such structures to assist women and men experiencing infertility to cope positively with the travails of infertility as well as receiving treatment.
10. Finally, there is the need for policy makers and economic managers of the country to work assiduously towards the eradication of poverty by creating job opportunities, promoting the

economic and social well-being of members of the society. This is believed to shorten or reduce ages for marriage, as marriage period for marriage young ones is often elongated in order to attain better economic status. In any case, reproductive exercise at old age is characterised by reduced fertility for both women and men.

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APPENDIX I

Department of Sociology, University of Ibadan

Assisted Reproductive Technologies (ARTs) and Infertility in selected Areas of Ijebu Division, Ogun State, Nigeria.

No	
Name of Facility:	
Time of Interview:	
Date of Interview:	
Duration of Interview:	

Informed consent

My name is _____ I am from the Department of Sociology University of Ibadan. This is an academic study on infertility and attempts at biotechnology intervention in Ogun State. You have been randomly selected to participate in this study and your candid views will be highly appreciated. Please know that all your responses are going to be treated with confidentiality.

Consent

Now that the detail of the study has been explained to me and I fully understand the content of the study process. I will be willing to take part.

Signature/Thumbprint of participant /Date

Name/Signature of Interviewer /Date

Dear respondent,

My name is ALUKO, Olusola Sunday, a PhD candidate of the Department of Sociology, University of Ibadan. I am working on Adoption of Assisted Reproductive Technology for Infertility Treatment in Ijebu Division, Ogun State, Nigeria. Information given will be treated with utmost confidentiality. Thank you.

Name _____ of Interviewer: _____ Date: _____

Interview start time _____ End time: _____

Name of Area: _____

Local Government Area: _____

SECTION A: BIO-DATA

No	Questions	Option/Coding/Categories	CODE	SKIP TO
A1	Sex of respondent	Male Female	1 2	
A2	Age at last birthday	Please Specify:		
A3	Year of birth	Actual:		
A4	What is your Religious affiliation?	Muslim Christian Traditional	1 2 3	
A5	If Christian, what is your affiliation?	Protestant Catholic	1 2	
A6	Marital status?	Single Married Divorced Separated	1 2 3 4	Skip to A11
A7	If married, how old is your marriage?			
A8	What is your age at first marriage?			
A9	How many times have you been married?			
A10	If not presently married, please state the reason(s)?			
A11	Education qualification?			
A12	What is your current occupation?			
A13	What is your Ethnic group?			
A14	What is your total income per month? (estimate)			
A15	Are you permanently resident here?	Yes No	1 2	Skip to A17

A16	Length of residence			
A17	With whom are you living with presently (indicate from the option presented)	Alone With husband/wife With unmarried partner With parents With other relations With in-law With friend of the same sex Other (specific) No response	1 2 3 4 5 6 7 8 9	

SECTION B: SOCIO-CULTURAL FACTORS INFLUENCING THE ADOPTION OF ART

A18	Is it true that women/men who are unable to bear children often want to keep it secret?	Yes No I don't know	1 2 3	Skip 20
B19	If yes, what do you think are the reasons?	Be specific _____ _____		
B20	What do you think can be done to alleviate the problem of infertility?	Prayers TBA Orthodox treatment ART treatment I don't know	1 2 3 4 5	
B21	What do you think are the causes of infertility?	Spiritual Biological problem Social problem Cultural problem Both social and biological All together I don't know	1 2 3 4 5 6 7	
B22	Do you think infertility can be self inflicted?	Yes No It is destiny I don't know	1 2 3 4	
B23	Do you consider infertility as a disease	Yes No I don't know	1 2 3	

B24	If yes, what type of disease?	Physical Biological Spiritual	1 2 3	
B25	What extent do you think a couple should go to have children of theirs	No effort should be spared Wait for God's time Adopt children from relatives Seek ART intervention	1 2 3 4	
B26	Do you know of couple that have used ART	Yes No	1 2	
B27	In undertaking ART treatment, what are the issues you consider very important?	The position of the child society/family The social cost Financial cost Time for treatment Accessibility of the method (method within the reach of infertile ones)	1 2 3 4 5	

SECTION C: PERCEPTION OF INFERTILITY AND ART

C28	What is infertility?	Yes No I don't know No response	1 2 3 4	
C29	How many months do you think a couple would wait before one can say, they are infertile	0-12 (month) 13-24 (month) 25-36 (month) 36 above (month) I don't know	1 2 3 4 5	
C30	How many types of infertility do you of?	One Two Three I don't know	1 2 3 4	
C31	Kindly name the type(s) you know			
C32	Do you know of anybody who is infertile/or having problem to conceive?	Yes No I don't know	1 2 3	
C33	If yes, what do you think are the causes of it (infertility)	Promiscuity Abortion Infection (STD(i)) Spiritual, e.g. witches etc.	1 2 3 4	

		I don't know	5	
C34	Do you think infertility is curable?	Yes No I don't know	1 2 4	
C35	If yes, can you mention the treatment options			
C36	If the causes is spiritual can it be reversed			
C37	What is your opinion about ART (e.g. test tube baby)	It is very good It is not natural It is too costly The children through that cannot be accepted by the society I have no opinion	1 2 3 4 5	
C38	Do you think infertile person should be allowed to use the method	Yes No I don't know	1 2 3	
C39	How do you think infertility can be cured			
C40	What do you suggest that anybody who is infertile should do	Prayer TBAs Hospital ARTs Other (specific)	1 2 3 4 5	

SECTION D: AWARENESS OF TYPES OF TREATMENT

D41	Do you think infertility can be cured	Yes No Not all cases I don't know No response	1 2 3 4 5	
D42	If yes, what types of cure are you aware of?	Prayers (Syncretic healer) TBAs (Traditional birth attentions) Orthodox medicine In-vitro fertilization (test tube baby or other method (ARTs)	1 2 3 4	
D43	Rank them in the order of effectiveness	Prayer first		
D44	Do you think that assisted reproductive technology (ART) can be effective in curing infertility	Yes No I don't know	1 2 3	

APPENDIX II

IN-DEPT INTERVIEW

Department of Sociology, University of Ibadan

Acceptability of Assisted Reproductive Technologies (ARTs) As Treatment Modality for Infertility among Ijebu of Ogun State, Nigeria

IN-DEPTH INTERVIEW FORMAT

Greetings

- A. Introduction (intimate the interview with the informed consent permission)
- B. Socio-demographics (Age, marital status, type of marriage, religious affiliation, educational qualification, occupation and type of residence)
- C. Background information (to problem the importance attached to child bearing)

Question 1

What are those values attached to motherhood (probe for deep seated love for wife who is fertile)?

Question 2

What is the people reaction to infertility?

Question 3

How long do you think a couple should wait to expect to achieve fertility before going to seek solution?

Question 4

Please explain what you understand by the infertility? (Probe for different terms used for couples who have never had a child before or those who had before but after one or two issues there is problem to have more children.)

Question 5

Who is to be blamed for the inability to have children: the husband or wife (probe for gender bias in the treatment of infertility).

Question 7

What in your opinion are likely causes of infertility/childlessness (probe for the possible causes as understood by the public)

Question 9

In what ways do you think the infertile have you being coping with the challenge or difficulty of childlessness (probe specific methods including medical ones being patronised)

Question 10

Please can you say specifically, if you have heard of assisted reproductive technology (ART) in the treatment of infertility?

Question 11

Do you know of anybody who is presently using any assisted reproductive technologies (ARTs) ((to probe if the interviewee is aware of any type of ARTs)?

Question 12

What do you think is the people's understanding of ART? (Probe for cultural animosity against the practice, if there is any)

Question 13

What are the challenges or implication of having children through ARTs (to probe for time spent for on consultation, money expended and period of being away from home)?

Question 14

Do you consider these treatment option to have the most desired ends and why?

Question 15

Do you intend to inform your child eventually the mode of his or her conception?

Question 16

Are you prepared to share this mode of this conception with members of your family (from both sides?)

General Questions**Question 17**

What measures do members of this community take to resolve the problem of infertility? (Probe for treatment options interviewee has sought to resolve this problem).

Question 19

Do you know any member of this community that used any of these medical methods to treat infertility? (Probe for type of medical treatment achieved and/or also probe for type of medical treatment that participant have used).

Question 20

What is your opinion about what government is doing to assist infertile couples to have their own children? (Probe if participant perceives government effort of assisting infertile couples as insufficient compared to that of reducing fertility rate).

Question 22

What suggestions/advice would you give to prevent infertility among individuals/couples?

Question 23

I would like you to make any comments and share your opinion about the topic we have been discussing _____

- 1. Time _____ when _____ interview _____ was completed.....
- 2. Place of interview.....
- 3. Name of field assistant.....
- 4. Observation.....
-
- 5. Signature Date.....

I thank you for sparing some time to answer or complete this questionnaire. Good bye and God Bless.

APPENDIX III

INFERTILITY AND ART TREATMENT IN IJEBU, OGUN STATE, NIGERIA

Key Informant Interview (Clients)

Introduction (Read Informed Consent)

Informed consent

My name is _____ I am from the Department of Sociology University of Ibadan. This is an academic study on infertility and attempts at biotechnology intervention in Ogun State. You have been randomly selected to participate in this study and your candid views will be highly appreciated. Please know that all your responses are going to be treated with confidentiality. However, if you want to respond further to fielded questions on face to face interaction, you may please indicate your address and telephone number(s)

Consent

Now that the detail of the study has been explained to me and I fully understand the content of the study process. I will be willing to take part.

Signature/Thumbprint of participant /Date Name/Signature of Interviewer /Date

Socio-demographics (Age, Marital Status, Type of Marriage, Religious affiliation, Educational Qualification(s), Occupation and Type of Residence).

General Questions

Question 1

What are those types' of ceremonies that are celebrated in this community in respect of marriage and childbirth?

Question 2

Which of these you have mentioned would you say are most important and significant and why? (Probe for reasons why community members attach much significance to children).

Question 3

What ways by which members of this community, prospective couples and individual members of families, go about proving their fertility which is known to you?

Objective 1

Question 4

Explain what you understand by the term infertility? (Take note of any contextual meanings e.g. not having a child at all, having only one child, having only female children etc. ask how respondent describes her/his condition).

Objective 2

Question 5

What in your opinion are the likely causes of infertility/childbirth? (Probe for what/whom participant thinks is likely causes, which could be, behavioural, psychological, spiritual, social and demographic).

Question 6a

What happens if couples fail to achieve pregnancy and childbirth? (Probe for attitude of relations and other members of community)

(Here the interviewees experience may be investigated)

Question 6b

How long do you think a couple should wait to expect to achieve fertility before going out to seek solution?

Objective 3

Question 7

What challenges/problem have you encountered as a result of your difficulty to give birth to children? e. g. in financial term, time loss in seeking for intervention(s); social exclusion, pressure from significant others (i.e. the in-laws, relations, & others).

Objective 4

Question 8(a)

In what ways have infertile people being coping with the challenge of infertility (probe for and take note of any contextual meanings e.g. in terms of money, time, animosity from others and specific treatment modality; especially ART method)

Question 8(b)

What is/are the people's view(s) on children born through Assisted Reproductive Technology (ART)? Take note of the social and cultural implications.

Question 9

In what ways have you been coping with these challenges resulting from your delay in childbirth? (Probe for specific coping strategies such as adoption, caring for children/young ones, avoiding ceremonies e.g. naming ceremonies, blame of others, aggression/anger, self pity etc. also probe for positive and negative outcomes of these coping strategies).

Question 10

What measures do members of this community take to resolve the problem of infertility? (Probe for treatment options interviewees have sought to resolve the problem)

Question 11

What of these treatment options has achieved the most desired results and why? (probe for the extent of their knowledge of ART)

Question 12

Which of these treatment options has achieved the least desired and why? (To know if people have started patronising ART)

Question 13

What medical method(s) of infertility treatment do you know about?

Question 14

Do you know any member of this community that used ART method to treat infertility?

Question 15

What is your opinion about what government is doing to assist infertile couples to have their own children? (Probe if participant perceives government effort of assisting infertile couples as insufficient compared to that of reducing fertility rate).

Question 16

What suggestions/advice would you give to prevent infertility among individuals/couples?

Question 17

I would like you to make any comments and share your opinion about the topic we have been discussing.

Thank you for your time

UNIVERSITY OF IBADAN

APPENDIX IV

INFERTILITY AND ART TREATMENT IN IJEBU, OGUN STATE, NIGERIA

Key Informant Interview (Medical Doctors)

Introduction (Please read Informed Consent)

Informed consent

My name is _____ I am from the Department of Sociology University of Ibadan. This is an academic study on infertility and attempts at biotechnology intervention in Ogun State. You have been randomly selected to participate in this study and your candid views will be highly appreciated. Please know that all your responses are going to be treated with confidentiality.

Consent

Now that the detail of the study has been explained to me and I fully understand the content of the study process. I will be willing to take part.

Signature/Thumbprint of participant /Date Name/Signature of Interviewer /Date

Socio-demographics (Age, Marital Status, Type of Marriage, Religious affiliation, Educational Qualification(s), Occupation and Type of Residence).

General Questions

Question 1

What are those types of ceremonies that are celebrated in this community in respect of marriage and childbirth?

Question 2

Which of these you have mentioned would you say are most important and significant and why? (Probe for reasons why community members attach much significance to children).

Question 3

What ways by which members of this community, prospective couples and individual members of families, go about proving their fertility which is known to you?

Question 4

What is infertility? (Probe for social and medical definitions).

Question 5

Is infertility a disease? (Probe for the contextual meaning socially).

Question 6

How many months should a couple wait before one can say there is a case of infertility?

Question 7

Is it possible for man to be infertile? (Probe for gender stereo- type understanding of infertility)

Question 8

How many types of infertility do know of?

Question 9

Have you treated any before? Or, treating any case presently?

Question 10

What method(s)/intervention(s) did you use or the one you are you using presently?

Question 11

What is ART?

Question 12

What is the rate of patronage among the Ijebu (Probe for the level of awareness)

Question 13(a)

If the patronage is low, what is/are the reason(s)? (Situate this in the context of finance, time, and social factors – stigmatization,).

Question 13(b).

Is the low patronage predicted on religious bias?

Question 14

In understanding ART treatment and its peculiarity - What are the issues you consider more important? (1) The position of the child through ART in the family/society

(2) The social cost

(3) The economic/ financial cost

(4) Time expended on the treatment

(5) Availability of the method within the reach.

Question 15

What suggestions/advice would you give to prevent infertility among individuals/couples?

Question 16

I would like you to make any comments and share your opinion about the topic we have been discussing.

Thank you for your time

UNIVERSITY OF IBADAN